

DERMAPTERA

BY

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I. — INTRODUCTION

Through the kindness of Dr. V. VAN STRAELEN I have been able to study an interesting series of Dermaptera collected by M. G. F. DE WITTE during his recent collecting expedition to the Albert National Park, Belgian Congo. This collection, which is preserved at the Congo Museum, Tervueren, contains 136 examples belonging to 15 species, two of which, represented by unique females and one by a broken specimen, are indeterminable specifically. With the exception of *Anisolabis compressa*, the identity of which is not absolutely certain, all the remaining species have been previously recorded from the Belgian Congo. Having regard for the comparatively small area studied the total number of species collected bears a by no means disproportionate relation to the 80 ⁽¹⁾ or so species now recorded from the whole colony.

It will be noted that the commonest species in the collection is the mountain *Forficula sjöstedti* which is represented by 88 examples. The ubiquitous *Diaperasticus erythrocephalus*, probably the most abundant Belgian Congo earwig comes second in point of numbers with 14 examples. The third species represented by more than four examples is the doubtful *Anisolabis compressa* of which there are 11 specimens in M. DE WITTE's material.

The three most localised forms represented are perhaps *Apterygida cavallii*, *Archidux adolphi* and *Forficula sjöstedti*, the remaining species usually having a much wider African distribution.

(1) The list given by Dr. MENOZZI (1935, pp. 31-32) requires considerable modification as it includes species which have never been recorded from Belgian Congo and others which have been incorrectly identified. I am now engaged on a revision of the order as represented in the Belgian Congo in which I hope to correct many of these errors.

I was particularly interested to encounter two examples of the supposed melanistic phase of *Diaperasticus erythrocephalus* described by Borelli under the name of *Apterygida cagnii*; this being the first occasion on which this form has come under my notice. The other species are mostly familiar to me by reason of my examination of extensive collections for the Congo Museum.

I wish to express my sincere thanks to Dr. VAN STRAELEN for allowing me to examine the collection and to Dr. SCHOUTEDEN, through whose kindness the material was sent to me.

II. — LIST OF SPECIES

1. <i>Echinosoma</i> sp? (1 broken example)	1
2. <i>Anisolabis annulipes</i> (LUCAS), 1847... ..	2
3. <i>Anisolabis compressa</i> BORELLI, 1907.	11
4. <i>Anisolabis</i> sp? 1 ♀	1
5. <i>Labidura riparia</i> (PALLAS), 1773..	4
6. <i>Spongovostox assiniensis</i> (BORMANS), 1893... ..	4
7. <i>Spongovostox</i> sp? 1 ♀	1
8. <i>Labia minor</i> (LINNAEUS), 1758	1
9. <i>Labia ochropus</i> (STÅL), 1855..	1
10. <i>Apterygida cavallii</i> BORELLI, 1906	1
11. <i>Forficula senegalensis</i> SERVILE, 1839	2
12. <i>Forficula sjöstedti</i> BURR, 1907... ..	88
13. <i>Archidux adolphi</i> BURR, 1909..	1
14. <i>Diaperasticus sansibaricus</i> (KARSCH), 1886..	4
15. <i>Diaperasticus erythrocephalus</i> (OLIVIER), 1791, and <i>var. cagnii</i> (BORELLI), 1906	14

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III. — LIST OF LOCALITIES AT WHICH DERMAPTERA WERE COLLECTED ⁽¹⁾

LOCALITY	Species collected.	Number of specimens.
1. Bitshimbi (lac Édouard). Alt. 925 m. ...	<i>Labidura riparia.</i> <i>Diaper. erythrocephalus.</i>	4 1
2. Bikwi (rivière torrent, versant Sud du volcan Karisimbi; les récoltes ont été effectuées entre alt. 3,100-3,200 m., zone à <i>Hagenia</i> , <i>Hypericum</i> , <i>Senecio</i> et <i>Lobelia</i>)	<i>Forficula sjöstedti.</i>	3

(¹) Compiled from a list supplied by the Director of the Institute of National Parks of Belgian Congo. The details in the column headed 'locality' are entirely copied from this list.

