



Description of three new species of Tardigrada from the Seychelles

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Abstract

In the context of the project “The Nature Protection Trust of Seychelles”, three species new to science are described: *Calcarobiotus (Calcarobiotus) parvicalcar* **sp. n.**, *Macrobiotus modestus* **sp. n.**, and *Itaquascon pisoniae* **sp. n.**

Calcarobiotus (Calcarobiotus) parvicalcar **sp. n.** differs from the other species of the genus in having very small basal spurs of the claws; from some of them also in lacking eyes or in metric characters of placoids or claws.

Macrobiotus modestus **sp. n.** has a very simple buccal armature (only three thin transverse ventral ridges are present and the three dorsal ridges are joined together forming a single transverse dorsal arc), and a long and narrow buccal tube with stylet supports inserted at 67–70 % of its length. It differs from the most similar species, *Macrobiotus humilis* and *Macrobiotus madegassus*, in some characteristics of bucco-pharyngeal apparatus and eggs.

Itaquascon pisoniae **sp. n.** has the buccal tube slightly longer than the pharyngeal tube (*pbf* index = 54–55), pharyngeal apophyses and placoids are absent, a very faint cuticular bar near the internal claws of the first three pairs of claws, and no cuticular thickenings on the hind legs. It differs from the most similar species of the genus, *Itaquascon placophorum*, in having a smooth cuticle, shorter claws, in lacking placoid and the cuticular bar between the claws of the hind legs.

Including this study, 30 species are recorded in the Seychelles, 15 of which are currently considered endemic for that archipelago.

Key words: Tardigrada, *Calcarobiotus parvicalcar* **sp. n.**, *Macrobiotus modestus* **sp. n.**, *Itaquascon pisoniae* **sp. n.**, Seychelles

Introduction

Previous studies on tardigrades of the Seychelles (Biserov 1994; Binda & Pilato 1995), and in particular the studies carried out within the framework of the project “The Nature Protection Trust of Seychelles” coordinated by Justin Gerlach (University Museum of Zoology of Cambridge) (Pilato, Binda & Lisi 2002, 2004, 2006), have reported 27 species in the archipelago, 13 of which were new to the science. Within the context of this project, we are here describing three more species that are new to science: *Calcarobiotus (Calcarobiotus) parvicalcar* **sp. n.**, *Macrobiotus modestus* **sp. n.**, and *Itaquascon pisoniae* **sp. n.**

Material and methods

We examined specimens collected on three islands: Mahé (La Misère), Praslin (Mt. Cabris) and Silhouette (*Pisonia* forest). The specimens were mounted in polyvinyl lactophenol; measurements and photomicrographs were made under oil immersion, using a Leica Phase Contrast Microscope equipped with digital camera by which photomicrographs were taken.

For comparisons with the new species, we have examined holotypes of *Macrobiotus sapiens* Binda & Pilato, 1984; *M. iharosi* Pilato, Binda & Catanzaro, 1991; *M. diffusus* Binda & Pilato, 1987; *M. humilis* Binda