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Article

Incidence of predatory phytoseiid mites in Saudi Arabia: new records and a key to the Saudi Arabian species (Acari: Mesostigmata: Gamasina)

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Abstract

Cydnoseius negevi (Swirski & Amitai, 1961), *Neoseiulus paspalivorus* (De Leon, 1957) and *Proprioseiopsis beatus* (Chaudhri, 1968) are reported for the first time from Saudi Arabia. The mite genus *Cydnoseius* Muma, 1967 is also new to the Saudi Arabian fauna. *Cydnoseius negevi* was collected from various host plants in three different regions (Riyadh, Hail, Eastern region) while *N. paspalivorus* and *P. beatus* were collected from *Cynodon dactylon* L. (Poaceae) in date palm orchards in Riyadh and Eastern region respectively. A key is provided to the adult females of the known species of Phytoseiidae of Saudi Arabia.

Key words: Acari, Mesostigmata, Phytoseiidae, key, new records, Saudi Arabia

Introduction

Predatory mites of the family Phytoseiidae are the most important natural enemies of mite pests (Kostiainen & Hoy 1996, McMurtry & Croft 1997). This family comprises over 90 genera and more than 2,300 nominal species (Chant & McMurtry 2007; Beaulieu *et al.* 2011). Faunistic studies about phytoseiid mites in Saudi Arabia are still limited (Table 1). Dabbour and Abdel-Aziz (1982) reported two genera, *Amblyseius* Berlese, 1914 and *Phytoseius* Ribaga, 1904, with unnamed species associated with unidentified plants, soil and animal manure. These specimens were re-examined and identified by the senior author as *Neoseiulus barkeri* Hughes, 1948 and *Phytoseius plumifer* (Canestrini & Fanzago, 1876). Fouly and Al-Rehiayani (2011) listed five species collected from different habitats, including *Amblyseius cydnodactylon* Shehata & Zaher, 1969. *Neoseiulus cydnodactylon* (Shehata & Zaher) is listed in Chant and McMurtry (2007) as a species of *Neoseiulus*, but they have not indicated that it is a suspected synonym of *N. barkeri* as they did in Chant and McMurtry (2003) and so this species is included in the key below. Negm *et al.* (2012) carried out the most extensive work on Saudi Arabian Phytoseiidae so far, including a description of a new species, *Neoseiulus saudiensis* Negm, Alatawi & Aldryhim.

The objectives of this paper are to report on three phytoseiid mite species new to the Saudi Arabian mite fauna and provide a key to the 19 known species of Phytoseiidae of Saudi Arabia.