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The Dermaptera of the Canary Islands



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By A. BRINDLE

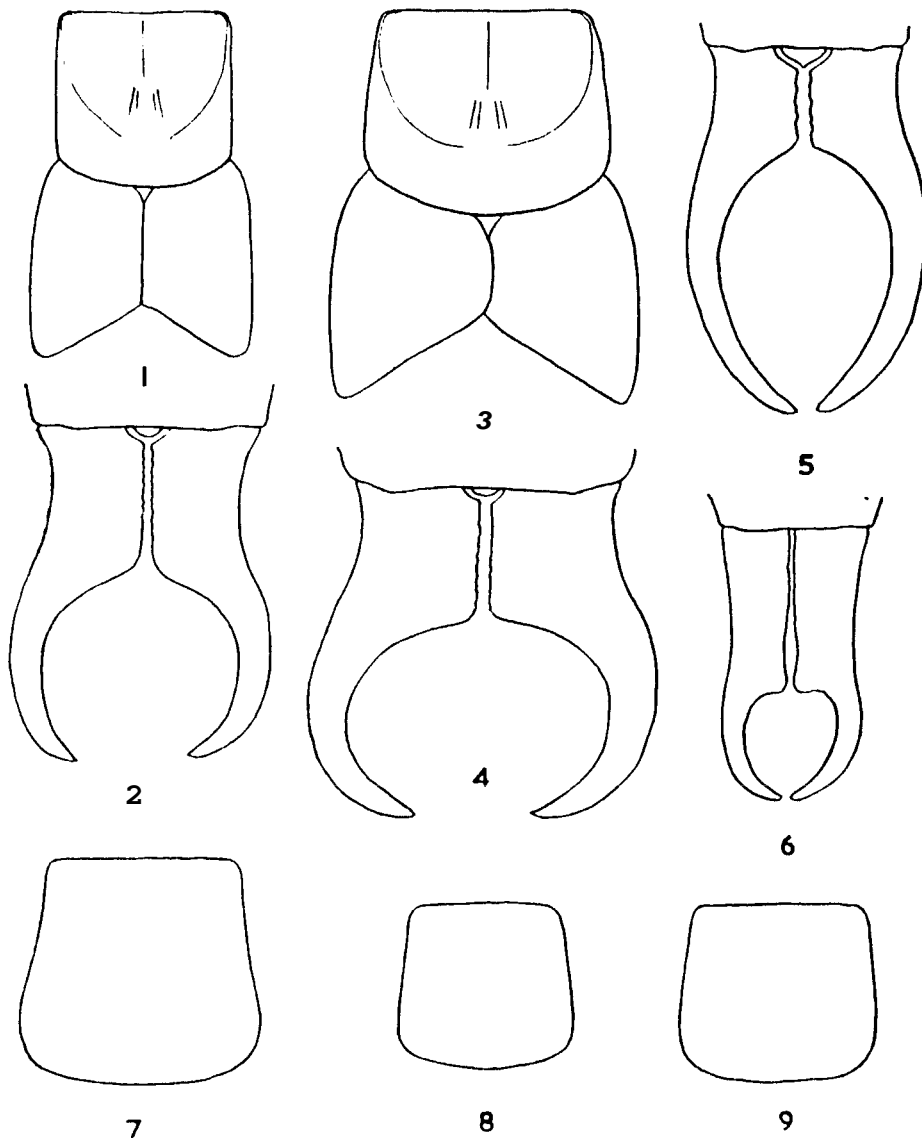
ABSTRACT

The Dermaptera of the islands in the Atlantic Ocean have not been adequately studied, and material from these islands tends to be scarce. On this account it was with pleasure that I have been able to examine a series of Dermaptera collected in the Canary Islands by Dr. O. Lundblad in the years 1957 and 1960. The collection consists of 116 specimens, and includes eight species, one of which is new and is described and figured in the present paper. Only four other species of Dermaptera have been recorded from the Canary Islands, and there is no key available for their separation, so the opportunity has been taken to extend the report on the collection into a survey of the known Dermaptera of these islands. A key to the species is given, and some discussion on the distribution of the species.

