



***Macrobotus alvaroi*, a new species of eutardigrade (Tardigrada, Macrobiotidae) of the *polyopus* group from Costa Rica (Central America)**

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Abstract

Macrobotus alvaroi sp. n. is a new species from Costa Rica belonging to the *polyopus* group; it has two macroplacoids and a small microplacoid, eggs with conical processes joined to each other by thin striae forming a reticular design with hexagonal meshes. It differs from the other species of the group in details of the eggs. From some of them it differs also in some characters of the adults.

Key words: Taxonomy, Tardigrada *Macrobotus alvaroi*, sp. n.

Introduction

Pilato in a recent paper (2006) attributed four species to the *polyopus* group: *Macrobotus polyopus* Marcus, 1928, *M. mandalae* Pilato, 1974, *M. insularis* Pilato, 2006 and *M. ocotensis* Pilato, 2006.

According to Marcus (1928) *M. polyopus* (originally described for Sumatra) has the following characters: colourless; body length up to 300 µm; ventral lamina of the buccal tube short (not longer than twice the stylet sheaths); pharyngeal bulb with two macroplacoids; microplacoid absent; claws short and weak (he used the terms *kurz* and *zart*) with a common portion shorter than the secondary branch; accessory points very thin (he used the adjective “feine”); diameter of eggs 65 µm including processes; egg processes large, conical and angular with pointed distal extremities. Marcus (1928) wrote: “mit kantigen, breiten, distal spitz endigenden Ausschüssen”, and he drew an egg with 18 processes around the circumference and 39 processes on the hemisphere.

M. polyopus was also recorded for Brazil by de Barros (1942), but she indicated some differences (the ventral lamina is clearly longer than that of *M. polyopus* drawn by Marcus (1928, p. 149, Fig. 172), the claws are not weak and the accessory points are normally developed); that induced Pilato (2006) to think that the material of de Barros does not belong to *M. polyopus*.

Pilato (1974) described *M. mandalae* from China (Canton) and this species differs from *M. polyopus* by having a longer ventral lamina, microplacoid present, and smaller egg processes with well visible annulations (Fig. 2E, F).

Maucci & Durante Pasa (1980) recorded *M. polyopus* for the Andaman Islands and considered *M. mandalae* as a synonym of *M. polyopus*, but Pilato (1984) confirmed that it is a *bona species*. Recently Pilato (2006) confirmed this statement and attributed the material from the Andaman Islands to the new species named *Macrobotus insularis*. This species has ventral lamina longer than double the length of the stylet sheaths, two macroplacoids and a small microplacoid, egg processes with slightly visible annulations, and egg shell dotted with hexagonal meshes (Fig. 2A, B).