Prolixus (Acari: Trombidiformes: Tenuipalpidae) newly recorded from New Zealand: A new species from Cyperaceae and its ontogenetic patterns in chaetotaxy

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Abstract

The genus Prolixus (Acari: Tenuipalpidae) was represented by two species from Australian sedges prior to this study. A new species, Prolixus meyerae sp. nov., is here described and illustrated from leaves of Gahnia (Cyperaceae) in Auckland, New Zealand. In this paper, we present the ontogenetic additions in idiosomal and leg chaetotaxy from larva to adult. A key to world species of Prolixus is also proposed.

Key words: Flat mite, false spider mite, Cyperaceae, Gahnia, ontogenetic changes

Introduction


The genus Prolixus was erected by Beard et al. (2005) with only two species collected on Gahnia aspera from Australia and was believed to be endemic to Australia. In this paper, we describe and illustrate a new species of this genus, which is a new record to the New Zealand fauna, with samples collected from Gahnia (Cyperaceae) in New Zealand. The ontogenetic development of this species is examined and all the life stages and the variations in the chaetotaxy of the idiosoma and legs are presented. A key to world species of this genus is also provided.

Material and methods

Mites were mounted in Hoyer’s medium, and examined at 1000 times with a DIC Leica DM5000B microscope. All measurements were made from slide-mounted specimens using a stage-calibrated ocular ruler and are given in micrometers (µm) (Zhang & Fan 2004). Measurements of the paratype as a range are presented, followed by the holotype data in parentheses. Body length was measured from the anterior margin of the prodorsum to posterior margin of the opisthosoma, and body width was measured as the greatest distance posterior to coxae II. Setae were measured from the centre of the setal base to the tip of the seta; distances between setae were measured as the distance from the centre of one setal base to the other. Legs were measured from the basal end of trochanter to the distal end of tarsus. Terminology follows that applied to the Tetranychidae by Lindquist (1985).
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References

http://dx.doi.org/10.11646/zootaxa.3778.1.1
http://dx.doi.org/10.1007/s10493-012-9636-8
http://dx.doi.org/10.11158/saa.18.4.6