

## A revision of the spider genus *Trochanteria* (Araneae: Gnaphosoidea)

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### Summary

Three species of *Trochanteria* are recognized: *T. ranuncula* Karsch, the type species; *T. gomezi* Canals, with which *Oltacloea major* Mello-Leitão is newly synonymized; and *T. rugosa* Mello-Leitão, which is removed from the synonymy of *T. gomezi*.

### Introduction

The spider genus *Trochanteria* is one of the most remarkable and least well-known of all gnaphosoids. As Karsch's choice of generic name indicates, the most obvious peculiarity of these flattened spiders is the enormously elongated fourth trochanter, which in adults becomes almost as long as the fourth femur (Fig. 2). Karsch (1878, 1879) awarded the group familial status (as the Trochanterioidae), but Simon (1893), who never examined any specimens of the genus, doubtfully placed the genus in his gnaphosid subfamily Hemicleinae, and his placement was generally (but not universally) followed by subsequent workers. Elsewhere (Platnick, 1985), I have argued that Trochanteriidae is indeed the correct name for the group including at least *Trochanteria* and the African genus *Platyoides*. The present paper supplements that study by reviewing the few known specimens of *Trochanteria*.

The geographical origin of *Trochanteria ranuncula* Karsch, the type species, has been a long-standing puzzle. In his brief initial description of the species, Karsch (1878) indicated only that the species was from "Amerika". Subsequently, Karsch (1879) provided a fuller description of the species, giving as the type data only "Sta. Cruz (leg. Hensel)," which is also the only information currently accompanying the holotype. Simon (1893) recorded the species as being from South America, but Petrunkevitch (1911) placed "Sta. Cruz" in the "West Indies" and subsequently (1926) indicated that the species was "described from St. Croix and never again found there or elsewhere." Canals (1933), the first modern student to examine specimens of the genus, thought *T. ranuncula* to be from "Santa Cruz (rep. de Costa Rica)," apparently because the preceding species described by Karsch (1879) was Costa Rican (although it was taken by a different collector). Both Roewer (1954) and Bonnet (1959) followed Petrunkevitch, listing the species from "Westindien" and "Antilles," respectively.

As detailed below, all subsequently discovered specimens of *Trochanteria* are from Argentina and Paraguay. It is unlikely, therefore, that Petrunkevitch's supposition of a West Indian origin of *T. ranuncula* is correct. Perhaps the specimen was collected in Santa Cruz, Argentina, but that is uncertain. According to

Horn & Kahle (1935), the Hensel who supplied specimens to the Zoologisches Museum, Berlin, was a physician working in southern Brazil, and Papavero (1973) indicates that a Reinhold Friedrich Hensel collected in "Rio Grande do Sul, especially Porto Alegre and the German colonies to the north of that city" between 1863 and 1866. Hence, the conservative decision of Schiapelli & Gerschman (1958), who listed the species from nowhere more specific than "America meridional," is probably the wisest course.

Those two authors placed *Trochanteria* in the Hemicleinae, along with two other Neotropical genera, *Oltacloea* Mello-Leitão and *Xenoplectus* Schiapelli & Gerschman. Neither of these genera, however, is a close relative of *Trochanteria*. Earlier (Platnick, 1985), I erroneously suggested that *Oltacloea* might prove to be a synonym of *Trochanteria*; this was based on Mello-Leitão's (1942) epigynal illustration of his species *O. major*, synonymized below with *Trochanteria gomezi* Canals, 1933. However, examination of the holotype of the type species, *O. mutilata* Mello-Leitão, 1940, indicates that it is not congeneric with *O. major* and is (unlike *Trochanteria*) a true gnaphosid.

For access to the rare specimens of *Trochanteria*, I am deeply indebted to Drs R. Arrozpide of the Museo de La Plata (MLP), L. Baert of the Institut Royal des Sciences Naturelles de Belgique (IRSN), E. A. Maury of the Museo Argentino de Ciencias Naturales (MACN), M. Moritz of the Zoologisches Museum, Berlin (ZMB), and A. Timotheo da Costa of the Museu Nacional, Rio de Janeiro (MNRJ). Assistance with illustrations was provided by Ms L. Duffy and Dr M. U. Shadab of the American Museum. The format of the descriptions follows that of Platnick (1985).

### Genus *Trochanteria* Karsch

*Trochanteria* Karsch, 1878: 817 (type species by original designation *Trochanteria ranuncula* Karsch).

