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Redescription of *Coronoquadroppia monstrosa* (Hammer, 1979) (Acari, Oribatida, Quadropiidae) from Java and variability of the species in Europe

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Abstract

A main goal of this study was the comparison of type material of *Coronoquadroppia monstrosa* (Hammer, 1979) from Java with European populations which were supposed by authors to be conspecific. The species identity of most respective European findings with a type specimen can be confirmed. Yet within some populations from Germany, Austria and northern Italy, specimens with morphological variations are present, resembling partly *C. gumista* (Gordeeva et Tarba, 1990) from the Caucasus in regard of a transversal band in the rostral structure. This and other described modifications are supposed to be individual variability within the species *C. monstrosa*. A detailed morphological analysis is presented, resulting in the division of the *Quadroppia* complex into the genera *Quadroppia* and *Coronoquadroppia* as first proposed by Ohkubo (1995).

Key words: taxonomic status, morphological analysis, morphological variability, Germany, Austria, Italy

Introduction

For about 100 years, the classical quadropiid species, *Notaspis quadricarinata* Michael, 1885, seemed to be the single known Palaearctic species in the genus *Quadroppia* Jacot, 1939. Jacot (1939) designated *Q. quadricarinata* as type species with reference to the redescription of *Notaspis quadricarinata* from England by Michael (1888); this is without doubt the species described by Michael (1885). Paoli (1908: 70; figs 30, 49) redescribed and figured a quadropiid species as "*Dameosoma quadricarinatum* (Mich.) Berl." (referring to a determination key without figure in Berlese 1896: 54) which was a misinterpretation of Michael's species. Nowadays, Paoli's species is considered to be *Quadroppia monstrosa* Hammer, 1979, following the statements of synonymy by Minguez *et al.* (1985). "*Oppia quadricarinata* (Mich.)" in Balogh (1943) is obviously a redrawing of Paoli's figure. Once again this misinterpretation was performed by Mahunka (1977: fig. 12, erroneously not fig. 13), who probably redescribed and figured *Q. monstrosa* from Greece as "*Q. quadricarinata*", referring to Paoli's redescription instead of the species described by Michael (1885, 1888), and he described a new species *Q. michaeli* Mahunka, 1977, related to *Q. monstrosa*.

Quadroppia quadricarinata (Michael, 1885) has no oval rostral structure. This structure is present in Paoli's figure and constitutes the most obvious difference from the real *Q. quadricarinata*. Woas (1986) was the first author paying attention to the misinterpretation of Paoli (1908); he renamed Paoli's species as *Q. paolii* Woas, 1986, and gave a description and figures based on specimens from Germany. Woas did not discuss characters of *Quadroppia monstrosa* Hammer, 1979, a species originally described from Java, which is considered a senior synonym to *Q. paolii* according to Subías & Arillo (2001: 263).

There is a level of uncertainty regarding the species identity of Paoli's "*Q. quadricarinata*" from Italy and Woas' *Q. paolii* from Germany, also regarding the species identity of *Q. monstrosa* Hammer from Java and the

Quadroppia paolii Woas, 1986: as synonym of *Coronoquadroppia monstrosa* (Hammer, 1979) according to Subías & Arillo (2001) and Weigmann (2006), confirmed by this study.
Quadroppia ritza Gordeeva et Tarba, 1990: as synonym of *Coronoquadroppia monstrosa* (Hammer, 1979) according to Subías 2004, but also mentioned as synonym of *Coronoquadroppia media* (Gordeeva, 1983) according to Subías 2009. Status unsolved.

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