INSTITUT DES PARCS NATIONAUX DU CONGO BELGE | INSTITUUT DER NATIONALE PARKEN VAN BELGISCH CONGO

Exploration du Parc National de l'Upemba

MISSION G. F. DE WITTE

en collaboration avec

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

FASCICULE 24

Exploratie van het Nationaal Upemba Park

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AFLEVERING 24

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(COLEOPTERA POLYPHAGA)

BY

CARLO KOCH (Pretoria)

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TENEBRIONIDÆ (PYCNOCERINI)
(COLEOPTERA POLYPHAGA) (1)

BY

CARLO KOCH (Pretoria) (2)

(With 16 figures and 10 plates.)

The « Institut des Parcs Nationaux du Congo Belge » (I.P.N.C.B.) has entrusted me with the study of the *Tenebrionidæ* collected in the National Parcs Albert and Upemba. At the same time large numbers of *Tenebrionidæ* from the Belgian Congo were forwarded to me by the « Musée royal du Congo Belge » (BCM.), the « Institut royal des Sciences naturelles de Belgique » (I.R.) and the « Commission d'Étude des Bois congolais », to which furthermore considerable collections were added by the Museu do Dundo da Companhia de Diamantes de Angola (M.D.), Coryndon Museum (C.M.), British Museum (B.M.), Science Museum of the California Academy of Sciences (M.C.A.), South African Museum (S.A.M.), Transvaal Museum (T.M.) and Museum Frey at München (M.F.).

Thus I was enabled to begin with a profound study of the *Tenebrionidæ* from the Belgian Congo, in particular with regard to their connections with the fauna of Southern Africa. Taking in consideration the poor state of systematics of the *Tenebrionidæ* from South of the Sahara in general, it seemed to me scientifically unjustified to add more single descriptions of new species to the already accumulated and uncritically described amount

(1) The *Tenebrionidæ* of Southern Africa — X.

(2) Results of a grant of a bursary by the South African Council for Scientific and Industrial Research.

of known forms. I decided therefore to proceed with the description of new forms only by including them in short revisions of the respective tribes. As a first tribe I have revised that of *Pycnocerini*.

The *Pycnocerini* form a very well-defined tribe of tropical and apparently xylophagous *Tenebrionidæ*, some of which resemble most strikingly the *Passalidæ* of *Lamellicornia*. Although several times monographed by WESTWOOD, 1843, KOLBE, 1903, and GEBIEN, 1904, their systematics did not allow for a correct classification of their forms. All previous authors have overlooked the importance of the many essential morphologic particulars, which I was able to point out in the following key. These particulars represent a good basis for a natural division of the African *Pycnocerini* and have been confirmed as such by the geographical distribution.

Apart from the Indian genera *Pheugonius* and *Ædiotorix* all *Pycnocerini* are tropically African. The two undertribes, viz. chirosceloid and pycnoceroid *Pycnocerini*, appear as if having a similar range of distribution. The pycnoceroid *Pycnocerini*, however, occupy, apart from the West- and Central-African provinces, more or less continuously a widely extended East African area from Somaliland southwards to Southern Africa; whereas the concentrated West- and Central-African distribution of the chirosceloid *Pycnocerini* appears to be suddenly stopped at the Tanganyika fault, whence it becomes changed into a discontinuous distribution, confined to isolated patches of mountainous rain forests of the central and southern parts of East Africa, there being faunistically divided by the Rift Valley fault.

All the many West- and Central-African species of both undertribes cover, morphologically unchanged, the whole of the Belgian Congo. None of these species crosses the Tanganyika fault into East African territories, nor enters Southern Africa. All of them, except for the two monotypical West-African genera *Chirocharis* and *Stratodemus*, are alate and do not develop endemic forms.

Eastwards from the Tanganyika fault a strong drop of species can be observed in the pycnoceroid *Pycnocerini*, but not in the chirosceloid ones, which split up into many strictly endemic and isolated forms and genera. To the latter belong the genera *Hemipristula*, *Passalocharis* and *Prioproctus*, which are altogether apterous. Only a single species of the West- and Central-African and alate genus *Prioscelis*, viz. *Pr. tridens*, has entered the South of Eastern Africa, where it spreads as far southwards as Zululand. The *Passalocharis* and *Prioproctus centralis* are endemic to the Kivu area of the Tanganyika fault, while the *Hemipristula*, *Prioproctus Oertzeni* and *Prioscelis tridens* are strictly confined to the region eastwards from the Rift Valley fault. Among the pycnoceroid *Pycnocerini* there is only the single apterous genus *Catamerus*, which appears to be endemic to the southern part of East Africa, occurring eastwards from the Rift Valley fault and reaching South Africa at the Transvaal and Portu. East Africa. Apart from the North-east African *Amorphochirus* and subg.*Dinoscelis* of *Pycno-*

cerus all the other genera are West- and Central-African. Among the latter there are only a few forms, which have entered East African territories, reaching Southern Africa at Portu. East Africa and Southern Rhodesia;

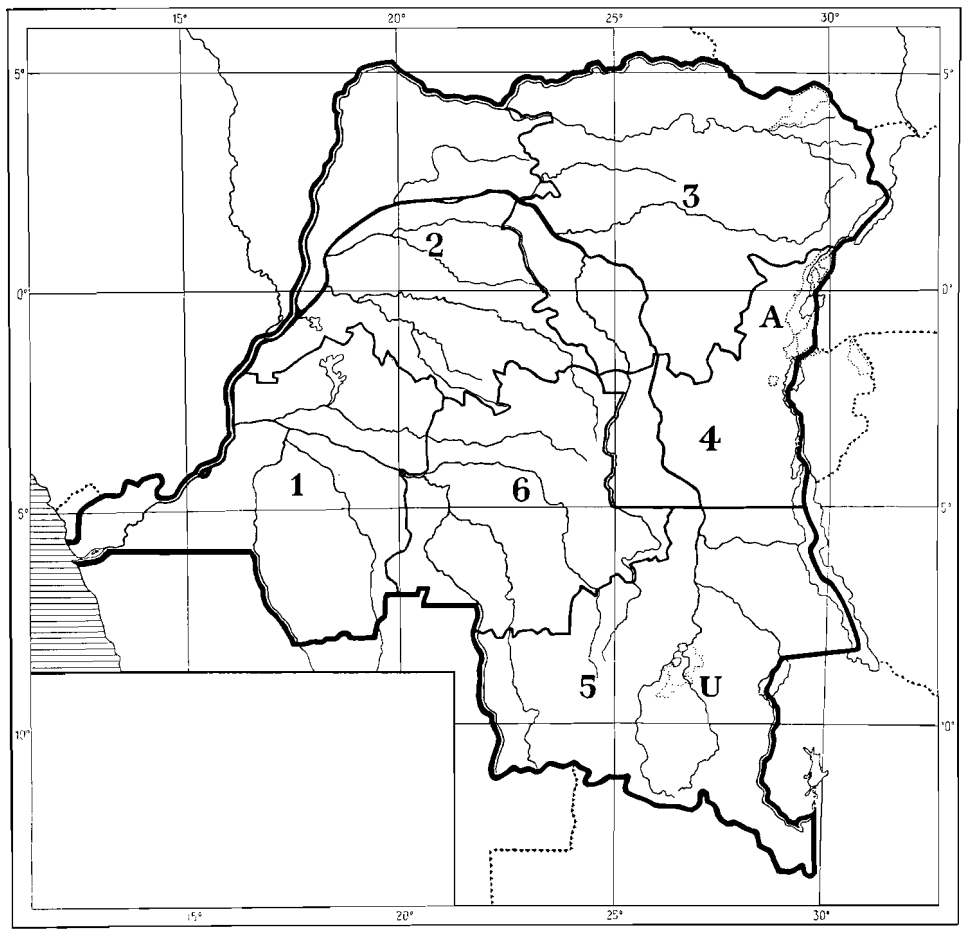

FIG. 1. — Map of the Belgian Congo.

1. Léopoldville Province. — 2. Equator Province. — 3. Oriental Province. — 4. Kivu Province. — 5. Katanga Province. — 6. Kasai Province. — A. Parc National Albert — U. Parc National de l'Upemba.

these are *Pycnocerus Passerini*, as well as three species of *Metallonotus*, viz. *speciosus* (with the forma typica and subsp. *gloriosus*), *ærugineus* and *silvaticus*.

Concluding it may be of interest to emphasize the fact that all the many and concentrated West- and Central-African *Pycnocerini*, with exception of

Chirocharis and *Stratodemus*, are primitive *Tenebrionidæ*, because of having a fully-winged body. On the other hand all the endemic East African genera are apterous, but not the few species, belonging to West- and Central-African

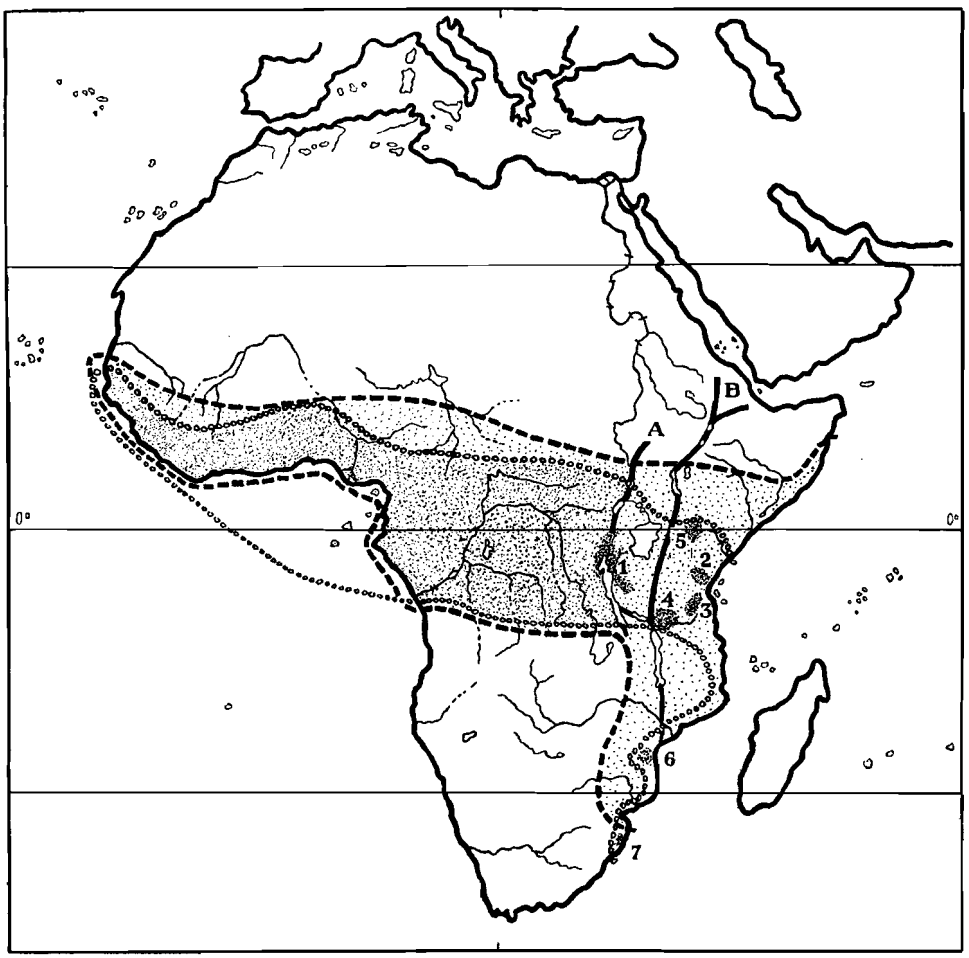

FIG. 2. — Distribution of the African *Pycnocerini*.

oooooooo and sparsely dotted : pycnoceroid *Pycnocerini*.
— — — — — and densely dotted : chyrosceloid *Pycnocerini*.
A ——— Tanganyika fault.
B ——— Rift Valley fault.

Numbers and densely dotted patches : discontinuous distribution of the chirosceloid *Pycnocerini* eastwards from the Tanganyika fault :

1. Kivu area; 2. Usambara area; 3. Ukami area; 4. Uhehe area; 5. Mount Kenya; 6. Chirinda and Amatonga forests; 7. Zululand forest near Mtunzini.

genera, which have migrated to East Africa. The latter are fully-winged as are all the other species of the respective genera. There do not exist transitorial forms between apterous and alate genera. The geographical division between apterous and alate genera is sharp and abrupt, the former occurring at or eastwards from the Tanganyika fault, the latter westwards.

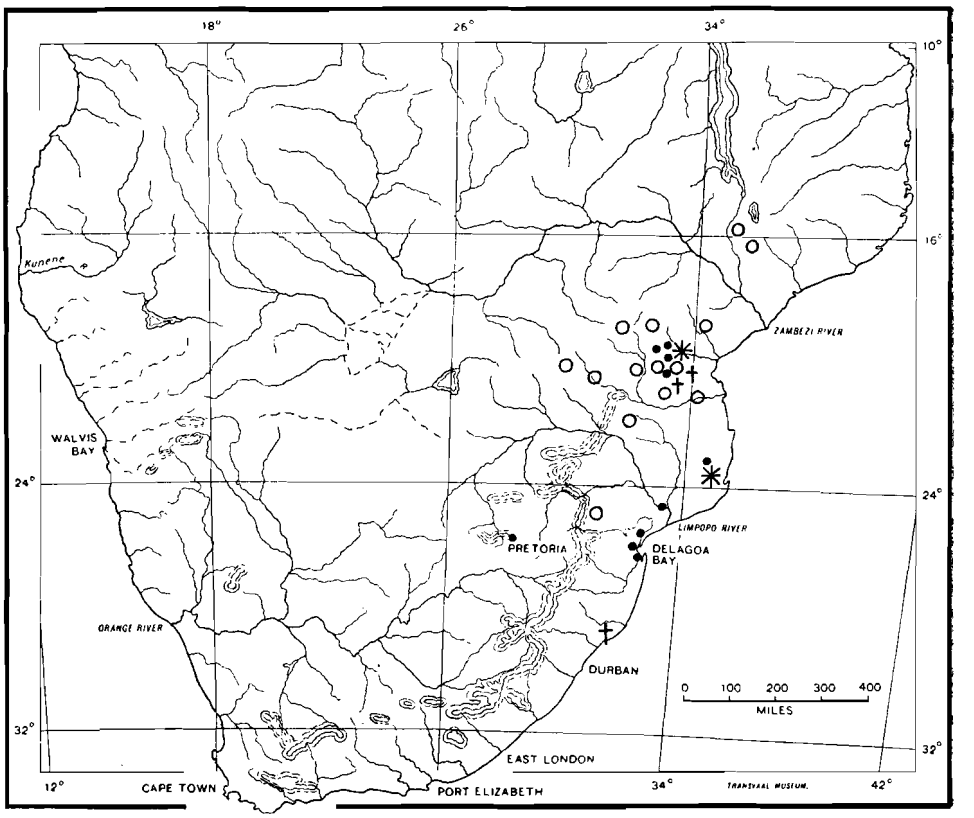

FIG. 3. — Southern and peripheral distribution of *Pycnocerini*.

\+ : *Prioscelis tridens* KOLBE.
* : *Pycnocerus* (s. str.) *Passerini* (BERTOLONI);
o : *Catamerus Revoili* FAIRMAIRE, sensu lato;
• : *Metallonotus ærugineus* GERSTAECKER, *silvaticus* KOCH, *speciosus* subsp. *speciosus* (BERTOLONI) and *speciosus* subsp. *gloriosus* GEBIEN.

Within the Belgian Congo a geographical division of the *Pycnocerini* seems to be hardly indicated; some of the genera or species show more distinctly pronounced West-African, some others more Central-African features; but a sharp line between West- and Central-African forms can not be drawn. Practically the whole of the Belgian Congo is populated by West- and Central-African *Pycnocerini*; only the western margin of the

Tanganyika fault shows an East African influence by the presence of the apterous genus *Passalocharis* and *Prioproctus centralis*.

The composition of the *Pycnocerini* in the National Parcs Albert and Upemba agrees with the above stated findings. A slight but negligible East African influence may be observed in the National Parc Albert; there is none in the National Parc Upemba, which does not differ faunistically from the remaining parts of the Katanga Province.

Only a few *Pycnocerini* belong to the fauna of Southern Africa from South of the Zambesi. These are : of the chirosceloid *Pycnocerini* only *Prioscelis tridens*, of the pycnoceroid ones *Pycnocerus Passerini*, *Catamerus Revoili* in various subspecies, as well as *Metallonotus speciosus*, *ærugineus* and *silvaticus*. The distribution of all these forms is discontinuous. They are confined, as relicts, to isolated patches of East African rain forest in Southern Rhodesia, Portu. East Africa, northern and eastern Transvaal, Swaziland and Zululand. They are not known from the mountainous rain forests of the Southern Cape Province, although there occur other tropical *Tenebrionidæ*, as are for instance the *Nodotelini*.

KEY.

1. Apex of mandibles bifid. Elytra black to testaceous, without metallic sheen; in only two cases (*Calostegia purpuripennis* and *cylindrica*) greenish, bluish or violaceous, but then the elytra striate or finely punctate-striate, with broad and unsculptured intervals, and the basal margination of pronotum formed by the carina of basal foramen, which is in contact with the posterior angles of pronotum. In the *Chiroscelis-group*, in which the carina of basal foramen of prothorax does not join the posterior angles of pronotum, the intervals between the elytral striæ are always unsculptured and smooth .....
Chirosceloid *Pycnocerini*. 2

— Apex of mandibles truncate. Elytra with metallic sheen; in only a few cases black (*Amorphochirus hercules*, aberrations of *Odontopezus cupreus* and *regalis*, and *Metallonotus Janssensi*), but in these cases either the elytra with dense and irregular punctation, and the basal margination of pronotum formed by the carina of basal foramen (*Odontopezus* and *Metallonotus*), or if not so, the intervals between elytral striæ with a longitudinal row of very fine granules (*Amorphochirus*) .....
Pycnoceroid *Pycnocerini*. 36

2. Submentum large, cordiform, concealing the basal joints of maxillary palpi, cardo and stipes of labial palpi and the ligula, strongly narrowed towards base, and at the broadest point about four times as broad as basally (fig. 9 A; Pl. VI, figs. 71, 73). Basal carina of pronotum formed by the pronotal margination, as the carina of basal foramen of prothorax runs well below the posterior angles of pronotum, therefore being

widely separated from the latter, and not raised to level of pronotum dorsally (fig. 4 A). Underside of tarsal joints, with exception of the ungual joint, at the apical margin either with a dentiform or strobiliform lobe at middle or with the lateral angles bearing each a dentiform prominent tubercle; in lateral view these structures project sharply downwards beyond the contours of tarsal joints (fig. 5 A, B) ... *Chiroscelis*-group. 3

— Submentum small, quadrangular, leaving exposed the entire maxillary and labial palpi, cardo and stipes included, and the ligula, less narrowed

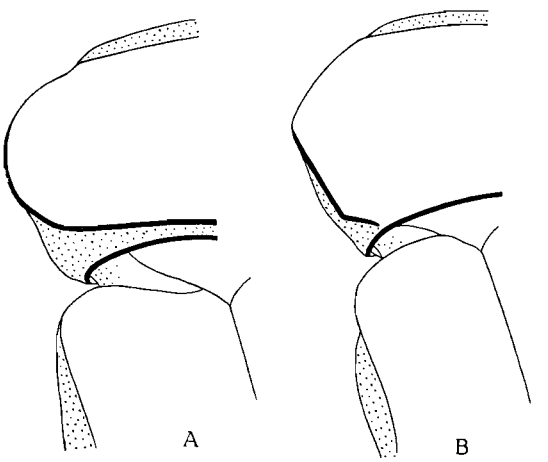

FIG. 4. — Margination of prothoracic base, in dorso-caudal view.
A: in the *Chiroscelis*-group;
B: in the *Prioscelis*-group.

towards base, and at the broadest point about twice as broad as basally (fig. 10 A). Basal carina of pronotum formed by the carinate margination of basal foramen of prothorax, which is in contact with the posterior angles of pronotum, dorsally raised to level of pronotum (fig. 4 B). Underside of tarsal joints simple, without dentiform structure apically (fig. 5 C) ..... *Prioscelis*-group. 17

3. The distal joints of antennæ subpedunculate, distinctly separated from one another by open slits (fig. 9 A; Pl. VII, fig. 79) 4

— Antennæ cylindrical, with the single joints closely fitted into each other and not separated from one another by any kind of open slits; the antennæ therefore with continuous and uninterrupted outlines (fig. 10 A) 14

4. Body alate; shoulders well-developed, more or less rectangular; sides of elytra subparallel behind shoulders (fig. 11). Metasternum distinctly

longer than basal sternite of abdomen, with the space between mesocoxal cavities and metacoxal ones being considerably longer than coxal cavities (fig. 11; Pl. VI, fig. 75).

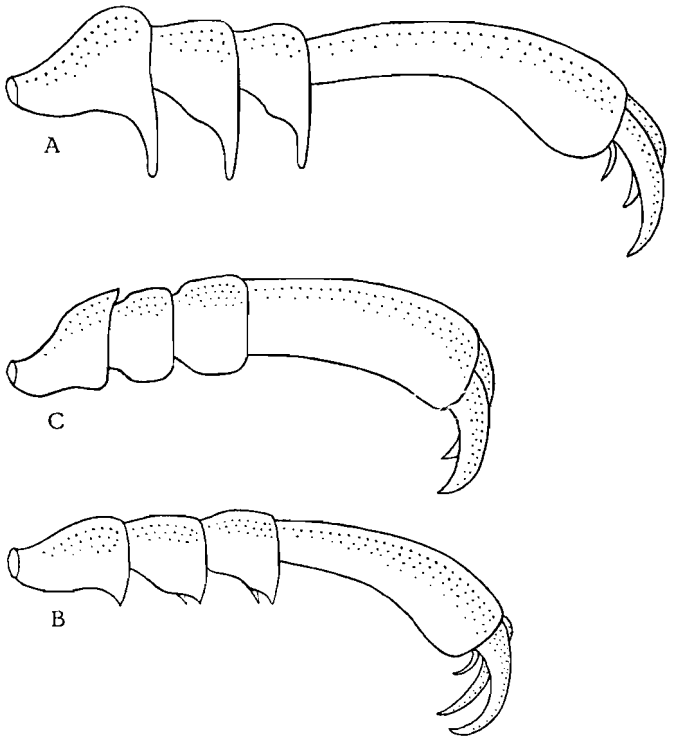

FIG. 5. — Posterior tarsus, lateral face.
A and B : in the *Chiroscelis*-group;
C ..... : in the *Prioscelis*-group.

CHIROSCELIS LAMARCK, 1804.

LATREILLE, 1804. — CASTELNAU, 1840. — WESTWOOD, 1843. — LACORDAIRE, 1859. — KOLBE, 1903. — GEBIEN, 1904.

Central African 5

— Body apterous; shoulders rounded or absent; sides of elytra narrowed towards base. Metasternum distinctly shorter than basal sternite of abdomen, with the space between mesocoxal cavities and metacoxal ones only about one-third the length of coxal cavities, or shorter 6

5. Exposed portions of mesothoracic tergite, on each side of scutellum, rather densely covered with acuductate strioles (Pl. VII, fig. 76). Inner surface of posterior tibiæ in both sexes with a longitudinal row of dense bristles on distal half. Tomentose patches on second abdominal sternite in the ♂ smaller, only a little broader than long. Size smaller, 25 to 34 mm long.

Chiroscelis bifenestrella WESTWOOD, 1843.

(Pl. I, fig. 4; Pl. VI, figs. 71 and 75; Pl. VII, figs. 76, 79, 82.)

WESTWOOD, 1845. — GEBIEN, 1904.

Type locality. — Guinea.

Distribution. — Sierra Leone, Gold Coast, Cameroons, French Equat. Afr., Belgian Congo, north-eastern Angola.

Material examined. — Cameroons (Mukonje Farm). Belgian Congo : Léopoldville province (Mangembo, Kisantu, Ganda Sundi, Mayida, Kikwit, Ipamu, Mwilambongo, Kwamouth); Equator Province (Lisala, Flandria, Bolombo, Eala, Coquilhatville, Libenge, Bokuma, Mamania, Binga, Yambata, Likimi, Gundji); Oriental Province (Buta, Moto, Barumbu, Yindi, Basoko, Yangambi, Bambesa); Kivu Province (Kindu, Maniema, Matale); Katanga Province (Kaniema, Kapanga, Katompe, Kafakumba); Kasai Province (Luluabourg, Luebo, Kabinda, Mwene Ditu). Spanish Guinea (Mongo). Northeastern Angola (Dundo, Floresta do Riv. Luachimo).

– Exposed portions of mesothoracic tergite, on each side of scutellum smooth or with only a few, single strioles (Pl. VII, fig. 77). Inner surface of posterior tibiæ only in the ♂ with a longitudinal row of bristles on distal half, in the ♀ inermous. Tomentose patches on second abdominal sternite in the ♂ large, about twice as broad as long. Size larger, 29 to 44 mm long.

Chiroscelis digitata (FABRICIUS, 1801).

(Fig. 6; Pl. I, fig. 2; Pl. VII, fig. 77.)

KLUG, 1835. — CASTELNAU, 1840. — HOPE, 1840. — WESTWOOD, 1843. — WESTWOOD, 1845. — KOLBE, 1903. — GEBIEN, 1904. — *bifenestrata* LAMARCK, 1804. — LATREILLE, 1804. — GUÉRIN, 1837. — *striatopunctata* FAIRMAIRE, 1894.

Type locality. — Guinea.

Distribution. — Senegal, Liberia, Dahomey, Gold Coast, Ashantee, Cameroons, French Equat. Afr., Belgian Congo, Uganda.

Material examined. — Belgian Congo : Léopoldville Province (Ipamu, Lemfu, Gingungi, Matadi, Mayidi, Kisantu, Kikwit, Leverville, Banana, Weka, Zaba, Temvo, Lokandu, Lukula, Ganda Sundi, Makaya Tete, Kwamouth, Léopoldville, Kalina, Mpese, Inkisi, Kiulu, Ngowa, Kiobo); Equator Province (Budjala, Binga, Karawa, Eala, Bokatola, Bikoro, Bolobo, Dwa, Bokungu, Boende, Flandria, Makamandelu, Libenge, Lisala, Ebola, Lukolela, Itoka,

Yambata, Bokote); Oriental Province (Stanleyville, Yangambi, Barumbu, Bambesa, Buta, Elisabetha, Panga, Kikanga, Bafwasende, Medje, Faradje, Poko, Bolama, Kondolole, Gazi, Kilo, Gety, Wamba,

FIG. 6. — *Chiroscelis digitata* (FABRICIUS).

A. Anterior tibia and tarsus, inner lateral face. — B. Anterior leg, outer lateral face. — C. Posterior leg, outer lateral face. — D. Posterior tibia, upper face. — E. Posterior tibia, inner lateral face. — F. Intermediate leg, outer lateral face.

