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A new genus and species of edaphic mite (Acari: Mesostigmata: Eviphididae) from Iran

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Abstract

The new genus *Pedoniphis* **gen. nov.** (Acari: Mesostigmata: Eviphididae) is described from soil detritus in Sabalan Mountains, northwest Iran, with *P. persicus* **sp. nov.** as type species. Among known eviphidid genera, the new genus is the most similar to *Scamaphis* Karg and *Scarabacariphis* Mašán and it can be distinguished especially by the dorsal chaetotaxy (setae J2 absent, setae J5 rudimentary) and the specific form of the peritrematal-dorsal scutal complex (peritrematal shields reduced; peritremes well developed, fused to lateral margins of dorsal shield).

Key words: Acari, Mesostigmata, Eviphididae, new genus, *Pedoniphis*, Iran

Introduction

The family Eviphididae is a cosmopolitan group of predatory mites that display a wide range of ecology and behaviour. Species of Eviphididae are found in various substrates such as soil, vertebrate dung, nests, carrion, and sea debris, and many species are phoretic on arthropods associated with these substrates (Mašán 1994; Makarova 1998; Halliday 2008, 2010). According to Mašán & Halliday (2010), the European fauna includes 29 species in 16 genera. Very few species of Eviphididae from western Asia are included in the existing classification, and the fauna of Iran is very poorly known. Until recently, eight species and seven genera were found in Iran (Kazemi *et al.* 2008; Kazemi & Rajaei 2013). We have found further species that could not be identified with any of the known genera. Based on its specific morphological features, we here introduce a new genus and species in order to contribute to the knowledge of these mesostigmatic mites in Asia, as a part of the project on regional fauna of Eviphididae in Iran, based on extensive recent collections of free-living and insect-associated species.

Material and methods

Newly described mites were extracted from soil using a modified Berlese-Tullgren funnels. The mites were cleared in Nesbitt's solution and mounted in Hoyer's gum-chloral medium. Measurements were made from slide-mounted specimens with a stage-calibrated ocular micrometer. Lengths of shields were measured along their midlines, and widths at their widest point. Length of the epigynal shield was measured from its posterior margin to the posterior margin of the sternal shield (the hyaline anterior margin of the shield is obscure and hardly detectable in the examined specimens). In cheliceral fixed digits, measurements were taken from the margin of the terminal hook to the dorsal lyrifissure, while idiosomal setae were measured from the bases of their insertions to their tips. Measurements are presented as ranges (minimum to maximum). The nomenclature used for the idiosomal chaetotaxy is that of Lindquist & Evans (1965), for the idiosomal poroidotaxy and adenotaxy that of Athias-Henriot (1969a, 1969b) as followed by Johnston & Moraza (1991), for the leg and palp chaetotaxy is that of Evans (1963, 1964). Terminology of other anatomical structures mostly follows Evans & Till (1979).

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