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EVANSSELLUS, A NEW GENUS OF THE FAMILY RHODACARIDAE (ACARINA : MESOSTIGMATA)

BY

P. A. J. Ryke.
(Institute for Zoological Research, Potchefstroom University for C.H.E., Potchefstroom, South Africa).

ABSTRACT.

The genus Evanssellus is based on a new species of mite, E. foliatus, collected from beech litter, New Zealand. It is characterized by the presence of two dorsal shields, the vertical setae which are situated on prominent protuberances and legs I which lack claws and pulvilli.

GENUS EVANSSELLUS, new genus

This genus is based on a new species of mite collected from beech litter, New Zealand. The author has great pleasure in naming this genus in honour of Dr. G. Owen Evans of the British Museum (Nat. Hist.), London.

Diagnosis: Dorsal shield divided; vertical setae situated on prominent protuberances; sternal shield in female with four pairs of setae; pre-endopodal shields present; ventri-anal shield with 17 setae; peritrematal shield produced behind coxa IV; specialized seta on the palpatarsus three-pronged; tectum denticulate; leg I without claws and pulvillus; legs provided with many spine-like setae; male with holoventral shield; male chelicera without prominent spermatophoral process.

Type species: Evanssellus foliatus, n. sp.

Evanssellus foliatus, n. sp.

FEMALE:

Dimensions: Length, 542 μ; breadth, 311 μ; leg I, 622 μ.

Dorsum (fig. 1): The dorsal shields are imbricate. The anterior dorsal shield bears 21 pairs of setae, the majority of which are leaf-like. The pincillate vertical

FIGS 1-4. — *Evanssellus foliatus*, n. gen. et n. sp., female.
Fig. 1, dorsum; fig. 2, venter; fig. 3, chelicera; fig. 4, gnathosoma.
setae are situated on prominent protuberances. The first pair of marginal setae (rr) are relatively long, curving inwards, and are placed on small tubercles. The setal bases of all the setae on the dorsum are prominent. Setae z2 on the anterior shield are smaller than the others. The posterior dorsal shield is also provided with 21 pairs of leaf-like setae. The shields do not cover the entire dorsum but the integument is devoid of setae.

**Venter** (fig. 2) : The sternal shield is broader than long and has a concave posterior margin which is overlapped by a median process of the genital area. The shield bears four pairs of setae, the metasternal setae being much shorter than sternal setae I-III. The tritosternum has two pilose laciniae and its base is flanked by a pair of triangular pre-endopodal shields. The ventri-anal shield bears seven pairs of setae in addition to the circum-anal setae. The two pairs of setae situated near its anterior margin as well as the para-anal setae are simple; the others are broad and flattened. The para-anal setae are placed in line with the posterior margin of the anus. The peritrematal shield is provided with a peritreme which reaches anteriorly to a position beyond coxa I; the shield is produced slightly behind coxa IV. The stigma is situated in line with the posterior margin of coxa IV.

**Gnathosoma** (fig. 4) : The fixed digit of the chelicera bears four teeth and a pilus dentilis (fig. 3); the movable digit is provided with two or three teeth. The hyposomal setae are normal, the inner posterior rostral setae being the longest (fig. 4). The corniculi are relatively small. The palp is provided with a few spine-like setae in addition to the normal simple setae. The specialized seta on the palp tarsus is prominent and it has three prongs; one of the prongs is considerably shorter than the others. The tectum has a median process, the base of which is fringed with denticles (fig. 5).

**Legs** : Leg I (fig. 6) is longer than the idiosoma and it bears strong spine-like setae. Tarsus I is devoid of claws and pulvillus; these are replaced by a cluster of sensory setae, two of which are relatively long. Legs II-IV also bear spinous setae in addition to the normal ones; they are all provided with well developed claws and pulvilli (fig. 7).

**MALE**

Dimensions : Length, 525 µ; breadth, 290 µ.

The venter of the male (fig. 8) is covered by a holoventral shield. The chaetotaxy of both the venter and dorsum resembles that of the female. The lateral portion of the venter has an incision, approaching the condition obtaining in the *Ologamasus — Gamasiphis* group. The male chelicerae are exceptional in that the spermatophoral process probably forms part of the original movable digit. It appears as if the large tooth of this digit acts as its terminal point (fig. 9). As far as could be determined the digit is open at its tip. The fixed digit bears three or four teeth. Leg II of the male is not armed to a much greater degree than that
Figs 5-9. — Evanssellus foliatus, n. gen. et n. sp.

Fig. 5, tectum; fig. 6, leg I; fig. 7, ambulacrum, tarsus III; fig. 8, venter, mâle; fig. 9, chelicera, mâle.
of the female; femur II, however, bears a relatively small additional spur. The other legs are basically the same as those of the female.

**Habitat and locality:** Holotype female, allotype male and paratypes from beech litter, Queenstown, New Zealand, July 1954; collector unknown. These specimens were put at the present author's disposal for description by Dr. G. Owen Evans, British Museum (Nat. Hist.), London.

**Remarks:** This new genus, together with the genera *Rhodacarus* and *Antennoseius* are the only known genera of the Rhodacaridae with a divided dorsal shield which have no claws and pulvilli on leg I. The nature of the venter, the chaetotaxy of the two dorsal shields and the shape of the tectum and chelicerae indicate that it should be referred to this family.

The holotype and allotype specimens of the new species are deposited in the collection of the Arachnida Section of the British Museum (Nat. Hist.); the paratypes are in the Institute for Zoological Research of the Potchefstroom University.