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***Neoribates alius* Fujikawa, 2007, a junior synonym of *Neoribates pallidus* Aoki, 1988 (Acari, Oribatida, Parakalummidae)**

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Abstract

The morphology of adult instars of two oribatid mites of the genus *Neoribates*, *N. pallidus* Aoki, 1988 and *N. alius* Fujikawa, 2007, is analyzed. Comparisons were based on holotype and paratypes (for *N. alius*) and specimens identified by the original author (for *N. pallidus*). Both species were described from Japan. *Neoribates alius* is recognized as a junior subjective synonym of *N. pallidus*.

Key words: oribatid mites, *Neoribates pallidus*, *N. alius*, new synonym

Introduction

Neoribates pallidus Aoki, 1988 (Oribatida, Parakalummidae) is distributed in the eastern Palaearctic region and Nepal (data summarized by Subías 2004, updated 2014; also personal data of the first author). It was described by Aoki (1988), based on specimens from Japan. The original description is clear, but it included only one figure (dorsal side of body). Later, Choi & Namkoong (2002) presented a short supplementary description of *N. pallidus*, based on specimens from Korea. Their data are similar to Aoki's description, but they also illustrate the ventral side of body. Also, Aoki & Noguchi (2005) presented a microscope image of dorsal side *N. pallidus*. All three papers (Aoki 1988; Choi & Namkoong 2002; Aoki & Noguchi 2005) are incomplete, in that they neither discussed nor clearly illustrate certain body structures and setae (for example, subcapitular and epimeral setae, pedotecta II, leg solenidia) that are useful in identification of *Neoribates*-species.

Some years ago, Fujikawa (2007) described *Neoribates alius* from Japan. The original description is full and well illustrated. A comparison of the three papers (Aoki 1988; Choi & Namkoong 2002; Fujikawa 2007) shows that all morphological characters (for example, body size and surface, length and morphology of prodorsal and bothridial setae, length and localization of adanal setae) of *N. pallidus* and *N. alius* are very similar. The main and objective distinctive character (see *Taxonomy* section below) between these species is the presence of a strong tooth on pedotectum II in *N. alius* (Fujikawa 2007). However, the pedotectum structure of *N. pallidus* was not addressed by either Aoki (1988) or Choi & Namkoong (2002). If it also has tooth on pedotecta II, morphological distinctions between this species and *N. alius* are absent.

Our primary goal is to compare the morphology of *N. pallidus* and *N. alius* and to judge their taxonomic status.

Material and methods

Three specimens of *Neoribates alius* (holotype and two paratypes) were received from the type collection of the National Museum of Nature and Science, Tokyo, Japan. Specimens are mounted whole on three slides, with Hoyer's medium. Material was collected in litter, humus and soil at the gardens, grave yards and forests from Japan by T. Fujikawa and Y.

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