LOCALITY	Species collected.	Number of specimens.
3. Burunga (à l'Ouest du Kamatembe, vers les lacs Mokoto). Alt. 2,000 m.	<i>Diaper. sansibaricus.</i>	2
4. Gabinga (volcan, Ruanda, vers. Ouest). Alt. 3,475 m., au sommet. (Forêt de Bambous jusqu'à alt. 3,000 m., puis <i>Hypericum</i> et ensuite zone de <i>Senecio</i> , <i>Lobelia</i> et Bruyères à partir de alt. 3,200 m.).	<i>Forficula sjöstedti.</i>	64
5. Kabara (col Mikeno-Karisimbi, forêt d' <i>Hagenia</i> et <i>Hypericum</i>). Alt. 3,200 m.	<i>Forficula sjöstedti.</i>	9
6. Kamatembe (au Sud de Ngesho, îlots de forêt primaire au milieu d'une plaine de lave ancienne, forêt sur plaine de lave et forêt secondaire). Alt. 2,100-2,300 m. (au mont Kamatembe)	<i>Echinosoma</i> sp.	1
7. Kansenze (marais entre Nyabirehe et Ilega, au Sud du Karisimbi; Bambous, <i>Hypericum</i> , <i>Hagenia</i> et forêt secondaire). Alt. 2,400 m.	<i>Forficula sjöstedti.</i>	1
8. Kibati (au Sud-Est du volcan Nyiragongo). Alt. 1,900 m.	<i>Forficula sjöstedti.</i> <i>Archidux adolfi.</i>	6 1
9. Kinago (mont près du mont Hehu, région du Kibumba). Alt. 2,000 m.	<i>Forficula sjöstedti.</i>	1
10. Kinigi (près de Ruhengeri, Ruanda, au Sud du volcan Biskoke). Alt. 2,100 m.	<i>Forficula sjöstedti.</i>	1
11. Magera (lac au pied du mont Kivorirwe et à l'Ouest du volcan Nyamuragira). Alt. 2,000 m.	<i>Apterygida cavallii.</i> <i>Diaper. sansibaricus.</i>	1 1
12. May ya Moto (sources chaudes sulfureuses au pied du massif du Kasali et au bord de la rivière Rutshuru). Alt. 950 m.	<i>Labia ochropus.</i>	1
13. Rutshuru (env. du poste). Alt. 1,285 m.	<i>Anisolabis compressa.</i> <i>Anisolabis</i> sp. <i>Spongovostox</i> sp. <i>Spongovostox assiniensis.</i> <i>Labia minor.</i> <i>Forficula senegalensis.</i> <i>Forficula sjöstedti.</i> <i>Diaper. erythrocephalus.</i> <i>Diaper. erythrocephalus</i> <i>v. cagnii.</i>	11 1 1 4 1 2 1 10 2
14. Runyoni (ou Nyandizima, lac près de Tshamugussa). Alt. 2,200 m.	<i>Forficula sjöstedti.</i>	2
15. Rwindi (camp près de la rivière Rwindi). Alt. 1,000 m.	<i>Anisolabis annulipes.</i>	2
16. Sake (lac Kivu). Alt. 1,460 m.	<i>Diaper. sansibaricus.</i>	1

IV. — ALTITUDINAL RANGE

The material and data before me is too scanty for any accurate results to be obtained with regard to the altitudinal distribution of the species studied. It may be interesting nevertheless to give a list of the species with the number of examples collected at particular altitudes.