#### Diagnosis

The flattened body (Fig. 3), together with the enormously elongated fourth trochanters (Fig. 2; cf. Platnick, 1985: fig. 2), distinguishes *Trochanteria* from all other known gnaphosoids.

#### Description

Total length 5-6 mm. Carapace (Figs. 1, 3) flattened, longer than wide, widest between coxae II and III, abruptly narrowed anterior to coxae I, slightly invaginated at middle of posterior margin, where margin becomes reflexed; cephalic grooves obvious, thoracic groove represented by shallow U-shaped depression about one-eighth of carapace width, situated back about five-ninths of carapace length; surface with numerous strong marginal setae and few weak scattered setae elsewhere. Eight eyes in two rows (Fig. 1), posterior row wider than anterior, anterior row straight, posterior slightly recurved; AME circular, dark, ALE and PLE oval, light, on small tubercles, PME flattened, irregularly rectangular; all eyes except PME ringed with black pigment; lateral eyes of each

*Female*

Total length, not including chelicerae, 5.20. Carapace 1.95 long, 1.76 wide. Femur II 2.00 long. Eye sizes and interdistances: AME 0.06, ALE 0.09, PME 0.08, PLE 0.08; AME-AME 0.04, AME-ALE 0.13, PME-PME 0.13, PME-PLE 0.14, ALE-PLE 0.09; MOQ length 0.17, front width 0.16; back width 0.29. Cheliceral promargin with denticle at about half of distance between fang origin and retromarginal tooth. Abdomen badly faded but dorsum possibly marked