The Dermaptera fauna of the Canary Islands is not rich, but it includes some interesting endemic species. The species recorded from these islands are either entirely endemic, or are widely distributed or cosmopolitan species which may have been accidentally introduced. The endemic species show some relationship to North or Central African species. The species of the genus *Guanchia* are all endemic, and the genus is mainly centred on the Canary Islands, but other species of the genus also occur in North Africa and elsewhere. Whilst *Gelotolabis marima* (Brullé) is endemic, other species of this genus occur on the mountains of Central Africa, the genus being possibly typically montane. The other endemic species, *Anataelia canariensis* Bolívar however, has a somewhat anomalous position, since it appears to be most closely related to a Chinese and Korean species, *Challia fletcheri* Burr; these two species form the subfamily Anataeliinae of the family Pygidicranidae (Hincks, 1959).

The tendency for island insects to develop apterous forms is well shown in the Dermaptera of the Canary Islands. With the possible exception of *Labidura riparia* (Pallas), only one species, *Forficula auricularia* (Linnaeus), has wings; all the other species lack wings, and four species lack elytra as well. No specimen of *Labidura riparia* from the Canary Islands has been examined, but this species often lacks wings especially in isolated populations. The lack of elytra and wings, however, does not prevent the species being widely distributed by artificial means, and both *Anisotabis maritima* (Géné) and *Euborellia annulipes* (Lucas) which have neither elytra nor wings, are cosmopolitan in distribution and occur in most of the Palearctic Region of the World.

Whilst some of the species in the present collection were readily determined, the species of *Guanchia* proved to be difficult. They were separable into three species on external characters, but the association of each of these species with the described



Guanchia canariensis—fig. 1, pronotum and elytra; fig. 2, male forceps. *G. transversa*—fig. 3, pronotum and elytra; fig. 4, male forceps. *G. guancharia*—fig. 5, male forceps; fig. 9, pronotum. *G. uxoris*—fig. 6, male forceps. *Gelotolabis maxima*—fig. 7, pronotum. *Euborellia annulipes*—fig. 8, pronotum.

species was unexpectedly complicated. This is partly due to some ambiguities in the original descriptions, and partly due to the lack of identified specimens. Out of the five recorded species of *Guanchia* from the Canary Islands, four were described from single specimens, and very few subsequent captures seem to have been recorded.

The species of *Guanchia* from the Canary Islands fall into two groups on the shape of the male forceps. In the *guancharia* group, the forceps have only a short basal dilation and a long narrow distal part (fig. 5), whilst in the *canariensis* group, the forceps are dilated for at least their basal half so that the distal slender part is much shorter (fig. 2, 4 and 6). The male forceps of the three species of the *guancharia* group (*guancharia* Heller; *cabrerae* Bolívar; and *storai* Chopard) are very similar to each other, and the external differences between these species are rather slight. They were originally described from different islands, which suggests that speciation in separate populations has just reached a point at which specific differences can be observed. However, it seems that the species are not restricted to any one island, if the species have been correctly recognized, for specimens of *cabrerae* in the British Museum (Natural History) and the Manchester Museum, are from Tenerife, whilst the original material was recorded from Gran Canaria. Similarly Chopard (1942) recorded *guancharia* from Gran Canaria, but the original specimen was described from Tenerife. One species in the present collection belongs to this group, and is referred to *guancharia*.

The two known species of the *canariensis* group are recorded from Tenerife. They are *canariensis* Burr and *uxoris* Heller. It is possible that *uxoris* is a very small, unusually developed macrolabe male of *canariensis* but the male forceps are striking (fig. 6) that it is better regarded as distinct. *G. canariensis* is known from the single type male which should be in the British Museum (Natural History) but this cannot be located at present, so that reliance must be placed on the original description. This is short, but it is stated that *canariensis* resembles *Forficula lesnei* Finot, but is rather larger and stouter, and the elytra are obliquely truncate instead of being horizontally truncate as in *lesnei*. *F. lesnei* tends to be a rather small insect but the body length varies from 6–10 mm, and the two species of this group in the present collection measure about 11 mm in body length, so that it seems certain that one of these species is referable to *canariensis*. Both are similar in external features but seem to be more closely similar to *Forficula lurida* Fisch., than *F. lesnei*. The species has the pronotum quadrate (fig. 1) and is from Tenerife, whilst the other has the pronotum transverse (fig. 3) and is from Hierro. Since *canariensis* was described from Tenerife, the former species is referred to *canariensis*; the second species from Hierro is described as new.

Check list of Dermoptera of the Canary Islands, with numbers of present specimens and species indicated

PYGIDICRANIDAE

Anataeliinae

1. *Anataelia canariensis* Bolívar¹

1

¹ Endemic species.

