

A NEW GENUS AND TWO NEW SPECIES OF SCHOENGASTIINE CHIGGERS (ACARI: TROMBICULIDAE) FROM A CANE MOUSE IN BRAZIL¹

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Abstract. *Serratacarus*, n. gen., containing 2 new species, *Serratacarus dietzi* and *Serratacarus lasiurus*, is proposed. Both new species were recovered from a cane mouse, *Zygodontomys lasiurus lasiurus*, taken in Brazil.

Goff et al. (1983) described several species of chiggers from a collection of ectoparasites collected from small mammals in Brazil by J.M. Dietz. Further examination of specimens in this collection has revealed 2 species of schoengastiine chiggers representing a new genus, described below, characterized by a palpal tarsal setation of 4BS and serrate dorsal idiosomal setae. The holotypes are in the collection of the U.S. National Museum of Natural History/Smithsonian Institution (chigger collection currently housed at B.P. Bishop Museum, Honolulu, Hawaii). Terminology follows Goff et al. (1982). All measurements are given in micrometres.

***Serratacarus* Goff & Whitaker, new genus**

Type species. *Serratacarus dietzi* Goff & Whitaker, n. sp.

Diagnosis. Trombiculinae with palpal setation B/B/NBB/4BS; galeala N; cheliceral blade with tricuspid cap; palpal claw 3-pronged; sensillae capitate, head with setules; dorsal idiosomal setae serrate (Fig. 1D, 2F), inserted on sclerotized platelets; 3 genualae I, genuala II and III; tibia III; no mastisetae III.

Remarks. In the key to the species of chiggers in the Western Hemisphere given by Brennan & Goff (1977), *Serratacarus* dead ends in couplet 36 of the Trombiculinae I section, with palpal tarsal setation 4BS. If the route with 4B is followed, *Serratacarus* will run to couplet 41 with *Quadrasetta* Brennan, 1970, and *Trombewingia* Fonseca, 1955. *Serratacarus* may be easily separated from *Quadrasetta* by the form of the dorsal idiosomal setae (cylindrical in *Quadrasetta* species) and the setation of the palpal tarsus

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(4B in *Quadrasetta* species). In addition to the setation of the palpal tarsus (4B in *Trombewingia* species), *Serratacarus* differs from *Trombewingia* in the form of the dorsal idiosomal setae. The dorsal idiosomal setae of *Trombewingia bakeri* Fonseca, 1955, are expanded and foliate, appearing similar to those of *Trombiculindus* species. Dorsal idiosomal setae for the 2 species of *Serratacarus* are serrate as shown in Fig. 1D, 2F. *Serratacarus* may be distinguished from *Kayella* Vercammen-Grandjean, 1960, in having 3 genualae I, genuala II and III, and both subterminala and parasubterminala I present (single genuala I and lacking genuala II, III, subterminala and parasubterminala I in *Kayella* species). *Serratacarus* differs from *Aithenius* Brennan, 1970, in having coxa III unisetose (multisetose in *Aithenius* species); from *Ectonyx* Brennan, 1960, in having a quadrate scutum, symmetrical tarsal claws, and lacking nude subterminal setae on tarsus I (scutum subpentagonal, asymmetrical tarsal claws and nude subterminal setae on tarsus I of *Ectonyx* species). The tricuspid cap on the cheliceral blade, 3 genualae I, and eyes 2/2 serve to separate *Serratacarus* from *Cheladonta* Lipovsky, Crossley & Loomis, 1955, which has a row of dorsal teeth on the cheliceral blade, 2 genualae I, and eyes 1/1 or absent.

The generic name is based on the form of the dorsal idiosomal setae. At present there are only 2 species in the genus: *S. dietzi*, n. sp., and *S. lasiurus*, n. sp.

