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Revalidación del género brasileño *antenoria* miranda-ribeiro, 1937 (dermaptera: diplatyidae: cylindrogastrinae)

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INFORMACIÓN SOBRE EL ARTÍCULO

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ABSTRACT: Based on the revision of the holotype of the species *Antenoria bicyclura* Miranda-Ribeiro, 1937, the genus *Antenoria* Miranda-Ribeiro, 1937, is revalidated, contrary to the proposal of Hincks.

KEYWORDS: Brazil; *Cylindrogaster*, Synonymy, Type material.

RESUMEN: Basado en la revisión del holotipo de la especie *Antenoria bicyclura* Miranda-Ribeiro, 1937, el género *Antenoria* Miranda-Ribeiro, 1937, es revalidado, contrario a la propuesta de Hincks.

PALABRAS CLAVE: Brasil, *Cylindrogaster*, Sinonimia, Material tipo.

INTRODUCTION

Antenoria bicyclura Miranda-Ribeiro, 1937, were described based on a series of three males, four females, and several juvenile specimens collected by Antenor Leitão Carvalho in the town of Villa de Poção, Serra do Acahy(sic), State of Pernambuco, Brazil (Miranda-Ribeiro, 1937: 36). In 1955, Hincks proposed synonymizing the genus under *Cylindrogaster* Stål, 1855, arguing: "I can discover no significant generic differences between *Antenoria bicyclura* Ribeiro(sic) from Brazil and the others species of *Cylindrogaster*, and the male genital armature is very similar to that of *C. thoracicus*" (Hincks, 1955; 19). Hincks also compare the development of the tegmina and last abdominal segment and forceps with *Diplatys gladiator* Burr. In this same work he presents the genital armature of the putative holotype *A. bicyclura* (Hincks, 1955; 22, Fig. 6), and this information and illustration is replicated in Steinmann (1986: 294; Fig. 449), additionally, Steinmann (1986: 295, Fig. 448), illustrates the forceps of what are supposedly *A. bicyclura*, but which is the same illustration of *C. sahlbergi* Dohrn, 1863 (Steinmann, 1986: 297, Fig. 450); Steinmann (1986; 295, key to species), highlights differences

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between *A. bicyclura* vs. the other representatives of the genus *Cylindrogaster*, but respects the synonymy proposed by Hincks (1955).

METODOLOGY

The holotype of *Antenoria bicyclura*, deposited in Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil (MNRJ), was reviewed, and the original description and works by Bormans and Krauss (1900); Hincks (1955) and Steinmann (1986, 1989) were consulted.

RESULTS

When reviewing the holotype and the original description of *A. bicyclura*, significant differences were found with respect to *Cylindrogaster* Stål:

1) Very small eyes (Fig. 1d) (large and globose in *Cylindrogaster,* Figure 1l).

2) Pronotum almost as wide as the head, as wide as it is long, with arched edges (Fig. 1e) (less wide than the head and longer than wide in *Cylindrogaster,* Figure 1l).

3) Tegmina lobiform and flattened (Fig. 1f) (well developed in *Cylindrogaster,* Figure 1l).

4) Hind wings absent (Figs. 1a, h) (well developed and squama present in *Cylindrogaster,* Figure 1l).

5) Penultimate abdominal segment broad and transverse, with a keel (Fig. 1h) (without a keel in *Cylindrogaster,* Figure 1l).

6) Last abdominal segment spherical, extremely dilated (Fig. 1h) (not extremely dilated in *Cylindrogaster,* Figure 1l).

7) Femora broadened laterally (Fig. 1a) (more cylindrical in *Cylindrogaster,* Figure 1l).

8) Forceps arcuate, with the inner margin presenting a toothed basal plate, with sexual dimorphism (Fig. 1k) (forceps simpler and very similar in both sexes in *Cylindrogaster,* Figure 1l).

Based on these differences the genus *Antenoria* Miranda-Ribeiro, 1937, is revalidated as well as original binomial combination of *Antenoria bicyclura* Miranda-Ribeiro, 1937.

SYSTEMATICS

Order **Dermaptera** de Geer, 1773

Suborder **Neodermaptera** Engel, 2003

Infraorder **Protodermaptera** Verhoeff, 1902

Superfamily **Pygidicranoidea** Verhoeff, 1902

Family **Diplatyidae** Verhoeff, 1902

Subfamily **Cylindrogastrinae** Maccagno, 1929

Genus ***Antenoria*** Miranda-Ribeiro, 1937 **rev**. **gen**.

Antenoria de Miranda Ribeiro, 1937: 36 [gen. n.].

Antenoria Miranda-Ribeiro [*sin*. *jun*. de *Cylindrogaster* Stål, 1855, in: Hincks, 1955; 28; Steinmann, 1986: 294; Steinmann, 1989: 167].

Type species: *Antenoria bicyclura* de Miranda Ribeiro, 1937; by monotype.