Basoko, Mongbwalu, Irumu, Yindi, Bunia, Lula); Kivu Province (Kindu, Maniema, Costermansville, Lubile, Matale, Shabunda, Lubongola, Kasongo, Beni, Lubutu, Kituri); Kasai Province (Galli Koko, Katoka, Luebo, Katako-Kombe, Lusambo, Sangale, Kondue);

Katanga Province (Sandoa); Parc National Albert (Mwenda, Katuka, forêt Semliki, Ndyelele, riv. Butahu). Uganda (Beni Ituri Forest). Ivory Coast (Mau).

6. Epistomal surface either with a median carina (Pl. V, fig. 62) or asymmetrical (Pl. V, figs. 63, 64), and in the latter case the left tubercle of apical margin alone developed or much stronger than the rudimentary right one. Outer margin of anterior tibiæ with a sharp tooth between middle and apical tooth (Pl. VII, fig. 81), the apical portion of tibiæ therefore appearing as if quadri-digitate (figs. 7 E, F; 8 E, F). Submentum practically bare, except for *Passalocharis curvipes*, in which it is densely hairy 7

— Epistomal surface with two median carinæ or with two symmetrical tubercles on apical margin (Pl. V, figs 66 to 68; Pl. VI, figs 69 to 70). Outer margin of anterior tibiæ denticulate or crenulate between middle and apical tooth (Pl. VII, fig. 83), the apical portion of tibiæ therefore appearing as if only tri-digitate (fig. 9 B, C). Submentum covered with a brush of dense yellowish hairs, concealing completely the background of cuticle (fig. 9 A).

HEMIPRISTULA STRAND, 1935.

Hemipristis KOLBE, 1903. — GEBIEN, 1904. — GEBIEN, 1911. — *Chirocharis* GEBIEN, 1911*a*. — GEBIEN, 1938-1942.

East African 10

7. Apical margin of intermediate and posterior tibiæ denticulate as in *Hemipristula* (fig. 8 A-D; Pl. VII, figs. 78, 80). Under surface of anterior tibiæ with the middle of the inner margin dilated and lobiform, and with crenulate or denticulate apical margin (fig. 8 F). Anterior femora without distinct teeth and with simple trochanters (fig. 8 E, F). Epistome asymmetrical, with only the left tubercle strongly developed and the right one generally absent; sides of epistome practically in line with genæ (Pl. V, fig. 63, 64). Pronotum quadrangular, with subparallel sides. Submentum either bare and with a few fine hairs, or densely hairy.

PASSALOCHARIS n. gen.

Type species. — *Chirocharis intermedius* GEBIEN, 1911*a*.

The new genus is closely allied to *Hemipristula*, with which it agrees in the denticulate apical margin of the intermediate tibiæ and posterior ones, a particular, which is likewise shown in the genera *Prioproctus*, *Stratodemus* and *Pristophilus*. *Chirocharis* differs strongly from the new genus and *Hemipristula* in the formation of

the legs, thereby agreeing to a high extent with the alate *Chiroscelis*. It is therefore impossible to unite *Hemipristula* with *Chirocharis*, as GEBIEN, 1911*a*, has done it.

East African 8

— Apical margin of intermediate tibiæ and posterior ones smooth and sharp as in *Chiroscelis* (fig. 7 A-D; Pl. VI, fig. 82). Under surface of

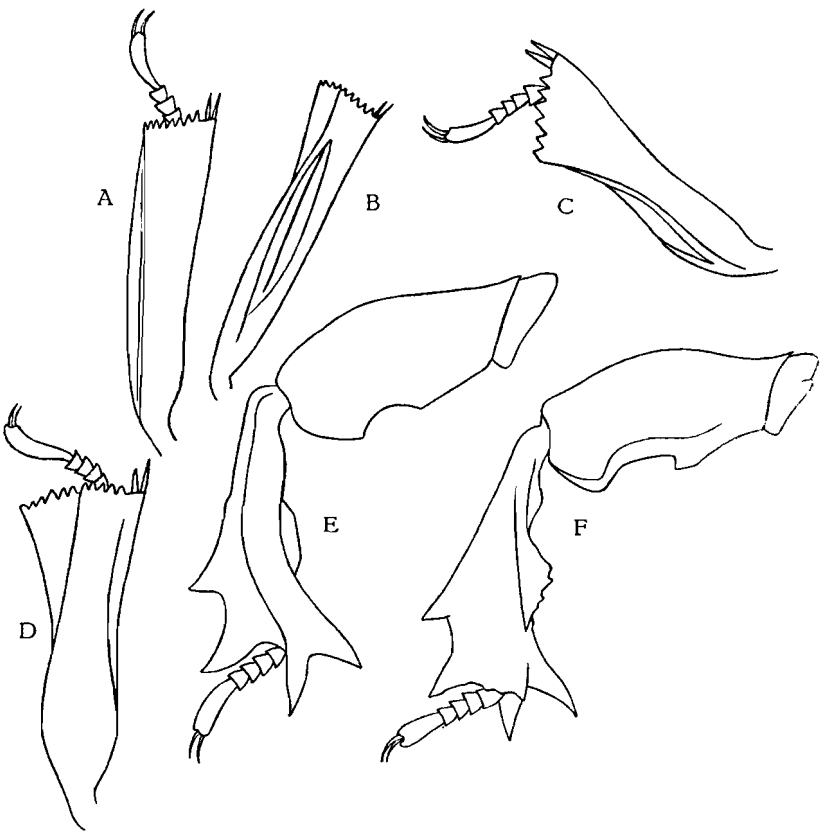

FIG. 7. — *Chirocharis australis* (WESTWOOD).

A. Posterior tibia, inner lateral face. — B. Posterior tibia, outer lateral face. — C. Intermediate tibia, inner lateral face. — D. Intermediate tibia, outer lateral face. — E. Anterior leg, outer lateral face. — F. Anterior leg, inner lateral face.

anterior tibiæ with the middle of inner margin produced into a sharp tooth, and with the inner angle of the smooth apical margin likewise produced into a tooth (fig. 7 E, F). Anterior femora and trochanters

shaped as in *Chiroscelis*; with a sharp tooth apically at each side of the tibial socket, with a tooth at the proximal end of the inner carina of the under surface in front of the base of femur, and with a tubercle at the outer angle of the anterior margin of trochanters (fig. 7 E). Epistome symmetrical, with strong median carina; sides forming an angle with the genæ (Pl. V, fig. 62). Pronotum with broadly rounded sides, which are strongly narrowed towards base.

CHIROCHARIS KOLBE, 1903.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Monotypical genus :

Chirocharis australis (WESTWOOD, 1845).

(Fig. 7; Pl. I, fig. 3; Pl. V, fig. 62; Pl. VII, fig. 81.)

Type locality. — Inner parts of the South of East Africa.

Distribution. — Sierra Leone, Ivory Coast, Cameroons, Gaboon, French Congo, north-western parts of the Belgian Congo, north-eastern parts of Angola.

Material examined. — Cameroons (Fan). Belgian Congo, Léopoldville Province (Mayidi). Spanish Guinea (Mongo).

8. Inter-ocular portion of vertex with one single tubercle at middle (Pl. V, figs. 63, 64). Elytra ciliate along sides, with fine and erect hairs on sloping lateral and apical portions 9*a*

— Inter-ocular portion of vertex with two tubercles at middle (Pl. V, fig. 65). Elytra bare 9*b*

9*a*. Body black, of larger size, 40 to 49 mm long. Pilosity on elytra scattered; sides less strongly narrowed towards base.

Passalocharis intermedia (GEBIEN, 1911*a*).

(Fig. 8; Pl. I, fig. 4; Pl. V, fig. 63.)

GEBIEN, 1938-1942.

Type locality. — Lake Kivu, Ruanda.

Distribution. — Endemic to the Kivu-area.

Material examined. — Ruanda-Urundi (lake Kivu). Belgian Congo, Kivu Province (forêt Lubinde, Shabunda, Walunga, Lubongola, Matele, Katana, Kabasha, Mwanga, Elila, Costermansville-Bukavu).

— Body reddish brown to black, of smaller size, 32 to 38 mm long. Elytra with more dense pilosity and more strongly narrowed sides basally.

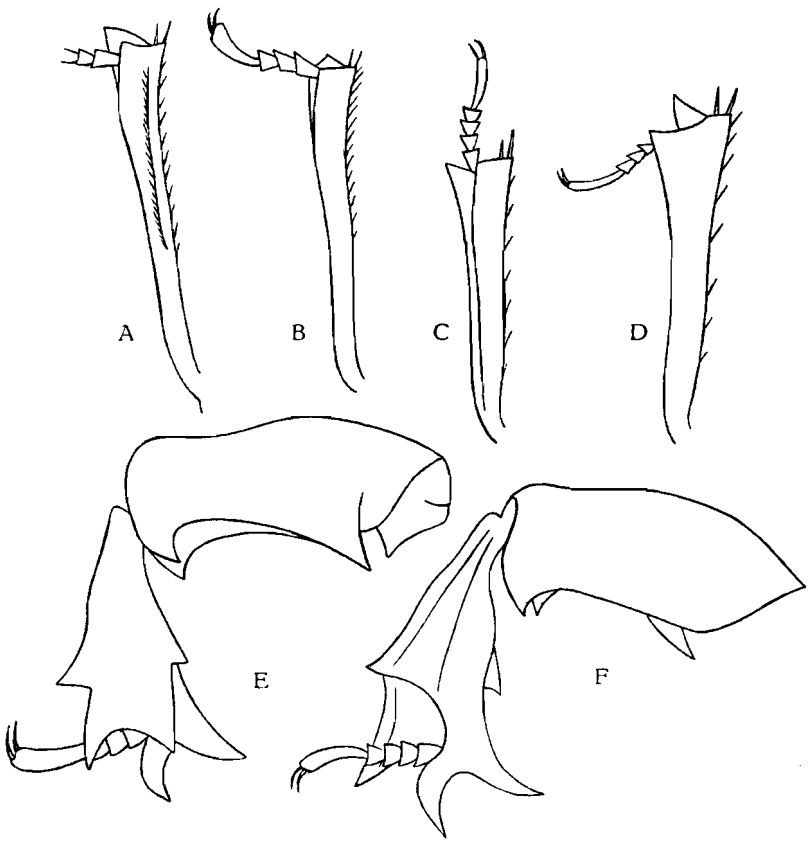

FIG. 8. — *Passalocharis intermedia* (GEBIEN).
A. Posterior tibia, outer lateral face. — B. Posterior tibia, inner lateral face. — C. Intermediate tibia, outer lateral face. — D. Intermediate tibia, inner lateral face. — E. Anterior leg, inner lateral face. — F. Anterior leg, outer lateral face.

Passalocharis ciliata n. sp.

(Pl. I, fig. 5; Pl. V, fig. 64.)

Distribution. — Endemic to the Kivu-area, but allopatric with *P. intermedia* and probably representing a vertical subspecies of the latter.

Material examined. — Belgian Congo, Kivu Province : Katana, 26 June 1947, leg. Mission Tanganyika (6 spec., holo- and allotypes I.R., paratypes I.R. and T.M.); Mountains West of Njamukubi, Nov. 1932, 2.350 m, leg. L. BURGEON (2 paratypes BCM.); Tshi-

binda, Nov. 1932, leg. L. BURGEON (3 paratypes BCM.); Kadjudju, Nov. 1932, leg. L. BURGEON (1 paratype BCM.); Kalonge, 1936, leg. J. V. LEROY (2 paratypes BCM.); Luzira Kaleke, 1.600 m, Apr. 1932, leg. L. VAN ROECHOUDT, collected in rotting wood of *Acalipha* (1 paratype BCM.). Ruanda-Urundi : forêt Rugege, 2.000 to 2.500 m, 1949, leg. FAIN (1 paratype BCM.); Nyangwe, Aug. 1946, leg. J. M. SCHOLL (10 paratypes BCM. and T.M.).

9*b*. Submentum densely hairy. Vertex of head between eyes with broad impression, which is posteriorly delimited by an arcuate rim, as it is the case in *P. intermedia* and *P. ciliata*; frons with a strong tubercle within, and a little in front of eyes on each side. Antennal joints, one to six, smooth and polished, seven to ten with minute asperities and sparsely hairy. Buccal fissure portions on underside of head coarsely sculptured. Body large, 50 mm long.

Passalocharis curvipes (BLAIR, 1926).

GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory, Kinole.
I do not know this species in nature.

— Submentum bare, with only a few fine, erect hairs. The frontal-epistomal impression of head not prolonged backwards to vertex, and not delimited posteriorly by any kind of rim or carina; frons without pre-ocular tubercles but with the supra-orbital ridge extending forwards to and almost continuous with the genal delimitation of the frontal-epistomal impression. Only the three basal joints of antennæ smooth and polished, all the following joints densely ciliate and covered with scattered, fine asperities. Buccal fissure portions with concentrated punctation only on the outer tooth. Body small, 24 to 28 mm long.

Passalocharis Leleupi n. sp.

(Pl. V, fig. 65.)

Distribution. — A strictly mountainous species, endemic to the Kivu-area.

Material examined. — Belgian Congo, Kivu Province : Uvira : Luvubu, 2.650 m, Nov. 1950, leg. N. LELEUP (1 ♂, collected in the cellular tissue of bamboo, holotype BCM.); Uvira : vallée Luvubu, 2.550 m, Sept. 1950, leg. N. LELEUP (1 ♀, collected in the bamboo forest, allotype BCM.); Kalehe : riv. Mukaba, S.-E. of Kahusi, 2.200 m, July 1951, leg. N. LELEUP (1 ♀, collected in the humus of bamboo and *Hagenia*, paratype T.M.); same locality (1 ♀, paratype BCM.).

10. Apical margin of buccal fissure portion on underside of head with two teeth (Pl. VI, fig. 72) 11

— Apical margin of buccal fissure portion on underside of head with only one inner tooth (fig. 9) 13

11. Upper surface of head with epistome dull; epistomal carinæ as far apart as are the inter-ocular tubercles on vertex (Pl. V, figs. 66 and 68; Pl. VI, figs. 69 and 70) 12

— Head above shiny, sparsely punctured; epistomal carinæ or tubercles approximated, the inter-ocular tubercles much more distant than are the epistomal ones (Pl. V, fig. 67).

Hemipristula kenyensis (BLAIR, 1926).

(Pl. I, fig. 6; Pl. V, fig. 67.)

GEBIEN, 1938-1942.

Type locality. — British East Africa, south-eastern slopes of Mt. Kenya, 6.000 to 7.000 ft.

Distribution. — Endemic to the Mount Kenya.

Material examined. — 1 paratype ex B.M.; Forest Station, Embu Kenya, Aug. 1949, leg. T. H. S. JACKSON (1 spec. C.M.).

H. kenyensis is a very specialized species, which differs from all the other apterous *Pycnocerini* of the *Chiroscelis*-group by the long tarsal groove on anterior tibiæ, being prolonged proximad to the base of tibia, the very shiny, almost impunctate, polished elytra, and the structure of the apical margin of the mandibular fissure portion. The latter appears as if tri-lobate, as the inner tooth is not in line with the inner lateral margin of the fissure portion, but separated from the latter by an angular emargination; in all the other species the inner tooth is continuous with the inner lateral margin of mandibular fissure portion.

12. Elytra lineate-sulcate, with convex intervals between stripes. Size small, less than 30 mm long.

Hemipristula Kraatzi (GEBIEN, 1904).

(Pl. I, fig. 7; Pl. V, fig. 66.)

GEBIEN, 1911. — BLAIR, 1926. — GEBIEN, 1938-1942.

Type locality. — Tanganyika.

Distribution. — Confined to the Tanganyika Territory.

Material examined. — Tanganyika Territory : Usambara.

— Elytra with punctured rows; intervals between rows almost flat. Size large, more than 30 mm long.

Hemipristula stygica (KOLBE, 1894).

(Pl. I, fig. 8; Pl. V, fig. 68; Pl. VI, fig. 72; Pl. VII, fig. 83.)

KOLBE, 1897. — KRAATZ, 1898. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1911*a*. — BLAIR, 1926. — GEBIEN, 1938-1942.

Distribution. — Southern parts of British East Africa and Tanganyika Territory (according to GEBIEN, 1904, in Usambara, Derema, Nguelo, Tanga and Dar-es-Salaam).

Material examined. — Tanganyika Territory : Nguelo, Usambara, Sigital, Amani, Nderema.

13. Head above rugose. Prosternal apophysis horizontally produced beyond procoxal cavities, with strongly compressed and perpendicularly declivous apex. Mesosternum sculptured. Outer face of intermediate tibiæ finely punctured or glabrous. ♂ with narrow and transverse tomentose patches on sides of the second abdominal sternite.

Hemipristula Mülleri (KRAATZ, 1898).

(Fig. 9; Pl. I, fig. 9; Pl. VI, figs. 69 and 73; Pl. VII, fig. 80.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1911*a*. — BLAIR, 1926. — GEBIEN, 1938-1942.

Distribution. — Tanganyika Territory and southern parts of British East Africa.

Material examined. — Tanganyika Territory : Usambara, Amani, Lutindi.

— Head above smooth. Prosternal apophysis gradually bent downwards behind procoxal cavities, with complanate and broad, depressed apex, and without prominent apical declivity. Mesosternum smooth, with only a few fine punctures on sides. Outer face of intermediate tibiæ with dense and very large foveæ on distal one-half. ♂ with large and round tomentose patches on the sides of second abdominal sternite.

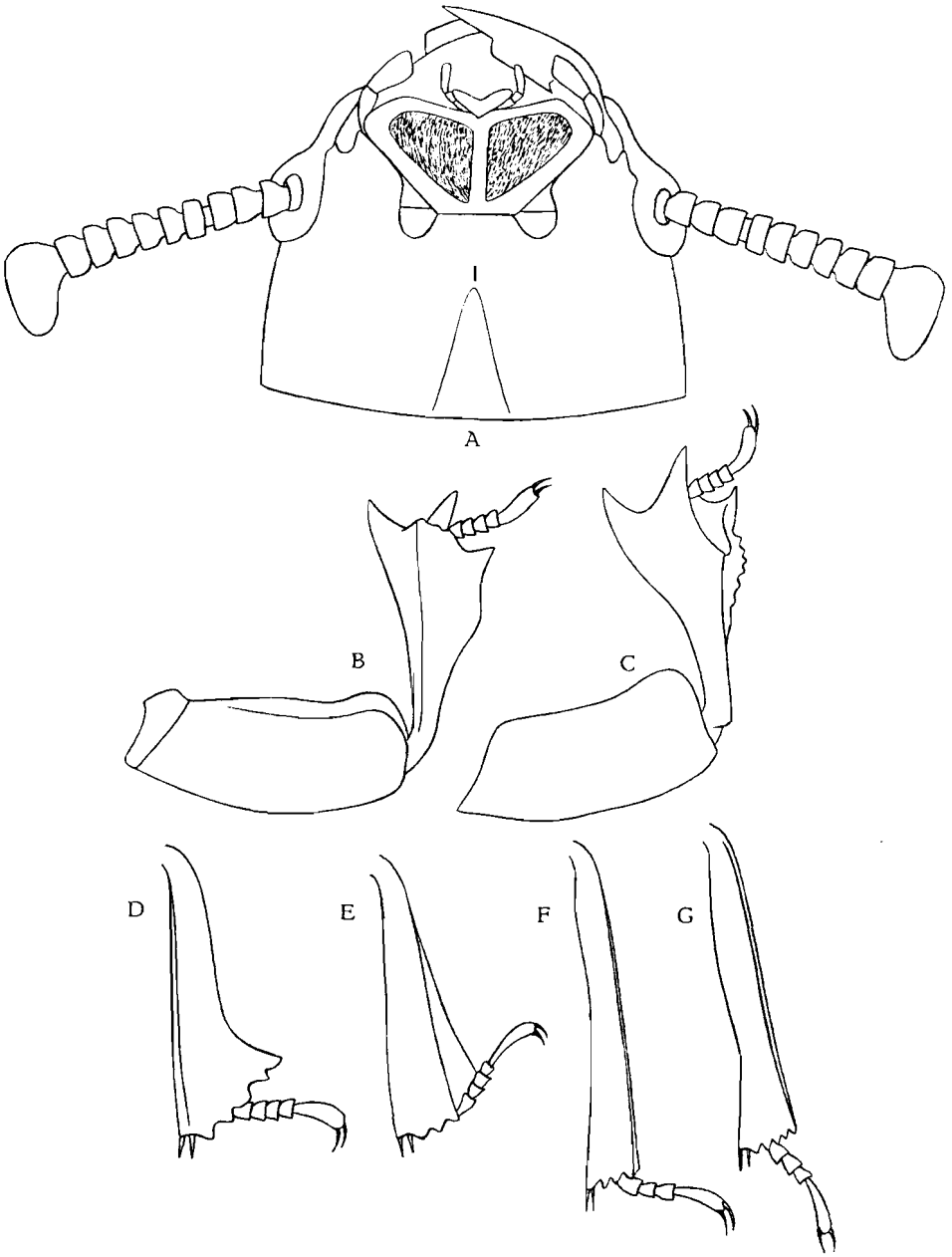

FIG. 9. — *Hemipristula Mülleri* (KRAATZ).

A. Head with antennae, underside. — B. Anterior leg, outer lateral face. — C. Anterior leg, inner lateral face. — D. Intermediate tibia, outer lateral face. — E. Intermediate tibia, inner lateral face. — F. Posterior tibia, outer lateral face. — G. Posterior tibia, inner lateral face.

Hemipristula ukamia (KOLBE, 1903).

(Pl. I, fig. 10; Pl. VI, figs. 70 and 74; Pl. VII, fig. 78.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1911*a*. — BLAIR, 1926. — GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory : Ukami Mountains.

Distribution. — Endemic to the Ukami Mountains.

Material examined. — 1 paratype ex M.F.

14. Body apterous; shoulders rounded; elytra narrowed in front of base. Metasternum shorter than basal sternite of abdomen, with the space between mesocoxal cavities and metacoxal ones less than one-half the length of coxal cavities 15

— Body alate; shoulders rectangular; elytra with subparallel sides. Metasternum much longer than basal sternite of abdomen, with the space between mesocoxal cavities and metacoxal ones almost twice as long as coxal cavities (fig. 11).

PRISTOPHILUS KOLBE, 1903.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.
Central African.

Monotypical genus :

Pristophilus passaloides (WESTWOOD, 1843).

(Pl. II, fig. 12.)

Type locality. — Guinea.

Distribution. — Dahomey, Cameroons, Gaboon, French Congo, Belgian Congo, Uganda.

Material examined. — Belgian Congo : Léopoldville Province (Mpese, Leverville, Gingungi, Mangembo, Lobo, Mazingu, Mayidi, Mwilambongo, Léopoldville); Equator Province (Wenga Ifami, Libenge, Eala, Lisala, Gwangu, Gumba, Bolobo, Makamandelu, Yolo, Ikela, Bokote, Makako, Flandria, Bokatola, Bikoro, Dwa, Boende); Oriental Province (Stanleyville, Bambesa, Wamba, Zobia, Niapu, Poko, Ibembo, Nduye, Makara, Dingila, Bafwasende, Bomili, Barumbu, Yamboyo, Moto, Yangambi, Elisabetha, Irumu, Lodjo, Panga, Buta, Paulis); Kivu Province (Kituri, Beni, Kasongo, Shabunda, Kindu); Katanga Province (Kapanga, Kafakumba); Kasai Province (Luebo, Kondue, Luluabourg, Bashishombe, Lusambo,

Sangale, Katako-Kombe, Djoko, Tunda, Shenateke); Parc National Albert (riv. Butahu, Ndzobulo, Mwenda, Katuka). Uganda : Beni Ituri Forest. Gaboon : Libreville.

15. Antennæ moderately broadened, distinctly accrescent towards apex, with the apical joint distinctly broader than the median joints; the latter three times as broad as long (fig. 15 I). Inferior edge of the lateral face of mandibles with a lobiform dilatation at base.

STRATODEMUS GEBIEN, 1920.

GEBIEN, 1938-1942.

West African.

Monotypical genus :

Stratodemus heraldicus GEBIEN, 1920.

(Fig. 15, F, H, I; Pl. I, fig. 11.)

Type locality. — Cameroons : Bana.

Distribution. — Confined to the Cameroons.

Material examined. — 1 paratype ex M.F.

— Antennæ extremely broadened, dilated from base towards middle, becoming more or less strongly attenuate from middle towards apex; the apical joint distinctly narrower than median joints; the latter four to five times as broad as long (fig. 10). Mandibles simple, with continuously curved lateral outlines.

PRIOPROCTUS KOLBE, 1903.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

East African 16

16. Antennæ strongly attenuate towards apex; the apical joint basally a little more than one-third narrower than the broadest median joint; third joint only a little narrower than the fourth one. The pre-ocular tubercles on upper surface of head gradually sloping backwards and continuous with the well-pronounced supra-orbital ridge; genal canthus prolonged backwards and almost reaching the eyes. Elytra with rounded shoulders, without humeral callus, therefore the lateral margination of elytra visible from above. Body completely wingless, of larger size, 45 to 56 mm long.

