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A new species of land flatworm (Platyhelminthes: Continenticola) from areas of *Araucaria* Forest in southern Brazil

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Abstract

The genus *Cratera* Carbayo *et al.* was proposed to encompass five species of Geoplaninae from southeastern Brazil that were mainly recorded in the state of São Paulo. Here we describe a new species of the genus, *C. steffeni* **sp. nov.**, that occurs in areas of *Araucaria* Forest in southern Brazil, which augments the known distribution of *Cratera.* The new species is distinguished from others of the genus by its characteristic colour pattern and a combination of internal morphological characters.

Key words: Geoplaninae, taxonomy, land planarians, triclads, Neotropical region

Introduction

The highest known biodiversity of land planarians occurs in the southern hemisphere, especially in tropical forests (Winsor *et al*., 1998; Sluys, 1999). Areas of *Araucaria* Forest, part of the south Brazilian Atlantic rain forest, harbor high species richness in southern Brazil, and they have been indicated as a hotspot of land planarian diversity (Leal-Zanchet *et al*., 2011). However, most species recorded in the region during land flatworms inventories or ecological studies are still undescribed (Leal-Zanchet & Carbayo, 2000; Carbayo *et al.*, 2002; Fick *et al.*, 2006; Leal-Zanchet *et al*., 2011). Here we describe a new species of land planarian from southern Brazil that occurs in areas of *Araucaria* Forest.

Material and methods

Specimens of *C. steffeni* **sp. nov.** were collected from the Aparados da Serra National Park (29º05'–29º15'S, 50º00'–50º15'W), in areas of Mixed Ombrophilous Forest with *Araucaria angustifolia* (BERTOL.) O. KUNTZE (*Araucaria* Forest) located in Cambará do Sul, state of Rio Grande do Sul, Brazil. Specimens were collected during the day from sampling the leaf litter, under and inside fallen logs and branches, and under stones.

Methods described by Froehlich and Leal-Zanchet (2003) were used for histological processing of material and analysis of external and internal characters. The material was sectioned at 6 µm.

The ratio of the height of the cutaneous musculature to the height of the body (mc:h index in Froehlich, 1955) was determined in the median region of a transverse section of the pre-pharyngeal region. Mesenchymatic muscle fibers were counted in transverse sections of the same region. Colour descriptors, based on the uptake of dyes of particular colours, were used for classifying secretions with trichrome methods: erythrophil, xanthophil and cyanophil secretions. The term cyanophil is also applied to secretions that have an affinity for the green dye of Goldner's Masson.

Type-material was deposited in the following reference collections: Museu de Zoologia da Universidade do Vale do Rio dos Sinos, São Leopoldo, Rio Grande do Sul, Brazil (MZU), and the Helminthological Collection of Museu de Zoologia da Universidade de São Paulo, São Paulo, São Paulo State, Brazil (MZUSP).

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