***Serratacarus dietzi* Goff & Whitaker, new species**

Fig. 1

Description of species. Larva. *Idiosoma.* Measuring 185 × 146 in unengorged specimen. Eyes 2/2, anterior larger, on heavily sclerotized ocular plate. 1 pair of humeral setae, ciliated (Fig. 1E), measuring 39; ca. 82 dorsal idiosomal setae, serrate, measuring 18–24, arranged 10-10-10+52; 2 pairs of ciliated sternal setae, anterior 29, posterior 23; 28 preanal setae, ciliated, 19–23; ca. 48 postanal setae, similar to dorsal setae in form, 23–25; total idiosomal setae ca. 164. Humeral, dorsal idiosomal, and postanal setae inserted on sclerotized platelets. *Gnathosoma.* Palpal setal formula B/B/NBB/4BS; palpal claw 3-pronged; galeala N; cheliceral blade (29) with tricuspid cap; gnathobase lightly punctate, bearing a pair of branched setae. *Scutum.* Lightly punctate with shallowly biconcave anterior margin; posterior margin biconvex; AL setae with coarse barbules, AM and PL setae finely ciliated; PL > AM > AL; SB anterior to level of PL bases; PW/SD = 1.46; sensillae capitate, head with fine setules. Scutal measurements of holotype: AW 58; PW 67; SB 23; ASB 28; PSB 18; AP 30; AM 40; AL 34; PL 42; sens. 23 × 19. *Legs.* All 7-segmented, terminating in a pair of claws and a clawlike empodium. Onychotriches absent. IP 636. *Leg I.* 221; coxa with 1 branched seta (1B); trochanter 1B; basifemur 1B; genu 4B, 3 genualae (σ), microgenuala (h); tibia 8B, 2 tibialae (ϕ), microtibiala (h); tarsus (51 × 24) 21B, tarsala (ω) (14), microtarsala (e), subterminala (ξ), parasubterminala, pretarsala (ζ). *Leg II.* 190; coxa 1B; trochanter 1B; basifemur 2B; telofemur 4B; genu 3B, genuala (σ); tibia 6B, 2 tibialae (ϕ); tarsus (40 × 21) 16B, tarsala (ω) (12), microtarsala (e), pretarsala (ζ). *Leg III.* 225; coxa 1B; trochanter 1B; basifemur 2B; telofemur 3B; genu 3B, genuala (σ); tibia 6B, tibiala (ϕ); tarsus (46 × 17) 15B.

Type data. Holotype, BRAZIL: Faz das Pedras, Serra da Canastra Natl Pk, 25 km W of São Roque de Minas, ex cane mouse, *Zygodontomys lasiurus lasiurus* (JMD 157), 27.VII.1979 (J.M. Dietz).

Remarks. This species is named in honor of the collector, J.M. Dietz.