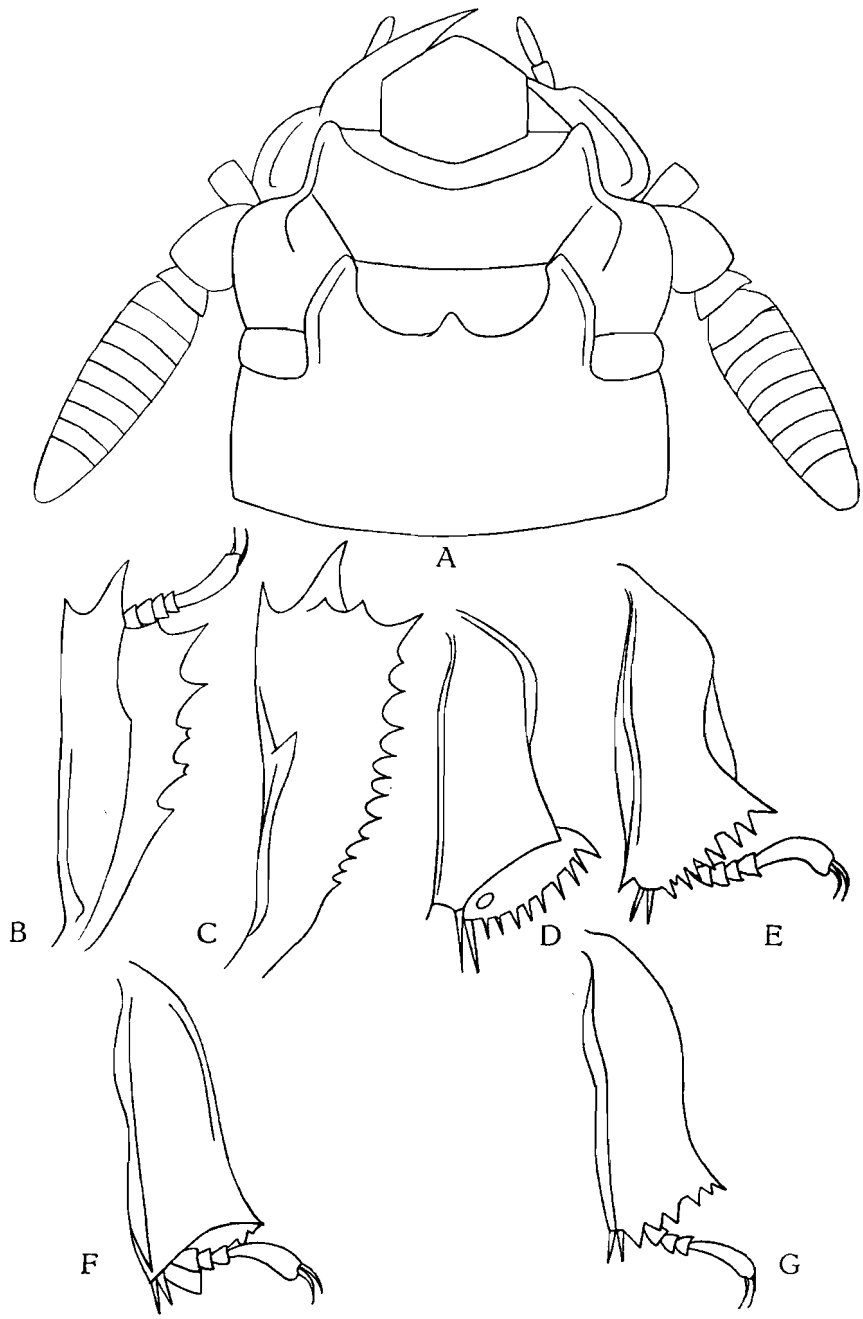

FIG. 10. — *Prioproctus Oertzeni* KOLBE.
A. Head with antennae, upper surface. — B. Anterior tibia and tarsus, inner lateral face. — C. Anterior tibia, outer lateral face. — D. Intermediate tibia, inner lateral face. — E. Intermediate tibia, outer lateral face. — F. Posterior tibia, inner lateral face. — G. Posterior tibia, outer lateral face.

Prioproctus Oertzeni KOLBE, 1903.

(Fig. 10; Pl. II, fig. 13.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory : Ukami Mountains.

Distribution. — Tanganyika Territory.

Material examined. — Tanganyika Territory : Mufindi.

— Antennæ moderately attenuate towards apex; the apical joint basally only one-quarter to one-fifth narrower than the broadest median joint; third joint almost as long as the two following joints combined. The pre-ocular tubercles on upper surface of head abruptly declivous and ending posteriorly, sharply separated from the rudimentary supra-orbital ridge; genal canthus abbreviated posteriorly, widely separated from eyes. Elytra with obtusangular shoulders, with well-developed humeral callus, concealing the lateral margination of elytra, if viewed from above. Body with rudimentary wing-strips, more slender, of smaller size, 43 to 46 mm long.

Prioproctus centralis KOLBE, 1903.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Batumbi, West of Lake Kivu.

Distribution. — Endemic to the Kivu-area.

Material examined. — Belgian Congo, Kivu Province (Matale, Lubongola, Shabunde, Malungu, Katana, Costermansville).

17. The proximal joints of antennæ shiny, the distal ones dull. Pronotum smooth or with very fine and scattered punctures. Distal portion of outer face of posterior femora smooth to finely punctured. Lateral edge of pronotum completely carinate, smooth or crenulate 18

— Antennæ entirely dull. Pronotum and distal portion of outer face of posterior femora with dense, confluent, scabrose to rugose punctation. Lateral edge of pronotum not carinate, but with a row of dentiform tubercles.

PRIOSCELIDES KOLBE, 1889.

KOLBE, 1903. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

West and Central African 28

18. Body large, not less than 22 mm long 19

— Body smaller, at most 18 mm long.

GABONISCA FAIRMAIRE, 1894.

Gabonia FAIRMAIRE, 1894. — *Prioscelides* GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

West and Central African.

GEBIEN, 1904, has created a great confusion in considering *Gabonisca* a synonym of *Prioscelides*. While he separated in his generic key (loc. cit., pp. 108-109) *Prioscelides* + *Gabonisca* from *Prioscelis* by the longer third joint of antennæ and the crenulate lateral edge of pronotum, he used in a contradictory way the same differential particulars in his key to the species of *Prioscelides* + *Gabonisca*.

Gabonisca represents a valid genus, which differs essentially from *Prioscelides* KOLBE (nec GEBIEN) in the abbreviated third joint of antennæ, the shiny proximal joints of the latter, the finely punctured outer face of posterior femora, the polished pronotum, the lateral edge of which is carinate and not tuberculate, and finally in the different structure of legs. In the ♂♂ of *Prioscelides* the inner surface of intermediate tibiæ and posterior ones shows a strong and strobiliform denticulation, which is lacking in *Gabonisca* 29

19. Third joint of antennæ only a little longer than the fourth one, often of similar length. Lateral carina of pronotum smooth.

PRIOSCELIS HOPE, 1840.

WESTWOOD, 1843. — THOMSON, 1858. — LACORDAIRE, 1859. — KOLBE, 1903. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

West, Central, East and South-east African 20

— Third joint of antennæ about one and a half times as long as the fourth joint. Lateral carina of pronotum irregularly crenulate.

CALOSTEGIA WESTWOOD, 1842.

WESTWOOD, 1843. — LACORDAIRE, 1859. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *Apristopus* KOLBE, 1903.

West and Central African 34

20. Inner margin of intermediate tibiæ straight, without tooth or dentiform dilatation at middle (figs 12 A, 13 A, 15 B, G). Ungual joint of posterior tarsi distinctly longer than the remaining joints taken together (fig. 12 B, D). Carina of the anterior margin of pronotum broadly interrupted at middle 21

— Inner margin of intermediate tibiæ with dentiform dilatation or spiniform tooth at middle (fig. 16 C, D). Ungual joint of posterior tarsi not longer than the remaining joints taken together (fig. 16 E). Carina of the anterior margin of pronotum complete, except for *Pr. exigua*, in which it is sometimes more or less interrupted at middle 25

21. The two apical sternites of abdomen linearly impressed or marginate around anterior angles (fig. 11). Posterior tibiæ more or less abruptly dilated at distal one-third (fig. 12 B, D). Anterior tibiæ strongly bent (fig. 12 C, E) 22

— The two apical sternites immarginate. Posterior tibiæ gradually dilated towards apex (fig. 15 D, E). Anterior tibiæ slightly bent (fig. 15 A, C) 24

22. Apex of prosternal apophysis with pointed tooth. Striation on elytra almost reaching the apex. Body smaller, 24 to 40 mm long 23

— Apex of prosternal apophysis blunt. Striolation on elytra evanescent on apical declivity. Body larger, 40 to 44 mm long.

Prioscelis serrata subsp. **hæsitans** KOLBE, 1903.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Island of Sâo Tomé.

Distribution. — Endemic to the Island of Sâo Tomé.

Material examined. — Island of Sâo Tomé (3 spec., leg. S.A.R. Prince LÉOPOLD, BCM.).

23. The striæ on apical one-quarter of elytra much narrower than the intervals; apical declivity with moderately dense sculpture. Distal dilatation of posterior tibiæ strong. Body larger, 26 to 40 mm long.

Prioscelis serrata subsp. **serrata** (FABRICIUS, 1775).

(Figs. 11-14; Pl. II, fig. 14.)

HERBST, 1799. — OLIVIER, 1795. — FABRICIUS, 1801. — HAROLD, 1879. — KOLBE, 1903. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *Raddoni* WESTWOOD, 1843.

Type locality. — Sierra Leone.

Distribution. — Sierra Leone, Liberia, Gold Coast, Ivory Coast, Togo, Cameroons, French Equat. Afr., Belgian Congo, Uganda, northern Angola.

Material examined. — Belgian Congo : Léopoldville Province (Mayidi, Kisantu, Lemfu, Benza Mazola, Malela, Zobe, Inkisi, Ngowa); Equator Province (Eala, Libenge, Wenga Ifami, Bolobo, Dwa, Itoka, Bokala, Lisala, Ebola, Yambata, Modjuambe, Bamania, Flandria); Oriental Province (Yangambi, Mongbwalu, Bambesa, Kilo, Buta, Stanleyville, Nduye, Makara, Moto, Wamba,

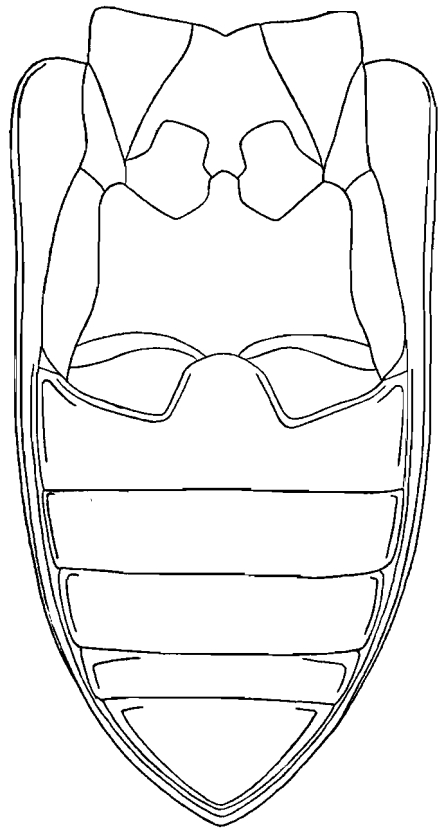

FIG. 11. — *Prioscelis serrata* (FABRICIUS). Underside of afterbody.

Irumu, Poko, Bondo); Kivu Province (Biruwe, Matenda, Masisi, Lubutu, Masua, Matale, Mutwanga, Lubile, Kasongo, Beni); Katanga Province (Kafakumba, Élisabethville, Sandoa, Kapanga, Muteba, Katompe, riv. Ndembo, Tshimbalanga, Luashi, Nyunzu, Tshala, Kaniama, Kepaza, Tshibamba, Tshibalaka, riv. Lunene, Kaongwesi, riv. Luele, Mutombo Mukulu, riv. Kasangeyi, Mukempe, Kinda); Kasai Province (Mwene Ditu, Bashishombe, Kondue, Kanda-Kanda, Gandajika, Luluabourg, Kabwe); Parc National Albert (Mwenda,

FIG. 12. — *Prioscelis serrata* (FABRICIUS).
A. Intermediate tibia, inner lateral face. — B. Posterior leg, outer lateral face. — C. Anterior tibia, inner lateral face. — D. Posterior tibia, inner lateral face. — E. Anterior tibia, outer lateral face.

Katuka, riv. Butahu, Bugazia, forêt Semliki). Cameroons (Mukonje Farm). Northern Angola (Cassanguidi, Boa Entrada Gabela). Uganda (Entebbe, Katoa).

— The striæ on apical one-quarter of elytra hardly narrower than the intervals; apical declivity with very dense, irregular and rugosely confluent sculpture. Distal dilatation of posterior tibiæ weak. Body small, 23 to 24 mm long.

Prioscelis serrata subsp. **serrata** var. **pseudocameruna** n.

Western Belgian Congo. Kasai Province, Bashishombe, Aug. 1921, leg. GHESQUIÈRE (1 spec., holotype, sex not determined, BCM.). Kivu Province, Matale, July 1939, leg. HAUTMANN (1 paratype T.M.).

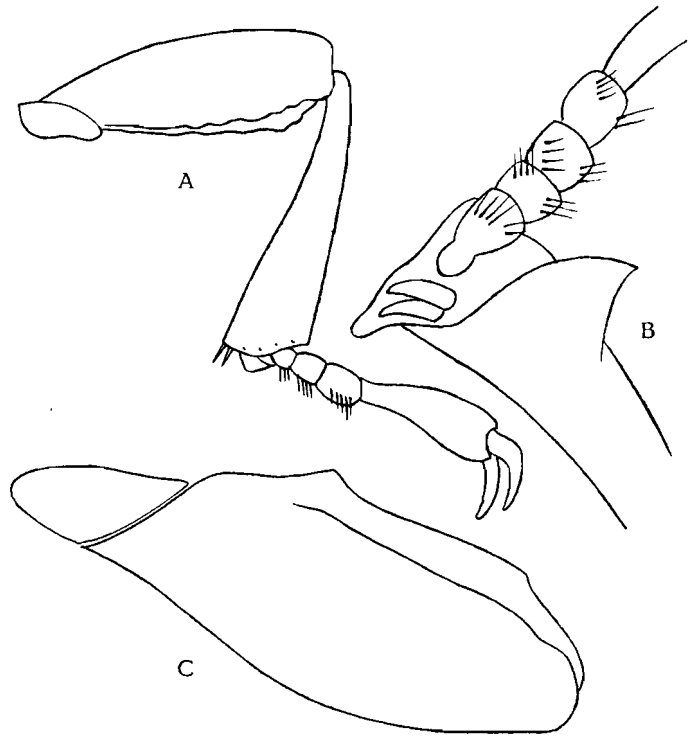

FIG. 13. — *Prioscelis serrata* (FABRICIUS).

A. Intermediate leg, outer lateral face. — B. Front view of the apex of anterior tibia, with insertion of tarsus and calcaria. — C. Anterior femur, outer lateral face.

24. The striæ on apical one-quarter of elytra much narrower than the intervals; apical declivity with moderately dense sculpture. Body slender and more convex.

Prioscelis Westwoodi KOLBE, 1903.

(Fig. 15, A-E, G; Pl. II, fig. 15.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *serrata* WESTWOOD, 1843. — *serrata* ♀ HAROLD, 1879.

Type locality. — Guinea : Lunda, Baluba.

Distribution. — Gold Coast, Liberia, French Congo, Belgian Congo, northern Angola.

Material examined. — Belgian Congo : Léopoldville Province (Leverville, Mayidi, Ipamu, Lokandu); Equator Province

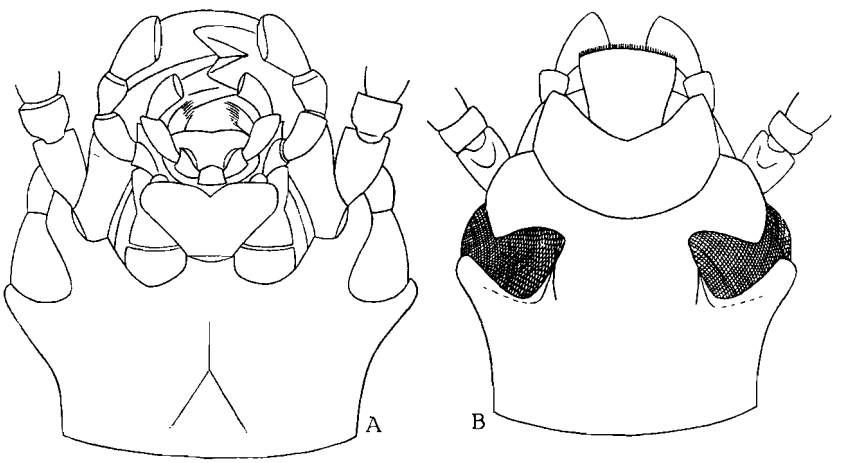

FIG. 14. — *Prioscelis serrata* (FABRICIUS).

A. Head, underside. — B. Head, upper surface.

(Bolobo, Dwa, Eala, Itoka, Boende, Flandria, Wenga Ifami); Oriental Province (Mongbwalu, Yangambi, Bambesa, Moto, Lula, Stanleyville, Doko, Gwane, Buta, Gazi); Kivu Province (Shabunda, forêt Lubinbe, Matale, Lubutu, Obongena); Katanga Province (Kafakumba, Kabwe, Tshala, Kapanga, Tshibamba, Mutombo Mukulu); Kasai Province (Luluabourg, Hemptinne, St. Benoît, Kondue, Mwene Ditu, Lukenge). Ivory Coast (Biume). Northern Angola (Dundo).

— The striæ on apical declivity of elytra as broad as or broader than the intervals, which are densely granulated. Body broader and more flattened.

Prioscelis Westwoodi var. **cameruna** KOLBE, 1903.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

According to GEBIEN, 1904, occurring in the western part of the range of the typical form, in the Cameroons, Ogooué, Spanish Congo, Upper Sanga and South of Lake Tchad.

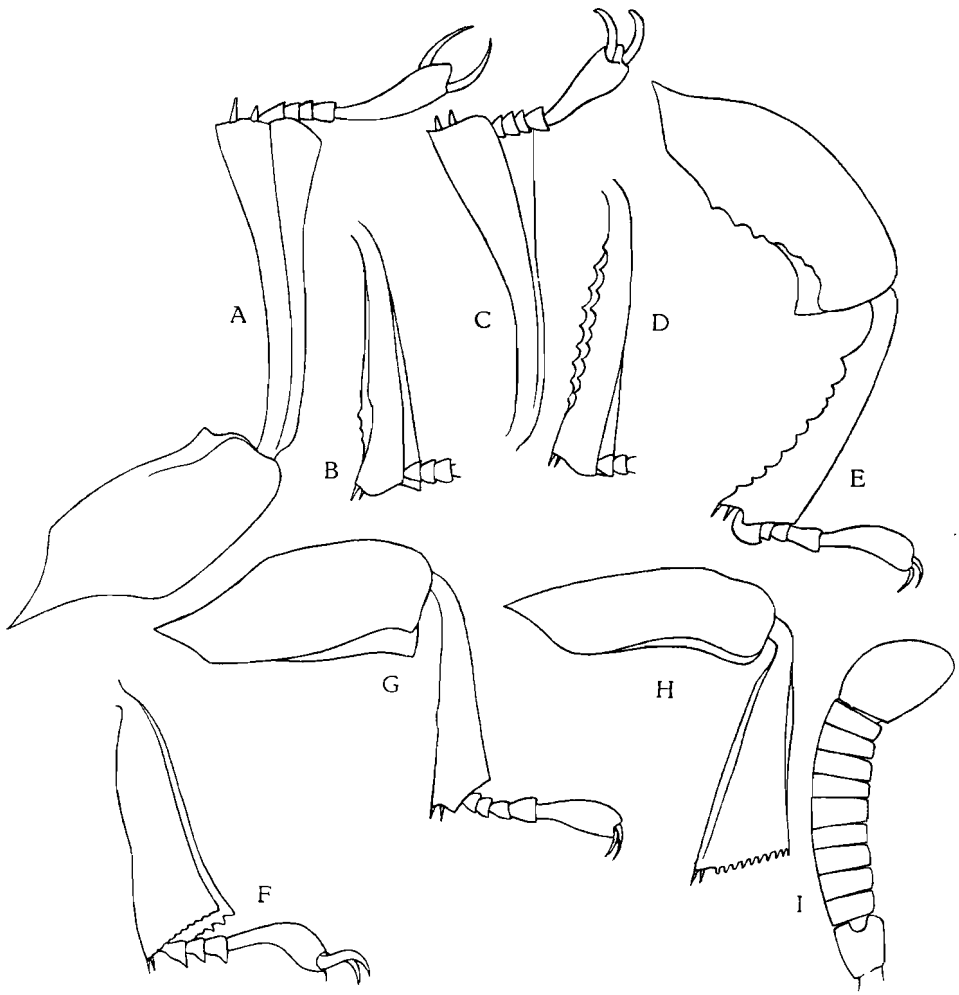

FIG. 15.

A-G. — *Prioscelis Westwoodi* KOLBE.

A. Anterior leg, outer lateral face. — B. Intermediate tibia, inner lateral face. — C. Anterior tibia, inner lateral face. — D. Posterior tibia, inner lateral face. — E. Posterior leg, outer lateral face. — G. Intermediate leg, outer lateral face.

F.-I. — *Stratodemus heraldicus* GEBIEN.

F. Posterior tibia and tarsus, inner lateral face. — H. Posterior femur and tibia, outer lateral face. — I. Antenna.

25. Anterior tibiæ weakly and continuously curved; inner margin obsoletely crenulate, without spiniform and erect teeth. Carina of anterior margin of pronotum very fine, often more or less broadly interrupted at middle. Body smaller, 24 to 27 mm long.

Prioscelis exigua GEBIEN, 1920.

(Pl. II, fig. 19.)

GEBIEN, 1938-1942.

Type locality. — Fernando Poo : Basilé.

Distribution. — So far known only from Fernando Poo and the northern part of the Belgian Congo.

Material examined. — Belgian Congo : Equator Province (Wenga Ifami); Oriental Province (Mongbwalu); Kasai Province (Lukenge).

— Anterior tibiæ strongly, almost angularly and abruptly bent; the inner margin with a series of sharp and erect, spiniform teeth (fig. 16 A, B). Carina of anterior margin of pronotum strong, complete and sharply demarcated. Body larger, 28 to 48 mm long 26

26. Third abdominal sternite plane and simple. Shoulders acute, ending with a distinct tooth, which is bent upwards. Posterior tibiæ with crenulated inner margin. Body small, 28 mm long.

Prioscelis humeridens DOHRN, 1876.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Liberia.

I do not know this species, from which only a single holotype is known; the latter is a ♀ and was examined by GEBIEN, 1904.

— Third abdominal sternite with the apical margin bunched up discally. Shoulders simple. Posterior tibiæ with sharply denticulate inner margin. Body larger, 28 to 48 mm long 27*a*

27*a*. Apical margin of epistome with tuberculiform dilatation at middle. Anterior tibiæ curved at middle; the spiniform teeth of inner margin confined to the median portion.

Prioscelis Fabricii HOPE, 1840.

(Pl. II, fig. 16.)

WESTWOOD, 1843. — KOLBE, 1903. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *clauda* THOMSON, 1858. — *Preussi* KOLBE, 1903.

Type locality. — Sierra Leone.

Distribution. — Sierra Leone, Togo, Dahomey, Gold Coast, Cameroons, Gaboon, French Congo, northern part of the Belgian Congo, Uganda.

Material examined. — Belgian Congo : Equator Province (Eala, Likimi, Momongo, Flandria, Boende, Bokungu); Oriental Province (Moto, Nduye, Makara, Kilo, Yangambi); Kasai Province (Matale, Lubile, Costermansville).

— Apical margin of epistome inermous, simple. Anterior tibiæ angularly curved at distal one-third; the spiniform teeth of inner margin extending from apical portion to median dilatation (fig. 16 A, B) 27*b*

27*b*. Basal sternite of abdomen with raised median callus.

Prioscelis Thomsoni GEBIEN, 1904.

(Fig. 16; Pl. II, fig. 18.)

GEBIEN, 1911. — GEBIEN, 1938-1942. — *clauda* KOLBE, 1903.

Type localities. — Cameroons (Kribri, Barombi, Johann-Albrechtshöhe), Ogooué (Lambaréné).

Distribution. — Cameroons, Nigeria, French Equat. Afr., Belgian Congo.

Material examined. — Belgian Congo : Léopoldville Province (Léopoldville, Kitobola, Kisantu); Equator Province (Eala, Bomboma, Wenga Ifomi); Oriental Province (Nduye, Makara, Mongbwalu, Yangambi, Yambuya, Bambesa, Ibembo, Kilo); Kivu Province (Matale, Costermansville); Kapanga Province (Kapanga); Kasai Province (Luluabourg, Bashishombe). Gaboon. Cameroons (Mamfe).

— Basal sternite of abdomen without median callus, but transversely impressed across middle.

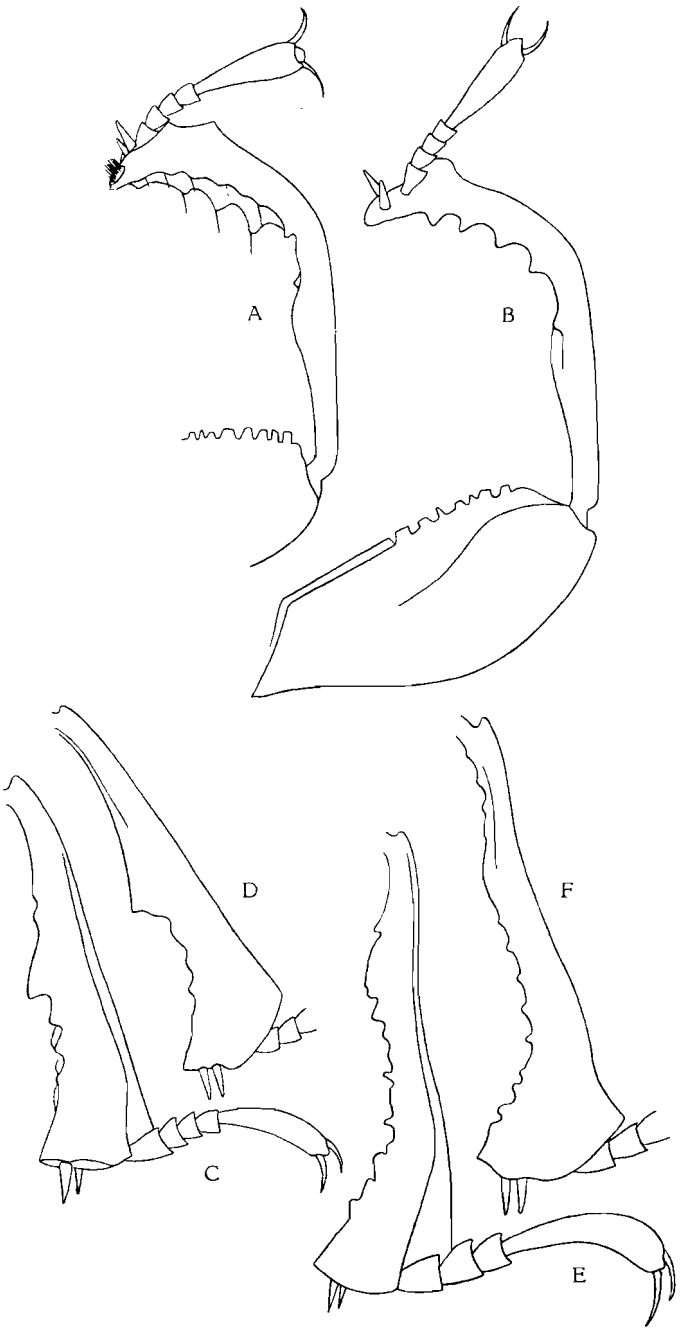

FIG. 16. — *Prioscelis Thomsoni* GEBIEN.
A. Anterior leg, inner lateral face. — B. Anterior leg, outer lateral face. — C. Intermediate tibia and tarsus, inner lateral face. — D. Intermediate tibia, outer lateral face. — E. Posterior tibia and tarsus, inner lateral face. — F. Posterior tibia outer lateral face.