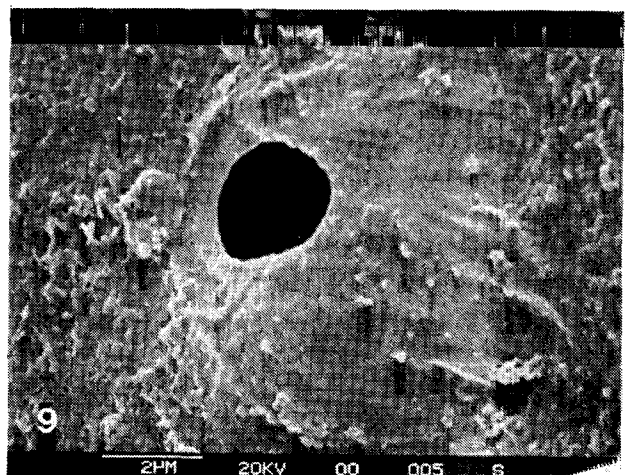
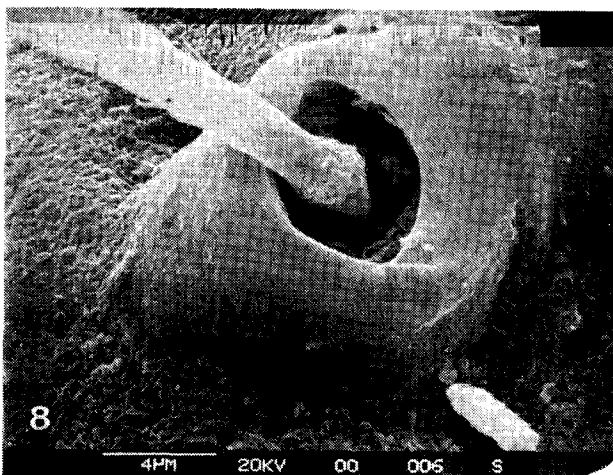
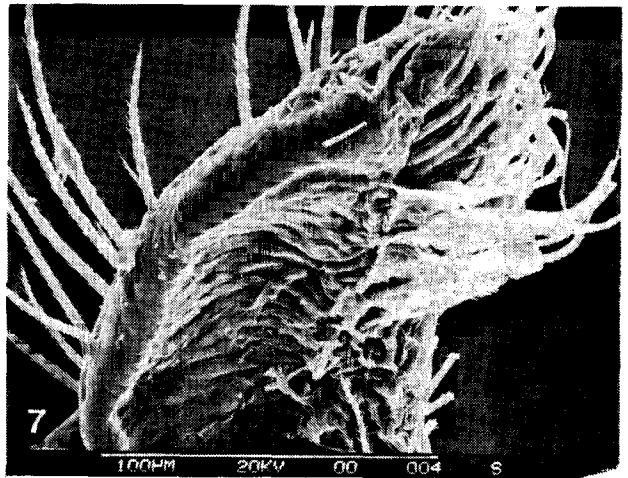
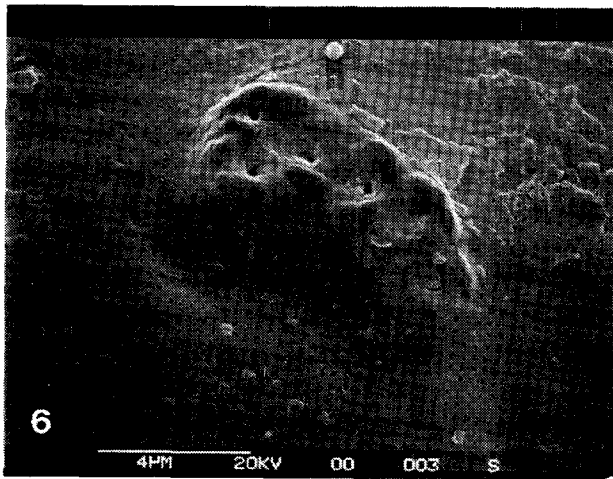
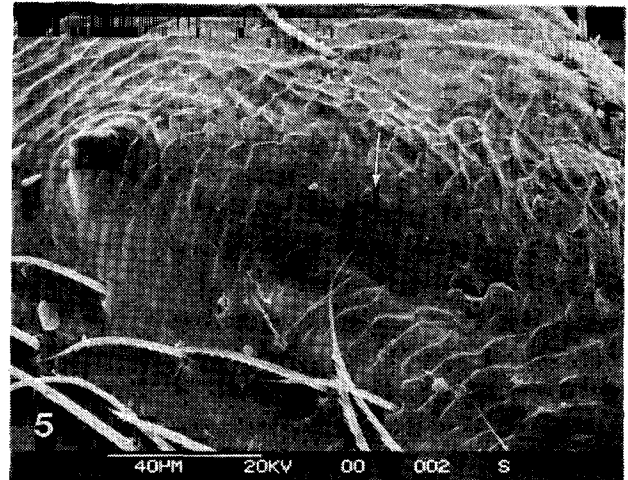
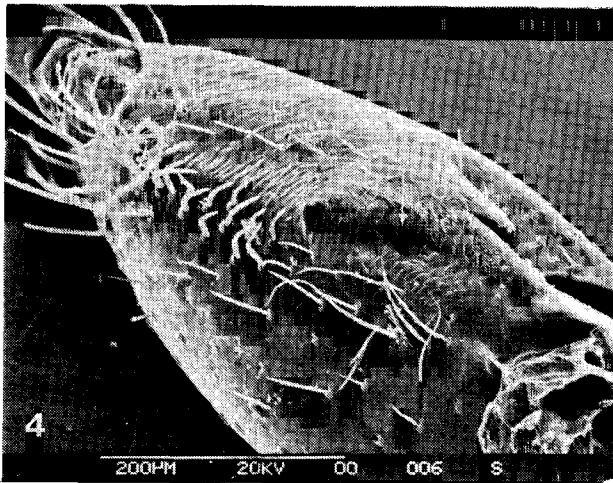
with dark longitudinal paramedian bands. Lateral epigynal margins widely separated, angular, long (Fig. 10); lateral epigynal ducts long (Fig. 11).

*Material examined*

Only the holotype, collected by Hensel.

*Distribution*

"Sta. Cruz," presumably in South America.



Figs. 4-9: *Trochanteria gomezi* Canals, juvenile. **4, 5** Left chelicera, medial view, showing retromarginal tooth and cheliceral gland depression (arrow); **6** Pores of cheliceral gland; **7** Endite; **8** Trichobothrial base; **9** Tarsal organ.

***Trochanteria gomezi* Canals (Figs. 1-9, 14-17)**

*Trochanteria gomezi* Canals, 1933: 234, figs. 1-6 (male holotype from Olta, La Rioja, Argentina, in MACN, examined).

*Oltacloea major* Mello-Leitão, 1942: 404, fig. 28 (female syntype from Colonia Dora, Santiago del Estero, Argentina, in MNRJ, examined). New synonymy.

**Diagnosis**

Females can be recognized by the very short lateral epigynal margins (Fig. 14), males presumably by the palpal structure (Figs. 16, 17).

