

CORYNDON MEMORIAL MUSEUM EXPEDITION TO  
THE CHYULU HILLS.

IX. DERMAPTERA.

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The Earwigs collected by the Expedition and submitted for study by Mr. A. F. J. Gedye comprise forty-nine specimens of four species, 2 of which are represented by single examples. One species, *Echinosoma wahlbergi* is a widely distributed African form known from Portuguese Guinea in the west to Abyssinia in the east and south to the Cape. The remaining species are much more restricted in range, two at least being recognised components of a small but interesting alpine fauna associated with the mountain ranges and massifs of Tropical Africa. For information on this subject, limited as the known data is, reference should be made to the papers of Burr (1907, Kilimanjaro), Menozzi (1938, East Africa), and Hincks (1938, Mufumbiro Volcanoes).

Little can be said of the habits or biology of any African Dermaptera and great indeed is the need for observations and data of even the most elementary kind.

Superfamily *LABIDUROIDEA*.  
Family *PYGIDICRANIDAE*.  
Subfamily *ECHINOSOMATINAE*.

*ECHINOSOMA WAHLBERGI* Dohrn, 1863.

*Echinosoma wahlbergi* Dohrn, Stettin Ent. Zeitschr., **24**, 1863:  
64, ♂. (Caffraria.)

*Echinosoma distanti* Burr, in Distant Ins. Transv., 1910: 252,  
fig. 48, ♂. (Transvaal)

Chyulu Hills, alt. 5,600 ft., June, 1938, 1♂.

Although this widely-distributed species has not always been correctly identified by previous authors the male is readily recognised by the lateral keels of abdominal tergites V and VI and the long and convoluted virga of the genitalia. The truncate but not transverse pygidium distinguishes the female.

Despite inaccuracies in the records *E. wahlbergi* is certainly very widely distributed in Africa. Based on the literature the following is the recorded range: Portuguese Guinea, Liberia, Togo, Cameroons, Fernando Po, French Congo, Belgian Congo, Angola, Uganda, Abyssinia, Kenya, Tanganyika, Zanzibar, Mozambique, Zululand, Natal, Transvaal and Cape Colony.

The Chyulu male agrees perfectly with material from Belgian Congo in my collection.

Family *LABIDURIDAE*.  
Subfamily *PSALIDINAE*.

*GELOTOLABIS FELIX* (Burr, 1907). (Fig. 1.)

*Anisolabis felix* Burr, in Sjöstedt Kilimandjaro, Orth., **17**, 1907: 4, pl. 1, fig. 4, 4a. ♂♀. [Kilimanjaro ca. 3,000 m. (approx. 10,000 ft.).]

*Horridolabis paradoxura* Zacher, Zool. Jahrb., **30**, 1911: 384, figs. L<sup>2</sup>, M<sup>2</sup>. ♂. (Kenya: Kikuyu Escarpment.)

Chyulu Hills, alt. 5,600 ft. (approx. 1,700 m.), July, 1938, 1♂.

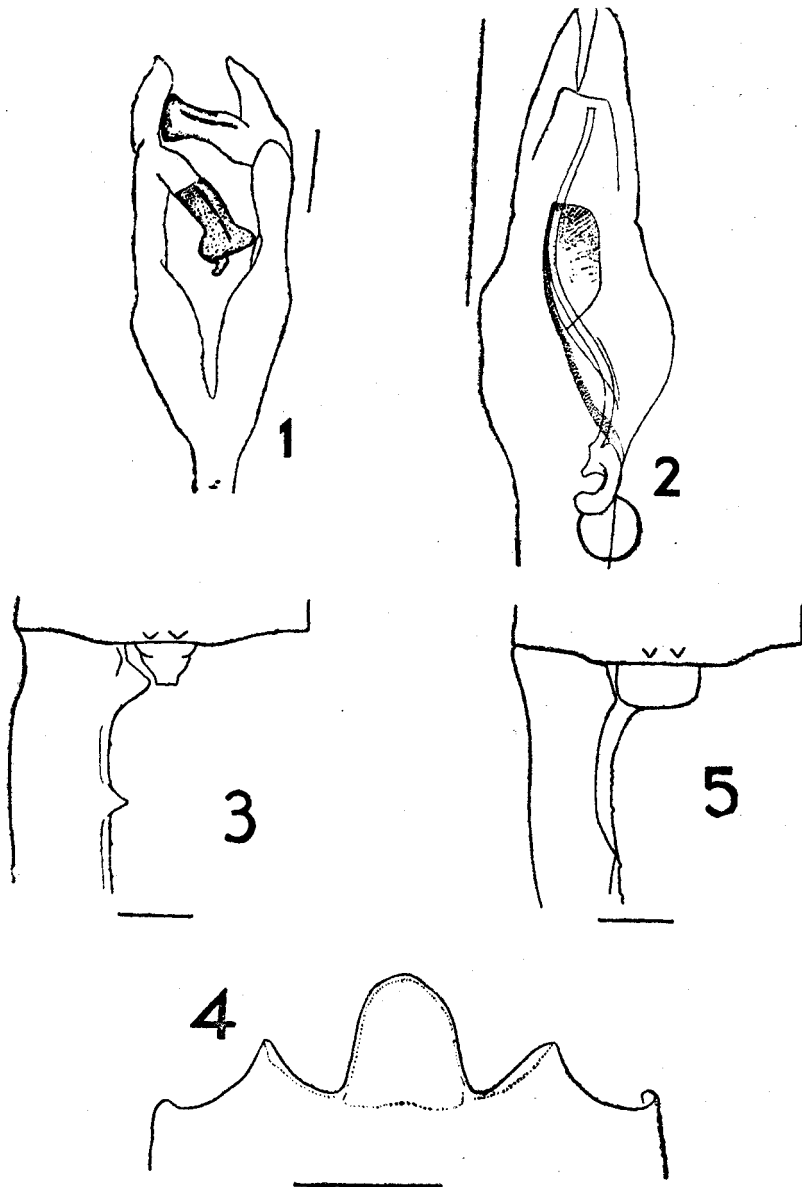
The species grouped under the name *Gelotolabis* are a specialized branch of the cosmopolitan genus *Anisolabis* and the status of the many divisions of the latter is still debated.

