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A new species of *Troglobius* (Collembola, Paronellidae) from Brazil

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SUMMARY

Troglobius brasiliensis n. sp. from two caves of Brazil is described and illustrated.

The genus *Troglobius* was described originally from caves of Madagascar. The only species known is the type species *T. coprophagus* Palacios-Vargas & Wilson, 1990. Now we have found a new species of this genus in Brazil.

Cave Collembola from Brazil are very poorly known. Palacios-Vargas (1989) reported four new records from Brazil. Species reported from Brazilian caves are: *Acherontides leo* Palacios-Vargas & Gnaspini-Neto, 1992 (Hypogastruridae); *Troglolaphysa aelleni* and *T. hauseri* both of Yoshii (1988) (Paronellidae); *Cyphoderus* sp. (Cyphoderidae) and recently *Mesaphorura iowensis* and *M. yosii* (recorded by Palacios and Diaz in press).

Information about the families of collembola associated to bat guano deposits was given by Gnaspini-Netto (1989 a, b). A good compilation on the cave fauna from Brazil was done by Trajano and Sánchez (1994) who cited about 160 different taxa including seven families of Collembola.

Troglobius brasiliensis n. sp. (Figs. 1-9)

Description

Habitus typical of Paronellidae (Entomobryoidea). Length 1.5 mm. Eyeless without pigment. Body with smooth and ciliated setae,

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scales and the typical trichobothria. Antennae apparently without any typical sensillae.

Ratio of antenna to head = 1.8:1.0 and antenna to body length = 1:1.7. Antennal segment I without scales. Ratio of antennal segments I-IV as = 1:2.5; 2.5; 3.0. Ant. II without differentiated sensillae, but with scales. Apparently without sensorial organ of Ant. III and with few scales. Ant. IV unsegmented, with rows of setae and without apical bulb and blunt sensillae.

Head, with two pairs of trichobothria. Labrum with 4 rows of smooth setae; all the setae are smooth. Labral formula is: 4:5/5/4. Two small spines dorsally close to prelabral setae (Fig. 1). Labial triangle with five smooth setae on row A. In posterior row, there is no setae «r». Posterior smooth setae can be named: M1, M2, E, L1 and L2 (Fig. 2).

Distribution of body trichobothria is two on the second segment and three on the third and fourth abdominal segments. Head, thorax, abdomen, and furcula with scales. Legs with ciliated setae. Coxa of leg with one large seta. Trochanteral organ with about 30 setae (Fig. 3). Tenent hairs are shorter than ventral unguis and acuminate; ratio ungues: tenent hair = 1:0.68 (Fig. 4). Unguis with two inner big basal teeth of different size; two median inner teeth and no outer tooth. Unguiculus with outer lamella well developed and the inner small (Figs. 4-6).

