Zootaxa 2479: 39–58 (2010)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

A review of *Mesotritia* (Acari: Oribatida: Oribotritiidae) in China, with descriptions of two new species and a checklist of known taxa

DONG LIU[1, 2] & JUN CHEN[1,3]

[1]*Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, P. R. China*

[2]*Graduate University of Chinese Academy of Sciences, Beijing 100049, P. R. China. E-mail: yzliudong@126.com*

[3]*Corresponding author. E-mail: chenj@ioz.ac.cn*

Abstract

The oribatid mite genus *Mesotritia* Forsslund, 1963 (Oribotritiidae) is reviewed. Five species of *Mesotritia* including two new species, *Mesotritia bicarinata* **sp. nov.** and *Mesotritia serrata* **sp. nov.**, and three newly recorded species from China, *M. maerkeli* Sheals, 1965, *M. nuda* (Berlese, 1887) and *M. okuyamai* Aoki, 1980, are identified. A checklist of all known species and a key to the Chinese species of this genus are provided.

Key words: soil mites, Oribatida, Oribotritiidae, *Mesotritia*, new species, new record, China

Introduction

The generic name "*Mesotritia*" was initially proposed by Forsslund & Märkel (1963) without any statement and designation of the type species. Subsequently, Märkel (1964) designated *Mesotritia testacea* Forsslund, 1963 as the type species of *Mesotritia*. Later, Marshall *et al*. (1987) transferred *Phthiracarus flagelliformis* Ewing, 1909 to this genus, and then Niedbała (2001) treated *M. testacea* as a junior synonym of *M. flagelliformis*. Therefore, *Phthiracarus flagelliformis* Ewing, 1909 is the type-species of *Mesotritia*.

Märkel (1964) divided this genus into two subgenera: *Mesotritia* (*Mesotritia*) and *Mesotritia* (*Entomotritia*). Mahunka (1990) treated subgenus *M*. (*Entomotritia*) as a synonymous name of *M*. (*Mesotritia*), and demoted *Perutritia* Märkel, 1964 to a subgenus of *Mesotritia*. By comparing characters with other genus, he also pointed that further studies are necessary to ascertain the validity of the subgenus *Perutritia*.

The *Mesotritia* species has a nearly cosmopolitan distribution except the Australian Region. Prior to our study, totally 31 valid species have been reported from the Oriental (seven species), Neotropical (fourteen species), Ethiopian (three species) and Holarctic (nine species, one of them also found in Neotropical and Ethiopian Regions) Regions (Subías 2009). However, none of the species belonging to this genus has ever been reported from China (Wang *et al.* 2002).

While studying the specimens of ptyctimous mites collected from China, we identified five species of *Mesotritia* including two new species. This paper gives detailed descriptions of these species and a key to them, as well as an updated checklist containing all valid species, distribution information and literatures that treat taxonomic issues involving this genus, and a key to Chinese *Mesotritia* species.

Material and methods

Measurements and descriptions are based on specimens mounted in temporary cavity slides that were studied using a standard light microscope equipped with a drawing tube.

Accepted by H. Schatz: 13 Apr. 2010; published: 20 May 2010