

## A NEW GENUS AND SPECIES OF CHTHONIID PSEUDOSCORPION FROM MEXICO (PSEUDOSCORPIONIDA, CHTHONIIDAE)<sup>1</sup>

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### ABSTRACT

*Mexichthonius unicus*, new genus and new species, is described on basis of a specimen from Campeche, Mexico. Affinities of the new genus are discussed briefly.

### INTRODUCTION

Among the numerous pseudoscorpions collected recently in southern Mexico by James R. Reddell was a single individual from Ich-Ek, Campeche, which represents an unusual new species in the Chthoniidae. Though only the one specimen is available, it is of sufficient interest to warrant describing it and erecting a new genus to distinguish it clearly from all others in the family.

#### *Mexichthonius*, new genus

**Type-species**—*Mexichthonius unicus*, new species.

**Diagnosis** (based upon female only)—With the general characters of the family Chthoniidae (see Hoff, 1949, p. 429). Carapace longer than broad, distinctly narrowed posteriorly; anterior margin with large, serrate epistome; no eyes; chaetotaxy 6-4-4-2-2=18. Palpal coxa with apex broad and truncate, bearing two setae, the lateral one short and curved medially; apex of coxa I rounded, with three small setae along medial edge; coxa II with unique row of spines, including a large, complex one laterally and a row of about seven small, simpler ones more medially; coxa IV with a prominent, rounded, asetous process at the posterior end; no intercoxal tubercle. Tergites and sternites entire; 11th sternite reduced to a very narrow, thin membrane; pleural membranes longitudinally striate and minutely papillate. Tergites 1 and 2 each with four setae, following ones with six; anterior genital operculum (female) with eight setae; latermost setae on sternites 5-7 much reduced in size. Chelicera about 0.7 as long as carapace; hand with four or five setae (exact number uncertain); flagellum of nine or ten pinnate setae; galea distinctly elevated. Palp generally of chthoniid facies, but femur somewhat pedicellate and tibia elongate; placement of trichobothria unique in that *isb* and *ib* on dorsum of hand are arranged in tandem and some distance apart, rather than transversely paired;

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also *it* is slightly proximad of *est* on fixed finger, and *sb* is nearer to *st* than to *b* on movable finger; marginal teeth of both chelal fingers mostly very low and irregular in shape; fixed finger with a small, internal accessory tooth at about level of third marginal tooth; movable finger with a small, rounded sensillum on external surface proximad of trichobothrium *sb*. Legs stout, but not unusual.

**Etymology**—The genus is named for Mexico, where its only representative was found.

**Remarks**—This genus is easily distinguished from all others in the family by the tandem, rather than transverse, placement of trichobothria *isb* and *ib* on the dorsum of the chelal hand. Superficially, the chela somewhat resembles that of *Lechytia* Balzan, but in the latter genus the tandem trichobothria are *esb* and *eb* (see Muchmore, 1975). *Mexichthonius* appears to be most closely allied to *Austrochthonius* Chamberlin, which has been found in South America as far north as Bolivia (see Vitali-di Castri, 1968), and to *Mundochthonius* Chamberlin, which is known from North America as far south as Tamaulipas, Mexico (see Muchmore, 1973). With *Austrochthonius* the new genus shares several important characters, including: 1) coxal spines only on coxa II; 2) no intercoxal tubercle; 3) three small setae on medial edge of apex of coxa I; 4) chelal teeth contiguous and partly reduced in size; 5) placement of trichobothria of chela, except *isb* and *ib*. It is also generally similar to *Mundochthonius* in most of these features, but, importantly, *Mundochthonius* possesses an intercoxal tubercle while *Mexichthonius* does not. The coxal spines of *Mexichthonius* are quite different from those in the other two genera, consisting, on each side, of a large, complexly branched one laterally and more medially a curved row of several, smaller, finely dentate ones; in *Austrochthonius* there is a row of several subequal, pinnate spines on each side, while in *Mundochthonius* there is on each side a single, deeply incised blade or one such blade plus one or more small spinules.

*Mexichthonius unicus*, new species

Figs. 1-7

**Material**—Holotype female (WM 3389.01001), taken from under a rock, 5 km. SSW Ich-Ek, Campeche, Mexico, 27 July 1973 (J. R. Reddell and J. M. Rowland).