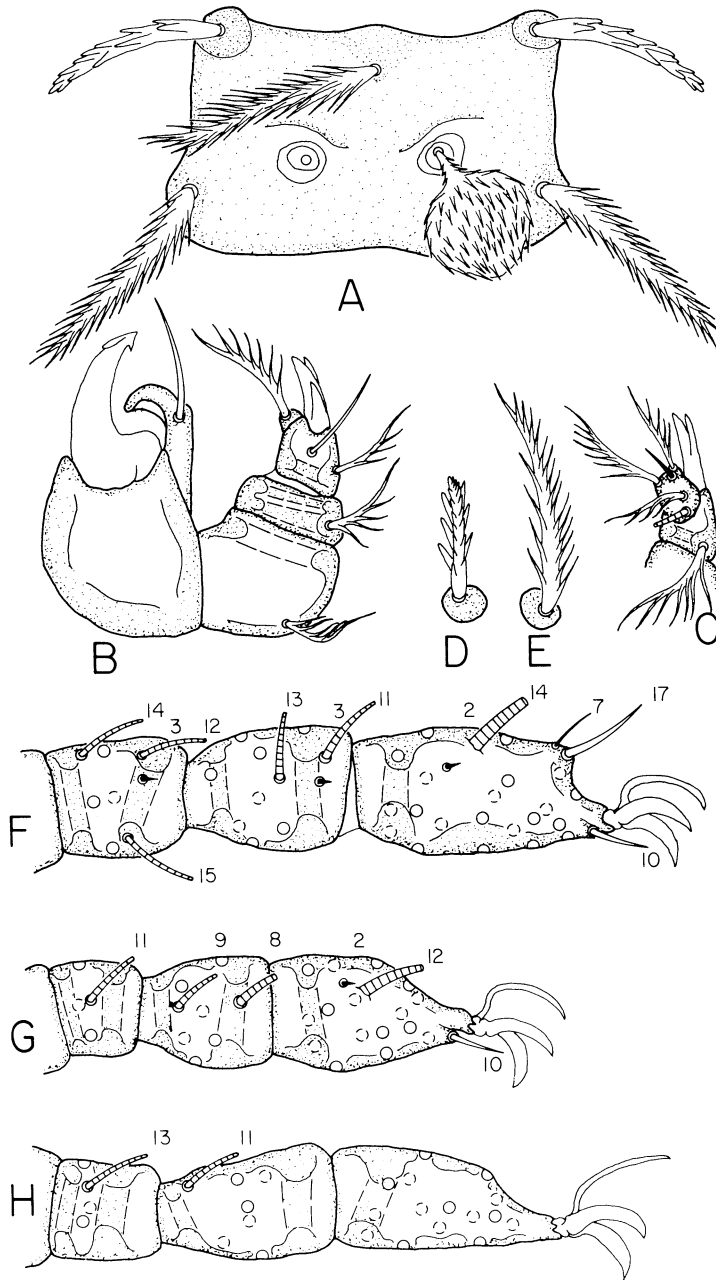


FIG. 1. *Serratocarus dietzi*: **A**, scutum; **B**, dorsal aspect of gnathosoma; **C**, ventral aspect of palpal tibia and tarsus; **D**, dorsal idiosomal seta; **E**, humeral seta; **F**, leg I distal 3 segments showing specialized setae (measurements in μm) and bases of branched setae; **G**, leg II as above; **H**, leg III as above.