Prioscelis tridens KOLBE, 1894.

(Pl. II, fig. 17.)

KOLBE, 1897. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *rugatifrons* FAIRMAIRE, 1894.

Distribution. — North-eastern Belgian Congo, Uganda, British East Africa, Tanganyika Territory, Rhodesia, Portu. East Africa, Zululand.

Material examined. — Belgian Congo, Oriental Province (Yangambi). British East Africa and Tanganyika Territory (Shimba Hills, 1.000 ft.; Usambara; Nderema; Kimboza, 2.500 ft.; Uluguru Mountains, 4.000 ft.; Rabai; Amani). Southern Rhodesia (Chirinda Forest). Portu. East Africa (Amatongas Forest). Zululand (Mtunzini).

28. Elytra dull. Pronotum broadest before middle.

Prioscelides rugosus KOLBE, 1889.

(Pl. II, fig. 20.)

FAIRMAIRE, 1893. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Cameroons, French Equat. Afr., Belgian Congo.

Material examined. — Belgian Congo : Oriental Province (Bambesa); Katanga Province (Kapanga, Kafakumba); Kivu Province (Matale, Shabunda, forêt Lubinbe). French Congo (riv. S. Benito).

— Elytra shiny. Pronotum broadest at middle.

Prioscelides striatus KOLBE, 1903.

(Pl. II, fig. 21.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Cameroons, Gaboon, Spanish Guinea.

Material examined. — Spanish Guinea (Cap S. Juan).

29. Lateral edge of pronotum obtusely crenulate 30
— Lateral edge of pronotum smooth.

Gabonisca insularis (GEBIEN, 1920).

GEBIEN, 1938-1942.

Distribution. — Fernando Poo : Basilé.
Unknown to me.

30. Antennæ and legs black to piceous. Size larger, 14 to 18 mm long ... 31
— Antennæ and legs red. Size smaller, 10 to 11 mm long 33
31. Body black, 14 to 15 ½ mm long 32
— Body red, 18 mm long.

Gabonisca obscuricornis (PIC, 1933).

GEBIEN, 1938-1942.

Distribution. — Gaboon.

Unknown to me.

32. Pronotum not or only indistinctly narrowed towards base. Anterior tibiæ in the ♂ almost straight, with a row of small teeth on distal one-half of inner margin.

Gabonisca simplicipes (GEBIEN, 1907).

GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Spanish Guinea : Cabo S. Juan.

Unknown to me.

— Pronotum strongly narrowed towards base, as well as towards anterior margin. Anterior tibiæ in the ♂ distinctly curved; the inner margin with a strong median tooth and between the latter and the prominent apical angle with two to three smaller teeth.

Gabonisca Straeleni n. sp.

(Pl. II, fig. 22.)

Material examined. — Belgian Congo : Katanga Province (Lulua, Katanga, Oct. 1933, leg. F. G. OVERLAET, 2 spec., holo- and allotypes BCM.); Equator Province (Flandria, Mar. 1932, leg. R. P. HULSTAERT, 1 ♂ paratype T.M.).

33. Pronotum barely broader than long. Punctured rows on elytra moderately impressed, but distinct.

Gabonisca denticulata (FAIRMAIRE, 1894).

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Congo.

Material examined. — 1 specimen from Gaboon, ex. coll. PIC.

— Pronotum longer than broad. Punctures rows on elytra slightly indicated.

Gabonisca substriata (PIC, 1933).

GEBIEN, 1938-1942.

Distribution. — Gaboon : Ogooué.

Unknown to me.

34. Upper surface shiny. Elytra black, sometimes with a dark, metallic greenish or bluish sheen, with strong, punctate-lineate rows or impressed striæ 35

— Upper surface dull. Elytra violaceous, with very finely punctured and not lineate, longitudinal rows.

Calostegia purpuripennis WESTWOOD, 1842.

(Pl. II, fig. 25.)

WESTWOOD, 1843. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Ashantee.

Distribution. — Gold Coast, Ashantee, Liberia and Ivory Coast.

Material examined. — Gold Coast.

35. Elytra constantly black, strongly shiny, with coarsely punctured striæ. Anterior tibiæ in the ♂ with distally dilated inner margin. Size of body smaller, 24 to 28 mm long.

Calostegia crassicornis (WESTWOOD, 1843).

(Pl. II, fig. 23.)

KOLBE, 1903. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *obsoleta* FAIRMAIRE, 1891.

Type locality. — Guinea.

Distribution. — Togo, Cameroons, Gaboon, Belgian Congo.

Material examined. — Cameroons (Mukonje Farm, Mabeta, Victoria Div.). Belgian Congo : Léopoldville Province (Mayidi, Leverville); Equator Province (Eala, Coquilhatville, Lukolela); Oriental Province (Buta, Yangambi, Stanleyville); Kasai Province (Bashishombe, Kondue, Mwene Ditu); Katanga Province (riv. Kapelekese).

— Elytra black, with or without a dark metallic sheen of a greenish to bluish colour; less shiny; striæ strongly impressed, but composed of fine and often obsolescent punctures. Anterior tibiæ in the ♂ simple, with straight inner margin. Size of body larger, 32 to 37 mm long.

Calostegia cylindrica GEBIEN, 1904.

(Pl. II, fig. 24.)

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Belgian Congo : Lingunde.

Distribution. — Belgian Congo : Léopoldville Province (Kikwit, Dima); Equator Province (Boende, Lisala, Bokapo, Flandria).

36. Structure of the base of prothorax similar to that in the *Chiroscelis*-group (fig. 4 A); the carina of basal foramen widely separated from the posterior angles of pronotum, the basal carina of the latter therefore formed by the pronotal margination. Elytra deeply striate, with broad and smooth intervals between striæ ..... *Pycnocerus*-group. 37

— Structure of the base of prothorax similar to that in the *Prioscelis*-group (fig. 4 B); the carina of basal foramen practically in contact with the posterior angles of pronotum and continuous with the basal carina of pronotum, which is formed by the foraminal margination. Elytra with dense and irregular punctation, tending to become arranged in longitudinal rows, which are often separated by more or less convex, sometimes subcostiform intervals ..... *Odontopezus*- and *Metallonotus*-groups. 55

37. Intermediate femora and posterior ones with two small teeth apically (one at the inner margin, the other at the outer margin) or without such teeth. Intervals of elytra polished and smooth. Body metallic, alate or apterous, in the latter case of small size, 18 to 26 mm long 38

— Intermediate femora and posterior ones with only one tooth at the apex of inner margin. Intervals of elytra with a row of very fine granules. Body black, apterous, of large size, 40 to 46 mm long.

AMORPHOCHIRUS GEBIEN, 1904.

GEBIEN, 1911. — GEBIEN, 1938-1942.

North-East African.

Monotypical genus :

Amorphochirus hercules (FAIRMAIRE, 1884).

FAIRMAIRE, 1887. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Somaliland : Guélidi.

Unknown to me.

38. Body alate. Metasternum longer than basal sternite of abdomen; the former between mesocoxal cavities and metacoxal ones two-thirds longer than coxal cavities.

PYCNOCERUS WESTWOOD, 1843.

LACORDAIRE, 1859. — HAROLD, 1879. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *Pachylocerus* HOPE, 1840.

West, Central, East and North-east African 39

— Body apterous. Metasternum much shorter than basal sternite of abdomen; the former behind mesocoxal cavities only one-half the length of mesocoxal cavities.

CATAMERUS FAIRMAIRE, 1887.

Pycnocerus (*Catamerus*) GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

South-east African 50

39. Anterior femora with a strong median tooth and an apical one. Underside of the three proximal joints of posterior tarsi with tomentose soles.

PYCNOCERUS subg. **DINOSCELIS** GERSTÄCKER, 1854.

GERSTÄCKER, 1862. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

East and North-east African 40

— Anterior femora only with small apical teeth. Underside of the three proximal joints of posterior tarsi with a brush of bristles apically.

PYCNOCERUS subg. **PYCNOCERUS** (GEBIEN, 1904).

West and Central African 42

40. Intermediate tibiæ and posterior ones denticulate; anterior tibiæ without basal tooth; median tooth of anterior femora small. The abdominal sternites plane.

Pycnocerus (Dinoscelis) cyanescens FAIRMAIRE, 1882.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — GRIDELLI, 1940.

Type locality. — Zanzibar.

Distribution. — British East Africa (GEBIEN, 1904 : Zanzibar and Uruguru); Southern Somaliland (GRIDELLI, 1940 : Mogadiscio, Daméré, Merca).

Unknown to me.

— Only the posterior tibiæ denticulate; anterior tibiæ with basal tooth; median tooth of anterior femora large. The second, third and fourth abdominal sternites swollen apically 41

41. Anterior femora strongly curved basally; basal tooth of anterior tibiæ very small. Apical joint of antennæ longer than broad. Upper surface of head raised between eyes. Disc of pronotum shiny.

Pycnocerus (Dinoscelis) validus FAIRMAIRE, 1887.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Zanzibar.

Distribution. — British East Africa.

Unknown to me.

— Anterior femora not curved basally; basal tooth of anterior tibiæ strong. Apical joint of antennæ as long as broad. Upper surface of head slightly convex between eyes. Pronotum dull, rarely with shiny disc.

Pycnocerus (Dinoscelis) Passerini (BERTOLONI, 1849).

(Pl. III, fig. 32.)

GERSTÄCKER, 1854. — GERSTÄCKER, 1862. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *cœruleatus* FAIRMAIRE, 1884. —FAIRMAIRE, 1887.

Type locality. — Portu. East Africa : Inhambane.

Distribution. — Somaliland, British East Africa, Tanganyika Territory, Northern Rhodesia, Portu. East Africa.

Material examined. — British East Africa and Tanganyika Territory (Garsen Tana, Arabuko Forest, Malindi, Amani, Usambara Mountains, Kanziko, Mwingi, Kitui, Sagalla, Shimba Hills, Nairobi, Samburu, Emali Range, Mutha Hill, Ukerewe, Sekoke, Kikoko, Rosako). Northern Rhodesia (Mweru, Wantipa Buleya). Portu. East Africa (Chimoio).

42. Intermediate tibiæ and posterior ones with strongly denticulate inner margin. Body small.

Pycnocerus (s. str.) **gracilis** GEBIEN, 1904.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Gold Coast (♂), Congo (♀).

Distribution. — Gold Coast, Northern part of the Belgian Congo.

Material examined. — Belgian Congo : Equator Province (Lisala, Yolo, Flandria); Oriental Province (Bambesa).

— Intermediate tibiæ and posterior ones with smooth inner margin. Body larger 43

43. Anterior femora with two apical teeth, one on the inner edge of underside, the other on the outer edge; intermediate femora and posterior ones with two apical teeth and with smooth edges of underside 44

— Anterior femora with only one apical tooth on the inner edge of underside; intermediate femora and posterior ones without distinct apical teeth and with crenulate or subtuberculate edges of underside; in one species (*Fageli*) the latter are smooth, but in this case all sterna with erect pilosity 48

44. Inner margin of anterior tibiæ without distinct median tooth. Pronotum shiny. Size generally smaller, 23 to 32 mm long 45

— Inner margin of anterior tibiæ with sharp median dilatation or tooth. Pronotum sericeously dull. Size generally larger, 30 to 37 mm long.

Pycnocerus (s. str.) **sulcatus** subsp. **opacicollis** n.

(Pl. III, fig. 35.)

Material examined. — Belgian Congo : Katanga Province (Kafakumba, Nov. 1937, Oct. 1930 to Feb. 1931, 16 spec., holo- and allotypes I.R., paratypes I.R. and T.M.; Sandoa, Oct. 1931, 1 paratype I.R.; Parc National Upemba : Kankunda, Kaziba and Lusinga, 10 paratypes I.P.N.).

The new subspecies agress in the greenish to bluish colour with subsp. *exaratus* and subsp. *clavicornis*; it is recognizable from the former by the densely and rugosely punctured submarginal area of elytra, from the latter by the moderately broad penultimate joints of antennæ.

45. Elytra bronzy to metallic, greenish, bluish or golden 46

— Elytra violaceous or purple.

Pycnocerus (s. str.) **sulcatus** subsp. **viola** n.

Material examined. — Sierra Leone : 1902, leg. B. Hombrugh (1 spec., holotype, sex not determined, S.A.M.); Kumasi, 1902, leg. B. Hombrugh (3 paratypes S.A.M. and T.M.).

46. Ninth joint of antennæ strongly dilated, much broader than the tenth joint. Elytra of a bronzy to metallic tint, rarely greenish or golden.

Pycnocerus (s. str.) **sulcatus** subsp. **sulcatus** (FABRICIUS, 1792).

(Pl. III, figs. 33, 34.)

FABRICIUS, 1801. — HAROLD, 1879. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *costatus* SILBERMANN, 1833. — CASTELNAU, 1840. — WESTWOOD, 1843.

Distribution. — Belgian Congo, North-eastern Angola.

Material examined. — Belgian Congo : Léopoldville Province (Lemfu, Mayidi, Kisantu, Tumba, Wombali); Equator Province (Boende, Eala); Oriental Province (Luma, Yebo, Moto); Katanga Province (Kapanga, Kamina); Kivu Province (Costermansville, Lubongola); Kasai Province (Lusambo, Mwene Ditu). North-eastern Angola (Dundo).

— Ninth joint of antennæ sometimes dilated, but not broader than the tenth joint. Elytra of a greenish to bluish colour, exceptionally golden ... 47

47. The two penultimate joints of antennæ less broadened, one and a half times to twice as broad as long; the ninth joint distinctly narrower than the tenth one, with the sides moderately narrowed towards base; the tenth joint nearly subtruncate at apical margin. Elytra with finer sculpture, the submarginal area with comparatively sparse punctation.

Pycnocerus (s. str.) **sulcatus** subsp. **exaratus** (HAROLD, 1879).

(Pl. III, fig. 36.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Belgian Congo, Uganda.

Material examined. — Belgian Congo : Léopoldville Province (Mayidi, Léopoldville, Kwamouth, Lokandu, Benza Mazola); Equator Province (Bamania, Bomboma, Karawa, Eala, Libenge, Boende, Flandria); Oriental Province (Yangambi, Buta, Gazi, Stanleyville, Bambesa, Isangi, Panga, Wamba, Ibembo, Gwane, Tukpwo, Elisabetha, Amadi, Barumbi, Moto, Mongbwalu, Basoko); Katanga Province (Élisabethville, Mutombo Mukulu, Katompe, Makale, Kasari, Kapanga, Sandoa, Kafakumba); Kivu Province (Costermansville); Kasai Province (Luluabourg, Katoka, Lusambo, Konduc, Dimbelenge, Mwene Ditu). Uganda (Bwamba Forest).

— The two penultimate joints of antennæ strongly dilated, about two and a half times as broad as long; the ninth joint exactly as broad as the tenth joint, with subconically narrowed sides; the tenth joint of lunulate shape, with strongly rounded apical margin. Elytra roughly sculptured, with coarsely punctured submarginal portion.

Pycnocerus (s. str.) **sulcatus** subsp. **clavicornis** n.

Material examined. — Uganda : Beni Ituri Forest, Oct. 1946, leg. T. H. E. JACKSON (1 spec., holotype, sex not determined, ex C.M. in B.M.); Kakumega, Yala River, leg. H. J. A. TURNER (1 paratype ex C.M. in T.M.); Entebbe, Oct. 1929 (1 paratype C.M.). Western Belgian Congo, Parc National Albert : Katuga, Oct. 1946, leg. J. DE WILDE (1 paratype I.P.N.).

48. Underside of prothorax, mesosternum, metasternum, as well as the humeral portion of elytra with long and erect, brownish hairs. Underside of intermediate femora and posterior ones with smooth edges.

Pycnocerus (s. str.) **Fageli** n. sp.

Material examined. — Belgian Congo : Katanga Province (Kapanga, Jan. 1933, leg. F. G. OVERLAET, 10 spec., holo- and allotypes BCM., paratypes BCM. and T.M.; Kafakumba, Mar. 1933, leg. F. G. OVERLAET, 2 paratypes BCM.; Muteba, May 1932, leg. F. G. OVERLAET, 1 paratype BCM.); Oriental Province (Stanleyville, 1949, leg. R. P. MILLER, 1 paratype BCM.); Kasai Province (Mwene Ditu, leg. DOUTRELEPONT, 2 paratypes BCM.).

— Prothorax, elytra and underside of afterbody bare. Underside of intermediate femora and posterior ones with crenulate or denticulate edges 49

49. Lateral portions of pronotum with very fine and scattered punctures. Sloping lateral portions of elytra coarsely punctured; pseudopleuræ almost smooth.

Pycnocerus (s. str.) **Westermanni** subsp. **Westermanni** HOPE, 1840.

WESTWOOD, 1843. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *impressicollis* DOHRN, 1876.

Distribution. — Liberia, Ivory Coast, Ashantee, Nigeria, Sierra Leone, Gaboon, Northern and Eastern Belgian Congo, Western British East Africa.

Material examined. — Cameroons (Mukonje Farm). Sierra Leone (Mayambe). Belgian Congo : Oriental Province (Stanleyville, Bengamisa, Kaparata, Yangambi, Tukpwo, Bambesa, Watsa, Niangara, Buta, Moto); Equator Province (Yolo, Eala, Flandria, Bamania, Yala, Boende, Wenga Ifomi); Katanga Province (Kapanga, Élisabeth-

ville, Luashi, Sandoa, Kafakumba); Kasai Province (Bashishombe); Kivu Province (Rutshuru). British East Africa (Maragoli, Kakamega).

— Lateral portions of pronotum with comparatively dense and coarse punctation. Sloping lateral portions of elytra and pseudopleuræ granulated.

Pycnocerus (s. str.) **Westermanni** subsp. **rugosus** GEBIEN, 1904.
(Pl. III, fig. 31.)

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Congo, Lukungu, Haut et Moyen Ogooué, Zambi.

Distribution. — French Congo, Northern Belgian Congo.

Material examined. — Belgian Congo : Léopoldville Province (Mayidi, Lemfu, Inkisi, Moanda, Kisantu); Kasai Province (Lusambo); Oriental Province (Yangambi).

50. The sixth and eighth intervals on elytra smooth and impunctate 51
— At least the sixth and eighth intervals on elytra coarsely punctured or transversely wrinkled or rugose or subtuberculate 52
51. Intervals on elytra faintly convex. Upper surface of body of a metallic green tint.

Catamerus Revoili subsp. **Revoili** FAIRMAIRE, 1887.
(Pl. III, fig. 26.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *lævis* GEBIEN, 1904.

Type locality. — Mpoupoua.

Material examined. — Northern Rhodesia (Abercorn, Mweru, Wantipa). Sout-eastern Belgian Congo : Katanga Province (Kaniama, Mitwaba, Manono).

— Intervals on elytra strongly convex. Upper surface of body of a blue to bluish green tint.

Catamerus Revoili subsp. **Fairmairei** ALLUAUD, 1892.
(Pl. III, fig. 27.)

Type locality. — Tabora.

Material examined. — Tanganyika Territory (Menenia, Kilossa, Iringa, Kassanga).

52. Only the sixth and eighth intervals on elytra sculptured, viz. punctured or transversely wrinkled 53
— All the lateral intervals on elytra interrupted by transverse wrinkles, appearing as if subtuberculate or rugose.

Catamerus Revoili subsp. **intermedius** GAHAN, 1893.

(Pl. III, fig. 28.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Zambesi.

Material examined. — Southern Rhodesia (Zimbabwe, Fort Victoria, Selukwe).

— The entire elytra densely rugose; the sloping lateral portions often tuberculate.

Catamerus Revoili subsp. **rugosus** GAHAN, 1893.

(Pl. III, fig. 30.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Zomba.

Material examined. — Portu. Nyasaland (Zomba, Chifumbasi). Brit. Nyasaland (Blantyre).

53. The third, fifth and seventh intervals on elytra apically hardly more raised than the intervals between them 54

— The third, fifth and seventh intervals on elytra strongly raised apically and there much more convex than the intervals between them.

Catamerus Revoili subsp. **gasanus** PÉRINGUEY, 1905.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Portu. East Africa : Gazaland, Melsetter. Holotype, ex S.A.M., revised.

54. Elytra with bluish to greenish sheen.

Catamerus Revoili subsp. **manicanus** PÉRINGUEY, 1905.

(Pl. III, fig. 29.)

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Southern Rhodesia (Manica, Umtali).

Material examined. — Southern Rhodesia (Salisbury, Bulawayo, Hillside, Penkridge, Umtali, Vumba).

— Elytra black.

Catamerus Revoili subsp. **transvaalensis** PÉRINGUEY, 1892.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Eastern Transvaal (Lydenburg).

Material examined. — Two specimens from the Albany district ? (ex Rhodes University) agree fairly well with the holotype (ex S.A.M.), except for the more elongate shape of body and the elytra, which show more convex intervals and a bluish sheen on apical declivity.

55. Prosternal apophysis simple, bent downwards behind coxal cavities, distinctly narrower than the transverse diameter of coxal cavities. Lateral margination of pronotum strongly crenulate or denticulate. Size of body large, not less than 25 mm long.

ODONTOPEZUS ALLUAUD, 1889.

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *Odontopus* SILBERMANN, 1833. — LACORDAIRE, 1859.

West, Central and East African 56

— Prosternal apophysis square and flat, becoming gradually depressed towards basal foramen of prothorax, without apical declivity; considerably broader than the transverse diameter of coxal cavities. Lateral margination of pronotum smooth. Size of body smaller, less than 25 mm long.

METALLONOTUS WESTWOOD, 1843.

LACORDAIRE, 1859. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *Aspidosternum* MÄKLIN, 1864. — GERSTÄCKER, 1873. — ALLUAUD, 1889.

West, Central, East, North-east and South-east African 60

56. Inner margin of anterior tibiæ in the ♂ with a pre-apical dentiform dilatation, which occupies the apical one-third or one-quarter of tibial length; in the ♀ with a much less pronounced, obtuse and smooth dilatation 57

— Inner margin of anterior tibiæ without pre-apical dilatation, at most the tibial apex curved inwards and appearing as if dilated at its extreme inner angle 58

57. Episternum of prosternum and femora without long hairs. Outer face of femora almost impunctate, without distinct micro-sculpture. Elytra covered with moderately dense and rather coarse punctures, with the background of cuticle micro-sculptured and sericeous.

Odontopezus cupreus subsp. **cupreus** (FABRICIUS, 1792).

(Pl. IV, fig. 37.)

HERBST, 1799. —FABRICIUS, 1801. — CASTELNAU, 1840. — WESTWOOD, 1843. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *tristis* WESTWOOD, 1841, 1842, 1843. — *violaceus* SILBERMANN, 1833. — CASTELNAU, 1840.

Distribution. — Senegal, Liberia, Ashantee, Togo, Nigeria, Cameroons, Gaboon, French Congo, Northern part of the Belgian Congo.

Material examined. — Belgian Congo : Léopoldville Province (Kisantu); Equator Province (Libenge, Budjala); Oriental Province (Bambesa, Moto, Tukpwo, Watsa, Pawa, Abok, Paulis, Faradje, Mahagi, Dingila).

Variability. — Elytra occurring in all colour grades; black, violaceous, green, blue, purple and bronzy.

-- Anterior one-third of episternum of prosternum with concentrated, coarse punctures, from which emerge rather long and erect black bristles; the latter project from below to beyond the lateral outlines of pronotum, which appear as if ciliate. Outer face of femora punctured, with numerous squarrose black bristles and distinctly micro-punctured background of cuticle. Elytra very densely and coarsely punctured, between punctures with shiny, not distinctly micro-sculptured background.

Odontopezus cupreus subsp. **lucens** GEBIEN, 1904.

(Pl. IV, fig. 38.)

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Cameroons, Bas Ogooué.

Distribution. — So far known from the Cameroons, French Congo and British East Africa.

Material examined. — Cameroons (Mukonje Farm). British East Africa (Buoia, Lira, Namasagali).

Variability. — Elytra purple, metallic, bluish and black.

58. Punctation of body fine to moderate; elytra with the intervals between punctures much larger than the diameter of punctures 59

— Punctation of body very coarse; elytra with the intervals between punctures distinctly smaller than the diameter of punctures.

Odontopezus asper ALLUAUD, 1892.

(Pl. IV, fig. 39.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Southern part of British East Africa, Tanganyika Territory, North-eastern Belgian Congo.

Material examined. — British East Africa and Tanganyika Territory (Nguru Mountains, Amani, Turiani district, Morogoro, Nguelo, Usambara). Belgian Congo : Katanga Province (Albertville, Lubunduy, Kundelungu Mountains, Baudouinville, Élisabethville, Kinda, Parc National Upemba : Kaswabilenga, Munoi).

Variability. — Elytra green, metallic, bronzy, slightly purple, bluish, cupreous, violaceous and black.

O. asper is a good species and not a subspecies of *cupreus* sensu GEBIEN, 1904. It is perfectly constant, allopatric with *cupreus* (sensu meo), and, where it overlaps the range of *regalis* (sensu meo) it does not develop any kind of transitorial forms, although having been collected in long series at the very same localities of the Katanga Province.

59. Body large, 30 to 39 mm long. Elytra of variable colour. Pronotum black, sometimes with a weak metallic sheen; the punctation much finer than that on elytra. Posterior femora with strong tooth.

Odontopezus regalis (HAROLD, 1878).

(Pl. IV, fig. 40.)

HAROLD, 1879. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *major* FAIRMAIRE, 1891.

Distribution. — French Congo, Belgian Congo, Uganda, Northern Angola.

Material examined. — Belgian Congo : Léopoldville Province (Kisantu, Lemfu, Moerbeke, Léopoldville, Mayidi, Zaba, Kalina, Goa, Ngowa, Mpese, Kwamouth); Equator Province (Eala, Bamania, Flandria, Boende, Mandungu, Lisala, Ebola, Bolobo, Dwa, Lukolela); Oriental Province (Pawa, Barumbu, Moto, Kasenge, Bambili, Limbala, Basoko, Yangambi, Stanleyville); Katanga Province (Kapanga, Kafakumba, Kanzenze, forêt Kashibi, Sandoa, Tshibamba, Kinda, Lubudi, Mutshatsha, Dilolo, Muteba, Kaniama, Kiponga); Kivu Province (Shabunda, Costermansville, Masisi, Kindu); Kasai Province (Hemptinne, St. Benoît, Luluabourg, Luisa, Tulume, Kambaye, Luebo). Northern Angola (Dundo).

Variability. — Extremely variable in sculpture and colour of elytra. The latter occur in all possible colour patterns, but violaceous to purple is predominant; the punctation is generally fine, but there are specimens, in which it is almost as strong as in *cupreus*.

O. regalis has to be considered a valid species and not a subspecies of *cupreus*, as GEBIEN interpreted it. It is the most common and most widely spread species in the Belgian Congo, where it overlaps the ranges of *cupreus*, *asper* and *obsoletus*. Although often collected together with these species at the same localities, I was not able to find any transitorial forms.

