New species and new records of mites of the genus *Stigmaeus* (Acari: Prostigmata: Stigmaeidae) from Crimea

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Abstract

Three new species of the genus *Stigmaeus* Koch, 1836 (Acari: Stigmaeidae) are described from various habitats in Crimea: *Stigmaeus kuznetsovi* sp. nov. from nests of *Microtus socialis* (Rodentia: Cricetidae); *S. mitrofanovi* sp. nov. from galleries of *Pityogenes bistridentatus* (Coleoptera: Curculionidae) under the bark of *Pinus pallasiana*, and *S. silvestris* sp. nov. from rotten log of *Pinus pallasiana*. *Stigmaeus corticeus* Kuznetsov and Wainstein, 1977 and *S. maraghehiensis* Bagheri and Ueckermann, 2012 are recorded for the first time in Crimea. A key to species of the genus *Stigmaeus* of Crimea is provided.

Key words: Acarina, Raphignathoidea, systematics, predatory mites

Introduction

The predatory mite family Stigmaeidae (Acari: Prostigmata) is the largest in the superfamily Raphignathoidea and includes about 500 species of 32 valid genera. Among them, the specious genus *Stigmaeus* Koch, 1836 includes about 135 species (Bagheri et al. 2013).

In the genus *Stigmaeus*, Summers (1962) established two species groups. The first group is characterized by the robust, broad-body as in *S. siculus* Berlese, the presence of only one pair of the genital setae, setation of femora I-IV 6-5-3-2, genua 4-4-1-1, and by the usually pointed empodial raylets. Summers (1962) also included in this group some “transitional” species with fusiform body such as *S. callunae* Evans. The second group includes only species with fusiform body and characterized by the presence of two genital setae, variable leg setation (usually femora I-IV with 4-4-3-2 setae and genua 6-5-2-2), and the capitate empodial raylets.


Material and methods

Mites were collected from various habitats using Berlese funnels or by direct examination of subcortical galleries of beetles and mounted in Hoyer’s medium. In the description below, the palpal, idiosomal and the leg setation follows Grandjean (1939, 1944, 1946). The nomenclature of the idiosomal plates follows Summers (1962). All measurements are given in micrometres (μm) for the holotype and if available for paratypes (in parentheses). In descriptions of leg setation the number of solenidia is given in parenthesis. Photographs were taken with a digital...
3. Dorsal setae thin, smooth .......................................................... S. solidus
- Dorsal setae thick, strongly barbed ........................................... S. glypticus
4. Median zonal plate entire .......................................................... 5
- Median zonal plates paired ........................................................... 6
5. Eyes present, suranal plate with 2 pairs of setae ........................................ S. unicus
- Eyes absent, suranal plate with 3 pairs of setae .................................... S. elongatus
6. Eyes present ............................................................................. 7
- Eyes absent ............................................................................. 9
7. Femur II with 5 setae, dorsal plates reticulated ..................................... 8
- Femur II with 4 setae, dorsal plates smooth ....................................... S. pilatus
8. Auxiliary plates fused with central propodosomal plate, most of dorsal setae long and pointed ................................. S. nikitensis
- Auxiliary plates separated from central propodosomal plate, most of dorsal setae relatively short and blunt-ended .................... S. corticeus
9. Suranal plate with 3 pairs of setae .................................................. S. planus
- Suranal plate with 2 pairs of setae .................................................. 13
10. Suranal plate entire ................................................................. 11
11. Suranal plate represented by 2 separate plates ................................S. maraghehiensis
- Lateral zonal plates very small, at least 4 times shorter than marginal plates ................................................................. S. pulchellus
12. Setae $c_2$ situated on small platelets, ratio ve/sei 1.1 ........................ S. purpurascens
- Setae $c_2$ situated on central hysterosomal plate, ratio ve/sei 1.4 ........ S. maraghehiensis
13. Supracoxal setae of palps (elcp) and legs I (elcl) seta-like (Figs. 28, 31) ................................................................. 14
- Supracoxal setae of palps and legs I peg-like (Figs. 12, 14) .......... S. maraghehiensis
14. Setae sce, $d_1$, $e_1$ long, smooth and pointed, similar to ve and c1 ........ S. mitrofanovi sp. n.
- Setae sce, $d_1$, $e_1$ short, barbed and blunt-ended, similar to c2 and d1 ... S. silvestris sp. n.
15. Setae sce relatively short, blunt-ended, barbed in distal half, similar to c1 ................................................................. S. sriculus
- Setae sce long, pointed, barbed in basal half, similar to ve ........................ S. kuznetsovi sp. n.

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