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Article

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The stigmaeid mites (Acari: Stigmaeidae) of Kelkit Valley (Turkey)[1]

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1. This paper is a part of the PhD thesis of G. Dönel.

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Abstract

The stigmaeid mites collected from Kelkit Valley in Turkey are investigated. Nine new species, *Cheylostigmaeus urhani* **sp. nov.**, *Eustigmaeus varius* **sp. nov.**, *Ledermuelleriopsis indiscretus* **sp. nov.**, *Stigmaeus additicius* **sp. nov.**, *S. angustus* **sp. nov.**, *S. ayyildizi* **sp. nov.**, *S. furcatus* **sp. nov.**, *S. kelkitensis* **sp. nov.** and *Prostigmaeus integrius* **sp. nov.**, are described and illustrated. The following four stigmaeid species are new records for the Turkish fauna: *Cheylostigmaeus salinus* Evans, *Eustigmaeus lacuna* (Summers), *Stigmaeus glabrisetus* Summers and *S. solidus* Kuznetsov. Some known stigmaeid mites are recorded from new localities. This is the first record of the genus *Prostigmaeus* Kuznetsov in Turkey. Keys to Kelkit Valley genera and species of Stigmaeidae are included.

Key words: Acari, Stigmaeidae, new species, new records, Kelkit Valley, Turkey

Introduction

Stigmaeidae is a family within the superfamily Raphignathoidea. They are a large cosmopolitan group of genera distinguished by the position of the dorsal shields, number of subcapitular setae, size of the palptibial claw, shape of the terminal eupathidia on the palptarsus, situation of the cheliceral base, and presence of coxisternal shields. These mites live in or on soil, grass, leaf, mulch, lichen, bark, beetle frass, crevices in rock and leaf cavities, and a few of them are parasitic on phlebotomine files (Doğan & Ayyıldız 2003b; Akyol & Koç 2007). Currently this family consists of 32 valid genera (Doğan *et al*. 2011). Up to now nine genera and 53 species have been reported from Turkey (Doğan 2007; Akyol & Koç 2007, 2010).

Kelkit Valley is the most northern part and the longest valley of the Yeşilırmak Basin. It is geographically a transitional zone between the Middle Black Sea and Inner Anatolia regions, also a transitional zone between the Euro-Siberian and Irano-Turanian phytogeographic regions. This situation is clearly reflected in the flora and vegetation of the study area. The valley starts from the Giresun Mountains and lies in an east-west direction along the Yeşilırmak Mountains and Canik Mountains, which constitute the northern and southern slopes of the valley respectively. The mean altitudes of these mountains are 1400–1500 m. At the bottom of the valley, there is a clear decrease in altitude in an east-west direction. The altitude is about 650 m in Koyulhisar, 450 m in Reşadiye, 350 m in Niksar and 280 m in Erbaa. The research area covers 15913.07 km^2 including 18 administrative districts: Taşova, Refahiye, Şebinkarahisar, Alucra, Çamoluk, Şiran, Köse, Kelkit, Koyulhisar, Suşehri, Doğanşar, Akıncılar, Gölova, Almus, Erbaa, Niksar, Başçiftlik and Reşadiye (Figure 1). Four seasons (autumn, winter, spring and summer) are recognized in this region. A Mediterranean climate is experienced in the study area along the valley between 300 and 900 m. But at the upper part of the valley, the effect of a Mediterranean climate decreases and an oceanic climate becomes dominant (Karaer & Kılınç 2001; Doğan 2009).

Nine new and four newly recorded species collected from Turkey are herein described and illustrated. Some known stigmaeid mites are recorded from new localities. *Prostigmaeus* is a new generic record for Turkey. Keys to genera and species of Stigmaeidae found in Kelkit Valley are included.

Material and methods

Samples were taken from the research area during 2007–2009. Methods used for specimen collection, extraction, material preservation, preparation and drawing of the specimens were as discussed by Doğan (2006b). Dorsal setal and leg setal designations follow Kethley (1990) and Grandjean (1944), respectively. Setal counts of leg segments are given with solenidia in parenthesis. All measurements are given in micrometers (μm) and refer to length of the