



A new species of *Aculops* (Acari: Prostigmata: Eriophyidae) from Serbia on *Dipsacus laciniatus* L. (Dipsacaceae), a weed target of classical biological control in the United States of America

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Abstract

A new eriophyoid mite species, *Aculops orlovacae* n. sp. (Acari: Prostigmata: Eriophyidae) collected from *Dipsacus laciniatus* L. (Dipsacaceae) in northern Serbia, is described and illustrated, including digital micrographs depicting key morphological characters. Differential diagnosis is provided in comparison with *Aculops salix* Xue, Song et Hong, *Aculops rhodensis* (Keifer), *Aculops hussongi* Keifer and *Aculops oblongus* (Nalepa). This is the first eriophyoid mite species in the genus *Aculops* described from a host plant in the family Dipsacaceae and it is only the second eriophyoid known from a host species in the genus *Dipsacus* L. This mite was found during surveys for natural enemies of *Dipsacus* spp., as part of a classical biological control program.

Key words: biological control of weeds, Eriophyoidea, invasive species, mite, systematics

Introduction

Amrine and Stasny (1994) listed only three eriophyoid mite species that were known to occur on hosts in the family Dipsacaceae, including: *Aceria squalida* (Nalepa), originally found on *Scabiosa columbaria* L. in France (Nalepa 1892) and since recorded from additional hosts in numerous European countries (Petanovic & Stankovic 1999; de Lillo 2011); *Epitrimerus knautiae* Liro found on *Knautia arvensis* (L.) J.M. Coult in Finland and Poland (Liro 1942; Boczek 1964); and *Epitrimerus succisae* Roivainen found on *Succisa pratensis* Moench in Finland (Roivainen 1947). Petanovic and Rector (2007) described *Leipothrix dipsacivagus* on *Dipsacus laciniatus* L., and *Dipsacus fullonum* L., from specimens collected in Serbia, France and Bulgaria and, in the same study, transferred *E. knautiae* and *E. succisae* to the genus *Leipothrix* Keifer. In May 2007, a new eriophyoid mite species was collected from *D. laciniatus* during surveys in northern Serbia. This new species, *Aculops orlovacae* n. sp., is described and illustrated herein.

Material and methods

Samples of *Dipsacus laciniatus* L. with symptoms of russetting consistent with eriophyoid infestation were collected from Orlovača, a location south of Belgrade, Serbia (44° 42.34' N, 20° 24.78' E). Mites were collected using extraction methods as described by de Lillo (2001) and Monfreda *et al.* (2007) and their presence was confirmed using a stereomicroscope. The morphology of *Aculops orlovacae* n. sp. was examined using a phase-contrast microscope (Leica DMLS) with a digital camera attached and connected to a computer. In preparation for light microscopy, the mites were initially cleared in lactic acid for several days and then mounted in Keifer's 'F' medium. Morphometry was performed using the software package IM 1000 (Leica, Wetzlar, Germany). Measurements of