INSTITUT DES PARCS NATIONAUX Du congo belge

# 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 35

# **Exploratie van het Nationaal Upemba Park**

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#### AFLEVERING 35

1.	DERMAPTERA :	by Walter D. HINCKS (Manchester).
2.	COLEOPTERA:	DRYOPIDÆ, par Joseph DELÈVE (Bruxelles).
3.		MORDELLIDÆ, von Karl ERMISCH (Leipzig).
4.		CLYTRIDÆ, par Pierre JOLIVET (Bruxelles).
5.		ANTHRIBIDÆ, par H. E. Karl JORDAN (Tring).
6.	DIPTERA :	CHIRONOMIDÆ, by Paul FREEMAN (London).



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#### PARC NATIONAL DE L'UPEMBA

I. MISSION G. F. DE WITTE en collaboration avec W. ADAM, A. JANSSENS, L. VAN MEEL et R. VERHEYEN (1946-1949). Fascicule 35 (1)

#### NATIONAAL UPEMBA PARK

 I. ZENDING G. F. DE WITTE met medewerking van
 W. ADAM, A. JANSSENS, L. VAN MEEL en R. VERHEYEN (1946-1949). Aflevering 35 (1)

# DERMAPTERA

ΒY

### WALTER D. HINCKS (Manchester).

Sixteen species of *Dermaptera* were collected in the Upemba National Park by the Mission G. F. DE WITTE during the period 1945 to 1949. Most of the material was obtained from upland localities ranging from an altitude of 585 to 1.810 metres (1.920 to 5.940 ft. but nearly all the species collected are essentially savannah insects. A truly montane earwig fauna appears to be restricted to those African mountains approaching or exceeding 10.000 ft. in altitude). Where such a fauna occurs however it is usual to find that some species extend to considerably lower altitudes though in smaller numbers. Thus *Forficula sjöstedti* BURR has been recorded as high as 13.000 ft. and as low as 3.300 ft. on Kilimanjaro. Montane species of *Dermaptera* are therefore absent from the Upemba National Park where the requisite altitudinal conditions are wanting.

Three species in the collection appear to be new to science, one of which has been described recently by the writer in another publication. The two other new species are described in the present report.

The writer would wish to express his sincere thanks to Prof. V. VAN STRAELEN for allowing him to examine this interesting collection.

All the localities between [] are outside the Park's boundaries.

# Family **PYGIDICRANIDÆ**.

#### 1. — Karschiella neavei Burr.

#### Karschiella neavei BURR, 1909, Ann. Soc. ent. Belg., **53** : 96 (♂ ♀, Belgian Congo : Katanga, Kambove, 4.500-5.000 ft.); HINCKS, 1951, Ann. Mus. Congo Belge, Zool., **8** : 28.

Gorges de la Pelenge, 1.150 m., 1 J, 21-23.V.1947 (428*a*); Kaswabilenga, 700 m., 1  $\Diamond$ , 18-23.IX.1947 (769*a*); Kankunda, 1.300 m., 3 J, 19-24, 20-28.XI.1949 (984*a*, 1011*a*); Muye (tête source), 1.630 m., 3  $\Diamond$ , 6.IV.1948 (1479*a*); Kabwe-sur-Muye, 1.320 m., 5 J, 5  $\Diamond$ , 12-14.V. 1948 (1606 *a*); Munoi, bifurc. Lupiala, 890 m, 1 J, 1  $\Diamond$ , 1  $\Diamond$ , 12-24.VI.1948 (1740*a*).

The males in this series vary in length from 29 to 35 mm. The smallest male, from Kabwe, has the abdomen markedly less inflated than in the largest males, being hardly more enlarged than in the females. In addition the forceps are only slightly asymmetrical. This specimen however conforms with the larger males in structural characters, especially those of the ultimate tergite.

The females vary in length from 29 to 33 mm. In addition there is a very small female of approximately 21 mm which however is much shrunken and cannot be measured accurately. It appears to agree with the other females in structural characters.

This species is widely distributed in Belgian Congo though usually only single or few individuals have been collected from each locality. These large and powerful earwigs are probably voracious carnivores as several specimens of this species which I have examined had the alimentary canal packed with the heads of small ants.