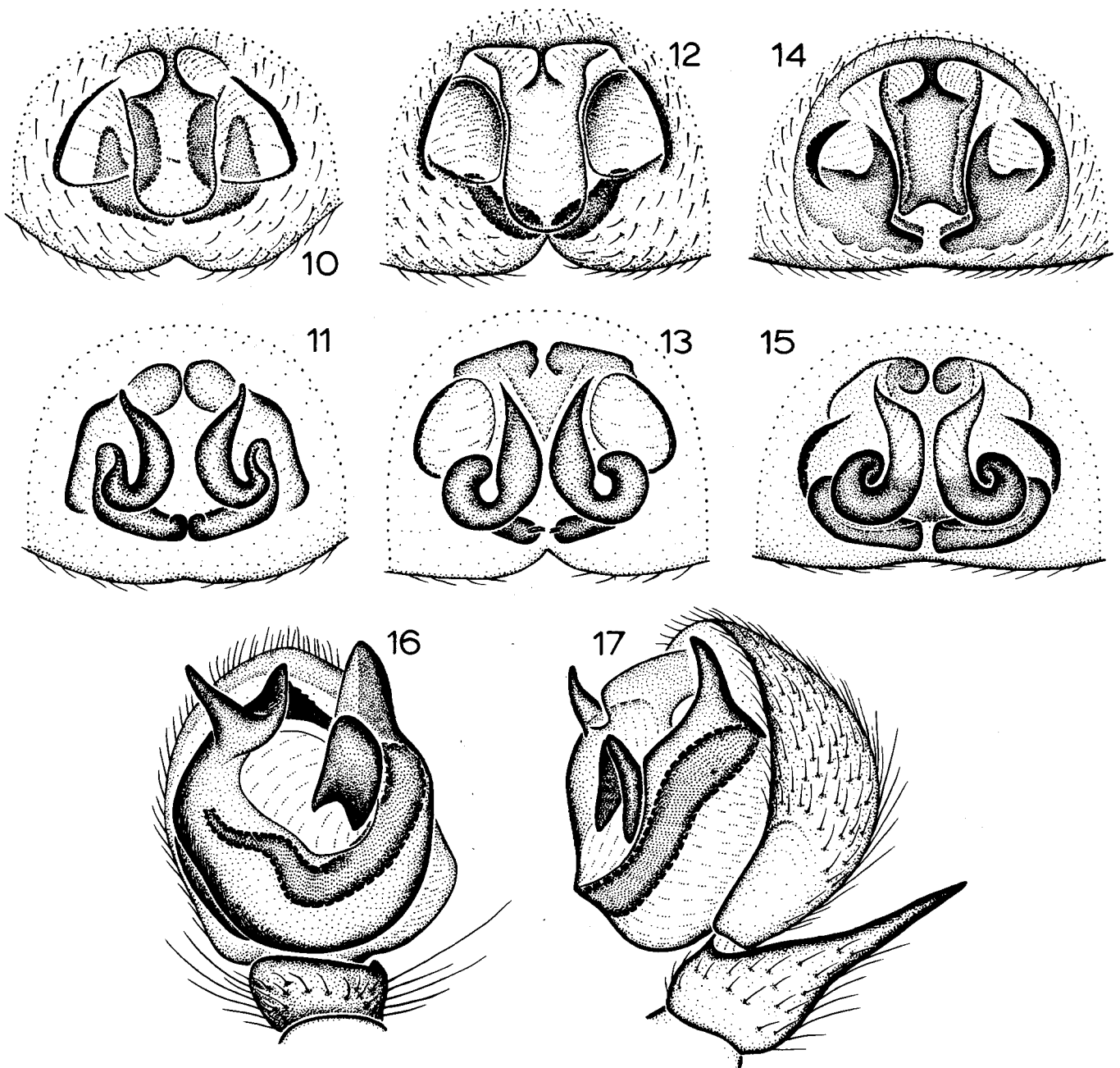
**Male**

Total length, not including chelicerae, 5.00. Carapace 1.91 long, 1.62 wide. Femur II 2.28 long. Eye sizes and interdistances: AME 0.07, ALE 0.10, PME 0.07, PLE 0.10; AME-AME 0.08, AME-ALE 0.11,

PME-PME 0.14, PME-PLE 0.18, ALE-PLE 0.16; MOQ length 0.25, front width 0.22, back width 0.28. Chelicerae without promarginal denticle. Abdomen maculated with brownish grey dorsally, lighter ventrally. Palp with long, sharply pointed retrolateral tibial apophysis (Fig. 17); embolar base bearing long prolateral spur (Fig. 16).

