

A NEW CAVERNICOLOUS *SATHROCHTHONIUS* FROM AUSTRALIA (PSEUDOSCORPIONIDA: CHTHONIIDAE)

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Abstract. A new species of pseudoscorpion, *Sathrochthonius webbi*, is described from Holy Jump Lava Cave in southeastern Queensland. *Sathrochthonius tullgreni* is discussed with regard to problems of its generic assignment.

Mr John A. Webb has kindly sent me a collection of pseudoscorpions taken from bat guano in Holy Jump Lava Cave in southeastern Queensland (Webb 1979). These prove to represent a new species of the genus *Sathrochthonius* Chamberlin.

Sathrochthonius webbi Muchmore, new species

Fig. 1–2

Diagnosis. Eyeless like *S. tuena* Chamberlin, but distinctly larger than that species and with more slender palpal chela (chela length usually 0.9 mm or more and l/w of chela 3.45 or greater).

Description. With general features of genus, as described and figured by Chamberlin (1962: 303), and with the following particular characters. Males and ♀ similar except for sexual differences. Carapace mostly smooth, finely reticulate laterally and posteriorly; anterior margin slightly concave at middle and with a low, rounded, serrate epistome (Fig. 1); eyeless; chaetotaxy usually 6-4-4-2-2 = 18. Coxal area generally typical of the genus, but varied; chaetotaxy of holotype 2-2-3:3-4:2-8-CS area:2-8:2-8; coxal spine (CS) area of coxa II medially roughened with many small spinules; intercoxal tubercle bisetose. Abdomen typical; tergites and sternites smooth; pleural membranes finely, longitudinally striate; tergal chaetotaxy of holotype ♂, 6:8:9:8:10:9:8:8:8:6:T2T:0; sternal chaetotaxy of same 16[3-3]:(3)16-14/11-11(3): (2)8(2):12:11:9:9:9:3T1T3:0:2. Chelicera about 0.7 as long as carapace; hand with 6 setae; flagellum of 9 or 10 pinnate setae; spinneret a low elevation of the finger margin, less well developed in ♂ than in ♀; serrula exterior of 17 or 18 blades. Palp robust (Fig. 2); femur 3.45–3.7×, tibia 1.9–2.05×, and chela 3.45–3.8× as long as broad; hand 1.7–1.8× as long as deep; movable finger 1.00–1.03× as long as hand. Palpal surfaces smooth except for small rough patches on outer sides of femur and tibia and on chela at bases of fingers. Trichobothria as indicated in Fig. 2. Each chelal finger with 45–52 contiguous marginal teeth; fixed finger with an accessory denticle on internal surface near 4th tooth. Leg IV with entire femur 2.4–2.8× and tibia 3.5–3.9× as long as deep; tactile seta on metatarsus proximal to middle.

Measurements (mm). Figures are given first for holotype ♂, followed in parentheses by ranges for the 9 mounted paratypes. Body length 1.65(1.3–1.8). Carapace length 0.58(0.55–0.615). Palpal femur 0.59(0.56–0.60) by 0.17(0.15–0.17); tibia 0.38(0.35–0.40) by 0.19(0.16–0.20); chela 0.955(0.88–0.97) by 0.26(0.245–0.28); hand 0.48(0.445–0.495) by 0.27(0.245–0.29); movable finger 0.495(0.445–0.50) long. Leg IV: entire femur 0.51(0.47–0.57) by 0.21(0.185–0.215); tibia 0.42(0.39–0.435) by 0.12(0.11–0.125).

