A new species and new records of *Gymnolaelaps* Berlese from Iran (Acari: Laelapidae), with a review of the species occurring in the Western Palaearctic Region

OMID JOHARCHI¹ & BRUCE HALLIDAY²

¹Department of Plant Protection, Yazd Branch, Islamic Azad University, Yazd, Iran.
E-mail joharchi@iauyazd.ac.ir, j.omid2000@gmail.com
²CSIRO Ecosystem Sciences, GPO Box 1700, Canberra ACT 2601, Australia. E-mail Bruce.Halliday@csiro.au

Abstract

This paper reports on five species of mites of the genus *Gymnolaelaps* associated with ants and soil in Iran—*G. artavilensis* sp. nov. from *Pheidole pallidula*, *G. laevis* (Michael) and *G. myrmecophilus* (Berlese) from *Tetramorium caespitum*, *G. myrmophila* (Michael) from *Formica* sp., and *G. obscuroides* Costa from soil. *Gymnolaelaps australicus* Womersley and *G. hospes* (Berlese) have also been reported from Iran, in association with *P. pallidula*, but those records are incorrect. A key to the species of *Gymnolaelaps* occurring in the Western Palaearctic Region is presented. We review the related genus *Laelaspisella* Marais & Loots, and transfer *Gymnolaelaps kabita* Bhattacharyya and *G. canestrinii* sensu Costa to *Laelaspisella*.

Key words: *Pseudoparasitus*, *Nidilaelaps*, *Laelaspisella*, *Laelaspis*, myrmecophile

Introduction

The present paper continues a series that has the objective of increasing our knowledge of the little-known Iranian fauna of the mite family Laelapidae, based on extensive recent collecting of free-living and insect-associated species. We have previously reported on five species of Laelapidae associated with ants (Joharchi et al., 2011), on several genera associated with scarabaeid beetles (Joharchi & Halliday, 2011; Joharchi et al., 2012a), and reviewed the Iranian species of the genus *Laelaspis* (Joharchi et al., 2012b, 2012c). We now expand the study to include further species in the genus *Gymnolaelaps* Berlese, 1916, mainly associated with ants.

*Gymnolaelaps* has often been treated as a subgenus of *Hypoaspis* Canestrini, 1884. Karg (1978) made *Gymnolaelaps* a subgenus of a broadly conceived genus *Pseudoparasitus*, along with three other subgenera, but we here consider it to be a separate genus, following Lindquist et al. (2009). The genus *Gymnolaelaps* is superficially similar in morphology to *Laelaspis* Berlese, 1903 and *Pseudoparasitus* Oudemans, 1902. This problem was briefly discussed in the previous paper (Joharchi et al., 2011), which attempted to distinguish between these genera.

The most recent taxonomic change to the genus was by Shaw (2012), who removed *G. annectans* Womersley, 1955 and made it the type species of the new genus *Nidilaelaps* Shaw, 2012. We now remove several more species that have been wrongly placed in *Gymnolaelaps*, and move them into *Laelaspisella* Marais & Loots and *Laelaspis* Berlese. As a result of these changes, the genus *Gymnolaelaps* can now be defined more precisely, in both morphological and ecological terms.

Species of *Gymnolaelaps* have been collected in many parts of the world, almost always from ants’ nests. The genus includes approximately 35 described species (Hunter, 1967; Gu & Guo, 1997; Afifi & Abdel-Halim, 1998; Joharchi et al., 2011). Seven identified species of *Gymnolaelaps* have previously been reported from Iran—*G. australicus* Womersley, 1956, *G. hospes* (Berlese, 1923), *G. messor* Joharchi et al., 2011, *G. myrmecophilus* (Berlese, 1892), *G. myrmophila* (Michael, 1891), *G. prestoni* Joharchi et al., 2011, and *G. vitzthumi* Womersley,