Original description (Português, As it appears in Miranda-Ribeiro, 1937): Cabeça mediana, achatada, pentagonal; antennas com quinze segmentos: o 1.° cylindro-conico; o 2.° cylindrico, minimo; 3.° e 4.° maiores que o 2.°; 2.°, 3.° e 4.° junctos do comprimento do 1.°, os demais cylindro-conicos; pronotum mais estreito que a cabeça, de comprimento igual a ella e com os ângulos arredondados; elytros rudimentares; memetanoto larval; femures compressos e carenados; pulvillus presente entre as garras; abdômen cylindrico; penúltimo segmento alargando-se para encaixe do ultimo que, e grande, dilatado e achatado; calliperos, fortes achatados e contiguos na base e arqueados circularmente. Na. femea, o abdômen é cylindrico uniforme até ao ultimo segmento e longo, truncado nos ângulos inferiores é os calliperos contiguos triquetos

achatados na base tornandose cylindricos, recurvos para dentro e para cima e armados no bordo interno com dentes minimos até os 2.° terço.

Translation (English): Head medium, flattened, pentagonal. Antennas with fifteen segments 1st cylinder-conical; or 2nd cylindrical, minimum; 3rd and 4th greater than or 2nd; 2nd, 3rd and 4th joints of the 1st compartment, the other cylinder-conical ones. Pronotum more narrow than the head, with a compression equal to it and like the rounded angles. Tegmina rudimentary; Metanotum like-larval type. Femora compressed and carinated. Pulvillus present between the claws. Abdomen cylindrical; penultimate segment lengthening to fit in with do last segment, last segment large, dilated and flattened; Forceps, flattened forts contiguous at the base and circularly arched. Female, the abdomen is uniformly cylindrical attached to the last segment and long, truncated at the lower angles and the adjacent, Forceps flattened at the base becoming cylindrical, recurved inside and out and armed on the internal edge with minimum teeth attached to the 2nd tergite (Miranda Ribeiro, 1937).

Antenoria bicyclura Miranda-Ribeiro, 1937 **rest**. **comb**. (Figs. 1a-k)

Antenoria bicyclura Miranda-Ribeiro, 1937: 36; 3 Figs. Pag. 36 (Male) (D♂♀) [sp. nov.] [Villa de Poção(sic); Serra do Acahy(sic); Estado do Pernambuco, a mil metros de altitude].

Cylindrogaster bicyclurus (Miranda-Ribeiro) in: Hincks, 1955; 22; Fig. 6 (♂) [genitalia putatively from the holotype] [comb. n.]. Reichardt, 1968: 192. Steinmann, 1975: 203: Fig. 20 (♂). Steinmann, 1986: 295 (Key to males); Figs. 448, 449 (♂) [cerci of the male are NOT from the Holotype]. Steinmann, 1989b: 167. Kamimura and Ferreira, 2017: 31 (key to species).

Type material: Holotype ♂, Paratypes: 2♂♂ and 4♀♀. BRAZIL, Pernambuco, Poção; Carvalho coll. [MNRJ].

Loss of the type series: The type series deposited at the MNRJ (Museu Nacional, Universidade Federal do Rio de Janeiro) was lost in the tragic fire that occurred on September 2, 2018. Photos of the MNRJ Holotype, provided by Sistema de Informação sobre a Biodiversidade Brasileira (SIBBR), through Dr. Gabriela Abrantes Jardim and Dr. Pedro Souza Dias (MNRJ) (Figs. 1a-g). The Holotype (male) lost the last four abdominal segments and forceps, and attached to a cardboard plate (Figs. 1a, b).

Distribution. BRAZIL: Pernambuco State, Mpty. Poção (serra do Acaí), approximately 2.5km S of Poção (≈8°12'59.5"S 36°42'01.4"W). Type locality amended.

DISCUSSIONS

In Bormans & Krauss (1900), both sexes of *C. gacilis* Stäl 1855, are adequately illustrated and differ from *A. bicyclura.*