— Body smaller, 24 to 32 mm long. Elytra constantly of an olivaceous opaque tint. Pronotum of a dark greenish colour; the punctation only a little finer than that on elytra. Posterior femora with weak tooth.

Odontopezus obsoletus THOMSON, 1858.

(Pl. IV, fig. 41.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Gaboon, French Sudan, Nigeria, French Congo, Cameroons, Northern part of the Belgian Congo, Uganda.

Material examined. — Belgian Congo, Oriental Province (Bambesa, Avakubi, Buta, Bunia, Medje, Faradje); Equator Province (Eala); Léopoldville Province (Zobe, Kiniati, Tsela, Maduda).

O. obsoletus is a constant and good species, which can not be regarded a subspecies of *cupreus*, as it was found to be sympatric with *cupreus* at Bambesa and Faradje, and with *regalis* at Eala.

60. Outer face of femora with a complete and sharp carina along midline 61
— Outer face of femora plane, sometimes with an indicated median edge only apically 73
61. Elytra ventricose, in lateral aspect, with more or less strongly arcuate contours discally 62
— Elytra simple, with flattened disc, in lateral aspect, with straight contours discally 67
62. Elytra of an intense green, purple, violet or blue colour; moderately ventricose, in lateral aspect, with the arcuate contours gradually rising from base towards the highest point of convexity. Intermediate and posterior femora with apical teeth 63
— Elytra black, with slight ænescent sheen, strongly ventricose, in lateral aspect, with the contours being almost straight basally, then abruptly and very strongly raised towards the highest point of convexity. Intermediate and posterior femora without apical teeth.

Metallonotus Janssensi n. sp.

(Pl. IV, fig. 46.)

Material examined. — Uganda : Kampala, Aug. 1919, leg. R. DUMMER (holo- and allotypes S.A.M.). Belgian Congo : Léopoldville Province (Ngowa, June 1939, leg. R.P. J. MERTENS, 1 ♂ paratype I.R.); Equator Province (Likimi, Gwanga, Aug. 1927, leg. A. COLLART, 1 ♂ paratype BCM.).

63. Elytra green, metallic or blue 64
— Elytra purple to violaceous 66
64. Elytra strongly ventricose, in the ♀ strongly dilated backwards, at the broadest point about twice as broad as basally, in lateral aspect, as high as the posterior femora are long or higher; covered with an extremely dense and coarse, rugose punctation. Antennæ golden to metallic, head and pronotum purple, seldom of a bluish green tint, elytra of an intense green, sometimes with a slight purple sheen basally.

Metallonotus ærugineus (GERSTÄCKER, 1855).

(Pl. IV, figs. 42, 43.)

GERSTÄCKER, 1862. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *physodes* PASCOE, 1871.

Type locality. — Portu. East Africa : Tete.

Distribution. — Confined to Portu. East Africa.

Material examined. — Portu. East Africa : Delagoa Bay, Lourenço Marques.

— Elytra less ventricose and less convex, in the ♀ not or only a little more strongly dilated backwards than in the ♂, at the broadest point one-third broader than basally or less so, in lateral aspect much less high than the posterior femora are long; very densely covered with moderately coarse punctures. Antennæ blue to violet, upper surface of body blue or of a metallic green colour 65
65. Upper surface entirely blue. Antennæ only slightly compressed, with the two apical joints much broader than the preceding ones. The punctures on disc of elytra more or less arranged in longitudinal rows.

Metallonotus seriatoporus GEBIEN, 1910.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory : Tanga.
This species is unknown to me.

— Head and sometimes the pronotum of a bluish green, the elytra of a metallic or golden green tint, with bluish apex. Antennæ very strongly compressed; the two apical joints not broader than the preceding ones. Elytra irregularly punctured.

Metallonotus silvaticus n. sp.

(Pl. IV, fig. 45.)

Material examined. — Southern Rhodesia : Chipinga distr., Feb. 1929, leg. R. H. R. STEVENSON (1 ♂, holotype T.M.); Chirinda Forest, Dec. 1937, leg. G. VAN SON (1 ♀, allotype T.M.).

66. Size smaller, 10 mm long. Antennæ very slender, hardly compressed, with the two apical joints broader than the preceding ones. Mesosternum not depressed basally. Submentum with only one large median callus.

Metallonotus pusio GEBIEN, 1910.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory : Lindi.
Unknown to me.

— Size larger, 19 to 21 mm long. Antennæ strongly compressed, stout, with the two apical joints being barely broader than the preceding ones. Mesosternum depressed basally. Submentum with two tubercles.

Metallonotus festivus (GERSTÄCKER, 1871).

(Pl. IV, fig. 44.)

GERSTÄCKER, 1873. — HAROLD, 1879. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *purpurinus* FAIRMAIRE, 1894.

Type locality. — Brit. East Africa : Kiriama.

Distribution. — Tanganyika Territory.

Material examined. — A few specimens with the locality label « Tanganyika ».

I have no doubt that *M. festivus* is specifically different from *M. ærugineus*; Gebien considered it to be a simple variatio of the latter.

67. Base of elytra obtusely marginate, with a distinct angle at level with the posterior angles of pronotum, separating the humeral portion from the median one; contours of the humeral portion sinuate at middle; humeral callus situated behind level of elytral base. Pronotum broadest in front of middle, strongly narrowed towards base. Antennæ strongly compressed, with the lateral face being much narrower than the dorsal or ventral ones. Anterior femora slender, not distinctly clavate; apical teeth of femora well-developed.

Metallonotus splendens GEBIEN, 1904.

(Pl. IV, fig. 52.)

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory : Nguelo, Usambara.

Distribution. — Tanganyika Territory.

Material examined. — Tanganyika Territory : Nguru Mountains, Amani.

— Base of elytra immarginate, simple, without angle between median portion and humeral one, the latter with straight or arcuate contours; humeral callus situated at level with base. Pronotum generally broadest at middle, not more narrowed towards base than towards anterior margin. Antennæ slightly compressed, their lateral face only a little narrower than the dorsal or ventral ones. Anterior femora clavate; apical teeth of femora inconspicuous, often altogether absent 68

68. Elytra with all four discal intervals raised to longitudinal, strongly wavy, often interrupted ridges 69

— Only the two alternate intervals on elytral disc forming a kind of very slight, longitudinal ridge each 71

69. Apical joint of antennæ shorter than the two preceding joints taken together, and shorter than the third joint. Pronotum broadest at middle.

Metallonotus tenuecostatus (FAIRMAIRE, 1897).

(Pl. IV, fig. 47.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Congo.

Distribution. — Belgian Congo, Uganda.

Material examined. — Belgian Congo : Oriental Province

(Stanleyville, Buta, Poko, Ruta); Katanga Province (Kapanga); Equator Province (Eala, Bamania, Likimi); Léopoldville Province (Mayidi). Uganda (Busia).

— Apical joint of antennæ elongate, distinctly longer than the two preceding joints taken together, and a little longer than the third joint. Pronotum broadest before middle 70

70. Upper surface of femora with dense and scabrose punctation. Antennæ short, with strongly transverse pre-apical joints. Head and pronotum densely and rugosely punctured, elytral intervals fine and faintly raised.

Metallonotus subcarinipes n. sp.

(Pl. IV, fig. 48.)

Material examined. — Belgian Congo, Kivu Province (W. Kivu : Walunga, 1938, leg. Dr. HAUTMANN, 1 spec., holotype, sex not determined, BCM.). Uganda (Kampala, July 1921, leg. H. HARGREAVES, 1 paratype, I.R.).

— Upper surface of femora smooth, with very scattered punctation. Antennæ long; the pre-apical joints square to slightly transverse. Head and pronotum with scattered punctation, all elytral intervals subcostate and strongly raised.

Metallonotus cariosus (FAIRMAIRE, 1897).

(Pl. IV, fig. 49.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Guinea.

Material examined. — Guinea (1 paratype, ex S.A.M.).

According to FAIRMAIRE's description this species should be distinguished by the absence of the apical teeth of anterior femora. This observation is not correct, as the paratype shows the same small apical teeth of anterior femora, as can be observed in all the other allied species.

71. Antennæ and tarsi almost bare, with only a few fine bristles. Punctation on disc of elytra well-separated, with the intervals between punctures not being reduced to the margins of punctures. Humeral portion of elytral base rounded and in line with the median portion. Upper surface of body bicolorous 72

— Antennæ and tarsi covered with rather dense and fine, brownish hairs. Punctation on disc of elytra very dense and rugose; the punctures separated from one another by very narrow intervals, which are reduced

to the margins around punctures and anastomosing, forming a kind of narrow reticulation. Humeral portion of elytral base oblique and meeting the median portion in an obtuse angle. Upper surface of body of a unicolorous bluish green tint.

Metallonotus viridis n. sp.

(Pl. IV, fig. 51.)

Material examined. — Tanganyika Territory : Ukerewe Island, leg. Father CONRAD (2 spec., ex C.M., holotype, sex not determined, B.M., paratype T.M.).

72. Elytra greenish.

Metallonotus nitidus ssp. **nitidus** n.

Material examined. — Belgian Congo : Katanga Province (Kafakumba, Dec. 1931, leg. F. G. OVERLAET, 1 spec., holotype, sex not determined, BCM.; same locality, Nov. 1937, 1 paratype I.R.; Luashi, 1935, leg. FREYNE, 1 paratype T.M.; Dilolo, Oct. 1933, leg. DE SAEGER, 1 paratype BCM.; Kayoyo, Mar. 1931, leg. F. G. OVERLAET, 1 paratype BCM.).

— Elytra metallic to purple or violaceous.

Metallonotus nitidus ssp. **purpuripennis** n.

(Pl. IV, fig. 50.)

Material examined. — Belgian Congo : Kasai Province (Mwene Ditu, leg. DOUTRELEPONT, 1 spec., holotype, sex not determined, BCM.); Katanga Province (Kaniama, 1931, leg. R. MASSART, 1 paratype T.M.; Parc National Upemba : Mubale, 1.480m, May 1947, 2 paratypes I.P.N., and Munoi bif. Lupiala, 890 m, June 1948, 1 paratype I.P.N.).

73. Elytra simple, flattened on disc, in lateral aspect, with straight contours from base to top of apical declivity 74

— Elytra ventricose, with convex disc, in lateral aspect, with contours, which are arcuate from basal one-quarter to apex 86

74. Outer surface of femora smooth, almost impunctate. Episternum of metasternum impunctate. Apical joint of antennæ generally a little longer than the two preceding joints taken together or as long as those 75

— Outer surface of femora with more or less dense, sometimes rough and confluent sculpture at least on distal one-half. Episternum of metasternum sculptured. Apical joint of antennæ generally shorter than the

two preceding joints taken together 79

75. Upper surface of body bicolorous 76

— Upper surface of body unicolorous, bluish green to green 78

76. Elytra with distinctly costiform intervals; the intervening spaces between subcostate intervals with a more or less regular single or double row of punctures. Body smaller, 13 to 16 mm long 77

— Elytra without distinctly raised intervals, only the alternate intervals each indicated by a more or less developed smooth line; the intervening spaces between intervals with almost irregular punctation, which is tending to become arranged in four to five rows. Body larger, 20 to 21 mm long.

Metallonotus principatus n. sp.

Material examined. — Belgian Congo : Oriental Province (Sources of the Bomokandi River, Dec. 1925, leg. S. A. R. Prince LÉOPOLD, 2 spec., holotype, sex not determined, BCM., paratype T.M.).

77. Head and pronotum green to bluish green, elytra cupreous with a faint purple sheen. Intervening spaces between the strongly raised, costiform intervals of elytra with a simple row of punctures each.

Metallonotus cupripennis GEBIEN, 1920.

(Pl. IV, fig. 53.)

GEBIEN, 1938-1942.

Type locality. — Cameroons (Victoria, Mukonje Farm near Mundame); French Congo (Fernand Vaz, Nkogo, Ndjole).

Distribution. — Cameroons, French Congo, Upper Sanga. I have seen only a paratype (ex M.F.) of this species.

— Head and pronotum æneous, metallic, elytra of a purplish violaceous tint. Intervening spaces between the less raised intervals of elytra with a double row of punctures each.

Metallonotus violaceus (FAIRMAIRE, 1888).

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Congo.

Distribution. — Congo, Fernando Poo (GEBIEN, 1920). I have not seen any specimens of this species.

78. All costate intervals on elytra complete, extending from base to apex.

Metallonotus costatus (HAROLD, 1879).

(Pl. IV, fig. 60.)

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Guinea.

Distribution. — Guinea, Belgian Congo, Uganda.

Material examined. — Belgian Congo : Oriental Province (Dingila, Yangambi, Stanleyville); Katanga Province (Sandoa, Kafakumba); Equator Province (Flandria, Lukolela, Bamania); Kasai Province (Mwene Ditu).

— At most the costæ of the even intervals on elytra reaching the base, the remaining ones becoming evanescent on basal one-third.

Metallonotus asperatus (PASCOE, 1871).

(Pl. IV, fig. 59.)

BATES, 1872. — FAIRMAIRE, 1897. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Guinea.

Distribution. — Guinea, Ashantee, Cameroons, northern part of the Belgian Congo.

Material examined. — Belgian Congo : Oriental Province (Mongbwalu, Stanleyville, Gazi, Yebo, Moto); Equator Province (Eala, Libenge); Kasai Province (Luluabourg); Léopoldville Province (Lokandu); Katanga Province (Kapanga, Kafakumba).

79. Elytra with strongly developed four primary intervals and more or less distinctly marked, fine secondary ones; of a green to blue or bluish violaceous tint. Body larger 80

— Elytra without or with very faintly developed two to three primary intervals; secondary intervals absent or feebly indicated, in the latter case the elytra violaceous, purple or metallic. Body smaller 81

80. Head and pronotum of a dark blue, elytra of a dark bronzy tint.

Metallonotus metallicus subsp. **metallicus** (FABRICIUS, 1801).

FABRICIUS described the elytra of his *Helops metallicus* as « *striatis* ». As among the many forms of *metallicus* sensu auct. only *sumptuosus* agrees in this respect with FABRICIUS' description, I have sent one of my *sumptuosus* to Dr. SV. LARSSON, Universitetets Zoologiske Museum, København. Dr. LARSSON was kind enough to compare carefully my *sumptuosus* with FABRICIUS' holotype and

confirmed the identity of both forms as to the strong development of the primary intervals on the elytra. There remain, however, small differences in the elytral pattern and sculpture, which seem to justify a subspecific separation of both forms.

The *metallicus* sensu auct. without strongly developed primary intervals on elytra are the *metallicus* of GEBIEN and the *cyaneus* of MÄKLIN; to them GRIDELLI, 1940, referred BERTOLONI's *Odontopus speciosus*. As the differences between *metallicus* and *speciosus* are constant, I have no doubt that both forms are good species.

So far I have not seen specimens of the *sumptuosus*-type, which show the pattern of body as indicated by FABRICIUS. Among all *metallicus* sensu auct. there is only *elegans* GEBIEN, whose elytra show sometimes a bronzy to metallic tint; on the other hand *elegans* belongs to the *speciosus*-forms, as the elytra are not subcostate and are even more shiny than in *sumptuosus*.

— Upper surface of an intense green colour, head and pronotum sometimes bluish.

Metallonotus metallicus subsp. **sumptuosus** HAROLD, 1878.

HAROLD, 1879. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Guinea : Kabele.

Distribution. — Guinea, southern part of the Belgian Congo, north-eastern part of Angola.

Material examined. — Belgian Congo : Katanga Province (Albertville, Muteba, Kafakumba, Kapanga, Kaniama, Sandoa, Tshibamba, Luashi); Kasai Province (Mwene Ditu, Kabinda, Luluabourg, Hemptinne, St. Benoît).

— Upper surface from a bluish green through blue to a bluish violaceous tint.

Metallonotus metallicus subsp. **upembensis** n.

Material examined. — Belgian Congo : Katanga Province (Parc National Upemba : Mabwe, 585 m, Dec. 1948, 15 spec., holotype, sex not determined, and paratypes I.P.N.; River Kateke, 950 m, Dec. 1947, 1 paratype I.P.N.; Kaziba, 1.140 m, Feb. 1948, 5 paratypes I.P.N. and T.M.; Kaswabilenga, 700 m, Jan. 1949, 3 paratypes I.P.N.; Kabenga, 1.240 m, Apr. 1949, 1 paratype I.P.N.; Albertville : Moyenne Kimbi, 900 m, Jan. 1951, leg. N. LELEUP, 7 paratypes BCM.; Baudouinville, 1937, leg. R.P. DEBBAUDT, 1 paratype BCM.; Lusaka, 1937, leg. R.P. DEBBAUDT, 3 paratypes BCM.).

81. Elytra of a vivid, strongly green colour 82
— Elytra blue, violaceous, purple, metallic, golden, cupreous or blackish, with a greenish to bluish sheen 83
82. Upper surface of head, pronotum, legs and the sides of abdomen of a purple, reddish golden or reddish bronzy tint.

Metallonotus speciosus subsp. **gloriosus** GEBIEN, 1904.

(Pl. IV, fig. 54.)

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Delagoa Bay.

Distribution. — Strictly confined to Portu. East Africa.

Materiel examined. — Portu. East Africa : Lourenço Marques.

The peculiar colour of this subspecies is convergent with that in *M. ærugineus*, with which *gloriosus* is sympatric.

— Upper surface of head, pronotum, legs and sides of abdomen green to blue.

Metallonotus speciosus subsp. **prasinus** GEBIEN, 1904.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Tanganyika Territory (Lukuledi) and British East Africa (Dar es Salaam).

I have examined only a few paratypes (ex M.F.) of this subspecies.

83. Upper surface of body unicolorous 84
— Upper surface of body bicolorous, the colour of elytra strongly contrasting with that of head and pronotum 85
84. Upper surface of body entirely violaceous.

Metallonotus speciosus subsp. **speciosus** (BERTOLONI, 1849).

PASCOE, 1871. — GRIDELLI, 1940. — *metallicus* GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *cyaneus* MÄKLIN, 1863. — CASTELNAU, 1840. — WESTWOOD, 1843.

Prof. AUGUSTO TOSCHI, University of Bologna, was kind enough to examine for me the single holotype of *speciosus*, coming from Inhambane; it is altogether violaceous and the elytra show faint traces of longitudinal intervals.

— Upper surface of body of a blackish colour, with a faint bluish or greenish sheen.

Metallonotus speciosus subsp. **varicolor** n.

(Pl. IV, figs. 57, 58 and 61.)

Material examined. — British East Africa : Merifano, Sept. 1932, leg. MACARTHUR, 12 spec., holo- and allotypes B.M., paratypes B.M., C.M. and T.M.

85. Elytra violaceous.

Metallonotus speciosus subsp. **simulator** GEBIEN, 1904.

(Pl. IV, fig. 55.)

GEBIEN, 1911. — GEBIEN, 1938-1942. — GRIDELLI, 1940.

Type locality. — Moçambique.

Distribution. — Italian Somaliland, southern Abyssinia, British East Africa, Tanganyika Territory, Portu. East Africa, northern part of the Belgian Congo.

Material examined. — British East Africa and Tanganyika Territory (Nairobi, Sabaki, Lower Tana, Arabuko Forest, Malindi, Karamoja, Kinangoe, Busia, Jinja, Liwale, Ukerewe Island). Belgian Congo : Oriental Province (Bangoie, Dingila, Faradje, Gwane, Tukpwo, Moto); Equator Province (Eala).

— Elytra metallic to golden or a golden purple.

Metallonotus speciosus subsp. **elegans** GEBIEN, 1904.

GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Cameroons.

Distribution. — Cameroons, Senegal, French Sudan, northeastern part of the Belgian Congo.

Material examined. — Senegal. Cameroons (Joko). Upper Sanga. French Sudan (Fort Crampel). Belgian Congo : Oriental Province (Geti).

— Elytra of an intense blue tint, sometimes the usually green pronotum blue.

Metallonotus speciosus subsp. **cælestinus** n.

(Pl. IV, fig. 56.)

Material examined. — British East Africa : Nairobi, Dec. 1923, leg. J. W. HUNT (1 spec., holotype, sex not determined, ex C.M. in B.M.); same locality, Apr. 1943, leg. MENEGHETTI (1 paratype C.M.); same locality, Sept. 1935 (1 paratype T.M.).

86. Body small, 11 mm long.

Metallonotus Schoutedeni n. sp.

Type locality. — Belgian Congo, Léopoldville Province : Temvo, Mar. 1922, leg. H. SCHOUTEDEN (1 spec., holotype, sex not determined, BCM.).

— Body large, 19 to 29 mm long 87

87. Anterior margination of pronotum interrupted at middle. Outer face of femora with comparatively dense and coarse sculpture, often transversely wrinkled between punctures. Punctation on elytra generally irregular, not or only to a small extent longitudinally confluent; only the two discal intervals sometimes slightly indicated; apical declivity with irregular punctation 88

— Anterior margination of pronotum complete, angular at middle. Outer face of femora with fine and scattered punctures on smooth background. Punctation on entire elytra longitudinally confluent and distinctly arranged in longitudinal rows, with all intervals between rows tending to form longitudinal ridges, with two discal and one lateral, subcostate primary intervals; apical declivity with longitudinal rows of punctures and alternate fine ridges.

Metallonotus antiquus (HAROLD, 1878).

HAROLD, 1879. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Type locality. — Guinea (Kabebe).

Distribution. — Belgian Congo, Guinea, Uganda.

Material examined. — Belgian Congo : Léopoldville Province (Mayidi, Lemfu, Kikwit, Leverville, Temvo, Gingungi, Lukula); Equator Province (Libenge, Lisala, Likimi, Bokapo, Eala, Budjala, Flandria); Oriental Province (Gwane, Wamba, Watsa, Niangara, Zobia, Niapu, Poko, Buta, Amadi, Elisabetha, Moto, Tukpwo, Bambesa); Kivu Province (Kasongo, Matale); Kasai Province (Luluabourg, Kondue, Tshikapa); Katanga Province (Kapanga, Sandoa, Tshibamba, Katompe); Parc National Albert (Mutwanga, Plaine Semliki). Uganda (Bwamba Forest, Kamengo Forest).

GEBIEN, 1904, placed *M. antiquus* as a simple variatio to *M. denticollis*; this opinion is not correct, for both forms differ from one another in essential particulars and are constant, occurring together in the same geographical areas.

88. Pre-apical teeth of anterior femora minute, but constantly developed. Elytra with very coarse and partly confluent punctures, becoming evanescent on extreme apex, with two indicated primary intervals on disc; the intervening spaces between punctures forming irregular rugosities. Convexity of elytra moderate, the afterbody 6 to 9 mm high.

Metallonotus denticollis (GRAY, 1832).

WESTWOOD, 1843. — GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942. — *gibbosus* GRAY, 1832. — *metallonotus* GRAY, 1832. — *rugulosus* FAIRMAIRE, 1897. — *rugosus* GEBIEN, 1904.

Distribution. — Cameroons, Ashantee, Togo, Gold Coast, Gaboon, Belgian Congo, Tanganyika Territory.

Material examined. — Belgian Congo : Léopoldville Province (Mayidi, Kisantu, Mpese, Lemfu, Léopoldville, Leverville, Ipamu, Lokandu); Equator Province (Lisala, Modjebo, Libenge, Bamania, Budjala, Ikela, Boende, Coquilhatville, Bokote, Binga, Eala, Bokuma, Bikoro, Flandria); Oriental Province (Stanleyville, Bengamisa, Bambesa, Moto, Gazi, Poko, Mahagi, Niatembe, Amadi); Kivu Province (Shabunda, Forêt Lubinbe); Kasai Province (Lusambo, Mwene Ditu, Luluabourg, Katoka, Lodja, Galli Koko); Katanga Province (Muteba, Kasinakaji, Kinda, Katompe, Kafakumba, Ngowa, Kapanga).

— Pre-apical teeth of anterior femora absent or obsolescent. Elytra uniformly covered with an extremely dense and subfoveate punctation, with the intervals between punctures reduced to narrow margins around punctures, forming a dense reticulation; without longitudinal primary intervals. Convexity of elytra very strong, the afterbody 7 ½ to 10 ½ mm high.

Metallonotus physopterus (HAROLD, 1880).

GEBIEN, 1904. — GEBIEN, 1911. — GEBIEN, 1938-1942.

Distribution. — Guinea, Cameroons, Ivory Coast, northern and western parts of the Belgian Congo, Uganda.

Material examined. — Belgian Congo : Equator Province (Libenge, Lisala); Kasai Province (Luebo, Luluabourg, Mwene Ditu); Oriental Province (Paulis); Katanga Province (Sandoa, Kafakumba); Kivu Province (Costermansville). Uganda (Kampala).

DESCRIPTIONS OF NEW SPECIES.

(Type localities cf. key.)

Passalocharis ciliata n. sp.

(Pl. I, fig. 5; Pl. V, fig. 64.)

Black to castaneous, shiny, subparallel. Head above rugose; with a shallow and wide depression between eyes, delimited laterally and posteriorly by a curved carina, which changes into a sulcus at middle of posterior margin; in front of the latter and at about level with the posterior margin of eyes there is an elevate and pointed tubercle on middle of vertex. Epistomal surface separated from the vertical one by a smooth and shallowly impressed, emarginate line. Apical margin of epistome emarginate, with two asymmetrical and porrect tubercles at middle; the left tubercle considerably larger than the right one, the latter feebly indicated; lateral angles of epistome lobiform and produced. Supra-antennal portions convex, strongly shiny, smooth and almost impunctate, distinctly projecting beyond lateral contours of eyes. Tempora long, slightly dilated backwards, smooth and in line with the coarsely punctured neck. Submentum shiny, densely rugose, with some scattered and erect hairs. Apical margin of buccal fissure lobes with a strong inner tooth and another outer one, emarginate between both teeth. Underside of head smooth, with fine and sparse punctures on buccal fissure lobes, longitudinally striolated on gula, and coarsely punctured on lateral portions. Antennæ with strongly transverse joints; only the three proximal joints shiny, polished and bare, all the other joints punctured and covered with a yellowish, rather dense, squarrose pilosity; apical joint a little shorter than the two preceding joints combined, of a broadly obovate shape. Pronotum quadrangular, slightly broader than long, with subparallel sides, briefly and abruptly narrowed in front of anterior angles and posterior ones. Anterior margin tri-sinuate, with a broad and shallow emargination at middle, and a small sinuosity at each side of anterior angles. The latter obtuse, the posterior angles rounded. Integument appearing as if smooth and polished; viewed under a strong magnification, uniformly covered with an extremely dense and fine micropunctation. Prosternum together with episterna smooth, the latter with a very fine and scattered, somewhat asperous punctation; apophysis horizontally produced beyond coxal cavities, with the apex forming an obtuse hook, which is separated from the pre-apical portion of apophysis by a narrow and transverse sulcus. Elytra shoulderless, gradually and almost straightly narrowed towards base, broadest behind middle, there hardly broader than pronotum; appearing as if smooth, but viewed under a strong

magnification, uniformly covered with an extremely dense micro-punctation; striæ defined by fine lines of obsolescent, shallow punctures, becoming more distinct on sloping portions; along the lateral margin and on apical declivity with numerous, comparatively coarse, irregular punctures, from which emerge rather long, fine, yellowish, erect hairs; in dorsal view the elytra thereby appearing as if ciliate. Base about as broad as pronotal base, strongly declivous towards mesothoracic tergite; scutellum small, triangular, impunctate, situated on the pre-basilar declivity; scutum with very dense and coarse, longitudinally confluent punctures; lateral portions of mesothoracic tergite shiny and with a few fine, acuductate, irregular strioles. Underside of afterbody impunctate, except for the punctured basal portion of mesosternum, the obsoletely and longitudinally wrinkled intercoxal process of basal sternite of abdomen and the anterior one-half of the lateral portions of the two first sternites, which are finely and sparsely granulated. In the ♂ the second sternite on each side with a velvety and transversely oval spot, which is broadened towards the outer margin. Anterior tibiæ curved, quadri-digitate at apical portion; upper surface with tarsal sulcus and the inner carina of the latter extending to basal one-third of tibial length; under surface scabrous, with a broadly rounded dilatation at middle of inner margin. Upper surface of intermediate and posterior tibiæ impunctate, broadly sulcate on basal three-quarters, with subcarinate lateral edges; inner surface of posterior tibiæ in the ♂ with a broad sulcus, which is situated on basal two-thirds and bears a longitudinal row of dense, semi-erect bristles along midline.

