



## ***Minibiotus xavieri*, a new species of tardigrade from the Parque Biológico de Gaia, Portugal (Eutardigrada: Macrobiotidae)**

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### **Abstract**

A new tardigrade, *Minibiotus xavieri* **sp. nov.**, is described from lichen and moss samples collected in Parque Biológico de Gaia, Avintes, Portugal. The new species has variously shaped pores forming transverse bands around the cuticle; granulation on legs absent. Peribuccal lamellae absent, peribuccal papulae present as in all species of *Minibiotus*. Buccal tube narrow with an anterior bend; pharyngeal bulb with apophyses, three small macroplacoids and microplacoid. *Minibiotus xavieri* **sp. nov.** differs from the species of the genus with a similar cuticular ornamentation (with pores of variable shape forming transverse bands) (*M. eichorni* Michalczyk & Kaczmarek, 2004, *M. orthofasciatus* Fontoura, Pilato, Lisi & Morais, 2009, *M. vinciguerra* Binda & Pilato, 1992, *M. furcatus* (Ehrenberg, 1859)) in some qualitative or quantitative characters of the bucco-pharyngeal apparatus, and/or claws and of the eggs. The new species is also similar to two species today ascribed to the genus *Macrobiotus* but whose systematic position needs to be better analyzed, *Macrobiotus lazzaroi* Maucci 1986 and *Macrobiotus pseudofurcatus* Pilato, 1972. *Minibiotus xavieri* **sp. nov.** differs from them in some characters of the animal (narrower buccal tube, some characters of the claws) and of the eggs.

**Key words:** *Minibiotus xavieri* **sp. nov.**, Tardigrada, Eutardigrada, Parque Biológico de Gaia, Portugal, Europe

### **Introduction**

The Parque Biológico de Gaia is a rural and forested area, with 350,000 square meters located on the grounds of a former farm at Avintes, Vila Nova de Gaia, included in the region of Porto, northern Portugal. This space is dedicated to nature conservancy and environmental education, exhibiting Portuguese wildlife.

Since 2006, we have carried out research on limno-terrestrial tardigrades as a part of a larger program aiming to do a more complete faunal inventory of that park.

Since the erection of the genus *Minibiotus* Schuster *et al.*, 1980, later revised by Claxton (1998), 42 species have been described (Guidetti & Bertolani, 2005; Degma & Guidetti, 2007; Degma *et al.*, 2009). In this paper a new species, *Minibiotus xavieri* **sp. nov.** from lichen and moss samples collected in the above mentioned park, is described.

### **Material and methods**

Twenty-five specimens and 15 eggs of *Minibiotus xavieri* **sp. nov.** were extracted from dried lichen and moss samples collected in Parque Biológico de Gaia, Northern Portugal (41°05' 57''N, 8°33'41''W) in May 2006 and April 2008.