

Three new records of raphignathoid mites (Acari: Raphignathoidea) from Iran

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Abstract: A total of 3 raphignathoid (Acari: Raphignathoidea) mite species, 2 from the family Stigmaeidae (*Eustigmaeus anauniensis* (Canestrini, 1889) and *Stigmaeus planus* Kuznetsov) and 1 from the family Raphignathidae (*Raphignathus africanus* Meyer & Ueckermann), are given as new records for the Iranian fauna.

Key words: Acari, Raphignathoidea, Raphignathidae, Stigmaeidae, new record, Iran

The family Stigmaeidae is a large cosmopolitan group in the superfamily Raphignathoidea (Acari: Prostigmata). They live in or on soil, grass, leaf, mulch, lichen, bark, beetle frass, crevices in rock, and leaf cavities; a few of them are parasitic on phlebotomine flies (Dönel and Doğan, 2011a). Currently, this family consists of 32 valid genera and about 500 species (Fan, 2005; Doğan et al., 2011). To date, 37 species in 9 genera, *Agistemus* Summers, *Cheyllostigmaeus* Willmann, *Eustigmaeus* Berlese, *Ledermuelleriopsis* Willmann, *Parastigmaeus* Kuznetsov, *Prostigmaeus* Kuznetsov, *Stigmaeus* Koch, *Storchia* Oudemans, and *Zetzellia* Oudemans, have been reported from Iran.

Raphignathidae contains 2 valid genera, *Raphignathus* Dugés and *Neoraphignathus* Smiley &

Moser. *Raphignathus* has a worldwide distribution and 60 described species. They can be found underneath tree bark and in litter, moss, lichen, soil, stored products, house dust, and bird nests (Dönel and Doğan, 2011b). To date, 9 species of this genus have been reported from Iran.

In the current paper, 3 newly recorded species collected from Iran, *Raphignathus africanus* Meyer & Ueckermann, *Eustigmaeus anauniensis* (Canestrini, 1889), and *Stigmaeus planus* Kuznetsov, are given. Distinguishing features of the identified species and their body dimensions are given. All measurements are given in micrometers. The specimens were examined, measured, and identified with the aid of a Leica DM 4000 B phase contrast microscope.

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Family Stigmaeidae

Genus *Eustigmaeus* Berlese, 1910

Eustigmaeus anauniensis (Canestrini, 1889) (n = 3)

Length of body 275-291, width 200-214. Dorsal shields with polygonal dimples, each dimple contains pores. Propodosoma tapering to a pointed apex. Dorsal body setae bushy, shorter than distances between their successive bases. Eyes present. Setae c_2 similar to dorsal setae. Humeral regions without callosities. Coxisternal shields completely fused. *4a* present. Three pairs of aggenital setae. Leg femur II bearing 4 setae.

Examined specimens: Three females from some kind of orchard soil, Torbate-Jam region (Khorasan Razavi Province), Iran, September 2010 and April 2011, by A. Rahmdeli.

Distribution: Austria, Crimea, Holland, Hungary, Italy, Lithuania, Latvia, Poland, Taiwan, Turkey, United States (Doğan, 2005, 2007; Dönel and Doğan, 2011b), and Iran (current paper).

Genus *Stigmaeus* Koch, 1836

Stigmaeus planus Kuznetsov, 1978 (n = 1)

Length of body 291, width 127. Propodosomal shield reticulated in middle with a median apodemal mark.

Intercalary shields paired. Suranal shield divided, h_3 present. Genital and anal shields contiguous, with 2 pairs of genital and 3 pairs of pseudanal setae. Leg femora 4-4-3-2, genua 6(k)-3-0-1.

Examined specimen: One female from some kind of orchard soil, Torbate-Jam region (Khorasan Razavi Province), Iran, December 2011, by A. Rahmdeli.

Distribution: Crimea, Turkey (Kuznetsov, 1978; Koç and Ayyıldız, 1997; Doğan, 2007), and Iran (current paper).

Family Raphignathidae

Genus *Raphignathus* Dugés, 1834

Raphignathus africanus Meyer & Ueckermann, 1989 (n = 1)

Length of body 298, width 194. Dorsum with small shields behind median prodorsal shield. Dorsal setae simple. Interscutal membrane with 2 pairs of setae. Palp femur bearing 3 setae. Leg femur IV with 2 setae, coxa II with 2 setae.

Examined specimen: One female from some kind of orchard soil, Torbate-Jam region (Khorasan Razavi Province), Iran, August 2010, by A. Rahmdeli.

Distribution: South Africa (Meyer and Ueckermann, 1989) and Iran (current paper).

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