CARCINOPHORIDAE

Carcinophorinae

2. <i>Anisolabis maritima</i> (Géné)	—
3. <i>Gelotolabis maxima</i> (Brullé) ¹	63
4. <i>Euborellia annulipes</i> (Lucas)	13

LABIDURIDAE

Lebidurinae

5. <i>Labidura riparia</i> (Pallas)	—
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FORFICULTDAE

Forficulinae

6. <i>Forficula auricularia</i> (Linnaeus)	22
7. <i>Guanchia guancharia</i> (Heller) ¹	7
8. <i>G. cabreræ</i> (Bolivar) ¹	—
9. <i>G. storai</i> Chopard ¹	2
10. <i>G. uxoris</i> (Heller) ¹	—
11. <i>G. canariensis</i> (Burr) ¹	16
12. <i>G. transversa</i> sp.n.	2

Key to species

1. Elytra and wings absent 2
- Elytra always present; wings sometimes present 5
2. Reddish-brown, variegated with dark brown; dull; pronotum much longer than broad, only slightly wider posteriorly 3
Anataelia canariensis Bolivar
- Blackish or dark brown, unicolorous; shining; pronotum quadrate or slightly transverse 3
3. Lateral margins of pronotum not sinuate (fig. 8); legs yellow, femora with dark rings; antennae with basal segments and some distal segments much lighter in colour than rest; smaller, total length not exceeding 12 mm 4
Euborellia annulipes (Lucas)
- Lateral margins of pronotum sinuate (fig. 7); legs more or less unicolorous, or with only vague dark marks; antennae unicolorous; larger, total length at least 16 mm 4
4. Pronotum with a deep median longitudinal furrow; antennae dark brown; legs brown with vague dark marks; male forceps long, almost symmetrical; larger, usually above 22 mm in total length 4
Gelotolabis maxima (Brullé)
- Pronotum with a shallow median longitudinal furrow; antennae and legs yellow, unicolorous; male forceps short, strongly curved and asymmetrical; smaller, usually 20 mm or below in total length 4
Anisolabis maritima (Géné)
5. Second tarsal segment simple; large species, yellowish-brown variegated with dark brown; male forceps widely separated at base, branches not broadened basally 5
Labidura riparia (Pallas)
- Second tarsal segment bilobed; smaller species, reddish or darker brown; male forceps close together at base, the base broadened or dilated 6
6. Wings visible; elytra not obliquely truncate; pronotum strongly transverse 6
Forficula auricularia Linnaeus
- Wings absent; elytra obliquely truncate; pronotum not so strongly transverse (*Guanchia*) 7
7. Male forceps with branches broad only near base (fig. 5); tergites smoother, at least posterior margins of abdominal tergites smooth and shining (*guanchia* group) 8
- Male forceps with branches broadened for at least basal half (figs. 2, 4 and 6); tergites strongly coriaceous or punctured, posterior margins of abdominal tergites not smooth and shiny (*canariensis* group) 10

¹ Endemic species.

8. Pronotum transverse, posterior margin almost straight (fig. 9); basal dilation of forceps shorter (fig. 6) 11
G. guancharia (Heller)
- Pronotum as broad as long, or almost so, posterior margin convex; basal dilation of forceps longer 11
9. Pronotum strongly widened posteriorly; distal part of male forceps more strongly curved. 11
G. storai Chopard
- Pronotum not widened posteriorly; distal part of forceps less strongly curved 11
O. cabreræ (Bolivar)
10. Male forceps with basal dilation about two-thirds of length of forceps (fig. 6) 11
G. uxoris (Heller)
- Male forceps with basal dilation half of length of forceps (figs. 2 and 4) 11
11. Pronotum quadrate (fig. 1); elytra comparatively narrow (fig. 1); forceps *G. canariensis* Burr
Tenerife 11
- Pronotum transverse (fig. 3); elytra comparatively wider (fig. 3); male forceps *G. transversa* sp.n.
fig. 4; Hierro 11

PYGIDICRANIDAE

Anataeliinae

Anataelia canariensis (Bolivar)

Anataelia canariensis Bolivar, 1899, *Actas Soc. esp. Hist. nat.* 1899: 98.

