



Acrotritia species (Acari: Oribatida: Euphthiracaridae) from China with description of a new species

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Abstract

In this paper, eight species of *Acrotritia* (Acari: Oribatida: Euphthiracaridae) are identified, including a new species, *Acrotritia tibetensis* sp. nov., and four newly recorded species from China: *Acrotritia gracile* (Niedbala, 2000), *Acrotritia hauseri* (Mahunka, 1991), *Acrotritia refracta* (Niedbala, 1998) and *Acrotritia simile* (Mahunka, 1982). An updated diagnosis of the genus and remarks on some known species are presented, the validity of species *A. hauseri* is discussed, and a key to Chinese known species of *Acrotritia* is also provided.

Key words: soil mites, Oribatida, Euphthiracaridae, *Acrotritia*, new species, new record, key, China

Introduction

The genus *Acrotritia* was proposed by Jacot (1923) with *A. sinensis* from China as type species. Shortly thereafter he stopped using it and considered it a synonym of *Pseudotritia* Willmann, 1919. Märkel & Meyer (1959) recognized *Pseudotritia* as a synonym of *Euphthiracarus* Ewing, 1917, and erected the genus *Rhysotritia*, designating *Hoplophora ardua* C. L. Koch, 1841 as its type species in order to accommodate certain species that did not fit their concept of *Euphthiracarus*. After that, the name *Rhysotritia* has been used in a vast amount of literature, until Subías (2004) reinstated the name *Acrotritia*, treating it as a junior subjective synonym of *Rhysotritia* in his catalogue of the world Oribatida. Niedbala (2006) supported this view and suggested all acarologists accept the proposal of Subías to use the name *Acrotritia*.

The *Acrotritia* species widely occur throughout the world. Prior to our study, about 50 species have been described (Subías 2014; Niedbala & Ermilov 2014; Niedbala & Starý 2014a, b). However, only four species belonging to this genus has been reported from China (Chen *et al.* 2010, Niedbala 2011). The present article is a part of systematic studies of the oribatid mite family Euphthiracaridae from China (see Liu *et al.* 2011, 2012; Liu & Chen 2014). In this study, we identified eight *Acrotritia* species, including a new species and four newly recorded species from China. An updated diagnosis of the genus and remarks on some known species are presented. In addition, the validity of species *A. hauseri* is discussed, and a key to Chinese known species of *Acrotritia* is provided.

Material and methods

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

Terminology generally follows Niedbala (2000). The unit of measurement is micrometre (µm).

(in alcohol, CJ-02-16), Yangyuan County, Hutouliang, from litter under willow, 12 May 2002, leg. Jun Chen; 1 adult (in alcohol, CJ-02-18), Yangyuan County, Nihewan, from litter under *Populus alba*, 11 May 2002, leg. Jun Chen.

Remarks. All specimens have nine pairs of genital setae, except some specimens from Fujian Province with only eight pairs.

Key to species of *Acrotrititia* known from China

1	Lateral carinae of the prodorsum forked distally	2
-	Lateral carinae of the prodorsum simple and not forked	5
2	All tarsi of legs monodactylous.	<i>A. refracta</i> (Niedbala, 1998)
-	Tarsi of legs I bidactylous, tarsi of legs II–IV heterotridactylous.	3
3	Surface of body punctate; fork of lateral carinae short and indistinct, bifurcated at insertion level of rostral setae	<i>A. corletti</i> (Mahunka, 2000)
-	Surface of body with polygonal sculpture or foveolate; fork of lateral carinae long and distinct, bifurcated at insertion level of lamellar setae.	4
4	Surface of body with polygonal sculpture; prodorsum abruptly humped near insertion level of rostral setae in lateral view.	<i>A. koreensis</i> (Mahunka, 1997)
-	Surface of body foveolate; prodorsum not abruptly humped near insertion level of rostral setae in lateral view	<i>A. tibetensis</i> sp. nov.
5	All tarsi of legs monodactylous.	6
-	Tarsi of legs I bidactylous, tarsi of legs II–IV heterotridactylous.	7
6	Sensilla setiform, slightly swollen distally	<i>A. simile</i> (Mahunka, 1982)
-	Sensilli with fusiform head	<i>A. sinensis</i> Jacot, 1923
7	Sensilla setiform without head	<i>A. gracile</i> (Niedbala, 2000)
-	Sensilla with swollen head	8
8	Prodorsum abruptly humped near insertion level of rostral setae in lateral view	<i>A. hauseri</i> (Mahunka, 1991)
-	Prodorsum not abruptly humped near insertion level of rostral setae in lateral view.	<i>A. ardua</i> (C. L. Koch, 1841)

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