#### 2. — Bormansia africana VERHOEFF.

Bormansia africana VERHOEFF, 1902, Zool. Anz., **25** : 184 (♂ ♀, Tanganyika); HINCKS, 1951, Ann. Mus. Congo Belge, Zool., **8** : 31.

Kamitungulu, 1.700 m, 1  $\Im$ , 16.V.1947 (257*a*); Lusinga, 1.760 m., 1  $\Im$ , 1  $\Im$ , 28.XI-6.XII. 1947 (1099*a*).

Widely distributed in Belgian Congo, Uganda, Kenya and Tanganyika but like *K. neavei* usually found singly or in small numbers.

### 3. - [Echinosoma afrum (Palisot de Beauvois).]

Forficula afra PALISOT DE BEAUVOIS, 1805, Ins. Afr. Amer., 35, Orth., pl. 1, fig. 1 (Q, Kingdom of Oware and Benin, Nigeria); HINCKS, 1951, Ann. Mus. Congo Belge, Zool., 8: 44.

[Kembwile, rive g. Kalule-Nord], 1.050 m., 1 9, 28.II.1949 (2405a).

A species very widely distributed in tropical Africa and widespread in Belgian Congo.

#### 4. — Echinosoma fuscum Borelli.

Echinosoma fuscum BORELLI, 1907, Ann. Mus. Stor. nat. Genova, (3),
3 (43): 6 (J, French Congo, Fernando Poo); HINCKS, 1951, Ann. Mus. Congo Belge, Zool., 8: 28.

Kateke, sous-affl. Lufira, 950 m., 1 3, 23.XI-5.XII.1947 (1085*a*); riv. Bowa, affl. dr. Kalule-Nord, près Kiamalwa, 1.050 m., 1  $\bigcirc$ , 1-3.III.1949 (2407*a*).

This species has a similar, but rather less extensive, distribution to that of E. *afrum*.

#### Echinosoma sp. ?

Kankunda, 1.300 m., 1 broken specimen, 19-24.XI.1947 (984a).

This broken specimen cannot be identified specifically. In addition the G. F. DE WITTE collection includes 4 nymphs of *Echinosoma* which also cannot be identified. The localities are as follows :

Mabwe (rive Est lac Upemba), 585 m., 15.VIII.1947 (678a); Mabwe (lac Upemba), 585 m., 21-28.VIII.1947 (719a); Kaswabilenga, 700 m, 16-24.X.1947 (840a); riv. Kateke, sous-affl. Lufira, 950 m., 23.XI-5.XII.1947 (1077a).

## Family LABIDURIDÆ.

#### 5. — Forcipula gariazzi Borelli.

Forcipula gariazzi BORELLI, 1900, Boll. Mus. Zool. Anat. comp. Torino, 15, (n° 381) : 1, f. (o<sup>\*</sup>, Belgian Congo : Madimba); REHN, 1924, Amer. Mus. Nat. Hist., 49 : 407.

Mukana, 1.810 m., 1 3, 14.IV.1947 (258*a*); Ganza, riv. Lukoka, 860 m., 2 3, 3  $\bigcirc$ , 1 nymph, 3.VI.1949, 10.VI.1949 (2652*a*, 2668*a*).

A widely distributed species in tropical Africa which is probably ripicolous in habitat.

#### 6. — Nala lividipes (DUFOUR).

Forficula lividipes DUFOUR, 1828, Ann. Sci. nat., 13 : 340 (♂♀, Spain : Lower Catalonia); MENOZZI, 1937, Rev. Suisse Zool., 44 : 453, fig. 5, B, C, 6, B.

Kaswabilenga, 700 m., 1 3, 17.X.1947 (845*a*); Ganza, riv. Lukoka, 860 m., 1  $\bigcirc$ , 3.VI.1949 (2652*a*).

The male is small and is greatly shrunken, measuring only about 9 mm. The female measures 12 mm but appears to be quite twice the bulk of the male specimen. This species is very widely distributed, occurring in the Palæarctic region in South Europe, North Africa, Japan and North China. It is widespread in Africa and also occurs in tropical Asia and Australia.