Reddish-brown; disc of head, posterior margin of tergites, mid all posterior part of abdomen darker brown. Male forceps with branches broad at base, narrowed distally, either straight or strongly sinuate; female forceps straight, narrower, branches contiguous.

Length: body 12–13 mm, forceps 2.5–3 mm.

Material examined: *Tenerife*: Puerto de la Cruz, 4.iv.1957 (O. Lundblad). 1 ♀

This species was originally described from Tenerife, and seems to be restricted to this island.

CARCINOPHORIDAE

Carcinophorinae

Anisolabis maritima (Géné)

Forficula maritima Géné, 1832, *Ain. Sc. int. Regn. Lomb. Venet.* 2: 224.

Anisolabis maritima (Géné): Bolivar, 1893, *Actas Soc. esp. Hist. nat.* 22: 46; Chopard, 1942, *Soc. Scient. Fenn., Comm. Biol.* 8 (4): 10.

Shining black, except for yellow antennae and legs; abdomen broader medially rather depressed; male forceps widely separated at base, branches strongly curved and asymmetrical; forceps of female more or less straight, branches contiguous.

Length: body 16–18 mm, forceps 2–2.75 mm.

Distribution: Gran Canaria; Fuerteventura; Tenerife.

Possibly an adventive. No specimens are in the present collection. The species is cosmopolitan in distribution.

Gelotolabis maxima (Brullé)

Forficula (Forficesila) maxima Brullé, 1838, *Hist. nat. Canar.* 2: 74

Forficula (Forficesila) major Brullé, 1838, *ibid.* 74.

Anisolabis maxima (Brullé): Bolivar, 1893, *Actas Soc. esp. Hist. nat.* 22: 46.

A large species, uniformly **dnrk** reddish-brown or blackish; shining; legs brown or yellowish-brown, femora with vague darker **mrks**. Mnle forceps long, only slightly curved, inner innrgin of each branch dentated, branches not contiguous; forceps of female similar but contigioua and rntlier shorter.

Length: body 18–26 mm, foraepe 4–8 mm.

Material examined: *Tenerife*: Las Cañadas, 30.v.1957; Los Bailaderos, 14.vi.1957, 21.vii.1960; Puerto de la Cruz, 23.v.1960; Bermeja, 14.v.1957. *Hierro*: 13.vi.1960; El Pinar, 10.vi.1960. *Palma*: Puntallana, 13.v.1957. *Gomera*: S. Sebastian, 28.iv.1957. *Gran Canaria*: Tamadaba, 25.vi.1957. (All coll. O. Lundblad.)

This species seems to have been rarely rccorded since its first description, but Bolivar (1893) recorded the species from Tenerife nnd Gran Cnnrn. No island was recorded in the original description. The present specimens give the widest distribution known for the species, and consist of 53 speciniens, most of wliich are large nymphs, possibly in the penultimate instar. There are, however, two males nnd four females, fully developed. The species is endemic but widely distributed in the islands.

Euborellia annulipes (Lucas)

Forficesila annulipes Lucas, 1847, *Ann. Soc. ent. Fr.* 15: 84.

Forficula annulata Brullé, 1838 (nec Fabricius 1793), *Hist. nat. Canar.* 2: 74.

Anisolabis annulipes (Lucas): Bolivar, 1893, *Actas Soc. esp. Hist. nat.* 22: 52; — Chopard, 1942, *Soc. Scient. Fenn., Comm. Biol.* 8 (4): 9.

Small, shining black; antennae brown or dark brown, **bsnl** few segments yellow, and one or more distal segments white or yellow; legs yellow, frmorn with a broad dark ring. Male forceps curved, sometimes only slightly; those of female straight and contiguous.

Length: body 8–10 inn, forceps 1.5–2 mm.

Material examined: *Tenerife*: Puerto de la Cruz, 18.vi.1960 (O. Lundblad). 2 ♂, 4 ♀, 4 nymphs.

Also recorded froiii Gran Cnnrn. The present speciineis nre rnther smaller thnii usual but otherwise nre identical to nornial *annulipes*. Recorded by Bolivar (1893) as occurring in the Canary Islands but no island was given. The species is cosmopolitan in distribution.

LABIDURIDAE

Labidurinae

Labidura riparia (Pallas)

Forficula riparia Pallas, 1773, *Reise Russ. Reichs.* 2: 727.

Forficula (Forficesila) gigantea Fabricius: Brullé, 1838, *Hist. nat. Canar.* 2: 74.