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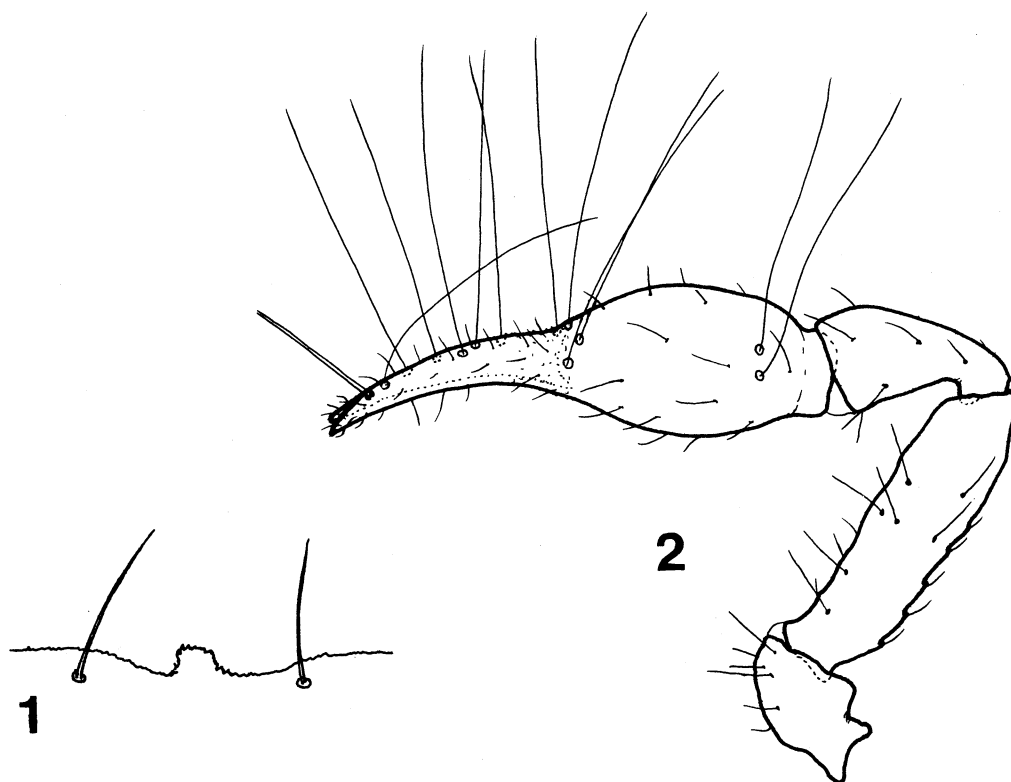


FIG. 1-2. *Sathrochthonius webbi*: 1, anterior margin of carapace with epistome; 2, right palp, dorsal view.

Type data. Holotype ♂ (BPBM 12,592), 12♂, 7♀ paratypes. AUSTRALIA: SE Queensland: Holy Jump Lava Cave, 25 km E of Warwick, on bat guano, 14.III.1979 and 2.III.1980, J.A. Webb. Holotype and 3 paratypes in the Bishop Museum, Honolulu; other paratypes in the South Australian Museum, Adelaide and the Florida State Collection of Arthropods, Gainesville.

Etymology. The species is named in honor of John A. Webb, who collected the specimens and brought them to my attention.

Remarks. If *Sathrochthonius tullgreni* Chamberlin is not included in the genus (see below), *S. webbi* is only the 3rd species, and the 2nd cavernicolous one, to be discovered in Australia. *S. tuena* Chamberlin (1962) is known from several caves in the Blue Mountain region of New South Wales, and like *S. webbi*, is eyeless. *S. crassidens* Beier (1966a), the only epigeic Australian form, with 2 well-developed eyes, is from the same general area in New South Wales. The type-locality of *S. webbi* is about 650 km to the north of these localities, which surely precludes any close relationship between the 2 cave-adapted forms.

In addition to the above mentioned species, the genus is represented by eyed epigeic forms in New Caledonia (Beier 1966b) and Chile (Vitali-di Castri 1974).

Sathrochthonius(?) tullgreni Chamberlin

Chthonius caecus Tullgren, 1909: 414, Fig. 3.

Mundochthonius caecus: Beier, 1932: 38.

Sathrochthonius tullgreni Chamberlin, 1962: 306.—Beier, 1966a: 276.—Vitali-di Castri, 1974: 193.

With no compelling evidence, Chamberlin (1962: 306–07) assigned this species to *Sathrochthonius*, remarking, "While it is quite possible that *S. tullgreni* is not truly congeneric with *S. tuena*, nothing in the original description prohibits the association." Because of the paucity of diagnostic information in Tullgren's original description and the fact that the type is presumably lost (Beier 1932: 38), there is no way to determine the identity of this species until topotypic material (from Brunswick, southwest Australia) is studied. There are in Australia at least 6 other chthonioid genera, and it might belong to any one of them.

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