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Two new species of *Pachyseius* Berlese (Acari: Pachylaelapidae) from Turkey, with a key to the world species

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Abstract

The genus *Pachyseius* Berlese, 1910 (Acari: Pachylaelapidae) is reported from Turkey for the first time. *Pachyseius siranensis* sp. nov. and *Pachyseius masani* sp. nov. are described from females collected from litter and moss in north-eastern Turkey. A world-wide key to the species of *Pachyseius* is provided. The number of setae on the ventri-anal shield appears to be variable within some species in this genus. Some species of *Pachyseius* show reductions in chaetotaxy on tarsi III and IV.

Key words: Acari, Pachylaelapidae, *Pachyseius*, new species, Turkey

Introduction

The family Pachylaelapidae includes 16 genera and about 250 species world-wide (Mašán, 2007; Mašán & Halliday, 2014). Mites in this family are found in decomposing organic matter, particularly soil, humus, litter and moss (Mašán, 2007). The fauna of Turkey is very poorly known, with only three recognised species – *Onchodellus siculus* (Berlese, 1892), *Pachydellus vexillifer* (Willmann, 1956) and *Olopachys hallidayi* Özbek, 2014 (Erman *et al.*, 2007; Özbek, 2014).

The genus *Pachyseius* was proposed by Berlese (1910), and now includes 18 species described from Europe, Russia and Asia. In Europe, species of *Pachyseius* have been described from Italy (Berlese, 1910), France (Willmann, 1935), Great Britain (Hyatt, 1956), Romania (Solomon, 1982; Mašán & Fend'a, 2014), Netherlands (Afifi & Nasr, 1984), Spain (Moraza, 1993), Slovakia (Mašán, 2007), Bulgaria (Mašán & Mihál, 2007), and Germany (Mašán, 2008). Species have also been described from China (Yin *et al.*, 1986; Ma & Yin, 2000; Chen *et al.*, 2009), Japan (Ishikawa, 1989), and the former USSR (Nikolsky, 1982). The two new species described here represent the first record of the genus from Turkey.

Material and methods

Mites were collected individually by hand, or by bulk methods and extracted using Berlese funnels. Mites were mounted in Hoyer's medium following the methods of Krantz & Walter (2009). Specimens were examined, illustrated and measured using a Leica DM 4000 B phase-contrast microscope. All measurements are given in micrometres (µm), with the holotype first and the range of measurements for paratypes in brackets. Holotypes and paratypes are deposited in the Acarology Laboratory of Erzincan University, Turkey. Paratypes are also deposited in the Australian National Insect Collection, CSIRO, Canberra. The terminology for the dorsal and ventral chaetotaxy follows Lindquist & Evans (1965). We use the word "lyrifissures" to refer to slit-shaped sensory organs, "gland pores" for the apparent openings of secretory organs, and "poroids" for pore-like structures of unknown function. All specimens were collected from localities in Turkey.

1982, but since then a further 17 species have been described. This sudden increase in knowledge of the genus in recent years suggests that more species remain to be discovered, perhaps on the basis of unrecognised or misclassified specimens that already exist in collections.

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