



***Stigmaeus boshroyehensis* sp. nov. (Acari: Stigmaeidae) from eastern Iran, with re-description of *Stigmaeus pilatus* Kuznetzov**

MOHAMMAD KHANJANI¹, HAMZEH IZADI², BAHMAN ASALI FAYAZ¹,
HOSEIN RAISI², ELAHEH ROSTAMI³ & SALİH DOĞAN⁴

¹Department of Plant Protection, College of Agriculture, Bu Ali-Sina University, Hamaden, Iran. E-mail: mkhanjani@gmail.com

²Department of Plant Protection, College of Agriculture, Vali-e-Aser University of Rafsanjan, Rafsanjan, Iran

³Department of Plant Protection, College of Agriculture, Shahed University, Tehran, Iran

⁴Department of Biology Education, Kâzım Karabekir Education Faculty, Atatürk University, Erzurum, Turkey

Abstract

A new species of the genus *Stigmaeus*, *S. boshroyehensis* **sp. nov.**, is described and figured based on females. Specimens were collected from soil under pistachio trees at Boshroyeh vicinity, south Khorasan province, Iran. Also a known species, *S. pilatus* Kuznetzov, collected from soil under plum and apple trees at Maryanaj vicinity, Hamedan province, Iran, is re-described. A key to all known Iranian species of the genus is provided.

Key words: Acari, Stigmaeidae, *Stigmaeus*, predatory mites, Iran

Introduction

The genus *Stigmaeus* was established by Koch (1836) and *Stigmaeus cruentus* Koch was designed as type species. *Stigmaeus* is one of the largest and most diverse genera in the family Stigmaeidae. The members of this genus are mostly predators (a few species are parasitic), feeding on a variety of arthropods (Swift, 1987). They are an important component of the Acari fauna of soil, litter, vegetation and even occur on sandflies. Currently this genus is one of the thirty-two known valid genera in the family Stigmaidae (Doğan *et al.*, 2010). To date eight species of the genus *Stigmaeus* have been recorded from Iran, namely: *S. unicus* Kuznetzov, 1977; *S. alvandis* Khanjani & Ueckermann, 2002; *S. elongatus* Berlese, 1886 [Khanjani & Ueckermann, 2002]; *S. candidus* Fan and Li, 1993 (= *S. mazandaranicus* Faraji and Ueckermann, 2006) [Faraji and Ueckermann, 2006] and *S. malekii* Haddad, Bagheri and Khanjani, 2006 [Haddad Irani-Nejad *et al.*, 2006]; *S. pilatus* Kuznetzov, 1978; *S. shabestariensis* Haddad, Lotfollahi & Akbari 2010, *S. shendabadiensis* Hadad, Akbari & Lotfollahi, 2010 [Haddad Irani-Nejad *et al.*, 2010 a & b]; and in this paper the ninth species, *S. boshroyehensis* **sp. nov.** is described and *S. pilatus* re-described. Khanjani and Ueckermann (2002); Haddad Irani-Nejad *et al.* (2006), (2010 a & b); and Noei *et al.* (2007) gave keys to this genus. We also compile a key to the all known Iranian species.

Material and methods

The specimens of the new species were mounted in Hoyer's medium (Krantz & Walter, 2009). Slide-mounted specimens were examined with an Olympus BX₅₁, with differential interference contrast microscopy (DIC) under 1000X magnification. All drawings were prepared with a drawing tube. Body length measurements represent the distance between the end of the palp tarsus and the posterior margin of the body; width was measured at the broadest point of the idiosoma, at the level of seta *c*₂. Setae were measured from the setal base to the tip of the seta; distances between setae were measured between setal bases. Leg measurements are from coxa to pretarsus.

The terminology and setal notations used in the descriptions follow that of Summers (1962) and Lindquist