**Female**

Total length, not including chelicerae, 5.15. Carapace 2.23 long, 1.94 wide. Femur II 2.20 long. Eye sizes and interdistances: AME 0.06, ALE 0.09, PME 0.08, PLE 0.10; AME-AME 0.12, AME-ALE 0.17, PME-PME 0.17, PME-PLE 0.25, ALE-PLE 0.15; MOQ length 0.22, front width 0.24, back width 0.33. Chelicerae and abdomen as in male. Lateral epigynal



Figs. 10-17: *Trochanteria ranuncula* Karsch (10, 11), *T. rugosa* Mello-Leitão (12, 13), and *T. gomezi* Canals (14-17). 10, 12, 14 Epigynum, ventral view; 11, 13, 15 Epigynum, dorsal view; 16 Palp, ventral view; 17 Palp, retrolateral view.

margins short, crescent-shaped (Fig. 14); lateral epigynal ducts coiled (Fig. 15).

#### Material examined

ARGENTINA: no specific locality (Partridge, MACN), one male. *La Rioja*: La Rioja, Nov. 1959 (Viana, MACN), one male, one female; Olta (M. P. Gómez, MACN), one male (holotype). *Santiago del Estero*: Colonia Dora (J. W. Ábalos, MNRJ), one female (holotype). PARAGUAY: *Nueva Asuncion*: 10 km N. Pico, 5-6 June 1984 (L. Baert, IRSN), one female.

#### Distribution

Northwestern Argentina and Paraguay.

#### Synonymy

Schiapelli & Gerschman (1958) correctly reported that "El Tipo" (actually a syntype) of *Oltacloea major*, in MLP, is a juvenile female belonging to *Trochanteria*. However, Mello-Leitão (1942) illustrated the female epigynum of the species, evidently based on a syntype now in MNRJ. That syntype conforms in epigynal details to the female of *gomezi* taken in La Rioja, and the name is therefore synonymized here.

#### *Trochanteria rugosa* Mello-Leitão (Figs. 12, 13)

*Trochanteria rugosa* Mello-Leitão, 1938: 108, figs. 25-27 (female holotype from Isla de Tehuel Malal, Río Negro, Argentina, in MLP, examined).

*Trochanteria gomezi* (misidentification): Mello-Leitão, 1941: 165, fig. 55.

#### Diagnosis

Females can be recognized by the moderately long lateral epigynal margins (Fig. 12).

#### Male

Unknown.

#### Female

Total length, not including chelicerae, 5.58. Carapace 2.34 long, 1.93 wide. Femur II 1.91 long. Eye sizes and interdistances: AME 0.08, ALE 0.10, PME 0.08, PLE 0.10; AME-AME 0.12, AME-ALE 0.20, PME-PME 0.18, PME-PLE 0.28, ALE-PLE 0.18; MOQ length 0.24, front width 0.28, back width 0.34. Chelicerae and abdomen as in *T. gomezi*. Lateral epigynal margins moderately long (Fig. 12); lateral epigynal ducts rounded (Fig. 13).

#### Material examined

ARGENTINA: *Catamarca*: Belén (M. Birabén, MLP), one female. *Río Negro*: Isla de Tehuel Malal (R. Lehmann-Nitsche, MLP), one female (holotype).

#### Distribution

Western Argentina.

#### Note

Schiapelli & Gerschman (1958) erroneously synonymized this species with *T. gomezi* because they realized, correctly, that the holotype of *T. rugosa* is conspecific with the female from Belén, misidentified by Mello-Leitão (1941) as the female of *T. gomezi*. The name is therefore here removed from synonymy.

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row larger than medians, both pairs of medians usually closer to each other than to laterals; MOQ wider at back than in front and than long. Clypeal height at AME slightly less than their diameter. Chelicerae (Figs. 1, 2) enlarged, projecting forward distance almost one-fourth of carapace length, laterally divergent, with single retromarginal tooth situated at about half of fang length; fangs long, curved; cheliceral gland openings concentrated in small area of shallow depression situated proximally on retromargin (Figs. 4-6). Labium longer than wide, narrowed distally. Endites elongate, narrowed opposite insertion of trochanters, obliquely depressed just anterior of trochanter insertion (Fig. 2), with anteromedian scopula but without serrula (Fig. 7). Sternum longer than wide (Fig. 2), with elongated, reflexed anterior margin and broad truncated posterior margin, strongly rebordered, with triangular extensions to coxae; coxae IV separated by about half their length. Abdomen flattened (Fig. 3), all surfaces setose, setae longer and stronger around margins of dorsum; six spinnerets, anteriors sclerotized, conical, separated at base by about half their basal width, with vaguely distinguishable, medially directed apical segments; medians short,

