

REDESCRIPTION OF *NANORCHESTES BIFURCATUS* (ACARINA: PROSTIGMATA: NANORCHESTIDAE)

By R. W. Strandtmann¹

Abstract: *Nanorchestes bifurcatus* Strandtmann, from Tottanfjella, Queen Maud Land, West Antarctica, briefly described by Strandtmann in 1967, is here more fully described and illustrated.

The original description of *Nanorchestes bifurcatus* Strandtmann, 1967, brief and without illustrations, was based on a collection of 7 specimens, 1 female, 2 males, 3 deutonymphs, 1 protonymph. The holotype male, paratype female and 1 paratype deutonymph are deposited in the British Museum (Natural History), London. The remaining paratypes, 1 male, 2 deutonymphs and 1 protonymph, are in my collection, and the present redescription and illustrations are based on these latter 4 paratypes.

***Nanorchestes bifurcatus* Strandtmann, 1967**

FIG. 1-8.

Dorsal opisthosoma with many long, slender, 2-branched setae; hence, the name *bifurcatus*. Most anterior dorsal setae are lost but of the few that remain, some are shorter and either single or multi-branched. Ventral setae mostly shorter and mostly multi-branched. Bifurcate setae of posterior opisthosome branch near base, slender, closely and coarsely ciliated, with delicate stems and very small trichopores, which may account for so many being lost before or during mounting. Leg setae mostly 1-branched and coarsely ciliated. Cheliceral setae 2-branched. [There is a discrepancy in the original description (Strandtmann 1967) which needs to be mentioned. On page 79, under the description of the species, it is erroneously stated, "...seta of chela coarse and not branched...." However, on page 54 (ibid), in the key to species, separating *Nanorchestes antarcticus* and *N. bifurcatus*, it states correctly "cheliceral seta forked, with unequal tines."] Palpal setae simple or antlered, coarsely and irregularly serrate. At tip of each palp tibio-tarsal complex are 4 nude, slender, slightly sickle-shaped setae. Labrum long and sickle-shaped. The trichobothria are subequal and longer than in most other species of *Nanorchestes*. Trichobothrium *na* coarser than *nb*, with coarse, fine ciliations. *Nb* slender, with sparser and finer ciliations than *na*. All trochanters, in all life stages, without setae.

Paratype ♂ (FIG. 6). Length, including chelicera, 350 μm . Leg I, exclusive of coxa, 150 μm . Most bifurcate setae lost; those present (ca. 12) 35 to 45 μm . Genitalia with 2 pairs of genital knobs, each 4-partite; 7 pairs internal genital setae, 2-branched and 1/2 as long as the external genital setae, which are 1, 2, or 3-branched.

Paratype deutonymphs (2) (FIG. 1-6). Only 1 of the 2 specimens can be measured. Length, including chelicera, 270 μm . Leg I, 120 μm . Genitalia; 2 pairs of genital knobs and 4 pairs of external genital setae. Length of bifurcate opisthosomal setae 40 to 45 μm . Outermost 2 setae of Coxa III each 40 μm . Leg I with divided femur. Legs IV lost in both paratypes. Tarsi I and II each with a small mediodorsal spine plus raised sensory lines. Chaetotaxy of legs: tarsi I-15, II-11, III-8; tibiae I-6, II-5, III-3; genua I-5, II-4, III-3; femora I-6, II-2, III-3; coxae I-3, II-1, III-6. All trochanters without setae.

Paratype protonymph (FIG. 8). The 1 specimen available to me is badly crushed and cannot be measured. Bifurcate idiosomal setae 50-65 μm long, longer than those of ♂ and deutonymph. Genitalia consists of 1 pair branched paragenital setae.