SPECIES	ALTITUDE				
	925-1000 m.	1285 m.	1460-2000 m.	2100-2400 m.	Over 3000 m.
<i>Anisolabis compressa</i>	—	11	—	—	—
<i>Anisolabis annulipes</i>	2	—	—	—	—
<i>Labidura riparia</i>	4	—	—	—	—
<i>Spongovostox assiniensis</i>	—	4	—	—	—
<i>Labia minor.</i>	—	1	—	—	—
<i>Labia ochropus.</i>	1	—	—	—	—
<i>Apterygida cavallii.</i>	—	—	1	—	—
<i>Forficula sjöstedti</i>	—	1	7	4	76
<i>Forficula senegalensis.</i>	—	2	—	—	—
<i>Archidux adolphi.</i>	—	—	1	—	—
<i>Diaperasticus sansibaricus.</i>	—	—	4	—	—
<i>Diaperasticus erythrocephalus.</i>	1	13	—	—	—

It will be noted that over 2.000 m. the only Earwig taken was *F. sjöstedti* and that this species comprises over half the total number of specimens in the whole collection. BURR's (1907) report on Prof. SJÖSTEDT's Kilimandjaro Expedition forms an interesting comparison in which 449 out of a total of 794 examples are *F. sjöstedti*.

The extensive material of this species studied by BURR was entirely obtained from altitudes of 2.000 m. or more and is recorded from the following stations which I copy seriatim from the report (1).

« Kilimandjaro : Kiboscho in the « Bergwiesen » at 3.000-3.700 m., in the « *Ericinella*-Formation », in dead flowers of *Lobelia deckeni* (over 100 specimens). »

« Kilimandjaro : Kiboscho, 3-4.000 m., February 1906, at the highest parts of the limits of the vegetation. (Several hundred specimens.) Also a few under moss, on trees, etc., in the very highest parts of the woods which encircle the mountain at 3.000 m. Most of the specimens are from the treeless « Bergwiesen ». »

(1) BURR, 1907, p. 11.

« *Meru*: On the highest part of the mountain, about 4.000-4.300 m., 21-27-XII-1905, on male of the form *macrolabia*. »

« There are altogether 449 specimens, of which 31 are of the *macrolabia* form of male, 97 of the typical form of male, 226 females, and 93 immature specimens; there are two males having one branch of the forceps atrophied, thus presenting a superficial appearance of gynandromorphism. »

« One pair from Kibonoto, 2.000-3.000 m., (« Regenwald ») is slightly different from the specimens from the higher altitude... »

For comparison with the above list of species taken by M. DE WITTE I have extracted a similar one from BURR's account of the Dermaptera collected by Prof. SJÖSTEDT on Kilimandjaro and Meru (1907).

V. — LIST OF SPECIES RECORDED BY BURR (1907) FROM KILIMANDJARO AND MERU

Altitudes given where stated by BURR, also number of examples recorded. Generic names in brackets are those used by BURR where these differ from modern ones.

SPECIES	ALTITUDE			
	1300-1900 m.	2000-3000 m.	3000-4000 m.	4000-4300 m.
<i>Dicrana (Pygidicrana) bettoni</i> (KIRBY) (1)	2	—	—	—
<i>Echinosoma wahlbergi</i> DOHRN.	28	—	—	—
<i>Anisolabis laeta</i> GERST.	—	—	1 (2)	—
<i>Anisolabis annulipes</i> LUCAS... ..	7	—	—	—
<i>Anisolabis felix</i> BURR.	—	57	—	—
<i>Chaetospania rodens</i> BURR.	52	—	—	—
<i>Spongovostox (Spongiphora) quadrimaculatus</i> (STÅL)	—	—	—	—
<i>Diaperasticus sansibaricus</i> (KARSCH).	—	—	—	—
<i>Prolabia (Apterygida) arachidis</i> YERSIN	—	—	—	—
<i>Forficula senegalensis</i> SERV.	—	—	—	—
<i>Forficula rodziankoi</i> SEM.	4	—	—	—
<i>Forficula sjöstedti</i> BURR.	—	2	± 400 (3)	1
<i>Pseudochehidura</i> sp.	1	—	—	—

(1) Not KIRBY's species, see BURR, *Ann. Mag. Nat. Hist.* (8), 2, 1908 : 388, where SJÖSTEDT's specimens are assigned to a new species, *Separata* BURR.

(2) BURR gives no altitude for his specimens but refers to GERSTAECKER's type locality at ± 3,200 m. on Kilimandjaro.

(3) It will be noted that the altitude of maximum density of this species appears to coincide in both collections.