Length 32 to 38 mm; width 10 ½ to 12 mm; height 8 to 9 mm.

Passalocharis Leleupi n. sp.

(Pl. V, fig. 65.)

Black to reddish brown, strongly shiny, subparallel. Head above rugosely punctured; with a wide depression on epistomal-frontal portion. Epistomal surface separated from the vertical one by a sharply impressed, emarginate line. Apical margin of epistome strongly emarginate, with prominent lateral angles, with one to two, cariniform tubercles at middle; these tubercles are strongly asymmetrical, with the left tubercle being much more strongly developed than the rudimentary right tubercle, which sometimes is hardly indicated. Lateral portions of epistome and genæ convex and raised, forming an emarginate, sharp edge, which delimits the sides of the epistomal-frontal depression. Vertex between eyes with two small pointed tubercles on middle, being as widely separated from one another, as are the epistomal tubercles. Supra-orbital ridges well-developed, complete, obtuse, continuous with the inner edge of genal convexity. Occiput and vertex in front of inter-ocular tubercles smoothed, neck coarsely punctured and longitudinally rugose. Genal contours strongly projecting outwards beyond contours of eyes. Tempora long, slightly dilated backwards.

Submentum shiny, shallowly rugose, with some scattered, fine and erect hairs. Apical margin of buccal fissure lobes bi-dentate. Antennæ with strongly transverse joints; the three proximal joints bare and polished, all the other distal joints densely ciliate; apical joint almost square, a trifle longer than the two preceding joints taken together. Pronotum subquadrangular, a little broader than long, at least as broad as elytra. Sides subparallel at middle, strongly narrowed in front of anterior angles and posterior ones. Anterior margin shallowly emarginate at middle. Anterior and posterior angles obtuse. Integument polished, as in *ciliata*. Episternum of prosternum covered with rather dense and very fine granules. Prosternal apophysis horizontally produced, with perpendicular, simple apical declivity. Elytra shoulderless, narrowed towards base, broadest behind middle, there not broader than pronotum, with polished integument as in *ciliata*; striæ very fine, composed of extremely fine and shallow punctures, which become a little more impressed towards sides. Apical declivity with a few, quite irregular, very fine granules, which bear each sometimes a fine erect hair, easily to be rubbed off. Scutellum and mesothoracic tergite as in *ciliata*. Underside of afterbody polished and practically impunctate; also the basal portion of mesosternum only with scattered, piliferous punctures. Lateral portions of the second abdominal sternite with a velvety and transversely oval patch in the ♂. Structure of legs very similar to that in *ciliata*; the posterior tibiæ with a row of dense, semi-erect, reddish bristles on inner surface.

Length 24 to 28 mm; width 8 ¾ to 9 ½ mm; height 6 ½ to 7 ¼ mm.

Named in honour of the discoverer, Monsieur N. LELEUP.

Gabonisca Straeleni n. sp.

(Pl. II, fig. 22.)

Black, shiny, bare. Head above densely punctured, with the punctures becoming more scattered on vertex. Apical margin of epistome deeply and arcuately emarginate, with strongly produced and acute lateral angles. Frons between supra-antennal convexities with a transverse impression, which shows more concentrated and somewhat confluent punctures; vertical portion behind this impression and between eyes convex. Genæ moderately projecting beyond ocular outlines. Eyes along inner margin with short and straight supra-orbital carinula, which is separated from vertical convexity by a narrow longitudinal sulcus. Tempora long, rounded and strongly narrowed towards neck; the latter separated from vertex by a slight transverse impression. Submentum scabrous, with a fine, cariniform, longitudinal convexity along midline. Underside of head densely punctured. Antennæ accrescent, becoming compressed towards apex; the six proximal joints shiny and sparsely punctured, the distal joints dull and very densely sculptured; third joint a little longer than broad, about one and a half times as long as the second joint and a little longer than the fourth joint; the

following joints transverse, becoming gradually broader towards apex, with the fourth joint a little broader than long, and the penultimate joint not quite as broad as long; the apical joint a little shorter than the two preceding joints taken together, with obliquely subtruncate or slightly rounded apical margin. Pronotum convex, only slightly broader than long, broadest at about middle, in the ♂ broader than in the ♀. Anterior margin shallowly emarginate, with slightly prominent, obtusely rounded, but rectangular lateral angles. Sides strongly rounded and dilated towards middle, more narrowed towards anterior angles than towards posterior ones, and faintly sinuate in front of the latter; lateral carina widely and obsoletely crenulate. Posterior angles distinctly produced backwards, obtuse. Basal carina of prothoracic foramen coalescent with the basal carina of pronotum behind posterior angles of the latter. Base distinctly broader than anterior margin, faintly emarginate at middle and slightly arcuate at lateral portions. Integument covered with uniform, rather fine and comparatively sparse punctures. Prosternum irregularly and obsoletely punctured, with some transverse strigæ in front of intercoxal apophysis, transversely wrinkled on lateral portions; episternum sparsely punctured and longitudinally wrinkled; apophysis horizontally projecting beyond coxal cavities, marginate laterally, dilated towards apex and with a minute, slightly porrect tubercle on middle of apex. Elytra subparallel, one and a half times as long as head and pronotum together, with strongly developed shoulders and humeral callus. Striæ impressed, composed of longitudinal rows or coarse and dense punctures, finer and less regular on sloping portions, becoming irregular in front of apex; intervals between striæ impunctate, convex, except on submarginal lateral and apical portions. Scutellar row abbreviate. Scutellum large, triangular, with some fine punctures; scutum coarsely and densely punctured; lateral portions of mesothoracic tergite with short strioles. Pseudopleuræ punctured. Basal portion of mesosternum densely and coarsely punctured; mesosternal apophysis deeply sulcate along midline. Abdomen with fine and rather dense punctures, becoming scattered on lateral portions. Anterior and intermediate tibiæ slightly bent. The anterior tibiæ in the ♀ with the under surface coarsely and scabrously punctured on apical one-half, and with the inner margin of upper surface appearing as if slightly dilated from middle to apex; in the ♂ the inner margin of upper surface with a strong tooth behind middle, and with two to three smaller teeth between median tooth and inner apical angle of tibia. The inner margin of intermediate tibiæ in the ♂ with a small tooth at about middle and with the inner apical angle of tibia produced inwards and provided with a short, strong, obtuse and squarrose spine. Posterior tibiæ in the ♀ almost simple, with the inner margin of upper surface very faintly sinuate between middle and apex; in the ♂ shaped as are the intermediate tibiæ, with a small dentiform tubercle before middle and with a short apical spine.

Length 14 to 15 mm; width 4 ¼ to 4 ½ mm; height 3 to 3 ¼ mm.

I name the new species in honour of Prof. V. VAN STRAELEN, Director of the « Institut royal des Sciences naturelles de Belgique », and President of the « Institut des Parcs Nationaux du Congo Belge ».

Pycnocerus (s. str.) **Fageli** n. sp.

Black, with a more or less pronounced metallic sheen, the pronotum often bronzy to greenish, the elytra of a metallic greenish, cupreous or purple tint. Head above with fine and scattered punctures. Epistome very shallowly emarginate, with a small, tuberculiform dilatation at middle of apical margin. Clypeal sutures deeply impressed. Vertex slightly convex, with longitudinal impression along midline. Buccal fissure lobes truncate apically, rugose. Underside of head practically smooth, except for a row of coarse punctures along the margin of mouth cavity and a few irregular punctures on lateral portions; the latter bear fine and erect hairs. Antennæ as in the typical form of *sulcatus*, with the ninth joint being strongly transverse and much broader than the penultimate joint. Pronotum with very fine and scattered punctures, appearing as if ciliate laterally on account of the erect pilosity on under surface. Prosternum with transversely wrinkled background and coarsely punctured; the punctures on episternum very fine, piliferous, concentrated on anterior angles. Elytra with eight very deep and irregularly punctured rows, which are all visible from above, and with strongly convex and smooth intervals; the latter almost narrower than the impressed rows of punctures. Base with irregular, rather coarse punctures, from which emerge dense and erect, brownish hairs. Sloping lateral portions with a dense, moderately coarse, irregular punctation, which bears a scattered, erect pilosity. Punctation on meso- and metasternum scattered, fine and piliferous. Abdomen polished. Only the anterior femora with an apical tooth on inner carina of underside; the edges of underside of femora smooth and not crenulate. Inner margin of the anterior and intermediate tibiæ in the ♂ with a distinct, dentiform dilatation in front of middle.

Length 27 to 32 mm; width 8 to 9 ¼ mm; height 6 ½ to 7 ½ mm.

I dedicate the new species to Monsieur G. FAGEL, Chief Entomologist to the « Institut des Parcs Nationaux du Congo Belge ».

Metallonotus Janssensi n. sp.

(Pl. IV, fig. 46.)

Black, the head and pronotum partially of a dark metallic greenish tint, with a slightly purple sheen, the legs greenish golden and shiny. Head above densely and rugosely punctured, except for the occiput; with a transverse, feebly arcuate impression between supra-antennal convexities; with a short, longitudinal, slightly convergent carinula on each side,

running from the antero-interior angle of eyes to about middle of supra-antennal convexities, continuous with the obsolescent supra-orbital ridges; the vertex between these carinulæ with a wide and shallow impression, which is delimited by the transverse sulcus between supra-antennal convexities anteriorly, and by a transverse convexity posteriorly; there can be observed two very fine and linear carinulæ on the middle of this impression. Posterior one-half of vertex strongly convex, subsulcate along midline. Eyes projecting beyond the subparallel genæ, but in line with the contours of tempora. The latter much longer than eyes, subparallel a short distance behind eyes, thence broadly rounded and narrowed towards neck. Submentum narrow, with truncate apical margin, and with the lateral angles of the latter minutely tuberculate. Antennæ long, becoming compressed and accrescent towards apex; third joint a little more than twice as long as the strongly transverse second joint, almost as long as the two following joints taken together; the following joints square to slightly broader than long; the two penultimate joints one-quarter broader than long; the apical joint large, a little broader than the penultimate joint, almost as long as the two preceding joints combined. Pronotum strongly transverse, broadest behind middle, there almost twice as broad as long; coarsely and in part confluently punctured; with a fine median sulcus on anterior one-half, and a roundish impression on each side halfway between middle and lateral margin on posterior one-half. Anterior margin practically straight, with obtusely rounded anterior angles. Sides strongly rounded, more narrowed towards anterior angles than towards posterior ones; the latter obtuse. Prosternum transversely wrinkled; episternum with very coarse and round punctures, becoming transversely confluent posteriorly; intercoxal apophysis punctured, sulcate along margins of coxal cavities, with the disc of apical portion distinctly raised and convex. Elytra strongly ventricose; the contours, examined in lateral view, forming a strongly, almost angularly curved line, which rises obliquely from base towards the highest point of convexity; the latter is situated a little behind middle of elytra; contours of apical declivity steep, obliquely declivous towards apex. Sides strongly dilated backwards, including the greatest width of elytra behind middle; there the elytra two and a half times as broad as pronotum in the ♂, a little more than three times as broad as pronotum in the ♀. Base shallowly emarginate, with the lateral portions obliquely truncate and forming a well-developed, obtuse humeral angle. Integument densely covered with a coarse, subfoveate and very dense, partly confluent punctation, becoming rugose on extreme sides and evanescent in front of apex; a fine micro-granule can be observed in the centre of each puncture. A few fine and erect black cilia emerge from granules on the submarginal area of sides. Intervals between punctures much smaller than the diameter of punctures, in part longitudinally confluent, especially so on extreme lateral portions, and on each elytron forming a feeble, longitudinal line, halfway

between suture and middle. Pseudopleuræ sericeous, covered with scattered granules. Mesosternum rugosely punctured, smooth along midline, with truncate and transversely convex apical margin; episternum with a few coarse and umbonate punctures. Metasternum shiny, glabrous, with fine and very sparse punctures, linearly impressed along midline on posterior two-thirds, and with a sericeous, micro-shagreened area along episternal suture; episternum with a few umbonate punctures. The four basal sternites of abdomen with fine and scattered punctures discally, becoming more distinct towards apex, with the cuticle between punctures obsoletely and longitudinally wrinkled; the lateral portions of sternites with comparatively dense and strong punctures, irregularly wrinkled; anal sternite uniformly covered with moderately dense and fine punctures. Inner and outer faces of femora with a sharp median carina, sparsely punctured and obsoletely wrinkled. Anterior and intermediate tibiæ distinctly curved, the posterior ones almost straight.

Length 13 ½ to 14 ¼ mm; width 7 ¼ to 7 ½ mm: height 6 to 6 ¼ mm.

I have pleasure to name the new species in honour of Monsieur A. JANSSENS, Entomologist to the « Institut royal des Sciences naturelles de Belgique ».

Metallonotus silvaticus n. sp.

(Pl. IV, fig. 45.)

Metallic green, the legs, antennæ and often parts of the head, prothorax, and apex of elytra cyanescent to violaceous; moderately shiny and bare. Head above with coarse and dense punctation, becoming scattered towards neck; with a deep and transverse impression between supra-antennal convexities, and with three longitudinal impressions on vertex, one of them running along midline and the others along inner margin of eyes. Lateral portions of epistome separated from central lobe by a deep sinuosity. Eyes slightly projecting beyond lateral contours of genæ and tempora; the latter longer than eyes, straightly narrowed towards neck. Discal portion of submentum raised, truncate apically. Gular surface smooth and impunctate, shiny; temporal surface densely and transversely wrinkled on underside. Antennæ long and strongly compressed, with the compressed lateral surfaces almost twice as broad as the dorsal or ventral surfaces, and sulcate along midline; third joint a little longer than the two preceding joints combined, slightly longer than the two following joints combined, twice as long as broad; the following joints strongly transverse, slightly accrescent towards apex, one-half to two-thirds broader than long; apical joint large, distinctly narrower than the penultimate joint, with subparallel sides, truncate apical margin, almost as long as the two preceding joints taken together or as long as the third joint. Pronotum strongly transverse, two-thirds broader than long, broadest a little before middle, densely and coarsely punctured, with a more or less developed median impression and a lateral one on each side of posterior one-half. Sides rounded and some-

times slightly sinuate in front of posterior angles; the latter minutely prominent and rectangular. Anterior angles rounded. Prosternum together with the broad and flattened intercoxal apophysis almost impunctate; episternum with round, subfoveate, very coarse punctures, transversely strigose apically; apophysis sulcate along lateral margins, truncate apically. Elytra moderately ventricose, with the discal contours, viewed from the side, forming a continuous, arcuately curved line; sides gradually, slightly and straightly dilated backwards; broadest behind middle, there two and a third times to almost two and a half times as broad as pronotum. Base trapezoidal, with the lateral portions obliquely sloping in a straight line towards humeral angles; the latter obtuse. Integument uniformly and densely covered with an irregular, coarse and round punctation, becoming scattered and shallow only in front of apex; intervals between punctures much smaller than the diameter of punctures; four vein-like longitudinal lines on each elytron slightly indicated or absent. Contours of apical declivity, examined in lateral aspect, slightly sinuate in front of apex. Pseudopleuræ sparsely punctured. Pleurites of meso- and metasternum coarsely and densely punctured; discal portions of meso- and metasternum almost impunctate. The four basal sternites of abdomen with extremely fine and scattered punctures on disc, with coarse and sparse punctures on lateral portions; anal sternite with comparatively dense and strong punctation. Femora with a straight median carinula on outer surface and inner one, sparsely punctured, with a small and sharp pre-apical tooth at each side of under surface. The anterior and posterior tibiæ strongly curved, the posterior ones less so.

Length 18 to 18 ¾ mm; width 8 to 8 ½ mm; height 5 to 6 ¼ mm.

Metallonotus subcarinipes n. sp.

(Pl. IV, fig. 48.)

Underside black, with a slight sheen of a metallic green; upper surface of a dark metallic green, the elytra with a more or less distinct, purple sheen; antennæ black with a bluish golden sheen; legs strongly shiny, of a bluish golden green tint; body moderately shiny. Head above with a dense and coarse, rugosely confluent punctation, with the exception of epistome and supra-antennal convexities, where the punctures become a little more scattered; with a slight transverse impression between supra-antennal convexities, and a longitudinal sulcus along middle on the convex posterior one-half of vertex; the latter separated from cervical-occipital portion by a transverse impression. No supra-orbital structures. Eyes strongly convex, with the lateral contours strongly projecting outwards beyond lateral outlines of genæ and tempora; the latter about as long as eyes, subparallel behind eyes and then broadly rounded and narrowed towards neck. Lateral angles of the apical margin of submentum each with a strongly elevate, shiny, cariniform, longitudinal tubercle. Antennæ rather short, becoming

strongly accrescent and compressed towards apex; third joint a little longer than the two following joints taken together; the following joints transverse and becoming much broader towards apex, with the fourth joint only slightly broader than long, and the two penultimate joints one and a half times to one and two thirds times as broad as long; apical joint large, elongate, very little broader than the penultimate joint, a little longer than the two preceding joints combined. Pronotum transverse, broadest before middle, about one and a half times as broad as long, with coarse, rugose and very dense punctures; sulcate along midline, but without distinct lateral impressions on posterior one-half. Anterior margin shallowly emarginate, with obtusely rounded lateral angles. Sides strongly rounded and almost straightly narrowed from about middle to base. The latter broader than anterior margin, with slightly obtuse posterior angles. Underside of prothorax as in *M. Janssensi*, but the posterior portion of episternum of prosternum transversely strigose and the median convexity of the apical portion of intercoxal apophysis slight. Elytra with flattened disc, subparallel, broadest at or a little behind middle, there a little less than twice as broad as pronotum. Base straight or slightly emarginate, with short and slightly sloping lateral portions; humeral angles obtusely rounded. Integument densely covered with coarse, subfoveate and rugosely confluent punctures, which are arranged in not quite regular longitudinal rows, becoming more irregular and confused in front of apex; intervening spaces between punctures much smaller than the diameter of punctures; the longitudinal primary intervals, between the more or less duplicate rows of punctures, raised to wavy and very fine longitudinal ridges; there are at least four well-developed discal ridges on each elytron, extending from base to apex; each puncture with a fine granule at centre. Underside of afterbody similarly shaped and sculptured as in *M. Janssensi*. Outer face of femora with a fine, faintly developed and abbreviate carinula along midline, coarsely and rather densely punctured; anterior femora with sharp apical teeth; intermediate and posterior femora inermous. Anterior and intermediate tibiæ curved, the posterior ones almost straight.

Length 13 to 14 ½ mm; width 5 mm; height 3 ¾ to 4 mm.

Metallonotus viridis n. sp.

(Pl. IV, fig. 51.)

On account of the elytral sculpture, among all the other *Metallonotus* having completely developed femoral carinæ, related only to *M. splendens* GEBIEN. As in the latter, the elytra are very densely punctured, exhibiting only two longitudinal, slightly raised, primary intervals on disc of each elytron. The new species differs from *splendens* as follows.

Pronotum broader, broadest at or behind middle, with evenly rounded sides; posterior angles widely obtuse, in dorsal aspect appearing as if broadly rounded with sides. In *splendens* the pronotum is narrower, cordi-

form, broadest in front of middle, thence with the sides straightly or sinuately narrowed towards the rectangular to slightly obtuse posterior angles. Elytral base not marginate; the humeral portions in an oblique and straight line sloping towards humeral angles. In *splendens* the base of elytra shows an indicated marginal carina; the contours of the humeral portions form a small subangular sinuosity a little outwards from the level of posterior angles of pronotum.

The two discal primary intervals on elytra are strongly raised, and there are also secondary longitudinal intervals slightly indicated between suture and primary intervals. In *splendens* the discal primary intervals are faint, often altogether absent, in which case, as no secondary intervals are developed, the elytra show a uniform, very dense and irregular punctation. Antennæ and tarsi densely covered with fine, reddish brown hairs; in *splendens* bearing only a few very fine, black hairs.

Dark green, head and pronotum of a bluish green to blackish blue tint.

Length 18 to 18 ½ mm; width 6 ¾ to 7 mm.

Metallonotus nitidus n. sp.

(Pl. IV, fig. 50.)

Underside black, with a more or less distinct greenish to bluish sheen; upper surface of head and pronotum of a bluish green colour, elytra metallic green, in the subsp. *purpuripennis* n. of a reddish violaceous to purple colour with a golden sheen; legs and antennæ of a dark blue tint. Head above coarsely and rugosely punctured, except for the supra-antennal convexities ant the smooth occipital area between vertex and neck; with a rather deep transverse impression between supra-antennal convexities. Vertex between eyes faintly convex and sometimes with traces of a fine median sulcus and two lateral ones. No distinct supra-orbital structures. The sloping lateral portions of epistome with a few, fine, yellowish bristles. Eyes convex, strongly projecting beyond genal contours, much less so beyond tempora. The latter a little longer than eyes, subparallel behind eyes and then broadly rounded and narrowed towards neck. Submentum broadly excavate along midline, with the lateral portions raised to longitudinal convexities. Antennæ comparatively short, becoming accrescent and compressed towards apex; third joint about as long as the two following joints combined; the following joints square to sligthly transverse, with the two penultimate joints one-third to one-half broader than long; apical joint about as broad as the penultimate joint, distinctly shorter than the two preceding joints combined, and a little shorter than third joint. Pronotum transverse, broadest at middle, a little more than one and a half times as broad as long, with coarse and rather dense punctures, becoming more concentrated and in part rugosely confluent on lateral portions; generally with broad and conspicuous median sulcus. Anterior margin shallowly emarginate, with rounded lateral angles. Sides evenly rounded, only a

little more narrowed towards the anterior margin than towards base. The latter straight; posterior angles slightly obtuse. Prosternum with very scattered and fine punctures; episternum with coarse and rather dense punctation, transversely rugose on posterior one-half; intercoxal apophysis flat, shallowly sulcate laterally. Elytra convex, subcylindrical, but not ventricose, subparallel, shiny. Base almost straight, with slightly and obliquely rounded lateral portions; humeral angles obtuse. Integument densely covered with coarse punctures, which are indistinctly arranged in simple or duplicate longitudinal rows; intervening spaces between punctures smaller than the diameter of punctures, but larger than in all the other allied species; intervals between the longitudinal rows of punctures raised and forming subcostate ridges on disc, less distinct on sloping portions. Scutellum with scattered punctures. Pseudopleuræ covered with sparse and coarse punctures, becoming finer towards apex. Mesosternum densely, rugosely punctured; apophysis broadly sulcate along midline; episternum and epimeron very densely and coarsely punctured, the latter with carinate outer margins. Metasternum smooth, with a longitudinal area of rough punctures near to episternal sutures; episternum narrow, rugosely punctured only along metasternal suture. Abdomen as in the allied species. The pre-apical teeth of femora well-developed in the anterior femora, minute and rudimentary in the intermediate femora and posterior ones; outer and inner surfaces of femora sparsely punctured, with strong carina along middle. Anterior and intermediate tibiæ curved, posterior ones almost straight.

Length 15 to 17 mm; width 5 ¾ to 6 ¼ mm; height 4 to 4 ¾ mm.

Metallonotus principatus n. sp.

Colour-pattern similar to that in *M. speciosus* subsp. *simulator*; strongly shiny and with vivid metallic colours, under surface of a bluish green, the legs of a cyaneous blue, head and pronotum blue to bluish green, and the elytra of a very strong, bluish violaceous tint. Head above moderately and sparsely punctured, with the punctures becoming a little more concentrated behind the transverse clypeal impression; frontal-vertical portion with longitudinal median impression. Eyes slightly projecting beyond genal contours, in line with those of tempora. The latter slightly and almost straightly narrowed towards neck. Submentum quadrangular, only slightly broader than long, coarsely punctured, with truncate apical margin and with tuberculate lateral angles of the latter. Antennæ extending a little beyond base of pronotum, becoming strongly compressed and accrescent towards apex, shiny, of an intense blue tint; third joint almost as long as the two following joints combined; the penultimate joint one-third to one-half broader than long; apical joint large, in one specimen (♂ ?) almost as long as the two preceding joints combined and distinctly longer than the third joint, in the other one (♀ ?) distinctly shorter than the two preceding

joints combined and a little shorter than the third joint. Pronotum one and a half times as broad as long, broadest before middle, with irregular, coarse but scattered punctures; the intervals between punctures of disc much larger than the diameter of punctures and smooth; with a linear, rather strong median impression and a shallow, roundish impression on each side near to posterior angles. Lateral angles obtuse. Prosternum smoothed, episternum with irregular and coarse punctures. Elytra flat on disc, slightly dilated backwards, with well-developed, slightly obtuse shoulders, strongly shiny. Integument densely covered with coarse, but round and well-separated punctures, becoming more concentrated and somewhat confluent towards apex; on the anterior one-third of disc the intervals between punctures are almost larger than the diameter of punctures; the longitudinal discal intervals are faintly indicated. Suture obtusely raised and smoothed. Scutellum smooth, with a few shallow punctures. Underside of afterbody polished and smooth, with a few fine punctures only on pleurital portions. Femora with very fine, but distinct pre-apical teeth; outer surfaces smooth, with a few, hardly discernible punctures, plane, without median carina. Anterior and intermediate tibiæ moderately curved.

