



Tardigrades from Guizhou Province (China) with description of a new species of genus *Doryphoribius* (Tardigrada: Hypsibiidae)

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Abstract

Seventeen species of tardigrades were found in this study. All species are new records for Guizhou Province, including two new records for China (*Echiniscus perviridis* and *Doryphoribius zappalai*) and one (*Doryphoribius huangguoshuensis* **sp. nov.**) new for science. The new species differs from the most similar species of the genus *Doryphoribius* mainly by different configuration of gibbosities on dorsal side of the body (configuration 4, 4, 4, 4, 4, 4, 2, 2 in the new species; 2, 2, 2, 2, 2, 2 in *D. dupliglobulatus*; 4, 4, 4, 4, 4, 4, 2, 2, 3 in *D. gibber*; 6, 4, 6, 4, 6, 4, 4, 2 in *D. zyxiglobus*).

Key words: Tardigrada, new species, new record, *Doryphoribius huangguoshuensis* **sp. nov.**, Guizhou Province, China

Introduction

Guizhou Province is located in the eastern part of the Yunnan-Guizhou Plateau in southern China. Tardigrada have never been reported from this region. In the summer of 2007 some moss samples were collected from the Huangguoshu Fall and Langdeshang Village (Guizhou Province, China). Among these mosses 17 species of tardigrades were found. All species are new records for Guizhou Province including two new records for China and one new for science which is also described and figured in this paper.

Materials and methods

Mosses were soaked in water for 12 hours. Specimens were extracted from the mosses and fixed with 85% boiling alcohol. All specimens were mounted on microscope slides in Hoyer's medium. Observation and measurements were made using Phase Contrast Microscopy (PCM) (Nikon eclipse 80i) and an eyepiece micrometer. All measurements are given in micrometers (μm). Structures were measured only if their orientation was suitable. Body length was measured from the anterior end to the posterior end of the body, not including the hind legs. Buccal tube length and the level of the stylet support insertion point were measured according to Pilato (1981). Buccal tube widths were measured as the external diameters at the level of the stylet support insertion point. Lengths of the claw branches were measured from the base of the claw to the top of the branch, including accessory points. The *pt* ratio is the ratio of the length of a given structure to the length of the buccal tube expressed as a percentage (Pilato, 1981). Photomicrographs were made using PCM associated with digital camera (Nikon, DS-Fi1). Line drawings were made using PCM associated with *camera lucida*.

Abbreviations used: SMI, the smallest measured individual; LMI, the largest measured individual; BT, buccal tube; BC, basal claw; PB, primary branch; SB, second branch; SS, stylet support.