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A new species and record of *Aceria* (Acari: Prostigmata: Eriophyoidea) on *Carlina* spp. (Asteraceae) from Serbia

BILJANA VIDOVIĆ

Department of Entomology and Agricultural Zoology, Faculty of Agriculture, University of Belgrade, Nemanjina 6, 11080 Belgrade – Zemun, Serbia. E-mail: magud@agrif.bg.ac.rs

Abstract

A new species of eriophyoid mite, *Aceria utzkae* n. sp., inhabiting *Carlina acanthifolia* subsp. *utzka* (Hacq.) Meusel & Kästner (Asteraceae) is described and illustrated. It is compared with *Aceria carlinae* (Nalepa), the only other species known to inhabit *Carlina* spp., and a differential diagnosis is provided. Both species are recorded from Serbia for the first time and a new host plant, *Carlina vulgaris* (Asteraceae) L., is also documented for *Aceria carlinae*.

Key words: Eriophyidae, Eriophyini, Eastern Europe, Cardueae, carline thistle, weeds

Introduction

Eriophyoid mites are among the smallest living plant feeders. A large number of species indicate high plant host specificity and relatively rapid speciation. A tendency to monophagy and/or oligophagy suggests a close morphological and biochemical interaction with their host plants (Oldfield 2005; de Lillo & Skoracka 2010; Petanović & Kielkiewicz 2010).

Good quality specimens are fundamental for the purpose of eriophyoid mite systematics. Since such specimens are mounted on microscope slides and their durability is of a very delicate nature, obtaining accurate alpha-taxonomic descriptions and associated drawings in the first instance are crucially important. About 3700 eriophyoid species have been described so far and a huge number remain undiscovered (Amrine *et al.* 2003). Every year, dozens more new eriophyoid species are being described. From 1996 to 2007, the rate was about 70 species per year (de Lillo & Skoracka 2010). Some published descriptions and drawings have not achieved the required level of quality which can later cause taxonomic uncertainty. Furthermore, many eriophyoid descriptions from very old publications are incomplete and often lack illustrations. Exact and uniform morphometric descriptions along with illustrative data are essential for the correct identification and future revision of eriophyoid species (de Lillo *et al.* 2010)

According to the Plant List database (2012), the genus *Carlina* L. includes about 50 plant species originating from Europe and West Africa with the highest diversity being recorded from the Mediterranean region (Mabberly 1998). In the Flora of Serbia, Gajić (1975) recorded three species: *Carlina vulgaris* L., *Carlina acaulis* L. and *Carlina acanthifolia* subsp. *utzka* (Hacq.) Meusel & Kästner (syn. *C. utzka* Hacq.).

Only one eriophyoid species from *Carlina* spp. has been described in the world, namely *Aceria carlinae* (Nalepa). Initially, *A. carlinae* was named as *Eriophyes carlinae* by Nalepa (1905) when it was first described from *Carlina gummifera* (Less.) collected in Sicily, Italy. This host plant was originally listed as *Atractylis gummifera* (L.) Less. which is now considered to be a synonym of *C. gummifera*. Since the original description of *A. carlinae* lacked detail, a supplementary morphological description of this species (with illustrations) was provided by Mifsud *et al.* (2006–2007). However, this was based on specimens collected from *Carlina gummifera* (syn. *Atractylis gummifera* L.) in Malta. This thistle, a plant species widely found in North Africa, commonly grows in dry areas and the juice of its rhizome is poisonous (Hamouda *et al.* 2004).

Among the Eriophyoidea fauna known from Serbia, 287 species have been recorded from 46 genera and 88 of

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