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Eriophyoid mites (Acari: Prostigmata: Eriophyidae) associated with Compositae in Iran

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Abstract

Five species of eriophyoid mites were identified during surveys of mite fauna associated with plant species of the family Compositae from Southwest of East Azerbaijan province during 2010 and 2011. Two of them, *Aceria virgatae* n. sp. from *Centaurea virgata* Lam. and *Aceria xeranthemis* n. sp. from *Xeranthemum squarrosum* Boiss., were found to be new to science. No damage symptoms were observed on their host plants. *Aceria xeranthemis* n. sp. is the first eriophyoid collected from the plant genus *Xeranthemum*. *Aculops centaureae* (Farkas, 1960) from *Centaurea albonitens* Turrill and *Aceria cichorii* Petanović *et al.* 2000 from *Cichorium intybus* L. are new records for Iranian mite fauna. The deutogyne female of *Aceria anthocoptes* (Nalepa) was recorded for the first time in Iran, too. A key to the species collected on Compositae in Iran is given.

Key words: fauna, new species, taxonomy, eriophyid, new records, weeds, Asteraceae

Introduction

According to the Plant List database (2010), the family Compositae comprises about 1,765 genera and about 104,365 species names (27,773 accepted) of which 2,505 (687 accepted), 89 (6), 1,551 (484) and 41 (6) scientific plant names at species rank for *Centaurea*, *Xeranthemum*, *Cirsium* and *Cichorium*, respectively. Many such species are weeds and some of them, for example, *Centaurea solstitialis* L. and *Cirsium arvense* (L.) Scop., are highly invasive and have been subjected to surveys and control utilising natural enemies (Smith *et al.* 2010). On the other hand, some species such as common chicory, *Cichorium intybus* L., have found application in pharmacology (Gruenwald *et al.* 2007).

Eriophyoid mites are obligatory plant feeders and are well adapted to living on plants (Lindquist & Oldfield 1996). Most of these mites have been detected on a single host plant species and some have been found on a few plant species within a single genus (Skoracka *et al.* 2010). Even though a certain number of species can be related to phylogenetically distant host plant species (Skoracka *et al.* 2010), the morphological resemblance of sister and cryptic species should be investigated (de Lillo & Skoracka 2010), especially, in order to characterize and identify good candidates for weed control (Smith *et al.* 2010).

Summarizing the current literature, more than 200 eriophyoid species have been recorded from plants of the family Compositae up until now. Considering the relevance of this subject and the efforts in finding new species or valuable strains within known species of natural enemies, plant species belonging to the family Compositae were collected and their associated mite fauna was studied.