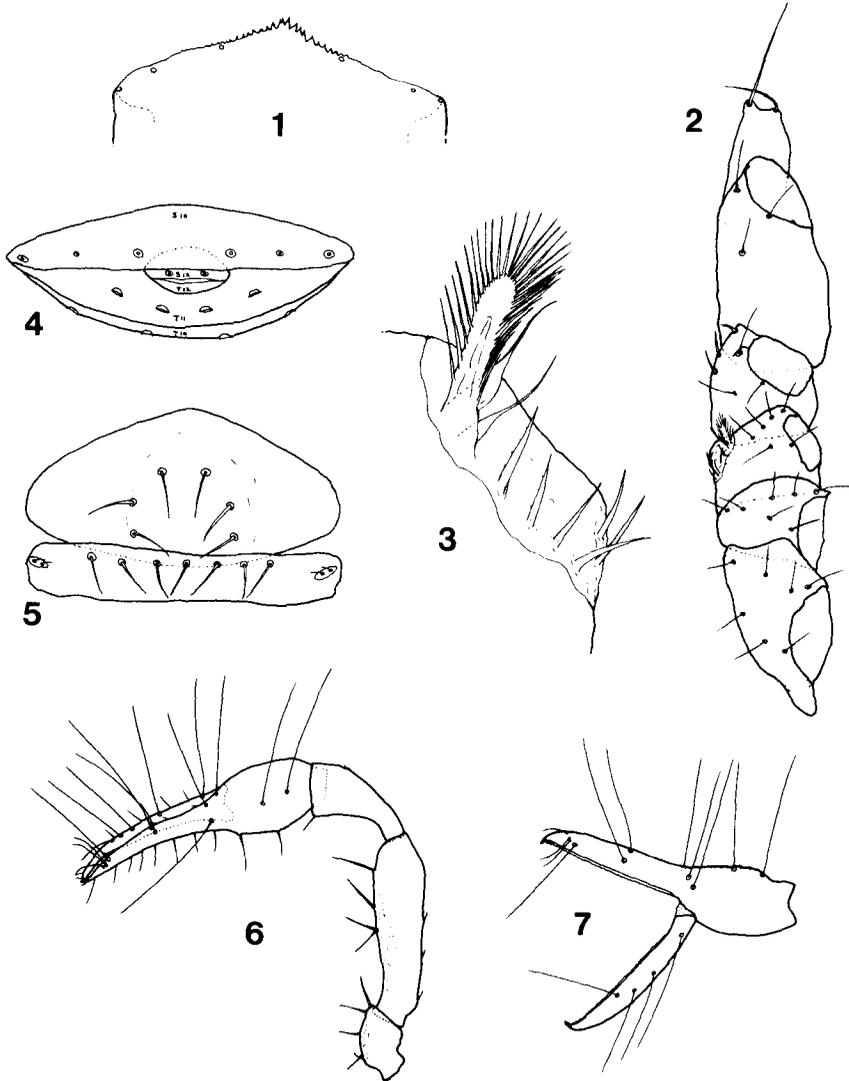
**Description of female**—All sclerotized parts very light tan. Carapace 1.2 times as long as broad, distinctly narrowed posteriorly; anterior margin with a large serrate epistome (Fig. 1); no eyes present; surface dorsally smooth, laterally finely reticulate and with scattered tiny, pointed tubercles; chaetotaxy 6-4-4-2-2=18. Coxae generally normal in proportions, but apex of palpal coxa broad and truncate, coxa I with rounded apex, and coxa IV with a prominent rounded process at posterior end and dorsal to articular socket (Fig. 2); no intercoxal tubercle. Coxal chaetotaxy 2-2-1:mmm-2-2(1);2-4-CS:2-5-2-5; lateral seta on apex of palpal coxa short and strongly curved medially; microsetae (m) on apex of coxa I evenly spaced along medial edge; coxa II with a unique row of one large, lateral and about seven small, medial spines, the large one complexly incised and branched, the small ones with very fine, lateral spinules (Fig. 3).

Abdominal tergites and sternites entire; eleventh sternite reduced to a very narrow, thin membrane, without setae (Fig. 4); surfaces of tergites and sternites smooth; pleural membranes longitudinally striate and minutely papillate. Tergal chaetotaxy 4:4:6:6:6:6:6:6:7:4:T2T:0, sternal chaetotaxy 8:(3)6(3):(2)6(2):8:8:8:7:6:TITIT:0:2; genital opercula as in Fig. 5; lateralmost setae on sternites 5-7 much reduced in size.

Chelicera fairly robust, 0.7 as long as carapace; hand with four or five setae (exact number uncertain, because setae lost and bases somewhat obscure); flagellum of nine or

ten pinnate setae; fixed finger with eight to nine and movable finger with nine to ten marginal teeth, evenly graded in size from tip to base; spinneret a distinct knob; serrula exterior with 15 blades.

Palp generally of chthoniid facies but with femur somewhat pedicellate and tibia slightly elongate (Fig. 6); trochanter 2.0, femur 3.65, tibia 2.0, and chela 4.05 times as long as broad; hand 1.55 times as long as deep; movable finger 1.55 times as long as hand. Surfaces of segments mostly smooth, but with sparse granulation on medial sides of trochanter, femur and tibia and on dorsal side of chelal hand. Trichobothria positioned as shown in Fig. 7; generally like other chthoniids but with *isb* and *tb* in tandem on dorsum



Figs. 1-7—*Mexichthonius unicus*, new species, holotype female: 1, Anterior margin of carapace, showing epistome (setae omitted); 2, Ventral view of coxae of left palp and legs I-IV; 3, Coxal spines on right coxa II; 4, Ventral view of posterior end of abdomen, especially sternite 10, anal opercula and tergites 10 and 11 (setae omitted); 5, Genital opercula; 6, Dorsal view of right palp; 7, Lateral view of left chela.

of hand rather than transversely paired; *it* lying at level of or slightly proximad of *est* on fixed finger; *sb* closer to *st* than to *b* on movable finger. Fixed finger with three small cusped denticles just behind terminal tooth, followed by 33 low, irregular elevations of the dental margin, and with a small accessory tooth on internal surface at level of third small denticle; movable finger similarly with three small denticles followed by about 27 low, irregular elevations. Movable finger with a small sensillum on external surface near dental margin, between *sb* and *b*.

Legs generally typical, fairly robust; leg IV with entire femur 2.1 and tibia 4.3 times as long as deep. Leg IV with tactile setae on metatarsus and telotarsus.

**Male**—Unknown.

**Measurements** (mm)—Body length 1.16. Carapace length 0.42. Chelicera 0.30 by 0.17. Palpal trochanter 0.16 by 0.08; femur 0.385 by 0.105; tibia 0.22 by 0.11; chela 0.525 by 0.13; hand 0.21 by 0.135; movable finger 0.325 long. Leg IV: entire femur 0.36 by 0.17; tibia 0.26 by 0.06; metatarsus 0.13 by 0.045; telotarsus 0.23 by 0.03.

**Etymology**—The species is named *unicus* because of its strikingly unique characteristics, which place it in an interesting new genus.

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