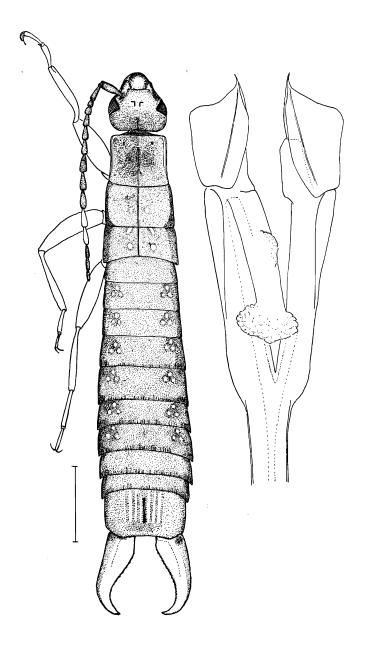


FIG. 1 and 2. — Apolabis straeleni n. sp.
1. Male. 2. Genital armature.

#### 7. — Apolabis straeleni n. sp.

(FIG. 1, 2.)

Male : Colour piceous; abdominal tergites slightly rufescent caudad; mouthparts, extreme lateral margins of pronotum and antennæ, except segments 11 and 12, 12 and 13, or 13 only, which are yellowish, fuscous; legs and thoracic sterna yellowish-brown. Head about as long as broad, moderately convex, very heavily and rugosely punctured, particularly caudad and laterad; caudal margin sinuate mesad; frontal sutures obsolete: coronal suture rather short, distinct. Eyes moderately large, shorter than genæ, rather flat and hardly protruding beyond lateral line of head. Antennæ 16 (+?) segmented; 1st about as long as eyes; 3rd long, as long as 4th and 5th together; 4th and 5th of about equal length and approximately one and a half times longer than broad; succeeding segments sub-pyriform and of approximately equal length; all segments from the 3rd somewhat compressed. Pronotum almost quadrate, slightly broader than long at caudal margin which is slightly wider than cephalic margin; sides straight, very slightly converging cephalad; disc plane; pro- and metazona only feebly differentiated; median sulcus distinct throughout; surface covered with close, strong, rugose puncturation. Tegmina and wings entirely absent. Meso- and metanotum slightly broader than pronotum and similarly sculptured though not quite so strongly; each with a polished median line corresponding to the median sulcus of the pronotum; both plates have a few small smooth areas; metanotum shorter and slightly broader caudad than mesonotum. Abdomen gradually expanded to 8th tergite thence slightly contracted to ultimate tergite; tergites sculptured similarly with three small smooth areas laterad, arranged in a triangle; caudal margins of tergites markedly rugosely punctured especially towards sides; latter with short golden pubescence; lateral sculpture of tergites 6 to 9 very rugose and heavy but without carinæ. Ultimate tergite transverse, without carinæ; median sulcus moderately distinct; puncturation of disc arranged serially in two or three rows separated by impunctate areas; puncturation confused at sides and near caudal margin; latter subtruncate mesad, without distinct tumidities above the roots of the forceps. Pygidium not prominent, longitudinally sulcate so that apex, viewed from above, is feebly bifid. Forceps slightly asymmetrical, right being slightly more abruptly curved than left; distant proximad, subtrigonal, curved distad; inner margin feebly crenulate. Penultimate sternite strongly punctate; feebly depressed on each side of disc; caudal margin very feebly sinuate. Legs normal for the genus.

Genitalia (fig. 2). Length 19-21 mm.

Female : As male but puncturation weaker; forceps symmetrical, straight except at apex; penultimate sternite subtriangular distad; caudal margin rounded. Length 20-24 mm.

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Holotype  $\mathcal{J}$ : Kaswabilenga, 700 m, 18-23.IX.1947 (769*a*). Allotype  $\mathcal{Q}$ : same locality, 16-24.X.1947 (840*a*). Paratypes : same locality, 22-26.X.1947, 1  $\mathcal{J}$  (856*a*), 6-9.X.1947, 2  $\mathcal{J}$ , 2  $\mathcal{Q}$  (805*a*), 3-7.XI.1947, 1  $\mathcal{J}$  (914*a*), 16-24.X.1947, 3  $\mathcal{J}$  (840*a*), 18-23.IX.1947, 1  $\mathcal{J}$ , 1  $\mathcal{Q}$  (769*a*); riv. Kateke, sous-affl. Lufira, 950 m., 23.XI-5.XII.1947, 1  $\mathcal{J}$  (1077*a*); Mabwe, 585 m, 24-31.XII. 1948, 1  $\mathcal{J}$ , 1  $\mathcal{Q}$  (2138*a*) (Institut des Parcs Nationaux du Congo Belge and coll. HINCKS). In addition : a damaged  $\mathcal{J}$ , Kankunda, affl. g. Lupiala, 1.300 m., 16-24.XI.1947 (1035*a*); 2 immature  $\mathcal{J}$ , Kaswabilenga, 18-23.IX.1947 (769*a*) and Mabwe (lac Upemba), 585 m., 4-8.IX.1947 (732*a*); 3 nymphs, Mabwe (732*a*), Kaswabilenga (769*a* and 771*a*).