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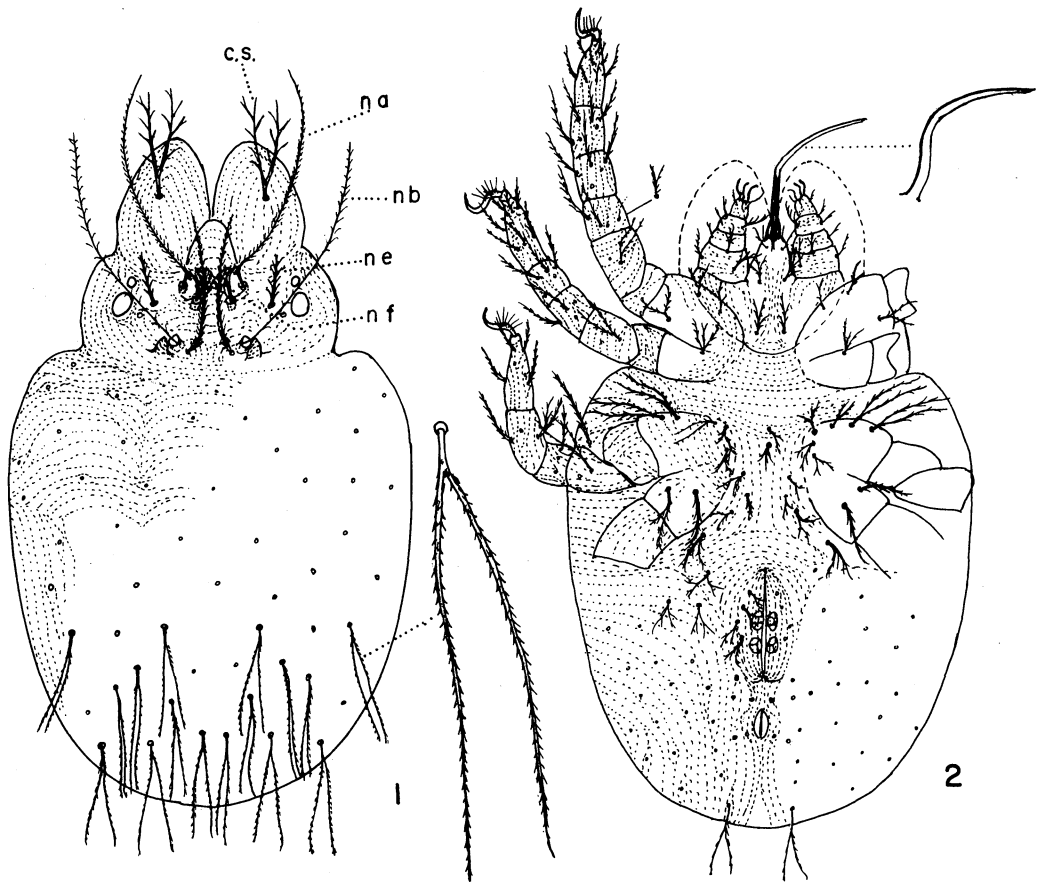


FIG. 1-2. *Nanorchestes bifurcatus* Strandmann, deutonymph; 1, dorsum, with an enlarged view of an opisthosomal setae (c.s.=cheliceral seta; na, nb, ne, nf=various setae of the propodosomal sensory area); 2, venter, with a 2nd view of the labrum.

The long, 2-branched opisthosomal setae readily distinguish this species from all other species of the genus so far known.

The collection data given in the original description (Strandmann 1967: 79) read "Queen Maud Land, Tottan Hills, #292A, moss and lichen, P. J. Tilbrook, collector (BAS)." Dr Tilbrook has informed me (pers. commun.) that these data are not wholly correct. They should read: Queen Maud Land, Tottanfjella (approx. 70°S and 10°W) Sta. Z. 92A, 1963-1964, moss and lichens, G. T. Bowra (British Antarctic Survey).

Station Z. 92A was at the base of broken cliffs occupied by a substantial Snow Petrel colony. The area was rich in plant life, consisting of 2 mosses, 11 lichens and an alga. Mosses and lichens were collected by G. T. Bowra during the Antarctic summer of 1963-64 and