This is a very interesting species regarded as one of the African montane forms and was first recorded from about 10,000 ft. on Kilimanjaro whence Borelli (1915) has since noted it at various stations and also on Mt. Kenya. Menozzi (1938) has records from Mt. Elgon 3,500 m. to 4,000 m. (approx. 11,500 ft. to 13,000 ft.), Mt. Marakwet about 3,426 m. (approx. 11,500 ft.), Mt. Kinangop 3,500 m. to 3,700 m. (approx. 11,500 ft. to 12,200 ft.), and Mt. Aberdare 2,900 m. to 3,100 m. (approx. 9,500 ft. to 10,200 ft.). He states that *G. felix* is characteristic of the alpine zone over 2,500 m. (approx. 8,200 ft.). It will be seen that of the localities where altitudes are noted the present record represents the lowest limit at which the species has yet been found. Burr (1912), however, has a record "Loangwa River, Mpeta." It is presumed that this refers to a Northern Rhodesia locality. The Luangwa River is in the north-eastern part of this territory and to its west is Mpika which may be the locality intended. There is, however, a Loangwa River in the north-west, flowing into Lake Mweru, but I cannot trace Mpeta in this area. Zacher's type locality is the Kikuyu Escarpment in Kenya (8,200 ft.), no altitude is, however, stated in the original citation.

Additional unpublished Kenya records from altitudes of over 9,000 ft. will be given in a forthcoming paper.

The genitalia of the male specimen are here figured for comparison with Zacher's illustration referred to above.

Superfamily *FORFICULOIDEA*.  
Family *LABIIDAE*.  
Subfamily *LABIINAE*.



EXPLANATION OF FIGURES.

(Drawn by the writer with the aid of a squared eyepiece; the scale against each represents approximately half a millimetre.)

- FIG. 1. Male genitalia of *Gelotolabis felix* (Burr). (Parameres shrunken, do not show characteristic shape despite treatment with KOH.)  
 FIG. 2. Male genitalia of *Chaetospasia rodens* Burr.  
 FIG. 3. Portion of apical segments of male *C. rodens* showing pygidium and part of one limb of forceps.  
 FIG. 4. Part of penultimate sternite of male *C. rodens* showing manubrium.  
 FIG. 5. Portion of apical segments of female *C. rodens* showing pygidium and part of one limb of forceps.

**CHAETOSPANIA RODENS** Burr, 1907. (Figs. 2 to 5.)  
*Chaetospania rodens* Burr, in Sjöstedt Kilimandjaro, Orth.,  
17, 1907: 7, pl. 1, fig. 5. ♂♀. [Kilimanjaro, Kibonoto  
(cultivated zone) 1,300 m. to 1,900 m. (approx. 4,400 ft. to  
6,300 ft.).]

Chyulu Hills, 5,200 ft. to 6,000 ft., April-July, 1938,  
5♂♂, 5♀♀, 2 juv. [April 1♀, 1 nymph, 5,200 ft.;  
May 1 nymph, 5,400 ft.; June 2♂♂, 1♀ (damaged),  
5,600 ft.; July 1♂, 5,600 ft., 2♂♂, 3♀♀, 6,000 ft.]  
Length including forceps ♂, 9 mm. to 12 mm.; ♀,  
9 mm. to 11 mm.

Hitherto this species has not been recorded from Kenya.  
All previous records are from Tanganyika, mostly in the  
Kilimanjaro area, except for a single note by Burr (1912) of  
a specimen from Ukaika-Mawambi in Belgian Congo.