This species is closely related to *Apolabis picea* (BORELLI, 1907) from the Ruwenzori. It differs in its larger size, seriate discal puncturation of the ultimate tergite and in the abdomen being widest at about the 8th tergite instead of gradually increasing in width to the ultimate tergite. In addition the genital armature differs quite markedly from that of *A. picea* as figured by BURR (1915, J. R. micr. Soc., **1915**, pl. 11, fig. 8). The black coloration, heavy puncturation, subquadrate pronotum, rugose but non-carinate sides of abdominal tergites 6 to 9, and the genital armature together clearly distinguish the present species from other members of the genus.

I have pleasure in dedicating this species to Prof. V. VAN STRAELEN, the President of the « Institut des Parcs Nationaux du Congo Belge ».

#### 8. — Isolabis schoutedeni HINCKS.

(FIG. 3.)

Isolabis schoutedeni HINCKS, 1954, Ann. Mus. Congo Belge (N. S. in-4°), Zool., 1: 387, fig. 1 (Miscellanea Zoologica H. SCHOUTEDEN).

Gorges de la Pelenge, 1.150 m., 1 & (type), 31.V.1947, in detritus (463a).

Male: Colour dark fuscous; femora distad, tibiae and tarsi lighter; sides of pronotum slightly lighter; antennal segments 6 to 9, wholly or in part, and 14th (last) testaceous. H e a d convex, contracted behind eyes, as wide in widest part as pronotum at cephalic angles; sutures obsolete; eyes longer than genae (11:7); surface dull, strongly punctured but less so than pronotum. Antennae 14-segmented; 1st about as long as eyes; 3rd slightly longer than broad; 4th quadrate; 5th about as long as 3rd; 6th to 13th approximately of equal lenght but increasing in width as far as 12th; 14th shorter and narrower than 13th, broadly rounded distad. Pronotum about as long as broad; sides straight; narrower cephalad than caudad; caudal margin very feebly convex; surface dull and very heavily punctate throughout; a narrow median sulcus present on prozona having three short oblique sulci on each side. Meson o t u m about two thirds the length of pronotum and similarly sculptured; lateral fold prominent but not carinate; sides strongly pubescent. Metanotum sculptured as mesonotum and about two thirds its length; sides strongly publicate, caudal margin concave exposing part of the first abdominal tergite. Abdomen contracted proximad and caudad, strongly punctured but much less so than foreparts of body, pubescent, especially at sides; pliciform tubercles of fourth tergite moderately distinct and adjoining a specialized area at base of fifth tergite. Ultimate tergite transverse, pubescent, prominent on each side above forceps, concave mesad, oblique laterad. For ceps contiguous, simple, gradually tapering, slightly curved. Penultimate sternite transverse, finely punctate, its caudal margin very slightly prominent mesad, the centre of the prominence being very feebly emarginate; area above prominence slightly tumid. Genitalia; parameres acuminate distad; distal lobes (penes) covered with an armature of minute teeth; basal vesicle relatively small. Length 10 mm.

T y p e : Male, Belgian Congo; Upemba National Park, gorges de la Pelenge, 1.150 m., 31.V. 1947 (Mis. G. F. DE WITTE, 463a) (in detritus) (Institut des Parcs Nationaux du Congo Belge). This species is dedicated to Dr Henri SCHOUTEDEN in appreciation of his many kindness.

