



New description of *Echiniscus scabrospinosus* Fontoura, 1982, and description of a new species of *Echiniscus* (Heterotardigrada) from China

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Abstract

A redescription of *Echiniscus scabrospinosus* Fontoura, 1982, is presented. A comparison with the more similar species is made, based on information available since the original description. A previously unreported cuticular feature (a central dark ring in the light spots) is described for *Echiniscus marginatus* Binda & Pilato, 1994. A new species, *Echiniscus lineatus* sp. nov., is described from China. This new species has a double plate ornamentation with numerous dark polygons and fewer light spots, forming transverse stripes on the plates. Longitudinal stripes are also present on the scapular plate. The new species has lateral filaments A and spines B, C, D, and E, as well as dorsal spines C^d and D^d.

Key words: Tardigrada, Heterotardigrada, *Echiniscus lineatus* sp. nov., *Echiniscus marginatus*, China

Introduction

Echiniscus scabrospinosus is a species of Heterotardigrada described by Fontoura (1982) from Portugal (Serra do Buçaco) and subsequently recorded from Africa (Tanzania) by Binda and Pilato (1995^b), from Yunnan Province, China, by Beasley and Cleveland (1996), Fujian Province, China, by Yang (2008), and from the Azores Islands by Fontoura *et al.* (2008). Fontoura *et al.* (2008) emphasized a difference (the absence of the lateral cirrus D) between the only specimen collected on the Azores and the species description, also based on only one specimen by Fontoura (1982); but they attributed this difference to a possible individual variability of the species considering that a degree of individual variability concerning the lateral and the dorsal appendages is recognizable in many species of Echiniscidae. They also stated that the specimens from China attributed to *E. scabrospinosus* by Beasley and Cleveland (1996) do not belong to this species. Fortunately, encouraged by the very recent discovery of a new population from Portugal (Amarante), we had the possibility of comparing almost all the known material attributed to this species (specimens identified by Yang, 2008, excluded). A redescription of *Echiniscus scabrospinosus* seemed opportune, as well as the description of the new species *Echiniscus lineatus* sp. nov. for the specimens from China (Yunnan Province).

Material and methods

We examined almost all the known specimens attributed to *Echiniscus scabrospinosus*: forty-six specimens from Portugal (the holotype from Serra do Buçaco and forty-five specimens from Amarante), one from Tanza-