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SPECIES OF CHIGGER (ACARI: TROMBICULIDAE) FROM THE ORANGE HORSESHOE BAT *RHINONICTERIS AURANTIUS*[1]

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ABSTRACT

Chiroptella (Neosomia) geikiensis sp. nov., from the Orange Horseshoe Bat *Rhinonicteris aurantius* (Gray, 1845) (*Chiroptera*, Hipposideridae), in Western Australia is described and illustrated.

INTRODUCTION

Vercammen-Grandjean and Nadchatram (1965) proposed the subgenus *Neosomia* in the genus *Reidlinia* Oudemans, 1914, for *Reidlinia (Neosomia) audyi* which had extrascutal PL setae, 2 genualae III and a femorala III. Nadchatram (1966) transferred the subgenus to *Chiroptella* Vercammen-Grandjean, 1960. A second species of this subgenus, from bats in the Kimberley Range of Western Australia, is described and illustrated below. All measurements are of the holotype in micrometers, and followed by means and ranges of the type series in parentheses. Terminology follows Brennan & Goff (1977). Collections were made under the direction of Dr F.S. Lukoschus, Katholieke Universitiet, Nijmegen, and Dr J.B. Kethley, Field Museum of Natural History, Chicago.

CHIROPTELLA (NEOSOMIA) GEIKIENSIS SP. NOV.

(Figs 1-6)

Type data: Holotype and 9 paratypes from Western Australia, Kimberley Range, Geikie Gorge, from 3 Orange Horseshoe Bats *Rhinonicteris aurantius*

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(2971, 2973, 2975), 8.X.1976. Holotype (WAM 79.1578) in Western Australian Museum (Perth) and paratypes there and in Bishop Museum (Honolulu), Field Museum of Natural History (Chicago), University of Nijmegen and U.S. National Museum of Natural History (currently housed at Bishop Museum).

Description of species

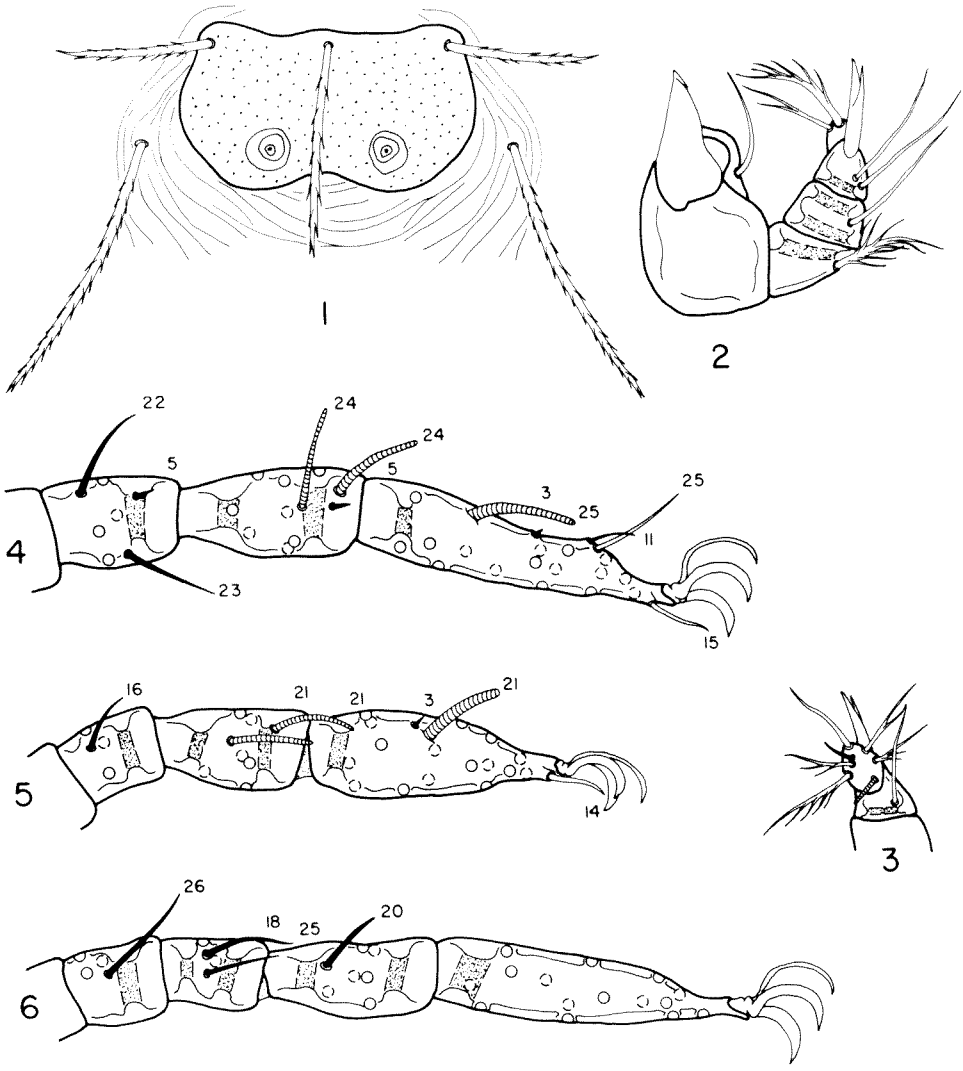
Larvae. *Idiosoma:* 675 x 570 (engorged). Eyes absent. One pair of humeral setae, 50-55 long; 28 dorsal body setae, 49-64, arranged 8-8-6-4-2; 2 pairs of sternal setae, anterior 37-39, posterior 48-50, 4 preanal setae, 45-51; 22 postanal setae, 40-59; total body setae = 60. *Gnathosoma:* Palpal setal formula B/N/NNN/6BNS; palpal claw 2-pronged, axial prong internal; galeala N; cheliceral blade (27-30 long) broad basally, triangular in side view, with ventral subapial tooth. *Scutum:* Moderately punctate with shallowly biconcave anterior margin; posterior margin biconvex; PL setae extrascutal; AM base in line with AL bases; PL > AM > AL; sensilla missing from all specimens. Scutal measurements: AW 56 (58, 55-62); SB 27 (29, 27-35); ASB 33 (30, 26-33); PSB 10 (10, 9-11); HM 48 (49, 48-51); AL 35 (33, 27-36); PL 75 (69, 65-75). *Legs:* 7-7-7 segmented, terminating in pair of claws and claw-like empodium. Onychotriches absent. *Leg I:* 288; coxa with 1 branched seta (1B); trochanter 1B; basifemur 1B; telofemur 5B; genu 4B, 2 genualae, microgenuala; tibia 8B, 2 tibialae, microtibiala, tarsus (71 x 21) 10B, tarsala (23-25), microtarsala, subterminala, parasubterminala, pretarsala. *Leg II:* 259; coxa 1B; trochanter 1B; basifemur 2B; telofemur 4B; genu 3B; genuala; tibia 6B, 2 tibialae; tarsus (56 x 20) 16B, tarsala (19-21), microtarsala, pretarsala. *Leg III:* 283; coxa 1B; trochanter 1B; basifemur 2B; telofemur 3B, femorala (26); genu 2B, 2 genualae, tibia 6B, tibiala; tarsus (76 x 16) 15B.