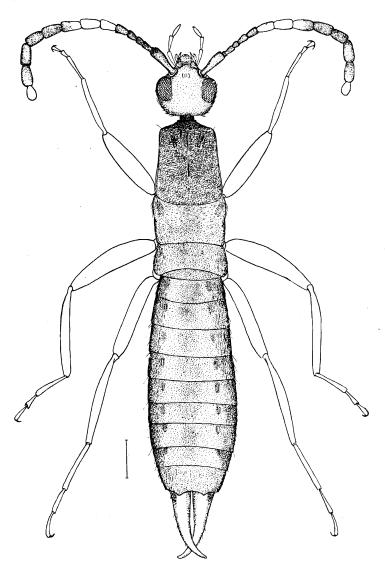


FIG. 3. — Isolabis schoutedeni HINCKS, male.

As mentioned in the original description this interesting species does not agree with any of the genera given by BURR (1911, Genera Insectorum, 122 : 40) but appears to come closest to VERHOEFF's monobasic *Isolabis* of

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which the type, I. braueri, was also described from the Belgian Congo. The short third and heavier built distal antennal segments distinguish the present species from I. braueri.

Nearly all the known species of the subfamily Brachylabinæ are extremely rare in collections. They may well be rare in nature since the group shows a remarkable discontinuous distribution suggesting that it is a relict. On the other hand collectors probably have yet to discover the special habitats of Brachylabines and certainly many more species will yet be discovered.

#### 9. — [Apachyus depressus (PALISOT DE BEAUVOIS).]

Forficula depressa PALISOT DE BEAUVOIS, 1805, Ins. Afr. Amer., 36, Orth., pl. 1, fig. 5 (J, Oware, Nigeria); REHN, 1924, Amer. Mus. Nat. Hist., 49: 376.

[Kembwile, rive g. Kalule-Nord], 1  $\bigcirc$ , 1 nymph, 28.II.1949 (2405a).

A widely distributed species throughout tropical Africa as far south as Transvaal.

# Family LABIIDÆ.

10. — Spongovostox assiniensis (DE BORMANS).

Spongiphora assiniensis DE BORMANS, 1893, in BOLIVAR, Ann. Soc. ent. Fr., 42 : 170 (Q, Ivory Coast); REHN, 1924, Amer. Mus. Nat. Hist., 49 : 408.

Gorges de la Pelenge, 1.150 m, 1 3, 10-14.VI.1947 (483a).

A common West and Central African species.

# Family FORFICULIDÆ.

#### 11. — Forficula auricularia LINNAEUS.

Forficula auricularia LINNAEUS, 1758, Syst. Nat. (ed. X), 1:423.

Kaswabilenga, 700 m, 1 \2, 30.XII.1948-3.I.1949 (2279a).

Doubtless this single female of our common Palæarctic earwig which has been introduced into North America, Australia and New Zealand, was brought into the Upemba National Park with food or equipment from Europe.

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#### 12. — Thalperus micheli (BURR).

Opisthocosmia micheli BURR, 1904, Trans. ent. Soc. Lond., 1904 : 307 ( $\sigma \circ$ , Abyssinia).

Lusinga (riv. Kagomwe), 1.700 m, 2 3, 7 9, 8.VI.1945 (88).

In a report on the Dermaptera collected by M. LAMOTTE on Mount Nimba [1954, La Réserve Naturelle intégrale du mont Nimba, 2: 113 (Mém. Inst. fr. Afr. Noire)], I have expressed the opinion that *T. micheli* and *T. kuhlgatzi* BURR, 1909, are variants of the same species. *T. micheli* is widely distributed in tropical Africa and tends to be most numerous in upland areas.

#### 13. — Thalperus hova (de BORMANS).

Neolobophora ova DE BORMANS, 1883, Ann. Soc. ent. Belg., 27 : 80, pl. 3, fig. 16 (9, Madagascar).

