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A new genus and species of Schizogyniidae (Acari: Mesostigmata) associated with carabid beetles (Coleoptera: Carabidae) from Ukraine

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Abstract

A new genus and species of Schizogyniidae (Acari: Mesostigmata: Celaenopsoidea), *Euroschizogynium calvum* **gen. nov.** and **sp. nov.**, associated with *Scarites terricola* Bonelli, 1813 (Coleoptera: Carabidae) is described from Ukraine, representing the first record of the family from the Palaearctic. *Fusura civica* Valle & Fox, 1966 is moved out of the Schizogyniidae and placed into the Megacelaenopsidae. A new diagnosis for the family Schizogyniidae and a key to genera are provided.

Key words: mites, Trigynaspida, Antennophorina, Celaenopsoidea, *Euroschizogynium calvum*, taxonomy, key

Introduction

The suborder Trigynaspida comprises about 350 mite species from 27 families that are mostly associated with arthropods in subtropical to tropical habitats (Lindquist *et al.* 2009; Beaulieu *et al.* 2011). Reflecting this habitat preference, about 25 species from eight families have been recorded from Europe (e.g., Silvestri 1912; Bregetova 1977; Kinn 1991; Wisniewski & Hirschmann 1992; Khaustov 1997, 1999; Gwiazdowicz 2002; Moraza *et al.* 2008; Kim & Castagnoli 2010; Trach 2011, 2013; Plumari & Kazemi 2012). Five families of Trigynaspida have been recorded from Ukraine: Antennophoridae, Celaenopsidae, Cercomegistidae, Diplogyniidae and Parantennulidae (Bregetova 1977; Khaustov 1997, 1999; Trach 2011, 2013).

The Schizogyniidae Trägårdh, 1950 is a poorly known family that includes only five genera and ten species: *Schizogynium megisthanoides* (Stoll, 1893), *S. intermedium* Trägårdh, 1950, *S. africanum* Trägårdh, 1950, *S. berlesei* Funk, 1970, *S. forcipis* Karg, 1997, *Indogynium lindbergi* Sellnick, 1954, *Mixogynium proteae* Ryke, 1957, *M. ruhmi* Hirschmann, 1972, *Choriarchus reginus* Kinn, 1966, and *Paraschizogynium odontokeri* Hunter & Rosario, 1987. *Fusura civica* Valle & Fox, 1966 described from Venezuela should be transferred to another mite family (Kinn 1966), most likely the Megacelaenopsidae. Schizogyniid mites are known from the Neotropical (Panama, Chile), the Afrotropical (Congo, South Africa, Uganda), the Indomalayan (India, Philippines), the Nearctic (USA) and the Australasian (New Caledonia) regions and, until now, were not known from the Palaearctic (Stoll 1893; Trägårdh 1950; Sellnick 1954; Ryke 1957; Kinn 1966; Funk 1970; Hirschmann 1972; Hunter & Rosario 1987; Karg 1997) (Fig. 1).

The biology of the Schizogyniidae is unknown, beyond what can be gleaned from their collection records. Adult mites are associated with passalid beetles (Coleoptera: Passalidae) (Trägårdh 1950), bark beetles (Coleoptera: Ipsidae) and their galleries (Kinn 1966; Hirschmann 1972), and snakes (Squamata: Uropeltidae) (Sellnick 1954), but have been found free-living under bark of a dead tree (Trägårdh 1950), on *Protea* flowers (Ryke 1957), and between roots in deciduous forest (Karg 1997). In this contribution to the family, we add the first Palaearctic species of this family, collected from Ukraine.

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