Remarks

Among species of *Chiroptella*, only *C. geikiensis* and *C. audyi* have extrascutal PL setae. *Chiroptella geikiensis* may be separated from *C. audyi* by the shape and measurements of the scutum, having a subterminala and nude seta on the palpal tarsus (palpal tarsus 7B in *C. audyi*), as well as AM > AL (AM < AL in *C. audyi*). In addition, the prominent perirostral collar described for *C. audyi* was not observed in *C. geikiensis*.

The reduction in numbers of branched setae on the telofemur and genu III in species of *Chiroptella*, appears to be correlated with an increase in the number of eupathids. Most species of Trombiculinae have 4 and 3 branched setae, respectively, on these segments, but *Chiroptella* species have only 3 and 2. In species of *Chiroptella*, there is a single eupathid, or femorala, on telofemur III (absent in other Trombiculinae) and 2 eupathids, or genualae, on genu III (1 in most other Trombiculinae). Thus, in both the usual pattern

and the pattern exhibited by species of *Chiroptella*, the total number for each segment remains constant at 4.



Figs 1-6: *Chiroptella (Neosomia) geikiensis* sp. nov. Scutum (**Fig. 1**). Dorsal aspect of gnathosoma (**Fig. 2**). Ventral aspect of palpal tibia and tarsus (**Fig. 3**). Distal 3 segments of legs I-III, showing specialized setae (measurements in micrometers) and bases of branched setae (**Figs 4-6**).

A parallel situation exists for genu III in species of *Sasatrombicula* Vercammen-Grandjean, 1960, where there are 2 eupathids on genu III and only 2 branched setae. In the leeuwenhoekiine genus *Odontacarus* Ewing, 1929, North American species, all in the subgenera *Odontacarus* and *Tarsalacarus* Vercammen-Grandjean, 1968 have 6 branched setae and 1 eupathid, or tibiala, on tibia III (Goff & Loomis, 1977). In species of the Australasian subgenus *Leogonius* Vercammen-Grandjean, 1968, tibia III has 4 branched setae, 1 eupathid and 2 mastisetae. In both instances, the number of setae on this segment remains constant at 7, although the structure of the setae involved varies. The presence of actinochitin in all 3 kinds of setae, combined with the numerical constancy for each segment, indicate a probable common origin for these setae, although function undoubtedly differs.

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