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First report of the *Stigmaeus diversus* (Acari: Stigmaeidae) from Iran

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Species of the family Stigmaeidae (Acari: Trombidiformes), living in soil and on plants in various parts of the world, are usually predators of other mites and a few prey on tree-associated arthropods or parasitize flies (Swift 1987; Fan and Zhang 2005). It is the largest family within the superfamily Raphignathoidea, and was established by Oudemans (1931). This family includes about 600 species in 33 valid genera (Fan *et al*. 2016; Doğan *et al*. 2017; Akyol 2019; Doğan, 2019; Khaustov 2019). The genus *Stigmaeus* is one of the largest and most diverse genera in the family, containing 143 valid species up to now and so far 43 species of this genus were recorded or described from Iran (Khanjani *et al.* 2015; Fan *et al*. 2016; Khaustov *et al*. 2017; Da-Costa *et al*. 2018; Akyol 2019; Majidi *et al*. 2019).

During 2018, the fauna of Raphignathoidea mites in Arasbaran Forests was studied. Mites were extracted from samples using a Berlese-Tullgren funnel and they were cleared in lactophenol fluid for 2–3 days and finally mounted in Hoyer's medium. Among collected species of the genus *Stigmaeus*, *S. diversus* was identified. This species originally was described from Uzbekistan by Barilo (1987), and has been reported only from that country. In this study, we are reporting it from Iran for the first time. Measurements are given in micrometers.

Genus *Stigmaeus* Koch, 1836

Type species: *Stigmaeus cruentus* Koch, 1836.

Stigmaeus diversus Barilo, 1987 (Fig. 1)

Redescription of female

Dorsum (Fig. 1) – Dorsum with 13 pairs of setae (setae *h3* absent); all dorsal shields completely reticulated, 310 long, 203 wide; prodorsal shield with 3 pairs of setae (*vi*, *ve* and *sci*); setae *sce* on small shields; eyes present but post-ocular bodies (*pob*) absent; median hysterosomal shield with two pairs of setae (*c1, d1*); setae *d2* located on lateral shields; seta *e2* on lateral zonal shield; intercalary shields separated and bearing setae *f1*; suranal shield undivided and with two pairs of setae (*h1*and *h2*); dorsal setae with small spinules. Length of dorsal setae: *vi* 44, *ve* 63, *sci* 28, *sce* 51, *c1* 45, *c2* 47, *d1* 49, *d2* 48, *e1* 50, *e2* 55, *f1* 62, *h1* 60, *h2* 64.

Venter – Endopodal shields punctuated, well divided by striae and with three pairs of ventral

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setae (*1a*, *3a* and *4a*); three pairs of aggenital setae (*ag1–ag3*); one pair of genital setae (*g1*) and three pairs of pseudanal setae (*ps1–ps3*); length of ventral setae: *1a* = *3a* = *4a* 18, *ag1* 15, *ag2* 16, *ag3* 17, *g1* 12, *ps1* 36, *ps2* 32, *ps3* 18.

Gnathosoma – Hypostome reticulated, with two pairs of subcapitular setae (*m, n*), *m* 20, *n* 14 and two pairs of adoral setae (*or1, or2*). Palps 72 long, five segmented: palptarsus with one terminal tridentae eupathidium, one solenidion and five simple setae; palptibia with one developed claw and two setae, accessory claw spine-like; palp genu with two setae and palp femur with three setae.

Legs – Length of legs I–IV: 192, 167, 165 and 205 respectively, including pretarsus. Segments punctuated, setal formulae of segments (solenidia in parentheses and not included) as follows: coxae 2-2-2-2, trochanters 1-1-2-1, femora 6-5-3-2, genua 2(+*κ*)-2(+*κ*)-0-0, tibiae 5(+*φ,φρ*)-5(+*φ*)-5(+*φ*)-5(+*φ*), tarsi 13(+*ω*)-9(+*ω*)-7(+*ω*)-7(+*ω*).

Habitat

Soil under *Medicago* sp. [Fabaceae] and *Salix* sp. [Salicaceae] (Barilo 1987; Fan *et al*. 2016); soil under *Carpinus* sp. [Betulaceae] (present study).

Distribution

Uzbekistan (Barilo 1987; Fan *et al*. 2016), Iran (present study).

Material examined

One female specimen was collected from soil under *Carpinus* sp. by M. Mohammad Doustaresharaf in 27 August 2018, from Arasbaran Forests, North East Azerbaijan Province, Iran, (38° 56' 42" N, 46° 45' 43" E), and deposited in the Acarological Collection, Department of Plant Protection, Faculty of Agriculture, University of Maragheh, Maragheh, Iran.

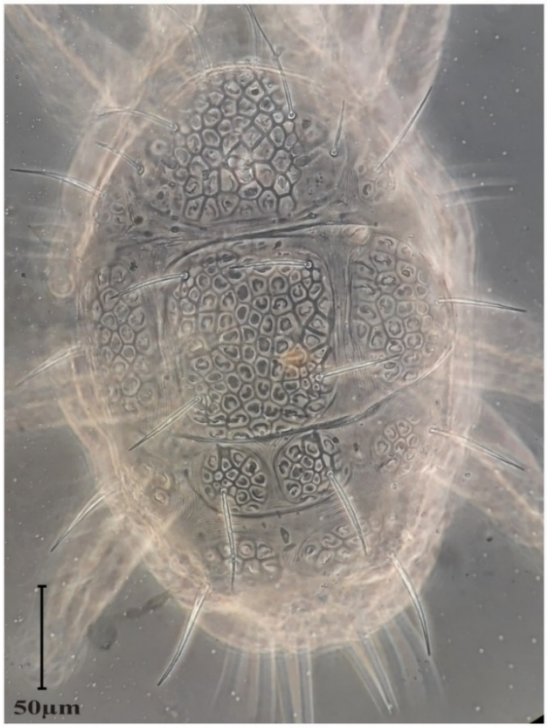

Figure 1. *Stigmaeus diversus* (female) – Dorsal view of idiosoma.

Discussion

Barilo (1987) described this species from Uzbekistan, in Russian language. We now have found it in Iran, extending its distribution area. Most features of the Iranian specimen including

pattern of dorsal shields, shape of dorsal setae and leg stations are very close to those in the original description, but there are negligible differences in length of dorsal seta.

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