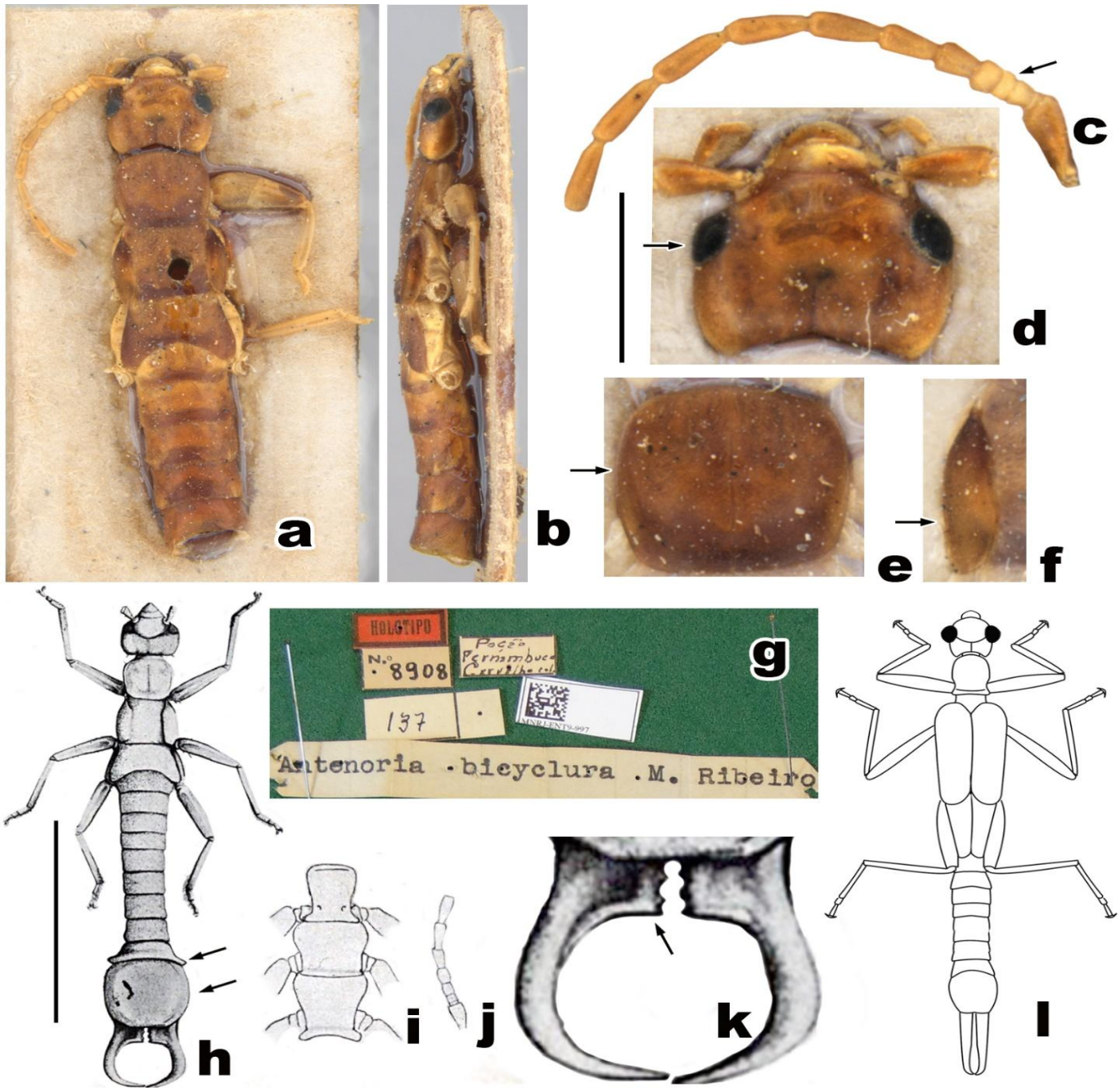
The putative illustration of the genital armature of *A. bicyclura*, *sensu* Hincks (1955; 22; Fig. 6), was prepared by M. E. Malins, made by J. C. M. (National Museum, Rio de Janeiro) and sent to Hincks; the cerci and the preparation of the genital armature were not sent with the holotype to Hincks (Hincks 1955). It is evident that the illustration of the forceps of *A. bicyclura sensu* Steinmann (1986; Figs. 448), does not correspond to this species (see Figs. 1h, k vs Figure 448, in Steinmann 1986;), and there is a duplication of figure C. *sahlbergi* Dohrn, and an editing error.

The type locality is a small town approximately 2.5 km south of Poção, Pernambuco, Brazil. Serra do Acahy(sic) (Miranda-Ribeiro, 1937) is misspelled, the correct spelling being serra do Acaí. Both the original illustration and the digital images of the holotype are useful for determining the material in the future, but the collecting of topotypes and the designation of a neotype are necessary.

Paulo de Miranda Ribeiro should be written: Miranda-Ribeiro, P. de (*sensu* Pombal 2002).

Figure 1a-l.

Cylindrogastrinae. ***(a-k) Antenoria bicyclura*** *Miranda-Ribeiro, 1937* ***rest***. ***comb***. ***(a-g)*** *Holotype male (MNRJ).* ***(a)*** *Dorsal habitus.* ***(b)*** *Lateral habitus.* ***(c)*** *Antenna.* ***(d)*** *Rostrum.* ***(e)*** *Pronotum.* ***(f)*** *Tegmina.* ***(g)*** *Labels.* ***(h-k)*** *After Miranda-Ribeiro, 1937.* ***(h)*** *Dorsal habitus.* ***(i)*** *Ventral view of thoracic segments.* ***(j)*** *Antenna.* ***(k)*** *Forceps.* ***(l)*** *Cylindrogaster sp, dorsal habitus. Scale bar: a, b, h=10mm; c-f, k=2mm; g, i, j, l without scale.*



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