Labidura riparia (Pallas): Bolivar, 1893, *Actas Soc. esp. Hist. nat.* 22: 46; — Chopard, 1942, *Soc. Scient. Fenn., Comm. Biol.* 8 (4).

A large species, yellowish-brown variegated with dark brown, or almost entirely dark brown; antennae and legs yellow to brown. Elytra always present; wings often

absent; branches of male forceps widely separated at base, branches stout and only slightly curved, inner margin crenulate basally, and with an iiiier tooth; those of femaie with branchea contiguous, strnight except at apices.

Length: body 12–26 mm, forceps 3.5–10 mm (those of male larger).

Diatribution: Recorded from Gran Canaria; Lanzarote; Gomera; and Fuerteventura. Not represented in the present collection. This is nnother cosmopolitan species.

FORFICULIDAE

Forficulinae

Forficula auricularia (Linnaeus)

Forficula auricularia Linnaeus, 1768, *Syst. nat.* 1: 423. — Brullé, 1838, *Hist. nat. Canar.* 2: 76; — Bolivar, 1893, *Actas Soc. esp. Hist. nat.* 22: 47; — Chopard, 1942, *Soc. Scient. Fenn., Cotnm. Biol.* 8 (4): 10.

Head reddish to black; pronotuni blackish a-ith lateral margins yellow; antennae and legs yellow; elytra and wings brown or slightly lighter; abdomen blackish; forceps yellow or brown; male forceps strongly curved distally, each branch broad at base, not meeting the other brnch, niid the broadened basal part narrowing distally; variable in length but not in general form; those of female simple, straight, and contiguous.

Length: body 9–12 mm, forceps 3–7 mm (ninle), 2–3 mm (female).

Material exemined: *Tenerife*: 7.iv.1957; Aguamansa, 23.iv.1960. *Hierro*: 10.vi.1960. *Lanzarote*: Valles, 3.vii.1960. *Gran Canaria*: Montañon negro, 25.vi.1957. (All coll. O. Lundblad.)

Previously recorded from Tenerife; Grnn Canaria; Lanzarote; and Hierro. *F. auricularia* is a widely distributed species, mainly Palaearctic, but it also occurs, probably as an adventive in North America, Africa, nnd Australia.

There is a total of 22 epecimeis (7 ♂, 7 ♀, 8 nymphs) in the present collection.

Guanchia guancharia (Heller)

Forficula guancharia Heller, 1907, *Dt. ent. Z.* 1907: 525.

Guanchia guancharia (Heller); Chopard, 1942, *Soc. Scient. Fenn., Comm. Biol.* 8 (4): 13.

Dark yellowish-brown, rnther shining; lateral margins of pronotum yellow; legs yellow; antennae dark brown, basal segments yellow; forceps yellow, inner margins of dilnted basal part of male forceps black; outer margin of female forceps dark brown. Head, pronotum, and elytrn smooth, finely coriaceous; abdomen coriaceous, with scattered punctures, **bsnl** part of posterior abdominal segments punctured, posterior margine smooth, shining.

Length: body 7–8 mm, forcepa 3.6 mm (male); 2–2.5 mm (female).

Material examined: *Tenerife*: Las Mercedes, 2.vi.1957; Los Balladeros, 14.vi.1957 (O. Lundbind). 2 ♂, 3 ♀.

This species was recorded from n single male froiii Tenerife, and this has a body

length of 9.5 mm and the forceps are 5 mm long. The record by Chopard (1942) of this species from Gran Canaria is one of the few subsequent records. The present specimens are referred to this species on account of their close agreement with the original description and figure.

Guanchia cabreræ (Bolivar)

Forficula nhrerne Bolivar, 1803, Actas Soc. esp. Hist. nat. 22: 47.

Similar to *guancharia*, but reddish-brown in colour and more robust in general appearance. The pronotum is almost quadrate, and the posterior margin convex; legs reddish in colour.

Length: body 8.5-9 mm, forceps 3.5 mm (male) 3.5-4 mm (female).

Distribution: Gran Canaria; Tenerife.

This species is not represented in the present collection; specimens from Tenerife have been examined in the British Museum (Natural History) and in the Manchester Museum.

Guanchia storði (Chopard)

Guanchia storði Chopard, 1942, Soc. Scient. Fenn., Comm. Biol. 8 (4): 1913.

