

PSEUDOSCORPIONS FROM FLORIDA. 2.
A NEW GENUS AND SPECIES
BITUBEROCHERNES MUMAE. (CHERNETIDAE)¹

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ABSTRACT

Bituberochernes mumae, new genus and new species, is described on the basis of a male collected from under bark in Dade County, Florida.

Through the courtesy of Dr. H. V. Weems, Jr., I have recently had the opportunity to examine the pseudoscorpions of the Florida State Collection of Arthropods. Several new and little known species are included, but one of the most interesting is a chernetid with unusual palpal and pedal morphology, which proved to represent an undescribed genus.

Bituberochernes, new genus

Diagnosis (based on male only): A genus of the family Chernetidae. Body moderately stout, appendages rather long. All parts fairly heavily sclerotized, brown; carapace and palps heavily granulate; legs, especially femora, scaly; carapace with 2 shallow, indistinct transverse furrows; first and 11th tergites entire, others partly divided or divided; 11th sternite entire, 4th-10th divided; pleural membranes strongly rugose; most dorsal vestitural setae terminally and laterally denticulate, those on ventral surfaces mostly acuminate; setae of spiracular plates acuminate; 11th tergite and sternite each with 4 long, acuminate tactile setae; setae of anal plates finely denticulate terminally; genital opercula and internal genitalia generally typical of the Chernetidae. Chelicera with 3 setae in flagellum; hand with 5 setae, *b* and *sb* terminally denticulate, *es* long, acuminate; galea long, slender, with 1 small lateral ramus and 3 or 4 small, terminal rami. Palps moderately slender and typical of the family except for a distinct rounded, setiferous protuberance on medial side of tibia and a small, conical, bare protuberance on medial side of chelal hand at base of fingers; 50-60 "sense spots" on medial and ventral surfaces of chelal hand; tibia longer than femur, chelal fingers slightly shorter than hand; fingers with about 45 contiguous, marginal teeth, 1 internal and about 10 external accessory teeth; movable chelal finger with well developed venedens and venom duct reaching to level of trichobothrium *t*; fixed finger with short venedens and very small, vestigial venom duct; trichobothrium *t* located

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about one-third length of movable finger from distal end, *st* nearer to *sb* than to *t*; fixed finger with *ist* at level of *est*, both in basal half of finger. All legs monotarsate, moderately slender; each tarsus with an elevated slit sensillum at basal fourth of segment; leg IV: tibia without a tactile seta, tarsus with a very long tactile seta one-third length of segment from proximal end; leg I: tibia and tarsus with irregular rows of very short, truncate (sensory?) setae along ventral sides near distal ends.

Type species: *Bituberochernes mumae*, new species.

Etymology: The genus is named *Bituberochernes* with reference to the 2 protuberances on the palpal tibia and chela.

Remarks: *Bituberochernes* is unique among known chernetid pseudoscorpions in having a protuberance on *both* the tibia and the chela of the palp. *Mirochernes* Beier, also known from Florida, has a large, anvil-shaped process on the medial side of the chelal hand in the male but the tibia is normal. On the other hand, *Ancalochernes* Beier from Mexico and *Cordylochernes* Beier from Central and South America have a distinct protuberance on the palpal tibia, but the chela is normal. *Bituberochernes* differs further from these and other chernetid genera in the unusual relative length of the palpal tibia and the unique short (sensory?) setae on the tibia and tarsus of leg I.

Bituberochernes mumae, new species

Fig. 1-4.

Material: Holotype male (WM 3110.01001) taken from under bark at Matheson Hammock, Dade County, Florida, 12 September 1959 (M. H. Muma).

Diagnosis: Male easily distinguished from other chernetids by the protuberances on the palpal tibia and chela, the relative length of the palpal tibia (greater than that of femur) and the unique, short (sensory?) setae on the tibia and tarsus of leg I. (Female unknown).

