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***Eriocaenus* (Acari: Trombidiformes: Eriophyoidea), a new genus from *Equisetum* spp. (Equisetaceae): morphological and molecular delimitation of two morphologically similar species**

RADMILA U. PETANOVIĆ^{1,6}, JAMES W. AMRINE JR², PHILIPP E. CHETVERIKOV^{3,4}
& TATJANA K. CVRKOVIĆ⁵

¹University of Belgrade, Faculty of Agriculture, Department of Entomology and Agricultural Zoology, 11080 Belgrade–Zemun, Nemanjina 6, Serbia.

²West Virginia University, Division of Plant & Soil Sciences, P.O.Box 6108, Morgantown, WV 26506-6108, USA

³Department of Invertebrate Zoology, Saint-Petersburg State University, Universitetskaya nab., 7/9, 199034, St. Petersburg, Russia

⁴Zoological Institute, Russian Academy of Sciences, Universitetskaya Embankment 1, 199034 St. Petersburg, Russia

⁵Institute for Plant Protection and Environment Belgrade, Banatska 33, Zemun, Serbia

⁶Corresponding author. E-mail: rpetanov@agrif.bg.ac.rs

Abstract

Surveys conducted on horsetails, *Equisetum* spp. (Equisetaceae), in Serbia led to the discovery of a new eriophyoid mite genus while searching for a classical biological control agent against these weeds in New Zealand. *Eriocaenus* **gen. n.** is described based on the type species *Aceria equiseti* Farkas, 1960 (transferred to *Eriophyes* by Farkas 1965; herein reassigned to the new genus) and *Eriocaenus ramosissimi* **n. sp.**, a new species discovered on *Equisetum ramosissimum* Desf. in Serbia. *Eriocaenus equiseti* (Farkas, 1960), previously only known from Hungary, was found in Serbia for the first time on *Equisetum arvense* L. and *Equisetum telmateia* Ehrh., and is redescribed. Species descriptions include line drawings as well as phase contrast (PCLM), differential interference contrast (DIC) and scanning electron (SEM) micrographs. The differential diagnosis between the two *Eriocaenus* species is supplemented by molecular differentiation of 28S rDNA sequences including D2 fragments for both mites.

Key words: Eriophyidae, eriophyid, ferns, weeds, taxonomy, Prostigmata, new species

Introduction

Ferns *sensu lato* (Moniliophyta) are the least explored group of vascular plants for eriophyoid mites. Only 23 species belonging to the putatively more derived family Eriophyidae, namely in the subfamilies Nothopodinae: *Nothopoda* (1 sp.), Eriophyinae: *Eriophyes* (5 spp.), *Aceria* (1 sp.), *Acerimina* (2 spp.), *Diphytoptus* (1 sp.) and Phyllocoptinae: *Phyllocoptes* (2 spp.), *Leipothrix* (= *Flechtmannia*) (3 spp.), *Acaphyllisa* (1 sp.), *Cymeda* (1 sp.), *Litaculus* (6 spp.), *Aculops* (1 sp.), were known almost two decades ago (Gerson 1996). In the meantime, two further species, both from the subfamily Phyllocoptinae, namely *Phyllocoptes pteridii* Petanović, 1999 and *Leipothrix serbicus* n. comb. (Petanović, 1999) (= *Epitrimerus serbicus*), were described from Europe (Petanović 1999). One species, *Floracarus perrepae* Knihinicki and Boczek, from the subfamily Nothopodinae, was described from Australia (Knihinicki & Boczek 2002) and another, *Esalquia centennaria* Flechtmann, a member of the subfamily Cecidophyinae, was published from Brazil (Flechtmann 2002). Most of the fern-inhabiting eriophyoids have so far been found in the southern hemisphere. Only six species, belonging to *Eriophyes* (2 spp.), *Phyllocoptes* (2 spp) and *Leipothrix* (1 spp), have been found in the Holarctic region. This is in addition to *Eriophyes equiseti* (Farkas, 1960) as described from horsetail, *Equisetum arvense* L., and recently recognised as the type species of the new genus, *Eriocaenus*. According to the available data (Gerson 1996; Petanović 1999; Knihinicki & Boczek 2002; Flechtmann 2002), eriophyoids mainly infest leptosporangiate ferns (so-called true ferns) and, until recently, only one species was known from eusporangiate ferns, i.e. from the genus *Equisetum* (Equisetopsida). In addition,