Similar to *guancharia*; differs in having the pronotum as long as broad anteriorly, the posterior part being strongly widened, and the posterior margin very convex. The male forceps resemble those of *cabreræ*, but the distal part is more strongly curved.

Length: body 9 mm, forceps 4.5 mm.

Material examined: Gomera: El Cedro, 21.IV.1957 (O. Lundblad). 2 almost fully grown female nymphs.

This species was recorded from a single male from Gomera; the present specimens are referred to this species provisionally on account of the locality, and the shape of their pronota, although some shrinkage has occurred and this may have distorted the shape to some extent.

Guanchia uxoris (Heller)

Forficula uxoris Heller, 1907, Dt. ent. Z. 1907: 525.

Yellowish-brown; antennae and legs lighter in colour; head blackish. Pronotum almost quadrate (according to description, but figure shows the pronotum as transverse). Male forceps unusually elongated, the basal dilated part being very long (fig. 6).

Length: body 11.5 mm, forceps 5.2 mm.

Distribution: Tenerife.

This species is only known from their single male type. Not represented in the present collection.

Guanchia canariensis (Burr)

Forficula canariensis Burr, 1905, Ann. Mag. nat. Hist. 6 (7): 493.

Similar to *Forficula lurida*, rather than *F. lesnei*. Dark reddish-brown, robust,

legs yellow. Almost identical to *transversa* but the pronotum is quadrate, and abdominal tergites are less strongly punctured (figs. 1 and 2).

Length: body 11-11.5 mm, forceps 3-3.25 mm.

Material examined: Tenerife: Las Mercedes, 27.III.1957 (2 ♀, 1 nymph), 28.V.I (1 ♀, 1 nymph), 2.VI.1957 (2 ♀, 1 nymph), 30.IV.1960 (1 nymph), 1.VII.1960 (2 ♂, 1 ♀), Los Bailaderos (1 ♂); Pico del Inglés, 28.IV.1960 (1 ♂, 3 ♀). (All coll. O. Lundblad)

The present specimens seem to be the first recorded since their original description; the species seems to be restricted to Tenerife. The size of the present specimens varies only slightly, whilst the male forceps show little variation; those of the female are of the usual type, slender, contiguous, and straight.

Guanchia transversa sp.n.

Similar in size and general features to *canariensis*, but the pronotum is transverse, and the abdominal tergites more strongly punctured. Dark reddish-brown; legs yellow; lateral margins of pronotum yellow; antennae dark brown. Abdominal segments lighter in colour.

Male: head transverse, tumid, with two small depressions between the bases of the antennae; lateral margins of head smoothly rounded into posterior margin, latter straight; eyes small, less than length of head behind eyes; antennae 12-segmented (left), 13-segmented (right) type; first segment rather shorter than distal between antennal bases; second segment quadrate; third longer, about 2½ times long as broad; fourth shorter than third; fifth rather longer than third; remainder elongated, cylindrical.

Pronotum transverse, lateral margins parallel, posterior margin slightly concave (fig. 3); elytra short, rather longer than pronotum, the elytra overlapping but not meeting at a small triangular scutellum visible (fig. 3); posterior margin of elytra truncate. Head, pronotum and elytra coriaceous, but with scattered shallow punctures. Legs yellowish-brown; first segment broad, equal in length to narrower second segment in four anterior legs; first segment equal in length to both second and third segments in posterior pair.

Abdomen rather strongly punctured, more slightly so on basal segments and posterior margin of all tergites; tubercles on third segment small, those on fourth segment large. Abdomen widened medially, last tergite transverse, posterior margin straight but with two small low tubercles above the base of each branch of the fork. Pygidium small, rounded; forceps with inner margin broadened, the margin of the distal half of each branch cylindrical, strongly curved (fig. 4).

Length: body 11 mm, forceps 3 mm.

Female: similar to male, last tergite narrower, and narrowing posteriorly; forceps with each branch straight, broader at base, evenly tapered distally, inner margin crenulate; pygidium small, quadrangular, distally rounded dorsally, caudally

of forceps recessed at base so that this exposes the pygidium.

Length: body 11 mm, forceps 3 mm.

Material examined: Hierro: 13.VI.1960 (O. Lundblad) (♂ holotype, ♀ allotype)

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The types are in the Naturhistoriska Riksmuseum, Stockholm

Manchester Museum, The University, Manchester 13, United Kingdom

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