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AN UNUSUAL SPECIES OF *TYRANNOCHTHONIUS* FROM FLORIDA (PSEUDOSCORPIONIDA, CHTHONIIDAE)

The genus *Tyrannochthonius* is tropicopolitan in distribution, including tropical America (Hoff 1959, Mahnert 1979, Muchmore 1973, 1977); and though it has long been known to occur in the United States (Chamberlin and Malcolm 1960), no U.S. species has ever been described. Now with our increasing interest in and knowledge of West Indian species (Muchmore 1984, 1986), it seems appropriate to describe a unique epigean form from Florida and Alabama.

Nearly 40 years ago J. C. Chamberlin recognized as new two individuals of *Tyrannochthonius* found in northwestern Florida. He began a description of the form but, unfortunately, never completed and published it; an illustration of the palp was published, without a name, by Chamberlin and Malcolm (1960: Fig. 1A). Later, as part of a broad survey of the American species of *Tyrannochthonius,* the senior author restudied Chamberlin's specimens and expanded the description. More recently the junior author has received and studied new material from Florida and Alabama and has brought the description to its final form.

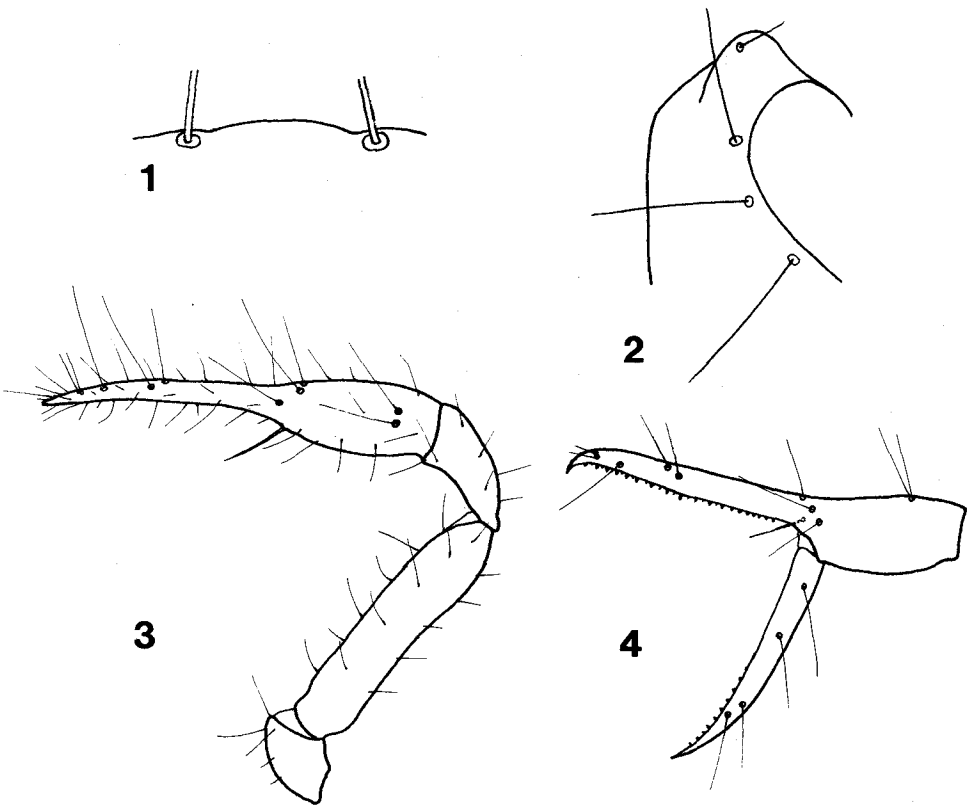
Tyrannochthonius floridensis, new species
Figs. 1-4

Material.—Holotype male (WM1664.01004) and 20 paratypes (6 males, 8 females, 6 nymphs) from litter in a sinkhole 3 mi. NW Marianna, Jackson County, Florida, 8 September 1968, S. Peck; one paratype male from Florida Caverns State Park, Jackson County, Florida, 9 September 1968, S. Peck; 2 paratypes (1 male, 1 female) from Rock Bluff, Liberty County, Florida, 27 April 1927, [T. H.] Hubbell; one paratype male from Moundville State Park, Moundville, Hale County, Alabama, 7 July 1967, S. Peck and A. Fiske. All types are in the Florida State Collection of Arthropods, Gainesville, except those from Rock Bluff, which are in the Cornell University Insect Collection, Ithaca, NY.

Diagnosis.—A small, epigean species of *Tyrannochthonius* characterized by the presence (usually) of a small seta at the base of the apical projection of the coxa of leg I, and the absence (usually) of a preocular dwarf seta on the carapace; tergites 1-4 each with 4 setae and tergites 5-8 each with 6 setae.

Description (based mainly on 12 mounted specimens).—Male and female very similar, though female usually a little larger and with slightly more robust palps. Carapace subquadrate; epistome a low, rounded lobule, barely evident between the 2 median setae (Fig. 1); with 4 conspicuous, corneate eyes; chaetotaxy usually 4-4-4-2-2, though two paratypes have a single preocular dwarf seta on one side or the other. Coxa I with a broad, rounded apical projection, which usually bears a small seta (m) at its base mesially (Fig. 2); complete coxal chaetotaxy 2-2-1:m-3-0:2-lor2-CS:2-3:2-3; each coxa II with an oblique row of 6-10 terminally incised spines (CS).

