



Echiniscidae (Tardigrada, Heterotardigrada) from Faial and Pico Islands, the Azores, with the description of two new species

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Abstract

Nine species of Echiniscidae (Heterotardigrada) are recorded for Faial and Pico Islands. Two of them, *Echiniscus azoricus* and *Bryodelphax atlantis* are new to science. *Echiniscus merokensis* Richters, 1904, *Echiniscus perviridis* Ramazzotti, 1959 and *Echiniscus scabrospinosus* Fontoura, 1982 are recorded in the Azores for the first time. *Echiniscus azoricus* **n. sp.** has dorsal plates sculptured with dark knobs surrounded by a ring of small pores. Lateral and dorsal appendages are spines B, C, D, E, C^d and D^d. *Bryodelphax atlantis* **n. sp.** has no ventral plates; it has small lateral supplementary plates between the paired plates, short filament A and a dentate collar on the hind legs with short and wide triangular teeth. A dichotomous key to the species of the genus *Bryodelphax* is also given.

Key words: Tardigrada, *Echiniscus azoricus* **sp. nov.**, *Bryodelphax atlantis* **sp. nov.**, Faial and Pico Islands, the Azores

Introduction

In contrast to the remaining Palaearctic Region, the tardigrade fauna of the Azores is indubitably poorly known. Until now only seven species from three of the nine islands that constitute the Archipelago were known (Fontoura, 1985; Pilato *et al.*, 2007; Fontoura & Pilato, 2007). In this paper nine species of limnoterrestrial Heterotardigrada from Faial and Pico Islands are recorded; two of them, *Echiniscus azoricus*, and *Bryodelphax atlantis* are new to science, *Echiniscus merokensis* Richters, 1904, *Echiniscus perviridis* Ramazzotti, 1959 and *Echiniscus scabrospinosus* Fontoura, 1982 are recorded in the Azores for the first time. A dichotomous key to all the known species of the genus *Bryodelphax* is also given.

Materials and methods

Tardigrades were extracted from dried moss samples collected on Faial Island (Parque Florestal and Miradouro da Praia Norte) in August 2005 and on Pico Island (Lages do Pico and Terras do Pico) in November 2005. The great majority of the specimens were mounted in Hoyer's medium with a small amount of potassium iodide solution (Horning *et al.*, 1978), only a few specimens were mounted in polyvinyl lactophenol. Measurements, given in micrometers (µm), and photomicrographs were made under oil immersion, with a Zeiss Axioskop Phase Contrast Microscope (PCM) equipped with a digital camera and using Axiovision 4.6.3 Imaging System Software. Structures were measured only if they were undamaged and their orientation was suitable. Body length was measured from the anterior margin to the end of the body, excluding the hind legs.