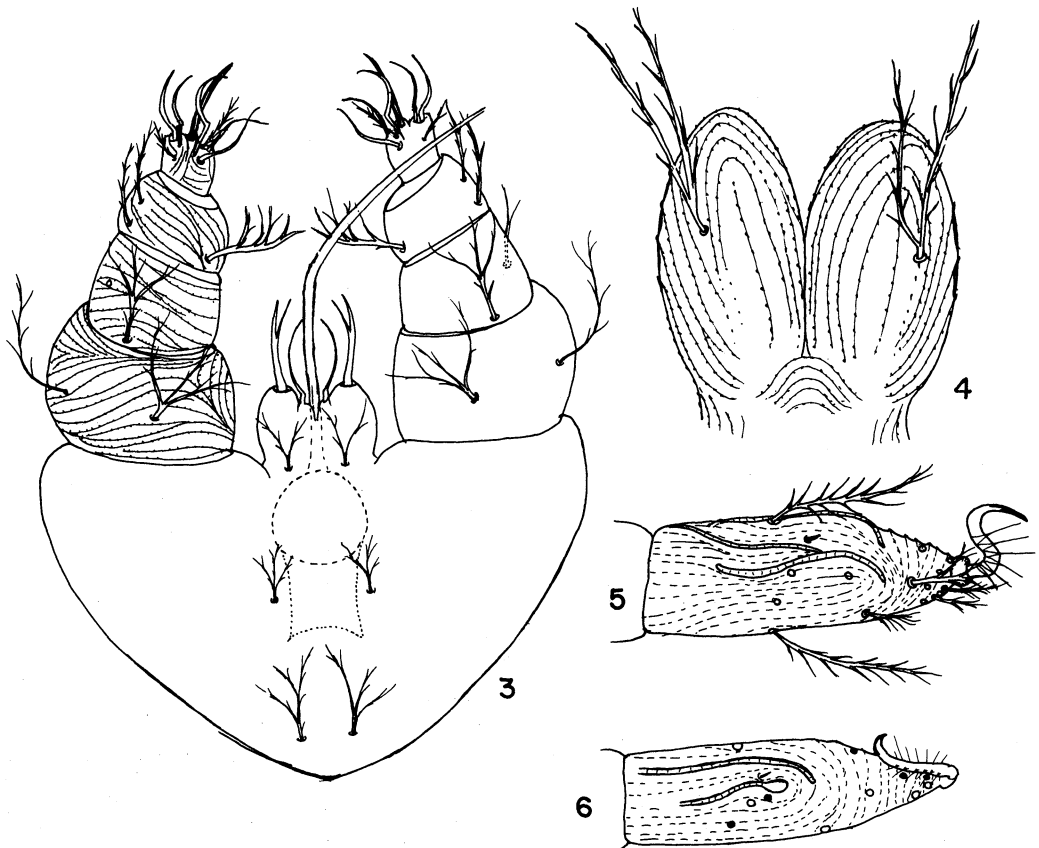


FIG. 3-6. *Nanorchestes bifurcatus* Strandtmann, deutonymph: 3, ventral view of the gnathosoma; 4, dorsal view of the chelicerae, showing striations and 2-branched cheliceral setae; 5, dorsolateral view of tarsus I; 6, dorsal view of tarsus II.

shipped to England. Dr P. J. Tilbrook subsequently extracted 3 mite species from this material, viz *Eupodes tottanfjella*, *Tydeus erebus*, and *Nanorchestes bifurcatus*. For further details on the area, see Bowra et al. 1966.

LITERATURE CITED

- Bowra, G. T., M. W. Holdgate & P. J. Tilbrook. 1966. Biological investigations in Tottanfjella and Central Heimefrontjella. *Br. Antarct. Surv. Bull. No. 9*. p. 63-70.
- Strandtmann, R. W. 1967. Terrestrial Prostigmata. p. 51-80. In: Gressitt, J. L., ed., *Entomology of Antarctica. Vol. 10*. Am. Geophys. Union Natl. Acad. Sci. - Natl. Res. Council., Washington, D.C.

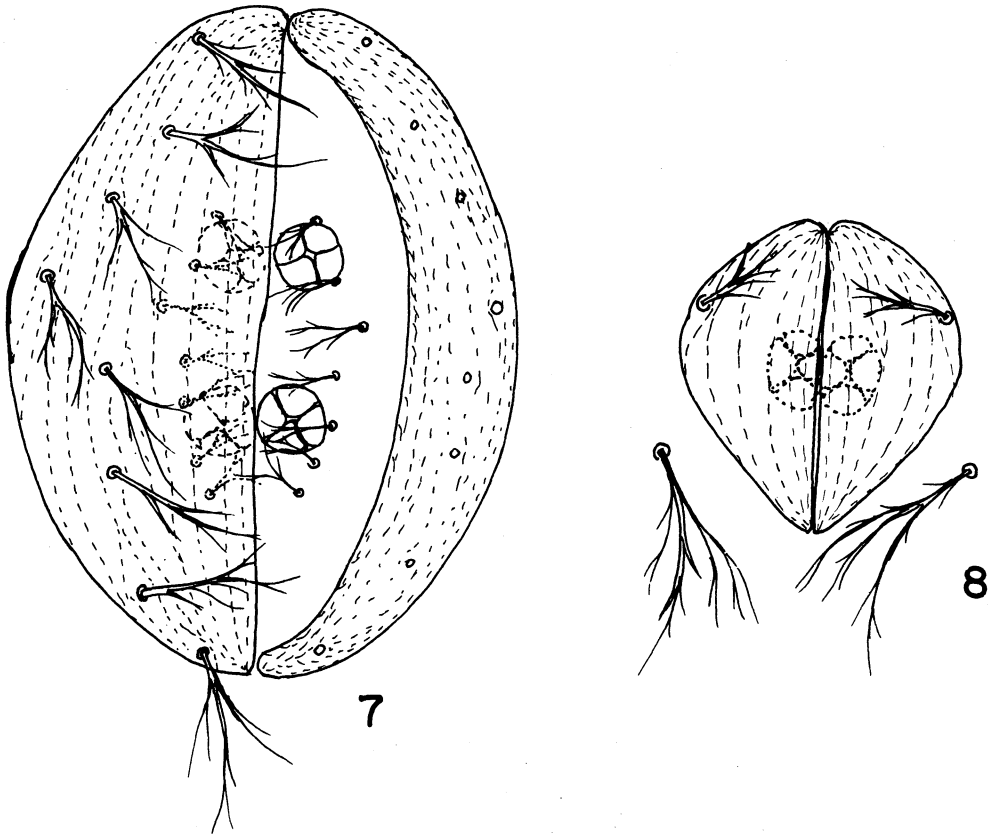


FIG. 7-8. *Nanorchestes bifurcatus* Strandtmann: 7, genitalia of ♂; 8, genitalia of protonymph.