Riv. Mubale, 1.450 m, 1-20.V.1947, 1  $\mathcal{J}$ , 1  $\mathcal{Q}$  (325*a*); Mubale, 1.480 m), 14-16.V.1947, 1  $\mathcal{J}$ (370*a*), 16-19.V.1947, 2  $\mathcal{Q}$  (411*a*); gorges de la Pelenge, 1.150 m, 21-31.V.1947, 1  $\mathcal{Q}$  (428*a*), 6-10.VI.1947, 1  $\mathcal{J}$  (465*a*), 10-14.VI.1947, 4  $\mathcal{J}$ , 4  $\mathcal{Q}$  (483*a*), 16-18.VI.1947, 1  $\mathcal{Q}$  (525*a*), 18-20.VI. 1947, 1  $\mathcal{J}$  (526*a*); Mabwe (rive Est lac Upemba), 585 m., 15.VIII.1947, 1  $\mathcal{J}$  (678*a*), 19-21.VIII. 1947, 1  $\mathcal{Q}$  (707*a*), 1-8.IX.1947, 1  $\mathcal{J}$ , 1  $\mathcal{Q}$  (733*a*); Kaziba, affl. g. Senze, sous-affl. dr. Lufira, 1.140 m, 4-12.XI.1948, 1  $\mathcal{J}$  (1266*a*), 10-14.II.1948, 1  $\mathcal{J}$ , 2  $\mathcal{Q}$  (1301*a*), 18-26.II.1948, 1  $\mathcal{J}$  (1319*a*); Mukana (Lusinga), 1.810 m, 18.III.1948, 1  $\mathcal{J}$ , 1  $\mathcal{Q}$  (1257*a*), 13-14.V.1948, 1  $\mathcal{Q}$  (1595*a*), 12-14.V. 1948, 2  $\mathcal{J}$ , 7  $\mathcal{Q}$  (1565*a*), 6-12.V.1948, 2  $\mathcal{J}$ , 4  $\mathcal{Q}$  (1577*a*), 13-14.V.1948, 1  $\mathcal{Q}$  (1595*a*), 12-14.V.

In the report mentioned under T. micheli I have suggested the synonymy of T. hova, roccatii (BORELLI) and inermis BORELLI. This species is widely distributed in tropical Africa and like T. micheli it appears to be an upland species.

#### 14. — Diaperasticus sansibaricus (KARSCH).

Sphingolabis sansibarica KARSCH, 1886, Berl. ent. Z., **30** : 90, pl. 3, fig. 8 ( $\sigma$ , Zanzibar); REHN, 1924, Bull. Amer. Mus. Nat. Hist., **49** : 396, 412.

[Masombwe, 1.120 m.], 6-9.VII.1948,  $2 \Leftrightarrow (1755a, 1753a)$ ; Mabwe (rive Est lac Upemba), 585 m., 27-30.XI.1948,  $1 \circlearrowleft, 2 \Leftrightarrow (1986a)$ , 17-31.XII.1948,  $3 \Leftrightarrow (2126a)$ ; [Kembwile, rive g. Kalule-Nord], 28.II.1949,  $1 \circlearrowright, 1 \Leftrightarrow (2405a)$ ; riv. Bowa, affl. dr. Kalule-Nord, près Kiamalwa, 1-3.III. 1949,  $1 \circlearrowright (2407a)$ .

All the above specimens of this widely distributed and common tropical African species are fully winged.

#### 15. — Diaperasticus erythrocephalus (OLIVIER).

*Forficula erythrocephala* OLIVIER, 1791, Encycl. Méth., Ins., **6** : 468 (♀, Cape of Good Hope); REHN, 1924, Bull. Amer. Mus. Hist., **49** : 398, 412.

Mabwe (lac Upemba), 585 m, 1-12.VIII.1947, 3  $\sigma$ , 5  $\wp$  (650*a*), 1.XII.1947, 3  $\sigma$ , 2  $\wp$  (657*a*), 1-12.VIII.1947, 1  $\sigma$ , 2  $\wp$  (660*a*), 1-12.VIII.1947, 1  $\sigma$  (667*a*), 9.IX.1949, 1  $\wp$  (760*a*), 17.XI.1948,