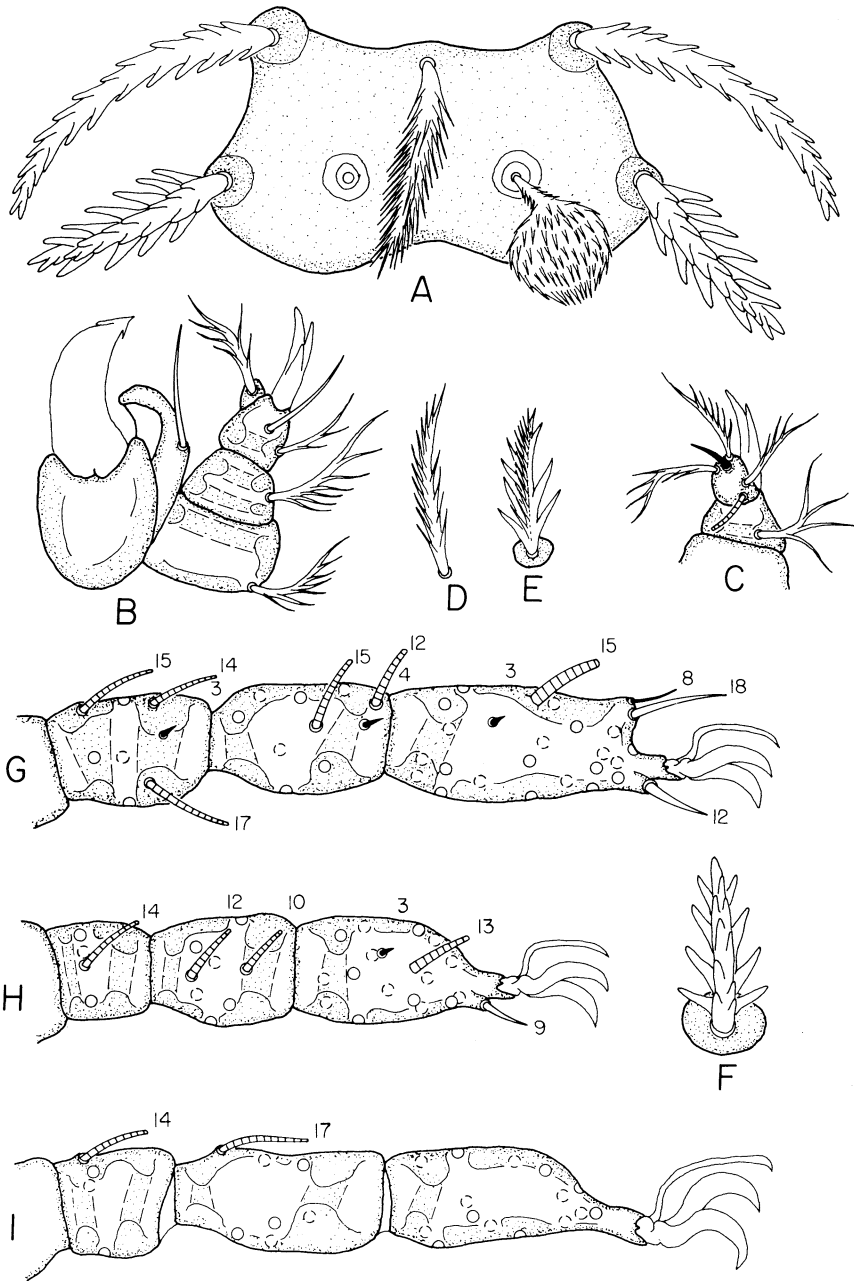


FIG. 2. *Serratacarus lasiurus*: **A**, scutum; **B**, dorsal aspect of gnathosoma; **C**, ventral aspect of palpal tibia and tarsus; **D**, anterior sternal seta; **E**, preanal seta; **F**, dorsal idiosomal seta; **G**, leg I distal 3 segments showing specialized setae (measurements in μm) and bases of branched setae; **H**, leg II as above; **I**, leg III as above.

Serratacarus lasiurus Goff & Whitaker, **new species**

Fig. 2

Description of species. Larva. *Idiosoma.* Ruptured in holotype. Eyes 2/2, anterior larger, on heavily sclerotized ocular plate. 1 pair of humeral setae, measuring 37; ca. 138 dorsal idiosomal and postanal setae, measuring 31-36; dorsal idiosomal setae arranged beginning 8-8 . . . ; 2 pairs of sternal setae, anterior 37, posterior 33; ca. 78 preanal setae, 19-28; total idiosomal setae ca. 222. Dorsal idiosomal, humeral, preanal, and postanal setae serrate (Fig. 2E, F), inserted on platelets; sternal setae ciliated, inserted on cuticle (Fig. 2D). *Gnathosoma.* Palpal setal formula B/B/NBB/4BS; palpal claw 3-pronged; galeala N; cheliceral blade (32) with tricuspid cap; gnathobase lightly punctate, bearing a pair of branched setae. *Scutum.* Lightly punctate, with shallowly biconcave anterior margin; posterior margin biconvex; AM seta ciliated, AL setae with heavy barbules, PL setae serrated; AL > PL = AM; AM base slightly posterior to level of AL bases; SB in line with PL bases; sensillae capitate, head with setules; PW/SD = 1.60. Scutal measurements of holotype: AW 58; PW 77; SB 30; ASB 31; PSB 17; AP 28; AM 39; AL 65; PL 49; sens. 29 × 18. *Legs.* All 7-segmented, terminating in a pair of claws and a clawlike empodium. Onychotriches absent. IP 682. *Leg I.* 243; coxa 1B; trochanter 1B; basifemur 1B; telofemur 5B; genu 4B, 3 genualae (σ), microgenuala (k); tibia 8B, 2 tibialae (ϕ), microtibiala (k); tarsus (56 × 21) 21B, tarsala (ω) (15), microtarsala (e), subterminala (ξ), parasubterminala, pretarsala (ζ). *Leg II.* 199; coxa 1B; trochanter 1B; basifemur 2B; telofemur 4B; genu 3B, genuala (σ); tibia 6B, 2 tibialae (ϕ); tarsus (49 × 18) 16B, tarsala (ω) (13), microtarsala (e), pretarsala (ζ). *Leg III.* 240; coxa 1B; trochanter 1B; basifemur 2B; telofemur 3B; genu 3B, genuala (σ); tibia 6B, tibiala (ϕ); tarsus (49 × 18) 15B.

Type data. Holotype, BRAZIL: Faz das Pedras, Serra da Canastra Natl Pk, 25 km W of São Roque de Minas, ex cane mouse, *Zygodontomys lasiurus lasiurus* (JMD 157), 27.VII.1979 (J.M. Dietz).

Remarks. *Serratacarus lasiurus* may be easily distinguished from *S. dietzi* by having the PL setae serrate (ciliated in *S. dietzi*), humeral setae serrate (ciliated in *S. dietzi*), and by the form of the dorsal idiosomal setae (Fig. 1D, 2F). The species name is based on the type host, *Z. lasiurus lasiurus*.

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