



Three new species of the family Phthiracaridae (Acari, Oribatida) from Bolivia

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Abstract

Three new species of the family Phthiracaridae, *Austrophthiracarus longisetosus* sp. nov., *Phthiracarus allocotos* sp. nov., *Protophthiracarus amboroensis* sp. nov. from Bolivia are described and figured. A comparison of morphological similarities with the most closely related species is presented. Additional descriptions and taxonomical notes for three ptyctimous species: *Acrotrititia peruensis* (Hammer, 1961), *Acrotrititia vestita* (Berlese, 1913), and *Steganacarus (Rhacaplacarus) sedecimus* Niedbała, 2004 are added. A list of twenty six ptyctimous species from Bolivia is presented, ten of these species are new records for the fauna of Bolivia. A key to all species of ptyctimous mites of Bolivia is presented.

Key words: Oribatid, ptyctimous mites, Phthiracaroidea, new species, taxonomy, morphology, Bolivia

Introduction

A few countries in the world possess such great a diversity of ecosystems as Bolivia. The Bolivian landscape range is from over 6000 metres above sea level in the Andes Mountains to the plains of the Amazonian lowlands less than 200 metres above sea level. About 70% of the country is situated less than 500 metres above sea level in the lowlands of the North and East. Because of its exceptional ecosystem diversity and location in the tropics, Bolivia has a high biological diversity at species level. This highly diverse country is likely among the top ten countries in the world in terms of species and ecosystem diversity (Araujo et al. 2010). The ecosystems with the highest biodiversity in Bolivia are the Sub-Andean Amazonian forests (Fredericksen 2003).

Our knowledge on the fauna of ptyctimous mites of this extremely interesting part of the Neotropical region is still scarce in comparison with some other countries of South and Central America. Balogh & Mahunka (1977) were the first authors who described two species of the family Phthiracaridae from Bolivia. Niedbała (2004) surveyed the fauna of ptyctimous mites of the Neotropical region with a total of 305 species (20 Arthroptyctima species and 285 Euptyctima ones). In the course of that study, only seven species (*Mesoplophora (Mesoplophora) hauseri* Mahunka, 1982, *Acrotrititia clavata* (Märkel, 1964), *Acrotrititia vestita* (Berlese, 1913), *Phthiracarus pygmaeus* (Balogh, 1958), *Austrophthiracarus caudatus* (Balogh et Mahunka, 1977), *Protophthiracarus filaris* (Niedbała, 2004) and *Atropacarus (Hoplophorella) vitrinus* (Berlese, 1913)) were recorded in Bolivia. Ermilov & Niedbała (2013) found another two ptyctimous species (*Mesoplophora (Mesoplophora) gaveae* (Schuster, 1962) and *Acrotrititia clavata* (Märkel, 1964)) from the territory of Bolivia.

This contribution is based on the identification of rich material of ptyctimous mites from leaf litter sifting samples collected by Dr. B. Greenway (London, UK) from the Amazonian part of Bolivia, which are deposited in the Institute of Soil Biology (České Budějovice, Czech Republic).

Material and methods

The soil samples were collected by using a leaf litter sifting method and were partly extracted using a Winkler

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