VI. — GEOGRAPHICAL DISTRIBUTION

The named species in the present collection may be grouped under four sections according to their distribution. *Anisolabis compressa* is not included as it is a member of a group (the *Psalinae*) many of which are frequently incorrectly determined and accurate records of which are very scanty. It is recorded from Uganda : Bimbia (BORELLI 1907), Mozambique (MENOZZI 1936) and if correctly named, from Belgian Congo in the present contribution.

- A. Cosmopolitan species, widely distributed in Africa, and occurring in many other parts of the world : *Anisolabis annulipes*, *Labidura riparia* and *Labia minor*.
- B. Widely distributed African species : *Labia ochropus*, *Spongovostox assiniensis*, *Forficula senegalensis*, *Diaperasticus erythrocephalus*.
- C. Widely distributed East African species : *Diaperasticus sansibaricus*.
- D. Mountain species restricted to the volcanic areas of :
 - a) Belgian Congo, Tanganyika and Kenya : *Forficula sjöstedti*, *Archidux adolfi*.
 - b) Highlands of East Belgian Congo and West Uganda : *Apterygida cavallii*.

VII. — SYSTEMATIC

Superfamily **LABIDUROIDEA** TILLYARD 1926.Family **PYGIDICRANIDAE** VERHOEFF, 1902.1. — **Echinosoma** sp?

1 example, Kamatembe, 3-22-IV-1934.

This specimen is without the terminal segments of the abdomen so that its determination is impossible. The colouration somewhat resembles that of *E. afrum* (PALISOT DE BEAUVOIS) 1805, to which it is no doubt allied if not identical.

Family **LABIDURIDAE** VERHOEFF, 1902.Subfamily **PSALINAE** BURR, 1909.2. — **Anisolabis annulipes** (LUCAS), 1847.

1847. *Forficesila annulipes* LUCAS, Ann. Soc. Entom. France (2), V, Bull. p. LXXXIV. [« Jardin des Plantes, Paris »; probably introduced.]

Material examined : 2 examples. Camp Rwindi (1.000 m.), 1 ♀, 20-28-XI-1934; 1 ♂, 1-XII-1934.

This cosmopolitan species is extremely widely distributed in tropical and subtropical countries and a number of Belgian Congo records have been reported by BORELLI (1923), REHN (1924) and MENOZZI (1935).

The present examples are fairly typical in colour, with well marked femoral annulations, and measure 12 mms. The genitalia of the male has been examined and agrees with the careful figure of MACCAGNO (1933).

3. — **Anisolabis compressa** BORELLI, 1907.

1907. *Anisolabis compressa* BORELLI, Boll. Mus. Zool. Anat. Comp. Torino, XXII, n° 558, p. 3, ♀ ♂. [Uganda : Bimbia.]

Material examined : 11 examples. Kivu : Rutshuru, 3 ♀ ♀, 22-31-V-1934; 1 ♂, 22-V-1-VI-1934; 3 ♀ ♀, 1-6-VI-1934; 2 ♀ ♀, 7-9-VI-1934; 2 ♀ ♀, 12-VI-1934.

The association of the present series with BORELLI's name is made with some hesitation. MENOZZI ⁽¹⁾ in referring to this species has pointed out the

(1) Contributions à l'étude de la Faune du Mozambique, voyage de M. P. Lesne (1928-1929). *Mém. Est. Mus. Zool. Univ. Coimbra*, 1936, sér., 1, n° 95, p. 5.

difficulties confronting the student in regard to *A. annulipes* and its allied African forms and emphasizes the need for a thorough revision of the group. Unfortunately the structure of the genital armature appears to assist very little, at least as far as the figures given by BURR ⁽¹⁾ are concerned.

The Rutshuru specimens agree with BORELLI's description and the genitalia of the single male accords fairly well with BURR's figure. Furthermore, an example compared with the BURR collection in the British Museum, London appears to agree closely. Nevertheless, it would be well to treat this determination with doubt as there appear to be three closely allied species in the Belgian Congo in addition to the ubiquitous *A. annulipes*.

A. compressa has not hitherto been recorded from Belgian Congo.

4. — *Anisolabis* sp?