Abdomen typical. Tergal chaetotaxy of holotype 4:4:4:4:6:6:6:6:7:4:T2T:0; others similar. Sternal chaetotaxy of holotype (male) 10:[4-4]:(3)13-12/6(3):(3)6(3):8:8:8:8:8:9:0:2; other males similar; female usually 10:(3)6(3):(3)6(3):-.



Figs. 1-4.—*Tyrannochthonius floridensis,* new species: 1, epistome and flanking setae on anterior margin of carapace; 2, anteromedial part of left coxa I, showing apical projection and setae; 3, dorsal view of right palp; 4, lateral view of left chela.

Chelicera about ¾ as long as carapace; hand with 5 setae; flagellum of 6-7 irregularly pinnate setae; fixed finger with one large distal tooth followed proximally by 7-9 much smaller teeth; movable finger with about 15 small teeth; galea a low elevation in both sexes.

Palp as shown in Fig. 3; femur 4.4-4.6, tibia 1.8-1.95, and chela 4.65-5.45 times as long as broad; hand 1.7-2.0 times as long as deep; movable finger 1.6-1.85 times as long as hand. Trichobothria as shown in Fig. 4; on movable finger *sb* distinctly nearer to *b* than to *st*. Hand with one heavy spinelike seta on medial side near base of fingers. Fixed finger with 16-20 widely spaced, prominent macrodenticles and 12-16 microdenticles interspersed distally; movable finger with 7-10 macrodenticles distally and 6-9 interspersed microdenticles, and 8-10 very low, rounded teeth basally. Sensillum at dental margin, usually nearer to trichobothrium *st* than to *sb*.

Legs typical: leg IV with entire femur 2.25-2.5 and tibia 4.1-4.55 times as long as deep; a prominent tactile seta on the proximal third of telotarsus IV.

Measurements (mm).—Figures given first for the holotype followed in parentheses by ranges of the 11 mounted paratypes. Body length 1.31 (1.00-1.40). Carapace length 0.39(0.335-0.445). Chelicera 0.29(0.26-0.325) long. Palpal femur 0.415(0.375-0.465) by 0.085(0.08-0.105); tibia 0.185(0.17-0.205) by 0.095(0.085-0.11); chela 0.60(0.53-0.69) by 0.11(0.11-0.14); hand 0.22(0.20-0.26) by

0.115(0.105-0.15); movable finger 0.375(0.355-0.43) long. Leg IV: entire femur 0.385(0.355-0.42) by 0.155(0.155-0.18); tibia 0.28(0.245-0.31) by 0.065(0.06-0.07); metatarsus 0.13(0.115-0.15) by 0.05(0.045-0.055); telotarsus 0.26(0.23-0.295) by 0.035(0.03-0.04).

Etymology.—The name originally selected by J. C. Chamberlin is retained, *floridensis* referring to Florida where the first specimens were found.

Remarks.—*T. floridensis* is apparently unique in the genus in having a small seta on the apical projection of coxa I. Such a seta (sometimes 2 or 3) is regularly present in many chthoniid genera, but not in *Tyrannochthonius* or the related *Lagynochthonius* and *Paraliochthonius* (cf. Muchmore 1984, 1986). It remains to be seen whether its occurrence is of any phylogenetic significance.

In addition, *T. floridensis* is unusual in having the epistome very low, broad, and rounded. The usual form of the epistome in epigean species of *Tyrannochthonius* is distinctly triangular, closely flanked by 2 setae (cf. Muchmore 1984). Some cavernicolous species of the genus have low, rounded epistomes (unpublished observations), but in few if any are they as insignificant as in *T. floridensis*.

We acknowledge the first recognition of the species by the late J. C. Chamberlin and are greatly indebted to S. B. Peck for providing the more recent material.

LITERATURE CITED

Chamberlin, J. C. and D. R. Malcolm. 1960. The occurrence of false scorpions in caves with special reference to cavernicolous adaptation and to cave species in the North American fauna (Arachnida — Chelonethida). Amer. Midl. Nat., 64:105-115.

Hoff, C. C. 1959. The pseudoscorpions of Jamaica. Part I. The genus *Tyrannochthonius* (Heterosphyronida: Chthoniidae). Bull. Inst. Jamaica, Sci. Ser., 10(1):1-39.

Mahnert, V. 1979. Pseudoscorpione (Arachnida) aus dem Amazonas-Gebiet (Brasilien). Rev. suisse Zool., 86:719-810.

Muchmore, W. B. 1973. A second troglobitic *Tyrannochthonius* from Mexico (Arachnida, Pseudoscorpionida, Chthoniidae). Assoc. Mexican Cave Stud. Bull., 5:81-82.

Muchmore, W. B. 1977. Preliminary list of the pseudoscorpions of the Yucatan Peninsula and adjacent regions, with descriptions of some new species (Arachnida: Pseudoscorpionida). Assoc. Mexican Cave Stud. Bull., 6:63-78.

Muchmore, W. B. 1984. Pseudoscorpions from Florida and the Caribbean area. 13. New species of *Tyrannochthonius* and *Paraliochthonius* from the Bahamas, with discussion of the genera (Chthoniidae). Florida Entomol., 67:119-126.

Muchmore, W. B. 1986. New species of *Tyrannochthonius* and *Lagynochthonius* from caves in Jamaica, with discussion of the genera. (in preparation).

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