Description of male: With the characteristics of the genus as outlined above, and with the following particular features. Carapace longer than broad; with 2 shallow, indistinct transverse furrows, 0.6 and 0.85 length of carapace from anterior margin; surface granulate; 2 faint eyespots present; about 80 short, dentate, vestitural setae, with 6 at anterior and 10 at posterior margin. Tergites 1 and 11 entire, 2 partly divided, 3-10 divided; sternite II entire, 4-10 divided. Tergal chaetotaxy 10:10:10:12:13:14:13:14:13:12:2T2T2T2:2; sternal chaetotaxy 52:(2)⁴⁻⁴/₁₇(3):(1)11(1):15:17:16:-16:18:18:T3T4T3T:2; dorsal setae strongly dentate terminally and often laterally (Fig. 1); ventral setae acuminate or finely denticulate; anterior genital operculum with 6 long, heavy setae centrally, flanked by 46 smaller ones; posterior operculum with 2 rows of 4 small setae just inside anterior margin and 17 setae scattered on face; setae of spiracular plates acuminate; setae of anal plates finely denticulate.

Chelicera one-third as long as carapace; hand with 5 setae, *sb* and *b* terminally denticulate, *es* long, acuminate; flagellum of 3 setae, distal 1 dentate along margin; fingers normal; galea long, thin, with 1 small lateral and 3-4 small terminal rami; serrula exterior with 24-25 blades.

Palps relatively slender and not unusual except for the occurrence of 2 protuberances, 1 each on tibia and chelal hand, and the fact that tibia is