1 ♀, Rutshuru (1.285 m.), 1-6-VI-1934.

The length of this example is 21 mm. I have seen no male which corresponds to it either in the present collection or in the several other large series of Belgian Congo specimens which I have examined, nor could I match it with any species in the BURR collection at the British Museum. It is very probable that a new species is represented but the absence of the male renders its characterization impossible.

Subfamily **LABIDURINAE** BURR, 1909.

5. — *Labidura riparia* (PALLAS), 1773.

1773. *Forficula riparia* PALLAS, Reise Russischen Reichs, 2, Buch 2, Anhang, p. 727, ♂. [Western Siberia : Shores of the Irtysh River.]

Material examined : 4 examples. Bitshumbi (925 m.), 1 ♀, 29-IX-1933; 1 ♂, 2-X-1933; 1 ♂ 1 ♀, 9-12-X-1933.

This is a cosmopolitan species with an extremely wide range throughout the tropical and subtropical parts of the world, extending in certain areas into temperate regions. The African distribution is summarised by REHN (1924) who also includes in his paper interesting distributional and variational data. Numerous records from Belgian Congo appear in the papers of BORELLI (1923), REHN (1924) and MENOZZI (1928) (1935).

Of the present specimens two are particularly dark in colour with shorter tegmina and wings, and are smaller being 23 mms. long. The other examples through dark are less so than the above, and although too damaged to measure are definitely larger and fully tegminate.

The wide variation of this species is now recognised though it remains to comprehensively survey the whole range in a single study.

⁽¹⁾ *Journ. R. Micr. Soc.*, 1915, pl. XII, fig. 13-20.

Superfamily **FORFICULOIDEA** TILLYARD 1926.Family **LABIIDAE** BURR, 1909.Subfamily **SPONGIPHORINAE** BURR, 1911.6. — **Spongovostox assiniensis** (BORMANS), 1893.

1893. *Spongiphora assiniensis* BORMANS in Bolivar, Ann. Soc. Entom. France, **42**, 170, ♀. [« Assinie », Ivory Coast.]

Material examined : 4 examples. Rutshuru (1.285 m.), 2♂♂, 1-6-VI-1934; 1♀, 7-24-VI-1935; 1♂, 12-VI-1934.

REHN (1924) has summarised the distribution of this species but was unable to include the Belgian Congo. Records from this region have been published by BORELLI (1923) and MENOZZI (1928) (1935).

The three male examples recorded above are represented by two specimens of the cyclolabic and one of the macrolabic phase.

7. — **Spongovostox** sp?

1♀, Rutshuru, 12-VI-1934.

The present female example is unaccompanied by any corresponding male so that its specific identification would be unwise.

Subfamily **LABIINAE** BURR, 1911.8. — **Labia minor** (LINNAEUS), 1758.

1758. *Forficula minor* LINNAEUS, Syst. Nat., Ed. 10, p. 423. [Europe.]

Material examined : 1♂, Kivu : Rutshuru, 15-25-IX-1933.

A cosmopolitan species widely distributed in Africa. Belgian Congo records are mentioned by BORELLI (1923), REHN (1924) and MENOZZI (1928) (1935).

The Rutshuru specimen agrees closely with European examples with which it has been compared.

9. — **Labia ochropus** (STÅL), 1855.

1855. *Forficula ochropus* STÅL, Öfv. Kongl. Vetensk.-Akad. Förhandl., **12** : 348, ♂, ♀. [Natal : Durban.]

Material examined : 1♂, May ya Moto (r. Rutsh.) (950 m.), 5-6-XI-1934.

The wide distribution of this African species is discussed and summarised by REHN (1924) including the Belgian Congo records then known. MENOZZI (1935) has added further data regarding the Belgian Congo distribution of the species.

Family **FORFICULIDAE** BURR, 1907.Subfamily **FORFICULINAE** BURR, 1907.10. — **Apterygida cavallii** BORELLI, 1906.

1906. *Apterygida cavallii* BORELLI, Boll. Mus. Zool. Anat. comp. Torino, **21**, n° 541, p. 4, ♂, ♀. [Uganda : Buhengo.]

