



Two new species of the genus *Elattoma* (Acari: Heterostigmatina: Pygmephoridae) phoretic on *Morimus verecundus* (Coleoptera: Cerambycidae) from Iran

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Abstract

Two new species of the genus *Elattoma* Mahunka, 1969 (Acari: Heterostigmatina: Pygmephoridae) associated with *Morimus verecundus* (Faldermann 1836) (Coleoptera: Cerambycidae) are described and illustrated from Oak forests in Golestan province, Northern Iran: *Elattoma cerambycidum* Rahiminejad & Hajiqanbar **sp. nov.** and *E. abeskoun* Rahiminejad & Hajiqanbar **sp. nov.** Both formed large colonies attached on the ventral surface, around coxae I–III of different individuals of the host beetles. This is the first phoretic record of the genus *Elattoma* for beetles of the family Cerambycidae. Furthermore, our record of *Elattoma* is new for the arthropod fauna of Iran. A key to world species of the genus *Elattoma* is also provided.

Key words: Prostigmata, mite, beetle, phoretic relationship, Scolytidae, Iran

Introduction

Adult females of the family Pygmephoridae (Acari: Prostigmata: Heterostigmatina) generally utilize various insects for phoretic dispersal. These mites, including the genus *Elattoma* Mahunka, 1969, are usually free-living and fungivorous (Kaliszewski *et al.* 1995). Heretofore, the members of the genus *Elattoma* comprised eight species and had phoretic relationships most frequently with bark beetles (Scolytidae) and rarely with scarabaeids (Scarabaeidae) (Cross & Moser 1971; Khaustov 2000, 2003; Rodrigues *et al.* 2001).

Mahunka (1969) established the genus *Elattoma* to include *Pygmephorus karafiati* (Krczal, 1959), a mite first described by Krczal (1959) as *Microdispodides karafiati*. Cross and Moser (1971) described the second representative of the genus from USA. Thereafter, Khaustov (2000) described four new species from Ukraine and Northwestern Russia and finally, two other species were added to the genus from Russia and USA (Khaustov 2003).

During a preliminary study of the heterostigmatic mites associated with Coleoptera in Golestan province, Northern Iran, we found two new species of the genus *Elattoma*. Both species had many individuals on specimens of *Morimus verecundus* (Faldermann, 1836) (Cerambycidae). This is the first record of the genus *Elattoma* from Iran. The main purpose of this paper is to describe these two new species.

Material and methods

The host beetles were collected directly in their habitats on Oak trees (*Quercus castaneifolia*) from Naharkhoran forest, Golestan province, Northern Iran in 2009. The mites were then detached from *M. verecundus* using mounting needles.

Mite specimens were cleared in lactophenol and mounted in Hoyer's medium. The morphology of the mites was studied by a light microscope with phase contrast (Olympus BX51). The terminology used in the description follows that of Lindquist (1986). All measurements in the description are given in micrometers (µm) for the holo-