Probably most of the reports of this insect are from high  
altitudes, but that this is not entirely the case, is evident from  
Burr's (1907B) Amani record.

One male in the present series (July, 6,000 ft.) is interest-  
ing in having the wings reduced to such an extent as not to be  
visible beyond the distal margin of the tegmina. This specimen  
is rather slenderer than the others and the abdominal punctura-  
tion appears heavier. The latter character, however, varies to  
some extent in the series although it is always stronger in the  
male than the female. This brachypterous male appears to  
differ in no other particular.

Burr in his original description does not mention the  
obvious pair of tuberculiform prominences on the distal margin  
of the ultimate tergite above the pygidium in both sexes.

The male genitalia is here figured for the first time, together  
with the manubrium of the male and apical segments of the  
abdomen showing the forceps and pygidium in both sexes.

*C. rodens* is closely allied to *C. ugandana* Borelli, 1907  
(Uganda: Ibanda), also recorded from the Cameroons and  
Belgian Congo, but may be distinguished by the male genitalia,  
pygidium and coloration, especially of the legs, in both sexes.

Family *FORFICULIDAE*.  
Subfamily *FORFICULINAE*.

*FORFICULA SJOSTEDTI* Burr, 1907.  
*Forficula sjostedti* Burr, Trans. Ent. Soc., Lond., 1907: 116.  
♂♀. (Kilimanjaro, Kiboscho.)  
*Forficula bequaerti* Menozzi, Rev. Zool. Bot. Afr., 19, 1930: 96,  
figs. 1, 2. ♂♀. (Belgian Congo: "Mt. Ninagonga and  
Burunga.")

*Forficula sjöstedti* var. *fusca* Borelli, Bull. Mus. Hist. Nat., Paris, 1912: 20. ♂. (Kilimanjaro, Kiboscho.)

Chyulu Hills, 5,200 ft. to 6,000 ft., April-July, 1938, 8♂♂, 6♀♀, 21 juv. [April 2 nymphs, 5,200 ft.; April 1♂ (immature), 1 nymph, 5,600 ft.; May 1♂ macrolabic phase, 5,200 ft.; June 3♂♂, 3♀♀, 9 nymphs, 5,600 ft.; June 1♂, 1♀, 2 nymphs, 6,000 ft.; July 2♂♂, 1♀, 6 nymphs, 5,600 ft.; July 1♀, 1 nymph, 6,000 ft.]

These specimens exhibit various degrees of shrinkage and distension so that accurate measurements are not desirable. The macrolabic male is, however, in good condition and measures 11 mm. body, and 6.5 mm. forceps. The other males approximate 11 mm. body, and 4 mm. forceps. The corresponding figures for the females are 10-11:2.

The present series agrees well with the material recorded by me (Hincks, 1938) from the Mufumbiro Volcanoes in Belgian Congo.

The variety *fusca* of Borelli cited above is not worth distinguishing.

*F. sjöstedti* is a wingless species characteristic of certain volcanic areas where it is often the only earwig found at altitudes of about 2,500 m. (approx. 8,000 ft.) and over. It is a dominant insect at these stations and Sjöstedt collected over 500 specimens on Kilimanjaro from which series Burr first diagnosed the species.

Nearly all the records hitherto published are included in the following summary:—

**BELGIAN CONGO AND RUANDA:**

Mufumbiro Volcanoes, Burr 1912; Rehn 1925, 2,900 m. to 3,300 m. (approx. 9,500 ft. to 11,000 ft.); Menozzi 1930; Hincks 1938, 1,900 m. to 3,475 m. (approx. 6,300 ft. to 11,500 ft. Volcanoes Sabinyo, Karisimbi, Mikeno, Nyiragonga, Gahinga, and Kinago).

**TANGANYIKA:**

Kilimanjaro, Burr 1907A, 2,000 m. to 4,000 m. (approx. 6,500 ft. to 13,000 ft.); Burr 1912; Borelli 1915; Borelli 1912, 1915 (var. *fusca*) 1,000 m. to 1,700 m. (approx. 3,300 ft. to 5,600 ft.).

Meru, Burr 1907A, 4,000 m. to 4,300 m. (approx. 13,200 ft. to 14,200 ft.)

**KENYA:**

- Mt. Kenya, Borelli 1915, 1,800 m. (approx. 6,000 ft.) .  
Aberdare Mts., Borelli 1915, 3,000 m. to 3,100 m. (approx.  
9,900 ft. to 10,200 ft.).  
Mt. Elgon.  
Kikuyu Escarpment.  
Elgeyu Escarpment.  
Mt. Marakwet, Menozzi 1938, 2,300 m. to 3,500 m. (approx.  
7,600 ft. to 11,600 ft.).  
Mau Escarpment, Borelli 1915 (var. *fusca*), 2,420 m. (approx.  
8,000 ft.).

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