



New taxonomic position of several *Macrobotus* species (Eutardigrada: Macrobiotidae)

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Abstract

The main character distinguishing *Minibiotus* from *Macrobotus* is the presence of peribuccal papulae instead of lamellae. However, most *Minibiotus* species also share a set of characters of the bucco-pharyngeal apparatus. This set is defined by ten morphological features (the first seven common to all species, the last three to most of them): antero-ventral mouth (1), teeth in oral cavity absent or strongly reduced (2), a rigid and narrow buccal tube (3), buccal tube wall thickened below the point of insertion of stylet supports (4), stylet supports inserted at considerable distance from the posterior end of the buccal tube (5), short ventral lamina (6), short macroplacoid row length (7), a double curvature of the buccal tube (8), first macroplacoid situated very close to the pharyngeal apophysis (9) and three almost rounded macroplacoids (10). We examined the original descriptions and/or the type material of several species belonging to the genus *Macrobotus* that seemed to present this set of characters. It was concluded that several species should be transferred from *Macrobotus* to *Minibiotus*. The following new combinations are proposed: *Minibiotus subintermedius* (Ramazzotti, 1962) **comb. n.**, *Minibiotus pustulatus* (Ramazzotti, 1959) **comb. n.**, *Minibiotus julietae* (de Barros, 1942) **comb. n.**, *Minibiotus marcusii* (de Barros, 1942) **comb. n.**, *Minibiotus granatai* (Pardi, 1941) **comb. n.**, *Minibiotus allani* (Murray, 1913) **comb. n.**, *Minibiotus crassidens* (Murray, 1907) **comb. n.** and *Minibiotus acontistus* (de Barros, 1942) **comb. n.**. As a result of these new combinations, the genera *Minibiotus* and *Macrobotus* appear to be more homogeneous, but their monophyly has not yet been demonstrated. Further data are necessary to better analyze the systematic position of *Macrobotus lazzaroi* Maucci, 1986, *Macrobotus spertii* Ramazzotti, 1957 and *Macrobotus striatus* Mihelčič, 1949.

Key words: Tardigrada, new combinations, *Minibiotus subintermedius* **comb. n.**, *Minibiotus pustulatus* **comb. n.**, *Minibiotus julietae* **comb. n.**, *Minibiotus marcusii* **comb. n.**, *Minibiotus granatai* **comb. n.**, *Minibiotus allani* **comb. n.**, *Minibiotus crassidens* **comb. n.**, *Minibiotus acontistus* **comb. n.**, *Macrobotus lazzaroi*, *Macrobotus spertii*, *Macrobotus striatus*

Introduction

The genus *Minibiotus* Schuster, 1980 was erected by Schuster *et al.* (1980). In the diagnosis of *Minibiotus*, Schuster defined the genus by the presence of peribuccal papulae instead of lamellae, by freely laid eggs with processes enclosed in a membrane (distinctions between *Minibiotus* and other Macrobiotidae genera), by the presence of symmetrical double claws in each leg (sequence 2112), and other characters common to other macrobiotids, such as rigid buccal tube, mucrones, macroplacoids, and lunules while development of infrabuccal baffles (transversal ridge) was unknown. In discussion, Schuster wrote that “the buccal tube of known species is very thin and the stylet supports are attached near the middle”. Claxton (1998) re-defined the genus still considering the presence of peribuccal papulae and in addition considering several characters, most