3  $\varphi$  (1951a), 12-17.XII.1948, 1  $\varphi$  (2107a), 17-20.XII.1948, 1  $\varphi$  (2115a), 17-31.XII.1948, 1  $\overset{*}{\sigma}$  (2126a), 3-12.I.1949, 1  $\overset{*}{\sigma}$  (2168a), 12.I.1949, 3  $\varphi$  (2204a), 20-26.I.1949, 1  $\overset{*}{\sigma}$  (2247a); Kaziba, affl. g. Senze, sous-affl. dr. Lufira, 1.140 m., 4-12.II.1948, 1  $\overset{*}{\sigma}$  (1266a), 18-26.II.1948, 1  $\overset{*}{\sigma}$  (1319a), 24.II.1948, 1  $\overset{*}{\varphi}$  (1329a), 15-26.II.1948, 1  $\overset{*}{\sigma}$  (1330a); Munoi, bifurc. Lupiala, 890 m., 1  $\overset{*}{\sigma}$ , 6-15.VI. 1948 (1685a); [Masombwe, 1.120 m.], 6-9.VII.1949, 2  $\overset{*}{\sigma}$  (1755a); Kilwezi, 750 m., 16-21.VIII. 1948, 1  $\overset{*}{\varphi}$  (1799a); monts Kabulumba, 987 m., entre Mabwe et Lufira, 27-28.I.1949, 1  $\overset{*}{\sigma}$ , 1  $\overset{*}{\varphi}$  (2271a); Kaswabilenga, 700 m., 30.XII.1948.3.I.1949, 1  $\overset{*}{\varphi}$  (2279a); Kalule-Nord, rive g. face Mujinga Kalenge, 1.050 m., 28.II-3.III.1949, 1  $\overset{*}{\varphi}$  (2399a); [Kembwile, rive g. Kalule-Nord], 28.II.1949, 1  $\overset{*}{\sigma}$ , 1  $\overset{*}{\varphi}$  (2405a); riv. Bowa, affl. dr. Kalule-Nord, près Kiamalwa, 1-3.III.1949, 2  $\overset{*}{\varphi}$  (2408a).

This is the commonest and most widely distributed African earwig and is found throughout the continent, south of the Sahara, and in Madagascar. Only 6 out of 45 specimens in the present collection belong to the typical fully winged form. The rest have the tegmina reduced and the wings absent or at least invisible. BORELLI has called this form var. *aptera* but has more recently applied the name var. *dietzi* DE BORMANS to it. Besides wing variation this species is also variable in colour and a striking melanic form with a red head is known as var. *cagnii* BORELLI. This dark form is not included in the present collection though I have seen specimens from the Albert National Park (HINCKS, 1938, Exploration du Parc National Albert, fasc. 17 : 15).

#### 16. — Diaperasticus wittei n. sp.

#### (FIG. 4, 5.)

Male : Colour yellowish brown; head black in mature individuals; antennæ and palpi brown; tegmina unicolorous, without infuscated sutural area; abdomen with a black triangular lateral mark of tergite 4; distal abdominal tergites brown; forceps unicolorous yellowish brown. Head similar to that of *D. erythrocephalus* but caudal angles are less broadly rounded and the tumid lateral areas of occiput are clearly less widely separated; also eyes slightly more prominent. Antennæ similar to D. erythrocephalus. Pronotum longer than broad, parallel-sided, of the same width caudad as cephalad; caudal margin broadly rounded. Tegmina abbreviated, a little longer than pronotum, slightly obliquely truncate caudad. Wings entirely absent. Abdomen gradually expanded to ultimate tergite, diffusely and shallowly punctured. Ultimate tergite strongly punctured with 4 longitudinal impunctate areas on disc; caudal margin tumid above forceps but without definite tubercles. Pygidium similar to that of *D. erythrocephalus*. For ceps rather short, cylindrical, slightly curved; inner basal one third lamellate; lamellation not triangular but truncate or slightly concave, having a tubercle-like tooth at each extremity; the more or less straight lamellar edge between these teeth sometimes irregularly crenulate. Penultimate sternite simple, transverse; caudal margin truncate; caudal angles broadly rounded. Legs as in D. erythrocephalus.

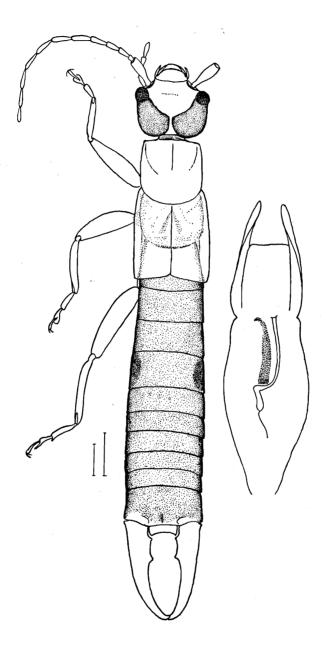


FIG. 4 and 5. — *Diaperasticus wittei* n. sp. 4. Male. 5. Genital armature.