Length 20 to 21 mm; width 7 to 7 ½ mm; height 4 to 4 ¼ mm.

Metallonotus Schoutedeni n. sp.

Much resembling *M. asperatus* PASCOE, but of much smaller size and with distinctly ventricose elytra. The new species differs from *asperatus*, with which it agrees in the basally evanescent primary intervals on elytra, as follows :

Size smaller : 11 mm long, 5 ¾ mm broad.

Elytra of an greenish olivaceous tint, pyriform and distinctly ventricose; broadest behind middle, there convex, with the discal contours, viewed from the side, forming a straight line at basal one-quarter, thence becoming slightly and gradually raised towards the top of apical declivity; the latter therefore situated at a higher level, than is the base of elytra. All six primary intervals raised, forming wavy, longitudinal ridges on posterior half, becoming gradually evanescent towards base; the punctures between intervals coarser, being rugose and completely irregular on basal one-quarter. In *asperatus*, as in the closely allied species *cupripennis*, *violaceus* and *costatus*, the elytra are subparallel, uniformly convex and flattened discally, with the top of apical declivity situated at same level with elytral base.

Pronotum a little more transverse, broadest in front of middle. The antennæ are a little shorter, but show approximately the same proportions of single joints as in *asperatus*.

Outer surfaces of femora with distinct and moderately dense punctures, but without indication of a median carinula apically. In *asperatus* the

outer surfaces of femora show only a few very fine punctures, and there is a fine and short plica in front of apex. Head blackish green, pronotum green, elytra greenish olivaceous, underside and appendages blue.

From the *denticollis*-group, with which the new species agrees in the ventricose elytra and in the absence of any femoral plica or carina, *M. Schoutedeni* is readily distinguished by the much smaller size of body.

Named in honour of its discoverer, Dr H. SCHOUTEDEN, Honorary Director to the « Musée Royal du Congo Belge ».

LIST OF PYCNOCERINI COLLECTED IN THE « PARCS NATIONAUX DU CONGO BELGE ».

A. — **PARC NATIONAL DE L'UPEMBA.**

I. — **Odontopezus asper** ALLUAUD.

97 ex. : Kaswabilenga, rive dr. Lufira, 700 m, 1-9.X.1947 (800 *a*); 29-30.X.1947 (899 *a*); 17/24.I.1949 (2287 *a*); 16.X.1947 (838 *a*); 22/24.X.1947 (885 *a*); 8.XI.1947 (962 *a*); 6-9.X.1947 (806 *a*); 24.IX.1947 (771 *a*); Munoi, bif. Lupiala, 890 m, 31.V-2.VI.1948 (1654 *a*); 15/21.VI.1948 (1712 *a*); Mabwe, lac Upemba, 585 m, 9.IX.1947 (773 *a*).

II. — **Metallonotus speciosus** ssp. **sumptuosus** HAROLD.

1 ex. : Kanonga, 700 m, 16-23.II.1949 (2366 *a*).

III. — **Metallonotus speciosus** ssp. **upembensis** nov.

24 ex. : Mabwe, 585 m, 31.XII.1948 (2153 *a*); Mabwe, lac Upemba, 585 m, 1-12.VIII.1947 (660 *a*); riv. Kateke, sous-affl. Lufira, 950 m, 23.XI/5.XII.1947 (1073 *a*); Kaziba, 1.140 m, 15.II.1948 (1292 *a*); 1-6.II.1948 (1256 *a*); Kaswabilenga, 700 m, 28.II.1949 (2427 *a*); Kabenga, 1.240 m, 2-6.IV.1949 (2505 *a*).

B. — **PARC NATIONAL ALBERT** (1).

I. — **Prioscelis serrata** ssp. **serrata** (FABRICIUS).

44 ex. : rive dr. Butahu, 1.000 m, VII.1946, J. DE WILDE; Ouest piste Mwenda-Katuka, 1.000-1.100 m, VIII.1945, J. DE WILDE; Bugazia, 912 m, 16.V.1935, H. DAMAS; plaine Semliki, 900-1.100 m, IV/X.1937, L. HACKARS; forêt Semliki, 900-1.200 m, X/XI.1937, L. HACKARS.

II. — **Pycnocerus sulcatus** ssp. **exaratus** HAROLD.

16 ex. : Mutsora, 1939, L. HACKARS; Ouest piste Mwenda-Katuka, 1.000-1.100 m, VIII.1945, J. DE WILDE (lot 3 *a*); forêt Semliki, 900-1.200 m, X-XI.1937, L. HACKARS; plaine Semliki, 900-1.100 m, IV/X.1937, L. HACKARS.

III. — **Chiroscelis digitata** (FABRICIUS).

4 ex. : rive dr. Butahu, 1.000 m, VII.1946, J. DE WILDE; Ndjelele S. Munsenene, 2.X.1946, J. DE WILDE (12); forêt Semliki, 900-1.200 m, X/XI.1937, L. HACKARS; Ouest piste Mwenda-Katuka, 1.000-1.100 m, VIII.1945, J. DE WILDE (3 *a*).

IV. — **Pristophilus passaloides** (WESTWOOD).

4 ex. : Ouest piste Mwenda-Katuka, 1.000-1.100 m, VIII.1945, J. DE WILDE (3 *a*); Ndzobulo, 29.X.1946, J. DE WILDE; rive dr. Butahu, 1.000 m, VII.1946, J. DE WILDE.

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(1) All material collected by the « Mission G. F. DE WITTE (1933-1935) » in the « Parc National Albert » was destroyed at Hamburg, during the War.

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SYSTEMATIC INDEX.

DEPARTMENT OF ENTOMOLOGY, TRANSVAAL MUSEUM.

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Photo with REICHERT, Neupolar 50 and REICHERT, « Lux FNI » 20 W-voltage lamp.

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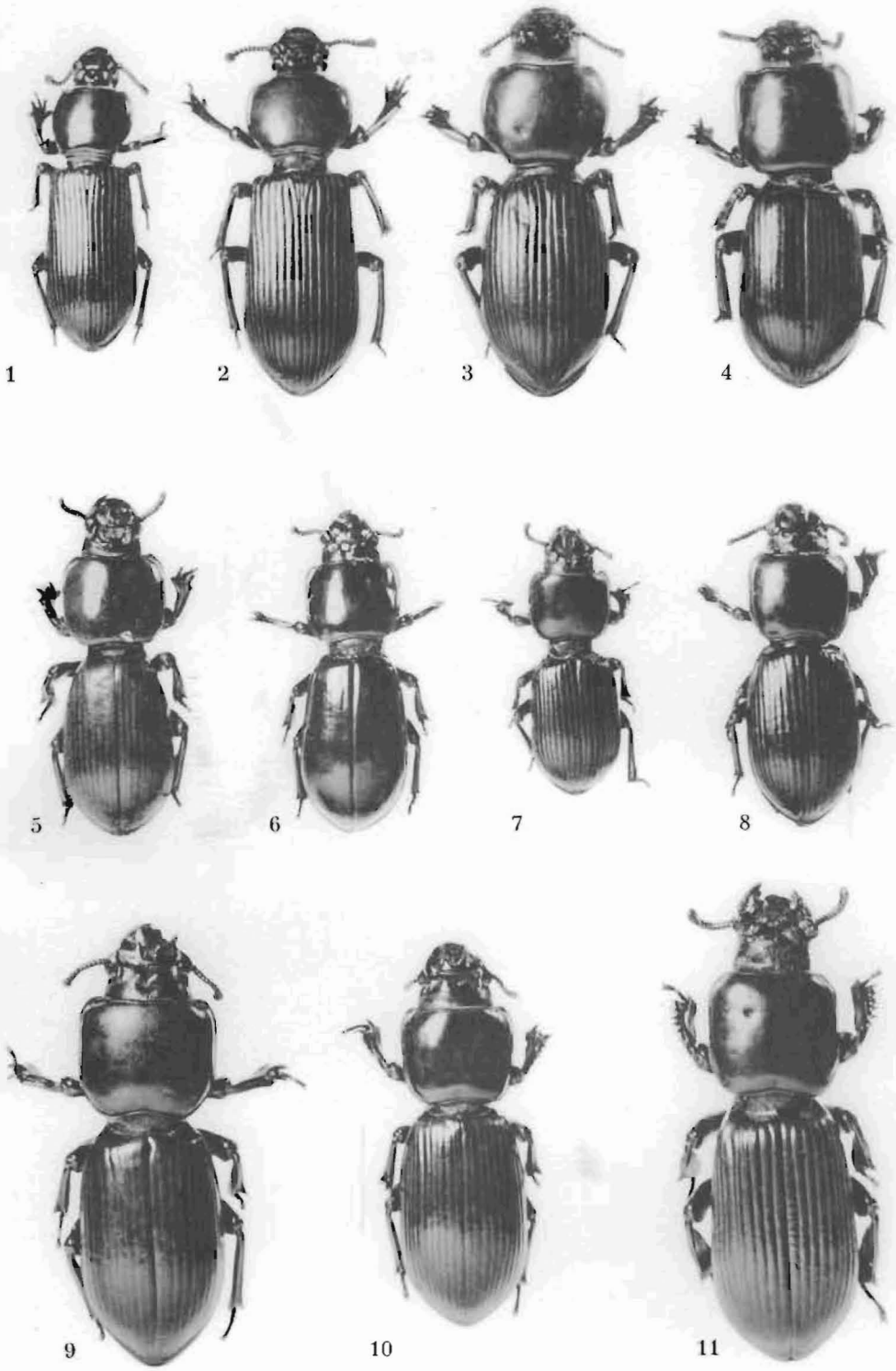

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FIG. 16. — *Prioscelis Fabricii* HOPE.

FIG. 17. — *Prioscelis tridens* KOLBE.

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Photo with REICHERT, Neupolar 50 and REICHERT, « Lux FNI » 20 W-voltage lamp.

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PLATE III

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FIG. 27. — *Catamerus Revoili* subsp. *Fairmairei* ALLUAUD.

FIG. 28. — *Catamerus Revoili* subsp. *intermedius* GAHAN.

FIG. 29. — *Catamerus Revoili* subsp. *manicanus* PÉRINGUEY.

FIG. 30. — *Catamerus Revoili* subsp. *rugosus* GAHAN.

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FIG. 32. — *Pycnocerus (Dinoscelis) Passerini* (BERTOLONI).

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FIG. 36. — *Pycnocerus* (s. str.) *sulcatus* subsp. *exaratus* (HAROLD).

Photo with REICHERT, Neupolar 50 and REICHERT, « LUX FNI » 20 W-voltage lamp.

PLATE III

EXPLANATION OF FIGURES.

FIG. 26. — *Catamerus Revoili* subsp. *Revoili* FAIRMAIRE.

FIG. 27. — *Catamerus Revoili* subsp. *Fairmairei* ALLUAUD.

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FIG. 36. — *Pycnocerus* (s. str.) *sulcatus* subsp. *exaratus* (HAROLD).

Photo with REICHERT, Neupolar 50 and REICHERT, « Lux FNI » 20 W-voltage lamp.

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Phototypie A. Dohmen. Bruxelles

PLATE IV

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FIG. 52. — *Metallonotus splendens* GEBIEN.
FIG. 53. — *Metallonotus cupripennis* GEBIEN.
FIG. 54. — *Metallonotus speciosus* subsp. *gloriosus* GEBIEN.
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Photo with REICHERT, Neupolar 50 and REICHERT. « Lux FNI » 20 W-voltage lamp.

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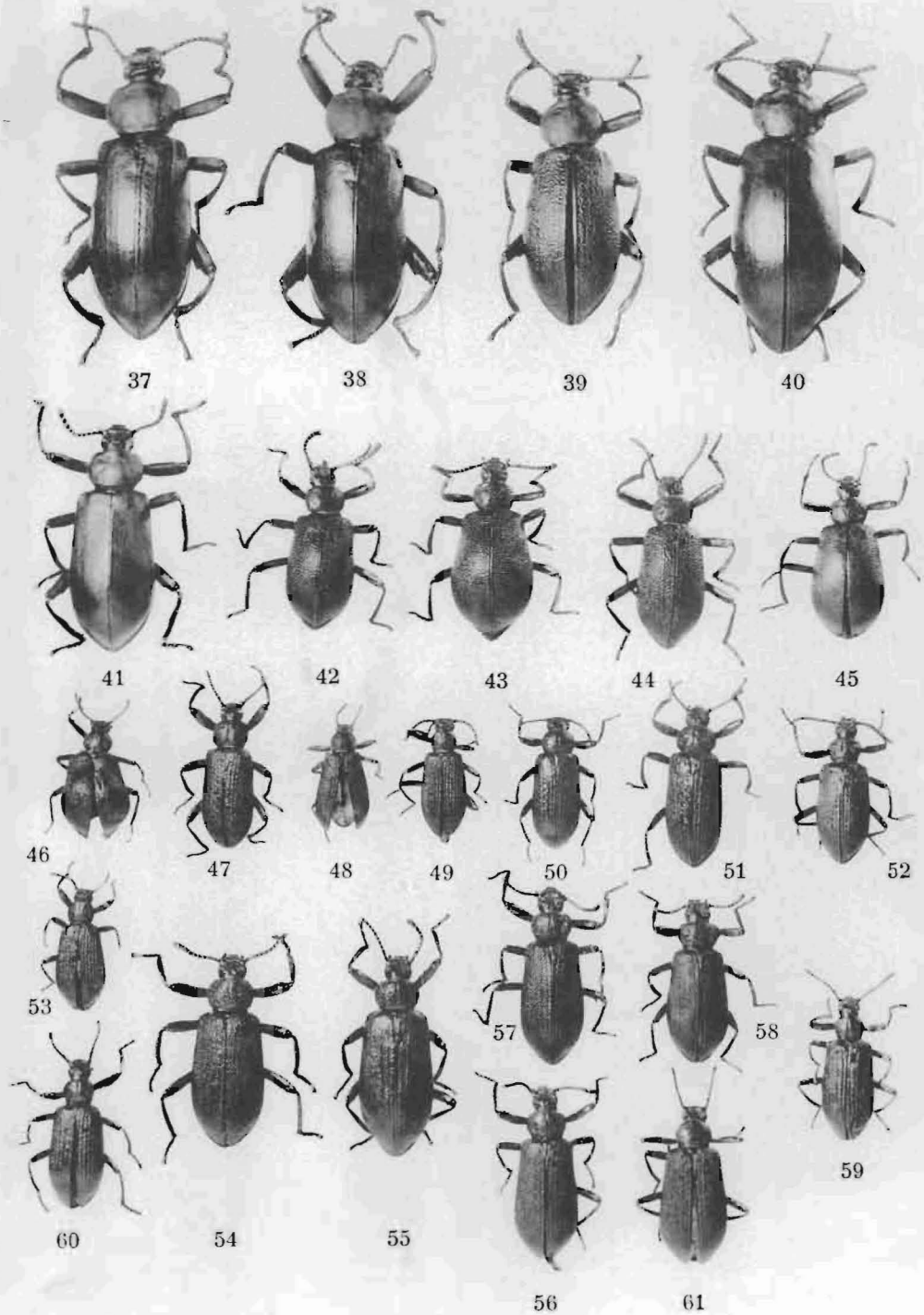

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PLATE V

EXPLANATION OF FIGURES.

Upper surface of head.

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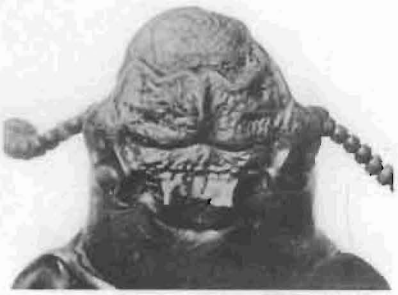
FIG. 65. — *Passalocharis Leleupi* n. sp.

FIG. 66. — *Hemipristula Kraatzi* (GEBIEN).

FIG. 67. — *Hemipristula kenyensis* (BLAIR).

FIG. 68. — *Hemipristula stygica* (KOLBE).

Photo with REICHERT, Neupolar 50 and REICHERT, « Lux FNI » 20 W voltage lamp.



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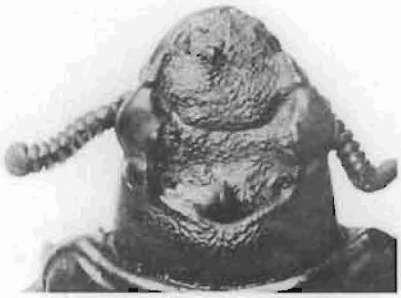

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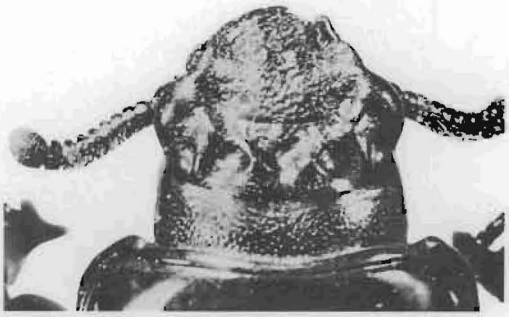

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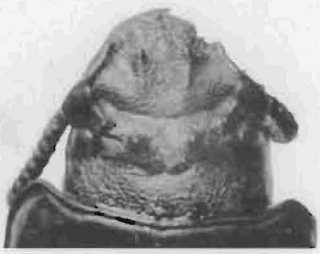

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PLATE VI

EXPLANATION OF FIGURES.

FIG. 69. — *Hemipristula Mülleri* (KRAATZ). Upper surface of head.

FIG. 70. — *Hemipristula ukamia* (KOLBE). Upper surface of head.

FIG. 71. — *Chiroscelis bifenestrella* WESTWOOD. Underside of head, with mentum.

FIG. 72. — *Hemipristula stygica* (KOLBE). Buccal fissure teeth.

FIG. 73. — *Hemipristula Mülleri* (KRAATZ). Underside of head, with mentum.

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FIG. 75. — *Chiroscelis bifenestrella* WESTWOOD. Pleurital parts of metasternum.

Photo with REICHERT, Neupolar 50 and REICHERT, « Lux FNI » 20 W-voltage lamp.

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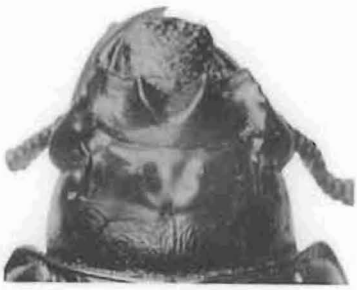

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PLATE VII

EXPLANATION OF FIGURES.

FIG. 76. — *Chiroscelis bifenestrella* WESTWOOD. Portion of mesothoracic tergite, with scutum and scutellum.

FIG. 77. — *Chiroscelis digitata* (FABRICIUS). Portion of mesothoracic tergite with scutum and scutellum.

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FIG. 79. — *Chiroscelis bifenestrella* WESTWOOD. Antenna.

FIG. 80. — *Hemipristula Mülleri* (KRAATZ). Posterior tibia.

FIG. 81. — *Chirocharis australis* (WESTWOOD). Anterior tibia.

FIG. 82. — *Chiroscelis bifenestrella* WESTWOOD. Posterior tibia.

FIG. 83. — *Hemipristula stygica* (KOLBE). Anterior tibia.

Photo with REICHERT, Neupolar 50 and REICHERT, « Lux FNI » 20 W-voltage lamp.

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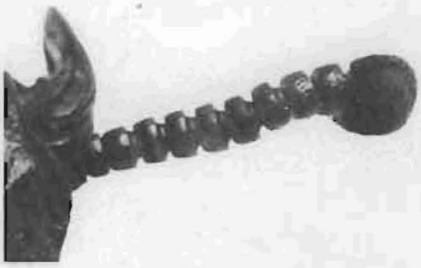

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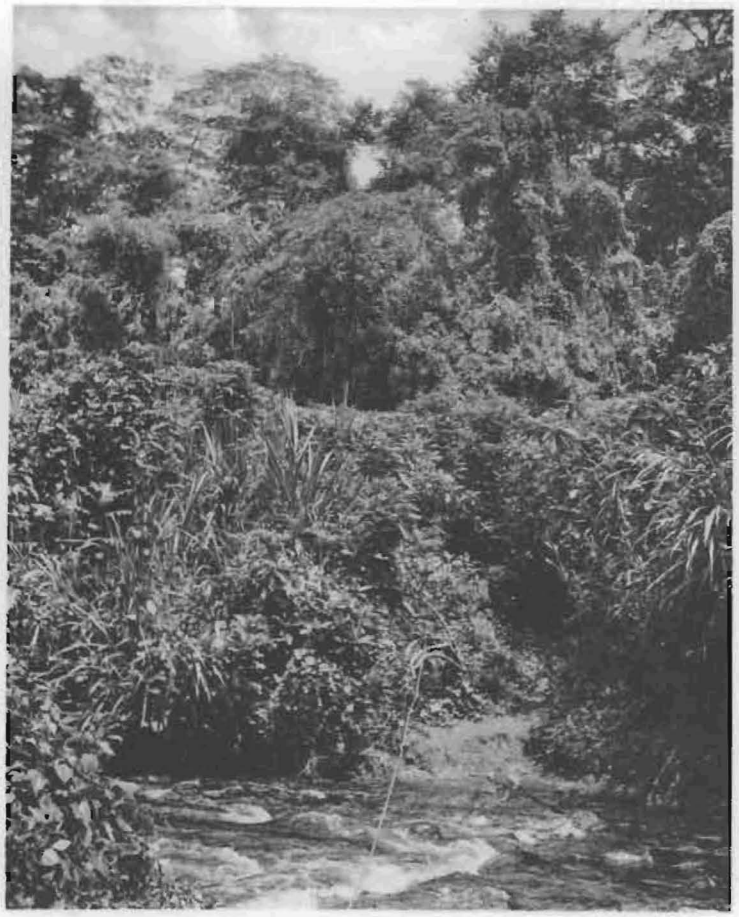
PLATE VIII

Coll. Inst. Parcs Nat. Congo Belge. Photo J.-P. Harroy.

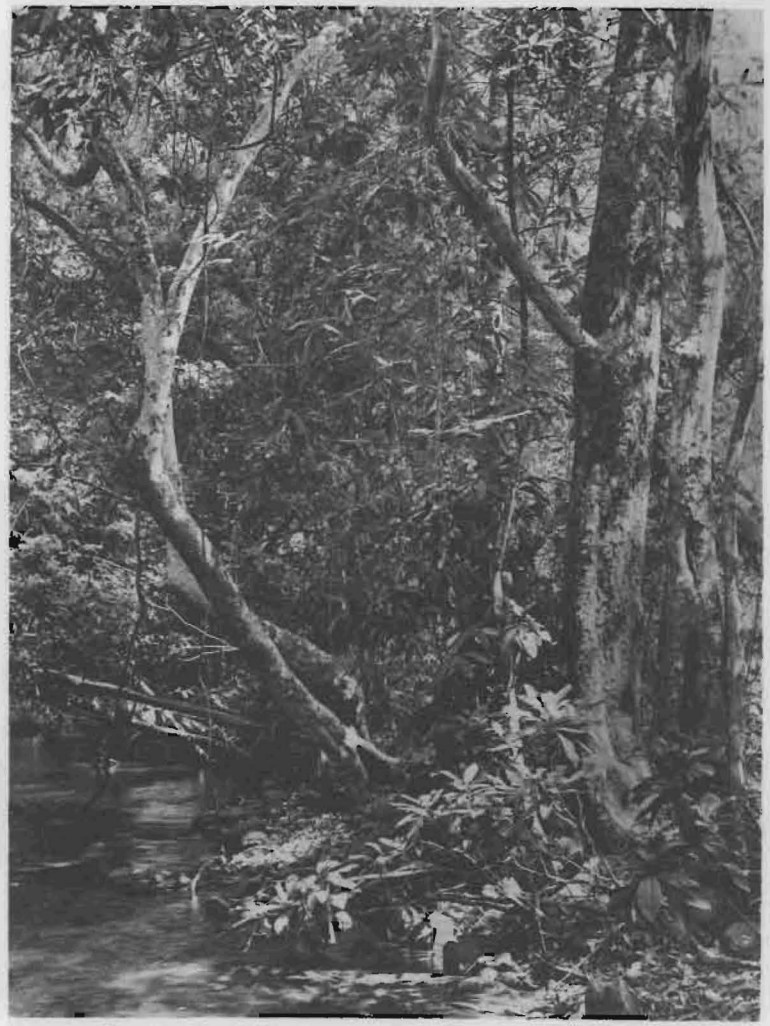
Fig. 1. — ALBERT NATIONAL PARK
Forest gallery of the Semliki river. Altitude : 880 m.



Coll. Inst. Parcs Nat. Congo Belge. Photo J.-P. Harroy.

Fig. 2. — ALBERT NATIONAL PARK
Big forest near the Butahu river. Altitude : 1.100 m.

PLATE IX



Coll. Inst. Parcs Nat. Congo Belge. Photo G.-F. de Witte.

Fig. 2. — UPEMBA NATIONAL PARK
Forest gallery of the Lupiala river near Kaswabilenga. Altitude : 700 m.

Coll. Inst. Parcs Nat. Congo Belge. Photo H. Da

Fig. 1. — ALBERT NATIONAL PARK
Western river of the Edward Lake at Bugazia. Altitude : 915 m.

Phototypie A. Dohmen, Bruxelles

PLATE X

Coll. Inst. Parcs Nat. Congo Belge. Photo G.-F. de Witte.

Fig. 1. — UPEMBA NATIONAL PARK
Forest at Mabwe, Eastern river of the Upemba Lake. Altitude : 585 m.

Coll. Inst. Parcs Nat. Congo Belge. Photo G.-F. de Witte.

Fig. 2. — UPEMBA NATIONAL PARK
Katanga forest at Kanonga. Altitude : 695 m.

Phototypie A. Dohmen, Bruxelles.

Sorti de presse le 15 avril 1954.

AVIS

L'*Institut des Parcs Nationaux du Congo Belge* a commencé, en 1937, la publication des résultats scientifiques des missions envoyées aux *Parcs Nationaux*, en vue d'en faire l'exploration.

Les divers travaux paraissent sous forme de fascicules distincts. Ceux-ci comprennent, suivant l'importance du sujet, un ou plusieurs travaux d'une même mission. Chaque mission a sa numérotation propre.

Les fascicules peuvent s'acquérir séparément.

L'*Institut des Parcs Nationaux du Congo Belge* n'accepte aucun échange.

BERICHT

Het *Instituut der Nationale Parken van Belgisch Congo* heeft in 1937 de publicatie aangevangen van de wetenschappelijke uitslagen der zendingen welke naar de *Nationale Parken* afgevaardigd werden, ten einde ze te onderzoeken.

De verschillende werken verschijnen in vorm van afzonderlijke afleveringen welke, volgens de belangrijkheid van het onderwerp, één of meer werken van dezelfde zending bevatten. Iedere zending heeft haar eigen nummering.

