



A new genus and three new species of Eviphididae (Acari: Mesostigmata) associated with scarab beetles in Iran

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Abstract

This paper describes a new genus and three new species of mites (Acari: Eviphididae) associated with scarab beetles (Coleoptera: Scarabaeidae) in northeast Iran: *Metacryptoseius* **gen. nov.**, *M. persicus* **sp. nov.**, *M. khorasanicus* **sp. nov.** and *Cryptoseius khayyami* **sp. nov.** The new genus is similar to *Cryptoseius* Makarova. Additional descriptive information is provided for the genus *Cryptoseius* and its type species, *C. petrovae* Makarova, based on new characters including dorsal adenotaxy and poroidotaxy. *Scamaphis guyimingi* Ma is transferred to *Metacryptoseius*. A key to adults of the genus *Metacryptoseius* is presented.

Key words: Acari, Mesostigmata, Eviphididae, *Metacryptoseius*, *Cryptoseius*, *Scamaphis guyimingi*, Coleoptera, Scarabaeidae, Iran

Introduction

Mesostigmatic mites of the family Eviphididae have been recorded from various substrates such as agricultural soils, vertebrate dung, nests, carrion, and sea debris, and many species are phoretic on arthropods associated with these substrates. There are 15 genera in this family (Hallan 2000), based on characters such as leg and dorsal chaetotaxy, structure of the gnathotectum, chelicerae and peritrematal shield development (Berlese 1910; Halbert 1920, 1923; Womersley 1956; Karg 1963, 1976, 1993; Evans 1969, 1980; Potter & Johnston 1976; Evans & Till 1979; Mašán 1994; Makarova 1998; Skorupski & Błaszak 1997). Other important papers on the family have clarified the identity of some disputable genera of Eviphididae (Ryke & Meyer 1957), contributed to knowledge of the world fauna (Athias-Henriot 1980) and summarized existing data on the family (Shoemaker 1970).

Makarova (1998) defined *Cryptoseius* Makarova based on adults and a deutonymph of a species taken from *Scarabaeus transcaspicus* Stolfa (Scarabaeidae) collected in Turkmenistan. In the diagnosis of this genus, she focused on the reduction of the hypotrichous dorsal shield, not covering the whole dorsum, the chaetotaxy of femur and genu IV, and the gnathotectal structure. In the present work, a new species of *Cryptoseius* is described based on adult females, males, and deutonymphs, together with a new closely related new genus based on adults and nymphal stages of two new species taken from scarab beetles.