Material examined : 1 ♂, lac Magara, III-1934.

The distribution of this species has been summarised by REHN (1924) as follows : Uganda (Buhengo, Fort Portal and Ibanda) and western « German » East Africa (Volcanic region north-east of Lake Kivu, and Rugege Forest, South-west Ruanda) ». MENOZZI (1938) adds records from Blukwa, Buba, Nialopal (Ituri), Matura (Kivu), V. Karissimbi (Ruanda) and Nairobi.

Besides the single male example in the present collection I have examined a number of Belgian Congo examples which will be reported elsewhere. It may be mentioned here that the female of *A. cavallii* appears to be almost indistinguishable from that of *Forficula sjöstedti*.

11. — **Forficula senegalensis** SERVILLE, 1839.

1839. *Forficula senegalensis* SERVILLE, Hist. Nat. Ins., Orth., p. 39, ♂, ♀. [Senegal.]

Material examined : 2 examples. Kivu : Rutshuru, 1 ♀, 15-25-IX-1933; 1 ♀, 17-20-VI-1934.

REHN (1924) has discussed and illustrated by a map the wide distribution of this species and has indicated its almost entire absence from the Western Forest Region which includes the majority of the territory within the borders of Belgian Congo.

BORELLI (1923) and MENOZZI (1928) (1935) have added further records.

12. — **Forficula sjöstedti** BURR, 1907.

1907. *Forficula sjöstedti* BURR, Trans. Entom. Soc. London, p. 116, ♂, ♀. [Kilimandjaro : Kiboscho.]

Material examined : 88 examples. 12 ♂♂, 14 ♀♀, 26 nymphs. Col Gahinga-Sabinjo, 12-19, 22-IX-1934; 3 ♂♂, Karisimbi, vers S., r. Bikwi (3.100 m.), 27-28-II-1935; 1 ♂, S. Karisimbi-Kanzenze (2.400 m.), 4-III-1935; 2 ♂♂, 1 ♀, 6 nymphs, Kabara (Mik.), 20-23-VII-1934; 4 ♂♂, 2 ♀♀, Kibati (1.900 m.),

IV-V-1935, 10-14-I-1934; 1 ♂, 3 ♀, 8 nymphs Volc. Gahinga (3.475 m.), 19-IX-1934; 1 ♂, Kinago, près Mt. Hehu (2.400 m.), 10-III-1935; 1 ♀, Ruanda (2.100 m.), Kinigi (Ruhengeri), II-1935; 1 nymph, Rutshuru, 12-VI-1934; 2 nymphs, lac Runyoni (2.200 m.), XII-1934.

This species was originally described by BURR from a very large series of specimens collected on Kilimandjaro by Prof. Y. SJÖSTEDT (*vide ante* p. 6). Since its original description it has been recorded from several localities in Tanganyika and Kenya and was first recorded from Belgian Congo as *Forficula bequaerti* n. sp. by MENOZZI (1930).

REHN (1933) has proposed the sinking of MENOZZI's species and that writer has recently (1935) added further data on the subject.

All the specimens before me have strongly abbreviate tegmina and obsolete wings and show considerable variation in size both of the body and of the forceps in the male sex. Accurate measurements with dried materials are impossible owing to the variable effects of shrinkage and the following therefore are only approximate figures for the material as it stands before me.

	Total length.	Forceps.	
Smallest male ...	14 mm.	4 mm.	Col Gahinga.
Largest male ...	21 mm.	9.5 mm.	Kabara.

The females are much more uniform in size, varying from 11-13 mm.

The Kibati series contains a single male with deformed forceps corresponding to the two males found by BURR in his series and referred to on page 7.

The general colouration is dark with lighter tegmina and the pronotum with a lighter border. The Kibati series however, and a specimen from Kinago have the tegmina and pronotum lighter than the remaining material.

Subfamily **NEOLOBOPHORINAE** BURR, 1907.

13. — **Archidux adolfi** BURR, 1909.

