



The first record of the genus *Bryodelphax* (Tardigrada: Heterotardigrada: Echiniscidae) from Easter Island, Rapa Nui (Pacific Ocean, Chile) with the description of a new species, *Bryodelphax aaseae*

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Abstract

A new heterotardigrade, *Bryodelphax aaseae* **sp. nov.** is described from a small moss sample collected in the Rano Kau Crater on Easter Island (Rapa Nui) in 1989. The new species belongs to the group of species within the genus that have ventral plates. *B. aaseae* **sp. nov.** is similar to *B. weglarskae* (Pilato, 1972), *B. sinensis* (Pilato, 1974) and *B. iohannis* Bertolani, Guidi & Rebecchi, 1995 but differs from them mainly by a different number and arrangement of ventral plates. This is the first record of the genus *Bryodelphax* from Easter Island/Rapa Nui.

Key words: Tardigrada, *Bryodelphax aaseae*, new species, SEM micrographs, Easter Island

Introduction

Easter Island or Rapa Nui is the most isolated inhabited island in the world. Its nearest inhabited neighbour is Pitcairn Island, about 2250 km away. Rapa Nui is the eastern-most inhabited island of Polynesia. However, politically the island is a part of Chile. The nearest point in South America is Conception in Chile, about 3872 km away. In 1989 a single moss cushion was collected by Åse Jespersen in Rano Kau Crater. However, the sample was examined for Tardigrada many years later (*i.e.*, 2005–2009). As a result, more than 200 specimens of a heterotardigrade of the genus *Bryodelphax* were found in the moss.

The genus *Bryodelphax* Thulin, 1928 is found from the high Arctic to tropical rain forests. The fact that the genus can be found on the most isolated islands on the Earth suggests that dispersal is probably very effective and the dispersal stage consists of cryptobiotic tuns and possibly also exuvia containing eggs. Males have only been found in one species (Kristensen 1987); the other species may be obligatory parthenogenetic. This phenomenon could also explain the cosmopolitan distribution of the genus.

The genus *Bryodelphax* is a relatively small genus of only 16 species, including the new species described herein (Kaczmarek & Michalczyk 2004, Guidetti & Bertolani 2005, Kaczmarek *et al.* 2005, Fontoura *et al.* 2008). Two species, *Bryodelphax parvulus* Thulin, 1928 and *Bryodelphax tatrensis* (Węglarska, 1959), are considered cosmopolitan. The other taxa are known from a very few or only the type locality.

The species of this genus can be assigned into two groups based on the presence or absence of ventral plates. *Bryodelphax aaseae* **sp. nov.** belongs to the *weglarskae* group of species, *i.e.*, with well developed ventral plates. In addition to the new species, members of this group include: *Bryodelphax weglarskae* (Pilato, 1972), *Bryodelphax sinensis* (Pilato, 1974) and *Bryodelphax iohannis* Bertolani, Guidi & Rebecchi, 1995.