



<http://dx.doi.org/10.11646/zootaxa.3827.2.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:C3BBEA41-3032-4366-B31E-F4AD8E0AA672>

## Revision of *Fenestrobates* (Acari, Oribatellidae) with description of *F. marauni* sp. nov., from South America, and new diagnosis for Oribatellidae

SERGEY G. ERMILOV<sup>1</sup> & VALERIE M. BEHAN-PELLETIER<sup>2</sup>

<sup>1</sup>Tyumen State University, Tyumen, Russia 625003. E-mail: [ermilovacari@yandex.ru](mailto:ermilovacari@yandex.ru)

<sup>2</sup>Invertebrate Biodiversity Program, Research Branch, Agriculture and Agri-Food Canada, K. W. Neatby Bldg., Ottawa, Ontario, Canada K1A 0C6. E-mail: [Valerie.behan-pelletier@agr.gc.ca](mailto:Valerie.behan-pelletier@agr.gc.ca)

### Abstract

We propose a new species of the oribatid mite genus *Fenestrobates* (Oribatellidae), *F. marauni* sp. nov., based on adult specimens from Ecuador. The type species, *F. capucinus* Balogh and Mahunka, 1969 from Bolivia, is redescribed. We confirm the recombination of two species from the Russian Far East, *F. rossicus* Krivolutsky, 1974 from the Primorsky Region, and *F. vicinus* Ryabinin, 1975 from the Khabarovsk Region, as *Oribatella rossicus* (Krivolutsky) and *O. vicinus* (Ryabinin), and we give revised diagnoses for each. We present a new diagnosis for *Fenestrobates* and argue for its recognition as a genus distinct from *Oribatella* on the basis of the apomorphic development of a large, pouch-like depression positioned ventrally between pedotectum I and the lateral body wall, and absence of small ridges anteriorly on the notogaster. Based on these changes and new information, we give a revised diagnosis for Oribatellidae and provide a key to included genera.

**Key words:** *Fenestrobates*, *Oribatella*, Oribatellidae, new species, family diagnosis, genus diagnosis, key to genera

### Introduction

The oribatid mite genus *Fenestrobates* Balogh and Mahunka, 1969 (Oribatellidae) includes three named species: the type species, *F. capucinus* Balogh and Mahunka, 1969 from Bolivia and two species from the Russian Far East: *F. rossicus* Krivolutsky, 1974 from the Primorsky Region and *F. vicinus* Ryabinin, 1975 from the Khabarovsk Region. Specimens are rare. Only *F. rossicus*, recorded also from Mongolia (Bayartogtokh 2011), is known from other than the type locality.

Balogh and Mahunka (1969) considered *Fenestrobates* distinct from other genera of Oribatellidae due to the “fenestrate tectum, covering the epimeral region”. This was a misinterpretation of the ventral depression between pedotectum I and the lateral body wall (discussed below). Subías (2004, 2014) considered *Fenestrobates* a subgenus of *Oribatella* Banks, 1895, but provided no supporting arguments for this placement.

In this paper we describe a new *Fenestrobates* species from rain forest in Ecuador, *F. marauni* sp. nov. We provide a new diagnosis for the genus based on this species and re-examination of *F. capucinus*, and argue for the retention of generic status for *Fenestrobates*. We provide arguments in support of the recombination by Subías (2004, 2014) of the two Russian species as members of *Oribatella*. We build on recent literature on Oribatellidae and provide a rediagnosis of the family, with a key to included genera.

### Methods

Specimens were studied in lactic acid, mounted in temporary cavity slides for the duration of the study, and then stored in 70% ethanol in vials. All body measurements are given in micrometers. Body length was measured in lateral view, from the tip of rostrum to the posterior edge of ventral plate. Notogastral width refers to the maximum width in dorsal aspect. Lengths of body setae were measured in lateral aspect. Formula for leg setation is given in

during the study "Biodiversity and sustainable management of a megadiverse mountain ecosystem in South Ecuador", subproject "Soil fauna: Diversity and functioning" headed by Mark Maraun and Stefan Scheu, with financial support by the German Research Foundation.

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