1909. *Archidux adolfi* BURR, Ann. Mag. Nat. Hist. (8), **4**, p. 124, ♂, ♀.
[Tanganyika : Ufumbiro Volcanoes, Bamboo Forest, 3.000 m., Sabinyo.]

Material examined : 1 ♀. Kibati (1.900 m.), 10-14-I-1934.

Recorded from Belgian Congo (BORELLI 1923, REHN 1924, MENOZZI 1930, 1935), Tanganyika and Kenya.

Subfamily **DIAPERASTIGINAE** BURR, 1907.

14. — **Diaperasticus sansibaricus** (KARSCH), 1886.

1886. *Sphingolabis sansibarica* KARSCH, Berlin. Entom. Zeitschr., **30**, p. 90, pl. III, f. 8, ♂. [Zanzibar.]

Material examined : 4 examples. 1 ♂, lac Magera, III-1934; 1 ♂, 1 ♀, Burunga (Mokoto), 9-10-III-1934; 1 nymph, Sake (Kivu), 19-22-II-1934.

Belgian Congo records of this species have been published by BORELLI (1923), REHN (1924) and MENOZZI (1935). REHN (1924) discusses the distribution and illustrates it by means of a map.

The two males above recorded belong to the large form with sigmoidal forceps.

15. — **Diaperasticus erythrocephalus** (OLIVIER), 1791.

1791. *Forficula erythrocephala* OLIVIER, Encycl. Méthod. Ins., **6**, p. 468, ♀. [Cape of Good Hope.]

Material examined : 24 examples. Kivu : Rutshuru, 1 ♂, 9 ♀ ♀; 1 nymph, 17-20-VI-1934, 15-25-IX-1933; 1 ♀, Bitshumbi (925 m.), 29-IX-1933; 5 ♂ ♂, 6 ♀ ♀, Uelé : Monga, 18-IV-8-V-1935; 1 ♂, Uelé : Buta (450 m.), 11-13-V-1935.

This is an abundant and very widely distributed African species. The synonymy and distribution are ably discussed in detail by REHN (1924). Further records from Belgian Congo have been published by BORELLI (1923), MENOZZI (1928) (1935) and REHN (1933).

The colouration of the present series is variable. In some examples the abdomen is dark, the anterior half of the body being light coloured with the suture of the tegmina and inner margin of the wings heavily marked with blackish. Other specimens have the whole body more or less light and between this phase and the dark form there is every intermediate grade. The condition of the organs of flight are either (*a*) complete and well developed wings and tegmina or (*b*) wings absent, tegmina somewhat reduced. I have seen no intermediates between these two phases. In the Rutshuru series four of the ten adults are fully winged — three out of eleven specimens represent this condition in the Monga series. The single Buta male is also fully alate. The variation in size is not considerable.

Total length.	Male.	Female.
Rutshuru. ...	11 mm.	11-12.5 mm.
Monga	10.5-12 mm.	11-12 mm.
Buta..	12.5 mm.	—

Var. **cagnii** (BORELLI), 1906.

1906. *Apterygida cagnii* BORELLI, Boll. Mus. Zool. Anat. Comp. Torino, **21**, n° 541, p. 3, ♂. [Uganda : Ibanda.]

Material examined : 2 ♀. Kivu : Rutshuru, 15-25-IX-1933.

Probably REHN (1924 : 399) is correct in regarding this as a melanistic variant of *D. erythrocephalus*. The two females before me are striking in colouration with their reddish heads and antennae, blackish tegmina, black abdomen and dark legs and forceps. They agree well with BORELLI's description as far as that applies to the female. Compared with the above recorded *D. erythrocephalus* this pair is noticeably narrower and more slender, with a distinctly narrower pronotum, besides the colourational differences already mentioned. Both examples are without wings and have abbreviate tegmina. In the absence of the male it is difficult to say more regarding the identity or otherwise of this form with *D. erythrocephalus*. After examining many hundreds of that species this phase appears to be striking and distinctive and I have therefore restored BORELLI's name to varietal rank pending the examination of male specimens.

VIII. — BIBLIOGRAPHY

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