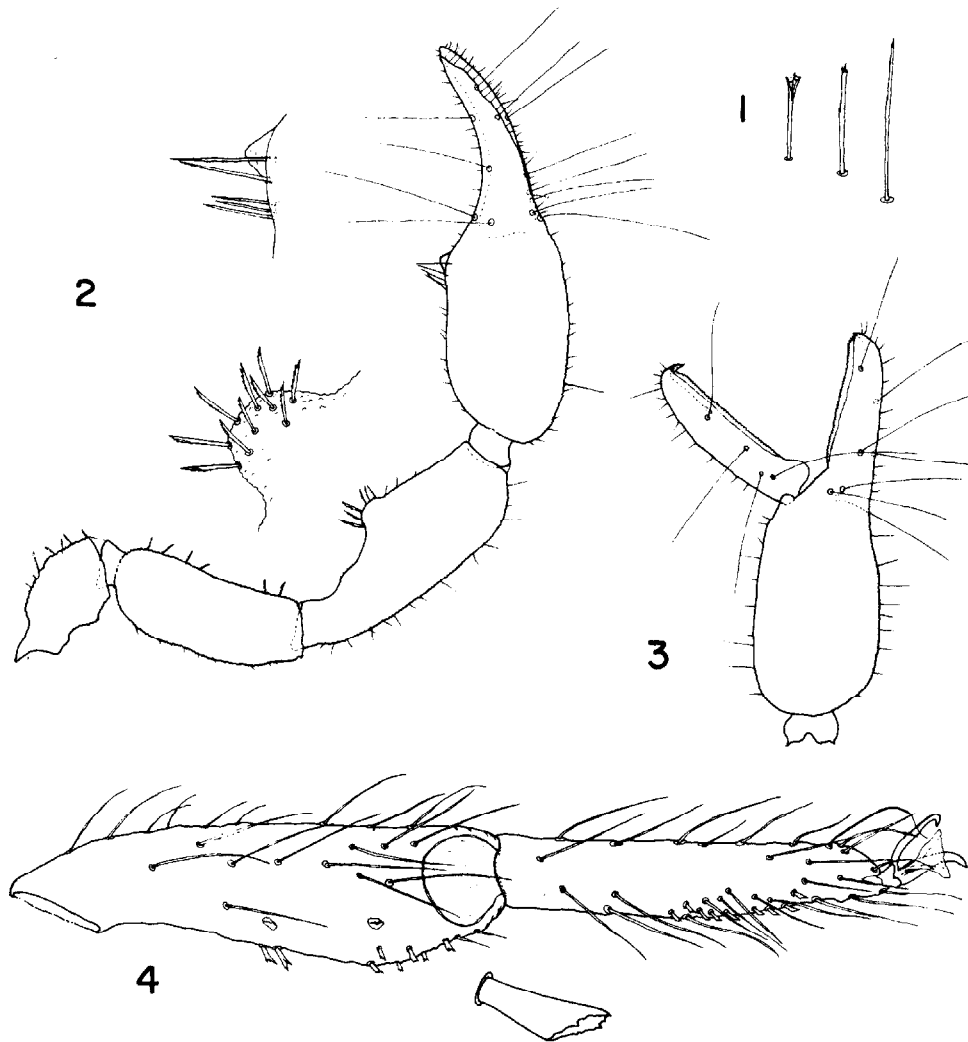


Fig. 1-4. *Bituberochernes mumae*, new genus and new species. 1—Examples of setae from carapace and tergites. 2—Dorsal view of right palp showing characteristic protuberances. 3—Lateral view of left chela. 4—Ventrolateral view of tibia and tarsus of leg IV, showing short (sensory?) setae.

noticeably longer than femur (Fig. 2); the protuberance on medial side of tibia is rounded and on its dorsal half bears 10 heavy, terminally dentate setae; the protuberance on medial side of chelal hand near base of fingers is smaller, conical and bare, but is flanked dorsally by a curved row of 5 heavy, acuminate setae. Surfaces strongly granulate except chelal fingers; 50-60 conspicuous "sensory spots" on medial and ventral surfaces of chelal hand. Trochanter 1.85, femur 2.8, tibia 2.65, and chela (without pedicel) 3.3 times as long as broad; hand (without pedicel) 1.75 times as long as deep; movable finger 0.82 as long as hand. Each chelal finger with 46 contiguous, conical to quadrate marginal teeth; fixed finger with 11 external and 1 internal accessory teeth,

and movable finger with 9 external and no internal accessory teeth. Movable finger with well developed venedens and venom duct, nodus ramosus at about level of trichobothrium *t*; fixed finger with short venedens and very small, vestigial venom duct. Trichobothria positioned as shown in Figs. 2 and 3; *t* located about one-third length of movable finger from distal end, *st* nearer to *sb* than to *t*; *est* and *ist* at same level, in basal half of fixed finger; left chela (Fig. 3) with only 7 trichobothria on fixed finger (apparently *isb* missing), but right chela with full complement of 8 (see Fig. 2).

Legs generally typical, moderately slender; leg IV with entire femur 2.65 and tibia 3.9 times as long as deep. Each tarsus with an elevated slit sensillum at basal quarter. Leg I: tibia and tarsus unique in having irregular rows of very short, truncated (sensory?) setae along ventral sides near distal ends (Fig. 4). Leg IV: tibia without a tactile seta; tarsus with a very long tactile seta one-third length of segment from proximal end.

Female: Unknown.

Measurements (mm): Body length 3.16. Carapace length 1.01. Chelicera 0.33 by 0.155. Palpal trochanter 0.52 by 0.28; femur 0.82 by 0.29; tibia 1.02 by 0.385; chela (without pedicel) 1.48 by 0.445; hand (without pedicel) 0.82 by 0.47; pedicel 0.095 long; movable finger 0.67 long. Leg I: basifemur 0.31 by 0.21; telofemur 0.50 by 0.20; tibia 0.495 by 0.125; tarsus 0.415 by 0.075. Leg IV: trochanter 0.325 by 0.185; entire femur 0.87 long; basifemur 0.35 by 0.245; telofemur 0.69 by 0.33; tibia 0.66 by 0.17; tarsus 0.45 by 0.11.

Etymology: The species is named *mumae* for Dr. Martin H. Muma, outstanding arachnologist, who collected the single known representative.

Remarks: The single male of *Bituberochernes mumae* was collected from beneath bark along with 8 specimens of *Paratemnus elongatus* (Banks).

It is tempting to suggest that the protuberances on the palps and the short setae on the first legs are modifications of the male for courtship or mating, analogous to situations seen in other chernetid and cheliferid males. However, in the absence of any knowledge of the morphology of the female or of the behavior of the male, no answer to the questions can yet be given.

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