De afleveringen kunnen afzonderlijk aangeschaft worden.

Het *Instituut der Nationale Parken van Belgisch Congo* neemt geen ruilingen aan.

FASCICULES PARUS

HORS SÉRIE :

Les Parcs Nationaux et la Protection de la Nature.

Discours prononcé par le Roi Albert à l'installation de la Commission du Parc National Albert.

Discours prononcé par le Duc de Brabant à l'*African Society*, à Londres, à l'occasion de la Conférence Internationale pour la Protection de la Faune et de la Flore africaines.

La Protection de la Nature. Sa nécessité et ses avantages, par V. VAN STRAELEN, 1937.

VERSCHENEN AFLEVERINGEN

BUITEN REEKS :

De Nationale Parken en de Natuurbescherming.

Redevoering uitgesproken door Koning Albert op de vergadering tot aanstelling der Commissie van het Nationaal Albert Park.

Redevoering door den Hertog van Brabant gehouden in de *African Society*, te Londen, bij de gelegenheid van de Internationale Conferentie voor de Bescherming van de Afrikaansche Fauna en Flora.

De Natuurbescherming. Haar noodzakelijkheid en haar voordeelen, door V. VAN STRAELEN, 1937.

Exploration du Parc National Albert — Exploratie van het Nationaal Albert Park.

I. — Mission G. F. DE WITTE (1933-1935). I — Zending G. F. DE WITTE (1933-1935).

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1.	G. F. DE WITTE (Bruxelles), *Introduction*	1937
2.	C. ATTEMS (Vienne), *Myriopodes*	1937
3.	W. MICHAELSEN (Hamburg), *Oligochäten*	1937
4.	J. H. SCHUURMANS-STEKHOVEN Jr (Utrecht), *Parasitic Nematoda*	1937
5.	L. BURGEON (Tervueren), *Carabidae* ... M. BANNINGER (Giessen), *Carabidae (Scaritini)*	1937
6.	L. BURGEON (Tervueren), *Lucanidae*	1937
7.	L. BURGEON (Tervueren), *Scarabaeidae* (S. Fam. *Cetoniinae*)	1937
8.	R. KLEINE (Stettin), *Brenthidae und Lycidae*	1937
9.	H. SCHOUTEDEN (Tervueren), *Oiseaux*	1938
10.	S. FRECHKOP (Bruxelles), *Mammifères*	1938
11.	J. BEQUAERT (Cambridge, Mass.), *Vespides solitaires et sociaux*	1938
12.	A. JANSSENS (Bruxelles), *Onitini* (*Coleoptera Lamellicornia*, Fam. *Scarabaeidae*)	1938
13.	L. GSCHWENDTNER (Linz), *Haliplidae* und *Dytiscidae*	1938
14.	E. MEYRICK (Marlborough), *Pterophoridae* (*Tortricina* and *Tineina*)	1938
15.	C. MOREIRA (Rio de Janeiro), *Passalidae*	1938
16.	R. J. H. TEUNISSEN (Utrecht), *Tardigraden*	1938
17.	W. D. HINCKS (Leeds), *Dermaptera*	1938
18.	R. HANITSCH (Oxford), *Blattids*	1938
19.	G. OCHS (Frankfurt a. Main), *Gyrinidae*	1938
20.	H. DEBAUCHE (Louvain), *Geometridae*	1938
21.	A. JANSSENS (Bruxelles), *Scarabaeini* (*Coleoptera Lamellicornia*, Fam. *Scarabaeidae*).	1938
22.	J. H. SCHUURMANS-STEKHOVEN Jr et R. J. H. TEUNISSEN (Utrecht), *Nématodes libres terrestres*	1938
23.	L. BURGEON (Tervueren), *Curculionidae*, S. Fam. *Apioninae*	1938
24	M. POLL (Tervueren), *Poissons*	1939
25.	A. JANSSENS (Bruxelles), *Oniticellini* (*Coleoptera Lamellicornia*, Fam. *Scarabaeidae*).	1939
26.	L. BURGEON (Tervueren), *Histeridae*	1939
27.	*Arthropoda : Hexapoda :* 1. *Orthoptera : Mantidae*, par M. BEIER (Wien); 2. *Gryllidae*, par L. CHOPARD (Paris); 3. *Coleoptera : Cicindelidae*, par W. HORN (Berlin); 4. *Rutelinae*, par F. OHAUS (Mainz); 5. *Heteroceridae*, par R. MAMITZA (Wien); 6. *Prioninae*, par A. LAMEERE (Bruxelles); *Arachnoidea* : 7. *Opiliones*, par C. FR. ROEWER (Bremen)	1939
28.	A. HUSTACHE (Lagny), *Curculionidae*	1939
29.	A. JANSSENS (Bruxelles), *Coprini* (*Coleoptera Lamellicornia*, Fam. *Scarabaeidae*)	1940
30	L. BERGER (Bruxelles), *Lepidoptera-Rhopalocera*	1940
31	V. LABOISSIÈRE (Paris), *Galerucinae* (*Coleoptera Phytophaga*, Fam. *Chrysomelidae*).	1940
32.	V. LALLEMAND (Bruxelles), *Homoptera* (*Cicadidae, Cercopidae, Fulgoridae, Dictyophoridae, Ricaniidae, Cixiidae, Derbidae, Flatidae*)	1941
33.	G. F. DE WITTE (Bruxelles), *Batraciens et Reptiles*, avec *Introduction* de V. VAN STRAELEN.	1941

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34. L. Mader (Wien), *Coccinellidae*. — I. Teil ... 1941
II. Teil ... 1950
35. R. Paulian (Paris), *Aphodiinae* (*Coleoptera Lamellicornia*, Fam. *Scarabaeidae*) ... 1942
36. A. Villiers (Paris), *Languriinae* et *Cladoxeninae* (*Coleoptera Clavicornia*, Fam. *Erotylidae*) ... 1942
37. L. Burgeon (Tervueren), *Chrysomelidae* (S. Fam. *Eumolpinae*) ... 1942
38. A. Janssens (Bruxelles), *Dynastinae* (*Coleoptera Lamellicornia*, Fam. *Scarabaeidae*). 1942
39. V. Laboissière (Paris), *Halticinae* (*Coleoptera Phytophaga*, Fam. *Chrysomelidae*) ... 1942
40. F. Borchmann (Hamburg), *Lagriidae* und *Alleculidae* ... 1942
41. H. Debauche (Louvain), *Lepidoptera Heterocera* ... 1942
42. E. Uhmann (Stollberg), *Hispinae* ... 1942
43. *Arthropoda : Arachnoidea* : 1. *Pentastomida*, par R. Heymons (Berlin); *Hexapoda* : 2. *Orthoptera : Phasmidae*, par K. Guenther (Dresden); 3. *Hemiptera : Membracidae*, by W. D. Funkhouser (Lexington U.S.A.); 4. *Coleoptera : Silphidae*, par A. Janssens (Bruxelles); 5. *Dryopidae*, par J. Delève (Bruxelles); 6. *Lymexylonidae*, par L. Burgeon (Tervueren); 7. *Bostrychidae*, par P. Lesne (Paris); 8 *Scarabaeidae : Geotrupinae*, par A. Janssens (Bruxelles); 9. *Cassidinae*, von A. Spaeth (Wien); 10. *Ipidae*, von H. Eggers (Bad Nauheim); 11. *Platypodidae*, par K. E. Schedl (Hann. Münden); 12. *Hymenoptera : Sphegidae*, by G. Arnold (Bulawayo) ... 1943
44. G. Marlier (Bruxelles), *Trichoptera* ... 1943
45. H. Schouteden (Tervueren), *Reduviidae*, *Emesidae*, *Henicocephalidae* (*Hemiptera Heteroptera*) ... 1944
46. R. Paulian (Paris), *Hybosoridae* et *Trogidae* (*Coleoptera Lamellicornia*) ... 1944
47. H. De Saeger (Bruxelles), *Microgasterinae* (*Hymenoptera Apocrita*) ... 1944
48. G. Schmitz (Louvain), *Chalcididae* (*Hymenoptera Chalcidoidea*) ... 1946
49. H. Debauche (Louvain), *Mymaridae* (*Hymenoptera Apocrita*) ... 1949
50. H. De Saeger (Bruxelles), *Euphorinae* (*Hymenoptera Apocrita*, Fam. *Braconidae*) ... 1946
51. A. Collart (Bruxelles), *Helomyzinae* (*Diptera Brachycera*, Fam. *Helomyzidae*) ... 1946
52. P. Vanschuytbroeck (Bruxelles), *Sphaerocerinae* (*Diptera Acalyptratae*, Fam. *Sphaeroceridae*) ... 1948
53. H. De Saeger (Bruxelles), *Cardiochilinae*, *Sigalphinae* (*Hymenoptera Apocrita*, Fam. *Braconidae*) ... 1948
54. A. Théry (Neuilly), *Buprestidae* (*Coleoptera Sternoxia*) ... 1948
55. M. Goetghebuer (Gand), *Ceratopogonidae* (*Diptera Nematocera*) ... 1948
56. H. Schouteden (Tervueren), *Coreidae* (*Hemiptera Heteroptera*) ... 1948
57. H. F. Strohecker (Miami), *Endomychidae* (*Coleoptera Clavicornia*) ... 1949
58. R. Poisson (Rennes), *Hémiptères aquatiques* ... 1949
59. M. Cameron (London), *Staphylinidæ* (*Coleoptera Polyphaga*) ... 1950
60. J. Pasteels (Bruxelles), *Tenthredinidae* (*Hymenoptera Tenthredinoidea*) ... 1949
61. F. C. Fraser (Bornemouth), *Odonata* ... 1949
62. D. Elmo Hardy (Honolulu, Hawaii), *Dorilaidæ* (*Diptera*) ... 1950
63. J. Balfour-Browne (London), *Palpicornia* ... 1950
64. R. Laurent, *Genres Afrixalus et Hyperolius* (*Amphibia Salientia*) ... 1950
65. D. Elmo Hardy (Honolulu, Hawaii), *Bibionidæ* (*Diptera Nematocera*) ... 1950
66. J Verbeke (Gand), *Sciomyzidæ* (*Diptera Cyclorrhapha*) ... 1950
67. H. Oldroyd (London), *Genera Hæmatopota and Hippocentrum* (*Diptera*, Fam. *Tabanidæ*) ... 1950
68. A. Reichensperger (Bonn) *Paussidæ* ... 1950
69. H. Haupt (Halle), *Pompilidæ* (*Hymenoptera Sphecoidea*) ... 1950
70. *Hexapoda* : 1. *Orthoptera : Tridactylidæ*, par L. Chopard (Paris); 2. *Hemiptera : Coccidæ*, par P. Vayssière (Paris); 3. *Coleoptera : Trogositidæ*, par G. Fagel (Bruxelles); *Erotylidæ* von K. Delkeskamp (Berlin); *Bostrychidæ*, par J. Vrydagh (Bruxelles); *Megalopodinæ*, by G. E. Bryant (London); *Anthribidæ*, by K. Jordan (Tring); 4. *Diptera : Therevidæ*, par P. Vanschuytbroeck (Bruxelles); *Conopidæ*, par P. Vanschuytbroeck (Bruxelles); 5. *Hymenoptera : Chrysididæ*, von S. Zimmermann (Wien) ... 1950
71. K. Ermisch (Radiumbad), *Mordellidæ* (*Coleoptera Heteromera*) ... 1950
72. J. Verbeke (Gand), *Tæniapterinæ* (*Diptera Cyclorrhapha*, Fam. *Micropezidæ*) ... 1951
73. P. L. G. Benoit (Tervueren), *Dryinidæ* (*Hymenoptera Aculeata*); *Evaniidæ* (*Hymenoptera Terebriantia*) ... 1951
74. P. Vanschuytbroeck (Bruxelles), *Dolichopodidæ* (*Diptera Brachycera Orthorrhapha*). 1951
75. N. Bruce (Stockholm), *Cryptophagidæ* (*Coleoptera Polyphaga*) ... 1951
76. M. C. Meyer (Orono), *Hirudinea* ... 1951
77. 1. *Thysanoptera*, by H. Priesner (Cairo); 2. *Suctoria* (*Aphaniptera*), par J. Cooreman (Bruxelles); 3. *Homoptera*, par V. Lallemand et H. Synave (Bruxelles); 4. *Coleoptera : Sagridæ*, par P. Jolivet (Bruxelles); *Clytridæ*, par P. Jolivet (Bruxelles); 5. *Diptera : Asilidæ*, by S. W. Bromley (Stamford, U.S.A.); *Simuliidæ*, g. *Simulium*, by P. Freeman (London) ... 1951
78. J. Verbeke (Zürich), *Psilidæ* (*Diptera Cyclorrhapha*) ... 1952

I. — Mission G. F. de Witte (1933-1935) (*suite*). I. — Zending G. F. de Witte (1933-1935) (*vervolg*).

Fasc. Afl.		
79.	1. *Dermaptera*, by W. D. Hincks (Manchester); 2. *Hemiptera : Cixiidæ*, par H. Synave (Bruxelles); 3. *Reduviidæ*, par A. Villiers (Dakar); 4. *Coleoptera Lamiinæ*, par S. Breuning (Paris); 5. *Chrysomelinæ*, von J. Bechyne (München); 6. *Diptera : Celyphidæ*, par P. Vanschuytbroeck (Bruxelles); 7. *Hippoboscidæ* and *Nycteribiidæ*, by J. Bequaert (Cambridge, Mass.); 8. *Argidæ*, par J. Pasteels (Bruxelles)	1953
80.	L. Mader (Wien), *Coccinellidæ* (III^e Teil) ... ... (Sous presse.) (Ter pers.)	
81.	L. P. Mesnil (Feldmeilen), Genres *Actia* et voisins (*Diptera Brachycera Calyptratæ*).	1954
82.	† A. Théry (Paris), Genre *Paracylindromorphus* (*Coleoptera Buprestidæ*)	1954

II. — Mission H. Damas (1935-1936). II. — Zending H. Damas (1935-1936).

1.	H. Damas (Liège), *Recherches Hydrobiologiques dans les Lacs Kivu, Edouard et Ndalaga*	1937
2.	W. Arndt (Berlin), *Spongilliden*	1938
3.	P. A. Chappuis (Cluj, Roumanie), *Copépodes Harpacticoïdes*	1938
4.	E. Leloup (Bruxelles), *Moerisia Alberti* nov. sp. (*Hydropolype dulcicole*)	1938
5.	P. de Beauchamp (Strasbourg), *Rotifères*	1939
6.	M. Poll (Tervueren), avec la collaboration de H. Damas (Liège), *Poissons*	1939
7	V. Brehm (Eger), *Cladocera*	1939
8.	F. Hustedt (Ploen), *Süsswasser Diatomeen*	1949
9.	J. H. Schuurmans Stekhoven Jr (Utrecht), *Nématodes libres d'eau douce*	1944
10.	J. H. Schuurmans Stekhoven Jr (Utrecht), *Nématodes parasites*	1944
11.	G. Marlier (Bruxelles), *Trichoptera*	1943
12.	W. Klie (Bad Pyrmont), *Ostracoda*	1944
13.	G. Marlier (Bruxelles), *Collemboles*	1944
14.	J. Cooreman (Bruxelles), *Acari*	1948
15.	A. Arcangeli (Torino), *Isopodi terrestri*	1950
16.	F. Guignot (Avignon), *Dyliscidae et Gyrinidae* (*Coleoptera Adephaga*)	1948
17	H. Bertrand (Dinard), *Larves d'Hydrocanthares*	1948
18.	O. Lundblad (Stockholm), *Hydrachnellae*	1949
19.	W. Conrad (Bruxelles), P. Frémy (St.-Lô) et A. Pascher (Prague), *Algues* et *Flagellates*	1949
20.	M.-L. Verrier (Paris), *Ephéméroptères*	1951
21.	Fr. Kiefer (Konstanz), *Copépodes*	1952

III. — Mission P. Schumacher (1933-1936). III. — Zending P. Schumacher (1933-1936).

1.	P. Schumacher (Antwerpen), *Die Kivu-Pygmäen und ihre soziale Umwelt im Albert-Nationalpark*	1943
2.	P. Schumacher (Antwerpen), *Anthropometrische Aufnahmen bei den Kivu-Pygmäen.*	1939

IV. — Mission J. Lebrun (1937-1938). IV. — Zending J. Lebrun (1937-1938).

1.	J. Lebrun (Bruxelles), *La végétation de la plaine alluviale au Sud du lac Edouard.*	1947
2-5.	... ... (En préparation.) (In voorbereiding.)	
6.	F. Demaret et V. Leroy (Bruxelles), *Mousses*	1944
7.	... ... (En préparation.) (In voorbereiding.)	
8.	P. van Oye (Gand), *Desmidiées*	1943
9.	P. van Oye (Gand), *Rhizopodes*	1948
10.	P. Duvigneaud et J.-J. Symoens (Bruxelles), *Cyanophycées*	1948

V. — Mission S. Frechkop (1937-1938). V. — Zending S. Frechkop (1937-1938).

1.	S. Frechkop (Bruxelles), *Mammifères*	1943
2.	R. Verheyen (Bruxelles), *Oiseaux*	1947

VI. — Missions J. Verhoogen (1938 et 1940). VI. — Zendingen J. Verhoogen (1938 en 1940).

1.	J. Verhoogen (Bruxelles), *Les éruptions 1938-1940 du volcan Nyamuragira*	1948

VII. — Mission J. de Heinzelin de Braucourt (1950). VII. — Zending J. de Heinzelin de Braucourt (1950).

1.	J. de Heinzelin de Braucourt (Bruxelles), *Géologie régionale du fossé tectonique sous le parallèle d'Ishango* ... ... (Sous presse.) (Ter pers.)	

Exploration du Parc National Albert. — Exploratie van het Nationaal Albert Park.

(Deuxième série.) (Tweede reeks.)

1.	J. de Heinzelin de Braucourt (Bruxelles), *Les stades de récession du glacier Stanley occidental*	1953

Flore des Spermatophytes du Parc National Albert.

Vol.

1. W. Robyns (Bruxelles), *Gymnospermes et Choripétales* 1948
2. W. Robyns (Bruxelles), *Sympétales* 1947
3. W. Robyns (Bruxelles), *Monocotylées* ... ... (En préparation.) (In voorbereiding.)

Exploration du Parc National Albert et du Parc National de la Kagera.
Exploratie van het Nationaal Albert Park en van het Nationaal Park der Kagera

I. — Mission L. van den Berghe (1936).

I. — Zending L. van den Berghe (1936).

Fasc.
Afl.

1. L. van den Berghe (Anvers), *Enquête parasitologique.* — I. — *Parasites du sang des vertébrés* 1942
2. L. van den Berghe (Anvers), *Enquête parasitologique.* — II. — *Helminthes parasites.* 1943

Exploration du Parc National de la Kagera. — Exploratie van het Nationaal Park der Kagera.

I. — Mission J. Lebrun (1937-1938).

I. — Zending J. Lebrun (1937-1938).

1. J. Lebrun, L. Toussaint, A. Taton (Bruxelles), *Contribution à l'étude de la flore du Parc National de la Kagera* 1948

II. — Mission S. Frechkop (1938).

II. — Zending S. Frechkop (1938).

1. S. Frechkop (Bruxelles), *Mammifères* 1944
2. R. Verheyen (Bruxelles), *Oiseaux* 1947

Exploration du Parc National de la Garamba. — Exploratie van het Nationaal Garamba Park.

I. — Mission H. De Saeger en collaboration avec G. Demoulin, I. Denisoff, J. Martin, M. Micha, A. Noirfalise, P. Schoemaker, G. Troupin et J. Verschuren (1949-1952).

I. — Zending H. De Saeger met medewerking van G. Demoulin, I. Denisoff, J. Martin, M. Micha, A. Noirfalise, P. Schoemaker, G. Troupin en J. Verschuren (1949-1952).

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Afl.

1. H. De Saeger (Bruxelles), *Introduction* ... ... (Sous presse.) (Ter pers.)

Exploration du Parc National de l'Upemba. — Exploratie van het Nationaal Upemba Park.

I. — Mission G. F. de Witte en collaboration avec W. Adam, A. Janssens, L. Van Meel et R. Verheyen (1946-1949).

I. — Zending G. F. de Witte met medewerking van W. Adam, A. Janssens, L. Van Meel en R. Verheyen (1946-1949).

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1. G. F. de Witte, W. Adam, A. Janssens, L. Van Meel et R. Verheyen (Bruxelles), *Introduction* ... ... (En préparation.) (In voorbereiding.)
2. K. Lindberg (Lund). *Cyclopides (Crustacés Copépodes)* 1951
3. A. Janssens (Bruxelles), *Oniticini (Coleoptera Lamellicornia*, Fam. *Scarabæidæ)* 1951
4. 1. *Coleoptera : Paussidæ*, par E. Janssens (Bruxelles); *Megalopodidæ*, par P. Jolivet (Bruxelles); *Sagridæ*, par P. Jolivet (Bruxelles). — 2. *Diptera : Muscidæ* (Genre *Glossina*), par C. Henrard (Bruxelles) 1951
5. C. Fr. Roewer (Bremen), *Solifuga, Opiliones, Pedipalpi* und *Scorpiones* 1952
6. G. F. de Witte (Bruxelles), *Reptiles* 1953
7. H. F. Strohecker (Miami), *Endomychidæ* 1952
8. 1. *Plecoptera : Perlidæ*, by H. B. N. Hynes (Liverpool); 2. *Coleoptera : Histeridæ*, par J. Théroud (Nîmes); 3. *Chrysomelidæ*, par P. Jolivet (Bruxelles); 4. *Scolytoidea*, par K. E. Schedl (Lienz); 5. *Diptera : Bibionidæ* and *Dorilaidæ*, by D. E. Hardy (Honolulu, Hawaii) 1952
9. L. Van Meel (Bruxelles), *Contribution à l'étude du lac Upemba.* — I. *Le milieu physico-chimique* 1953
10. P. Basilewsky (Tervueren), *Carabidæ* 1953
11. A. Janssens (Bruxelles), *Oniticellini (Coleoptera Lamellicornia*, Fam. *Scarabæidæ)* ... 1953
12. P. Vanschuytbroeck (Bruxelles), *Dolichopodidæ (Diptera Brachycera Orthorrhapha).* 1952
13. R. Jeannel (Paris), *Pselaphidæ* 1952
14. S. Frechkop (Bruxelles), *Mammifères* ... ... (En préparation.) (In voorbereiding.)
15. A. Villiers (Dakar), *Languriidæ* et *Cladoxeninæ* 1952
16. G. Ochs (Hannover), *Gyrinidæ* 1953
17. 1. *Nematodes*, par C. Vuylsteke (Geluwe); 2. *Embioptera*, par Y. Jolivet (Bruxelles); 3. *Lonchodidæ*, par Y. Jolivet (Bruxelles); 4. *Coleoptera : Dacninæ*, von K. Delkeskamp (Berlin); 5. *Prioninæ*, par P. Basilewsky (Tervueren); 6. *Cerambycinæ*, by E. A. J. Duffy (London); 7. *Diptera : Celyphidæ*, par P. Vanschuytbroeck (Bruxelles); 8. *Tenthredinoidea*, par J. Pasteels (Bruxelles) 1953
18. A. Villiers (Dakar), *Reduviidæ* 1954
19. R. Verheyen (Bruxelles), *Oiseaux* 1953

I. — Mission G. F. DE WITTE en collaboration avec W. ADAM, A. JANSSENS, L. VAN MEEL et R. VERHEYEN (1946-1949) (*suite*).

I. — Zending G. F. DE WITTE met medewerking van W. ADAM, A. JANSSENS, L. VAN MEEL en R. VERHEYEN (1946-1949) (*vervolg*).

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20. M. BEIER (Wien), *Mantidea* und *Pseudophyllinæ* 1954
21. E. MARCUS (São Paulo), *Turbellaria* 1953
22. C. Fr. ROEWER (Bremen), *Orthognatha* 1953
23. H. SYNAVE (Bruxelles), *Cixiidæ* 1953
24. C. KOCH (Pretoria), *Tenebrionidæ* (*Pycnocerini*) 1954
25. 1. *Coleoptera : Pterostichini*, par S. L. STRANEO (Gallarate); 2. *Coleoptera : Bostrychidæ*, par J. VRYDAGH (Bruxelles); 3. *Coleoptera : Aphodiinæ*, par R. PAULIAN (Tananarive); 4. *Coleoptera : Lamiinæ*, par S. BREUNING (Paris); 5. *Coleoptera : Cryptocephalinæ*, par P. JOLIVET (Bruxelles); 6. *Diptera : Leptogastrinæ*, par E. JANSSENS (Bruxelles); 7. *Hymenoptera : Chrysididæ*, von S. ZIMMERMANN (Wien) ... ... (Sous presse.) (Ter pers.)
26. S. G. KIRIAKOFF (Gand), *Lepidoptera Heterocera* ... ... (Sous presse.) (Ter pers.)
27. F. G. OVERLAET (Kortenberg), *Lepidoptera : Danaidæ, Satyridæ, Nymphalidæ, Acraeidæ* ... ... (Sous presse.) (Ter pers.)
28. E. UHMANN (Stolberg, Sachsen), *Coleoptera : Hispinæ* ... ... (Sous presse.) (Ter pers.)
29. Y. JOLIVET (Bruxelles), *Dictyoptera : Blattoidea* ... ... (Sous presse.) (Ter pers.)
30. C. FR. ROEWER (Bremen), *Aranea Lycosæformia* I. ... ... (Sous presse.) (Ter pers.)
31. R. POISSON (Rennes), *Hémiptères aquatiques* ... ... (Sous presse.) (Ter pers.)
32. 1. *Pseudoscorpionidea*, von M. BEIER (Wien); 2. *Hemiptera Homoptera :* Fam. *Flatidæ*, par H. SYNAVE (Bruxelles); 3. *Diptera : Culicidæ*, by P. F. MATTINGLY (London); 4. *Diptera : Tabanidæ*, par M. LECLERCQ (Liège); 5. *Lepidoptera : Geometridæ*, by D. S. FLETCHER (London) ... ... (Sous presse.) (Ter pers.)
33. F. GUIGNOT (Avignon), *Dytiscidæ* (*Coleoptera Adephaga*) ... (Sous presse.) (Ter pers.)
34. J. LECLERCQ (Liège), *Sphecinæ* (*Hymenoptera Sphecoidea*) ... (Sous presse.) (Ter pers.)

Exploration des Parcs Nationaux du Congo Belge — Exploratie der Nationale Parken van Belgisch Congo.

I. — Mission H. HEDIGER - J. VERSCHUREN (1948).

I. — Zending H. HEDIGER - J. VERSCHUREN (1948).

Fasc.
Afl.

1. H. HEDIGER (Bâle), *Observations sur la psychologie animale dans les Parcs Nationaux du Congo Belge* 1951