Genitalia (fig. 5). Length 8,5-11,5 mm.

Female as male but head brownish. Ultimate tergite rugosely punctured above base of forceps, without the spinules which are often present in *D. erythrocephalus*; forceps unicolorous. Length 8-10 mm.

Types :

Lusinga, 1.760 m, 18.VII.1947 (604*a*), holotype male and 3 male paratypes; Lusinga (riv. Kafwe), 5.VI.1945 (78-79), male paratype; Kilwezi, affl. dr. Lufira, 750 m, 23-27.VIII.1948 (1809*a*), male paratype; Kalule-Nord, rive g. face Mujinga-Kalenge, 1.050 m., 28.II-3.III.1949 (2399*a*), allotype female and 2 paratype females; Kalumengongo, 1.780 m., 21.VIII.1948 (1217*a*), paratype female (Institut des Parcs Nationaux du Congo Belge and a pair in coll. HINCKS).

#### Additional material :

Lusinga, 1.760 m., 26.III.1947, 18.VII.1947, 2  $\sigma$ , 1  $\circ$  (106*a*, 604*a*); Lusinga (riv. Kamitungulu), 13.VI.1945, 3  $\circ$  (116, 120, 121); Lusinga (Sange), 7.VI.1945, 1  $\sigma$  (94); Lusinga (Mukana), 21.VI.1945, 1.IV.1947, 2  $\circ$  (150*a*, 152); Kalule-Nord, rive g. face Mujinga-Kalenge, 1.050 m, 28.II-3.III.1949, 1  $\sigma$  (2399*a*); Kaswabilenga, 700 m., 1-4.XI.1947, 1  $\circ$  (926*a*); Kalumengongo, 1.780 m., 21.I.1948, 2  $\circ$  (1217*a*, 1222*a*); Kilwezi, affl. dr. Lufira, 750 m, 23-27.VIII. 1948, 1  $\sigma$  (1809*a*); [Masombwe, 1.120 m.], 6-9.VII.1948, 2  $\sigma$ , 1  $\circ$  (1755*a*).

This would appear at first sight to be a distinct species easily distinguished from D. erythrocephalus by the different coloration and shape of head, more prominent eyes and less widely separated lateral occipital areas, and also by the narrower pronotum and non-triangular basal lamellation of the forceps. There are two males however from Mukana (1.810 m, 22-23.IV.1949, 2550 a) and Kabwekanono (1.815 m, 6.III.1948, 1387 a) in which the forceps are better developed and in which the lamellæ are triangular; the point of the triangle however is distal and not proximal as in D. erythrocephalus. These specimens also have a tubercle on each side of the ultimate tergite above the forceps and the lateral occipital areas are as widely seperated as those of D. erythrocephalus. In other respects they clearly agree with D. wittei and I am inclined to regard them as showing the macrolabic condition of the species. On the other hand they might be regarded as intermediate between D. wittei and erythrocephalus in which case the former could only be regarded as a distinct variety.

In addition to the above recorded material of *Diaperasticus* there are a number of nymphs in the G. F. DE WITTE collection which are specifically indeterminable. These are as follows :

[Masombwe, 1.120 m.], 6-9.VII.1947, 1 nymph (1755*a*); Kaziba, 1.140 m, 19.II.1948, 1 nymph (1313*a*); Kaziba, affl. g. Senze, sous-affl. dr. Lufira, 1.140 m., 4-12.II.1948, 1 nymph (1266*a*), 10-14.II.1948, 2 nymphs (1301*a*), 18-26.II.1948, 1 nymph (1319*a*); Kalule-Nord, rive g. face Mujinga-Kalenge, 1.050 m., 28.II-3.III.1949, 1 nymph (2399*a*); [riv. Dipidi, 1.700 m.], 22.I-V.1947, 1 nymph (310*a*); Mukana, Lusinga, 1.IV.1947, 1 nymph (159*a*); Buye-Bala, 1.750 m, 1-7.IV.1948, 1 nymph (1500*a*).

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