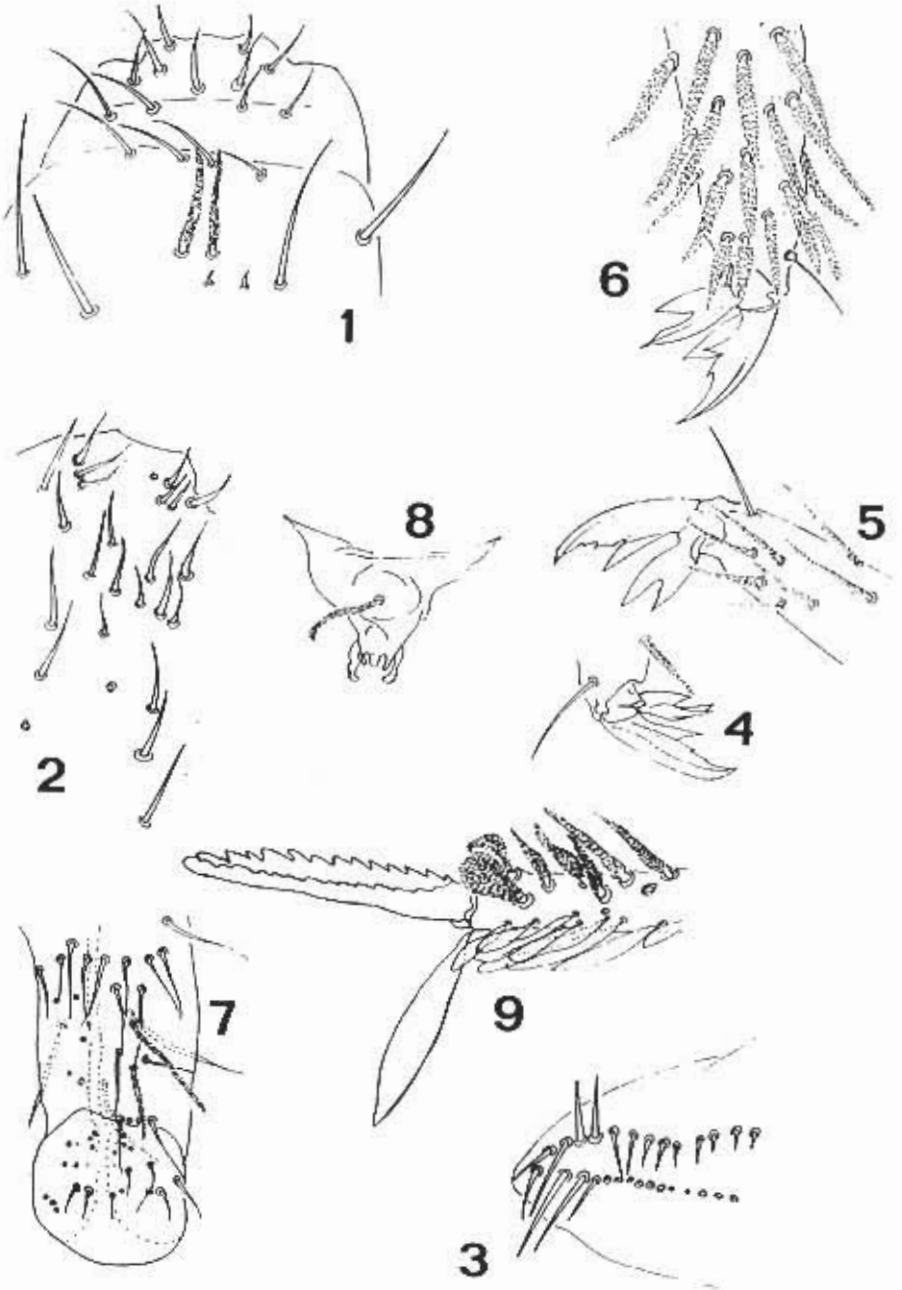
Posterior surface of ventral tube with two pairs of long setae and 11 distal pairs of small setae; anterior surface with several moderate setae (Fig. 7). Tenaculum with 4+4 teeth and only one ciliated setae on the corpus (Fig. 8). Furcula composed of manubrium, dens and mucro in the ratio 4.2; 3.5; 1.0. Dens without spines, but with ciliated setae and scales. Mucro is elogate and bears serrations in both edges with about 26 serrations of differente size (Fig. 9).

Variation

Ungues of specimens from Iporanga lack internal teeth. There is also a small variation in setae number of the trochanteral organ.

Discussion

In *Troglobius brasiliensis* n. sp. the antennae are longer than



Figs. 1-9 - *Troglobius brasiliensis* n. sp. 1, labrum; 2, labial triangle; 3, throcanteral organ; 4, tip of leg I; 5, tip of leg II; 6, tip of leg III; 7, chaetotaxy of ventral tube; 8, tenaculum; 9, tip of dente and mucro.

in the type species, but antennal segments ratio are more similar in this species than in *Troglobius coprophagus*.

The new species has the unguis with two inner big basal teeth of different size: two median inner teeth, in the type species the basal teeth are small and have no inner teeth.

Both species share the presence of two pairs of large setae in the posterior part of ventral tube, but *T. brasiliensis* n. sp. has eleven pairs of small setae at the tip and the other species has only two pairs.

An important difference in the mucro is the serration, in the new species is in both edges and in the type species is only in one side.

Labial chaetotaxy in the two species is the same. The third setae of posterior row could be setae «R» well developed or «E» as stated by Palacios-Vargas and Wilson (1990), only the discovery of new taxa will confirm the correct designation of these setae.

Type material

The holotype and one paratype will be deposited at senior author's institution. Two paratypes will be kept at the Zoological Museum of Sao Paulo, Brazil. 17-X-1988, E. Trajano col. Only one specimen from Riveira's valley was studied. 10-II-1989, E. Trajano col.

Type locality

The cave of Limoeiro, Medicilandia, Pará, Brazil. Other material was collected from the cave «Gruta dos Paiva» at the province of Iporanga, farm Intervales, Sao Paulo, Brazil.

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