those of females with expanded tips; posteriors shorter than anteriors, with short apical segment. Leg formula usually 4123; legs laterigrade, with long bristles but no spines; metatarsi and tarsi I and II lightly scopulate; tarsi with two dentate claws, without claw tufts; metatarsi without preening combs; trochanters unnotched, fourth pair extremely elongate (Fig. 2), at least three times as long as third pair; coxae IV slightly elongated, almost one-fourth longer than coxae III; tarsi with two rows, metatarsi with single row of trichobothria, trichobothrial bases smooth (Fig. 8); tarsal organ capsulate (Fig. 9). Female palp with strong bristles, tarsi not shortened, with long dentate claw.

*Trochanteria ranuncula* Karsch (Figs. 10, 11)

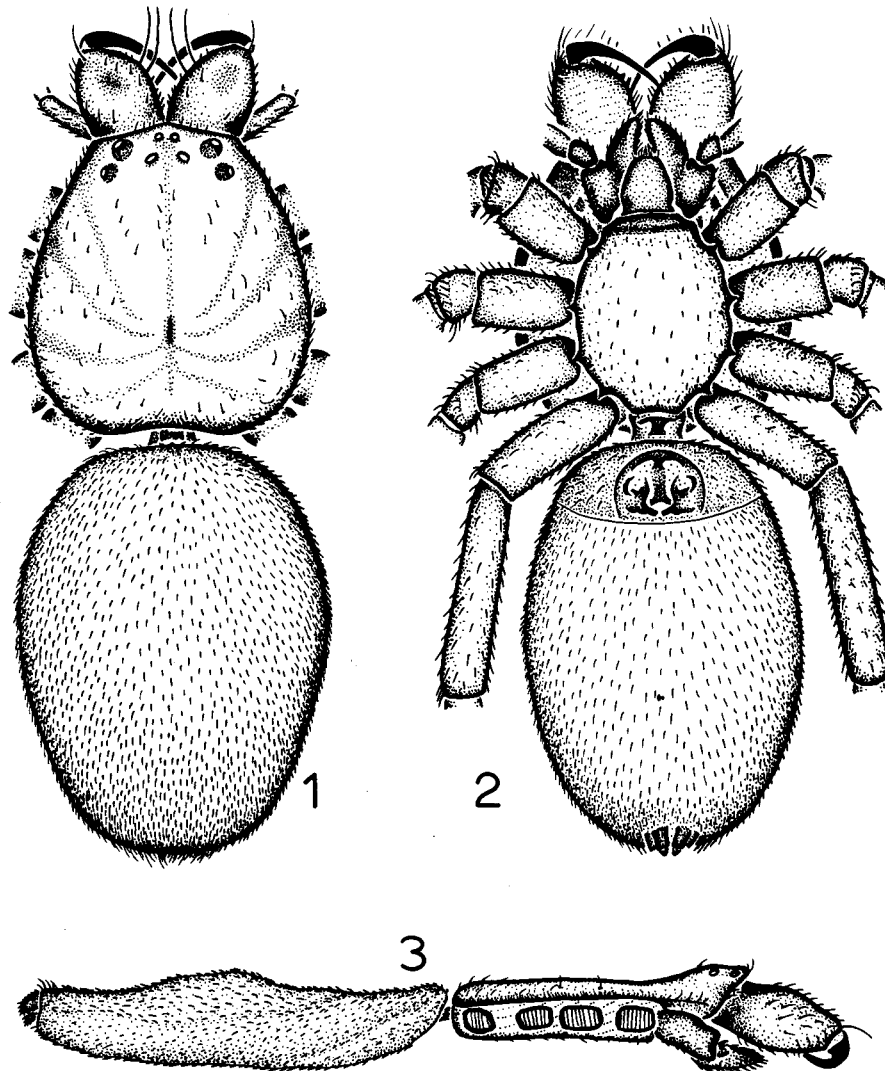
*Trochanteria ranuncula* Karsch, 1878: 17 (female holotype from "Sta. Cruz," in ZMB, examined); 1879: 537, figs. 3-5.

*Diagnosis*

Females can be recognized by the very long, angular lateral epigynal margins (Figs. 10, 11).

*Male*

Unknown.



Figs. 1-3: *Trochanteria gomezi* Canals, female, cephalothorax and abdomen. 1 Dorsal view; 2 Ventral view; 3 Lateral view.