



## Three new species of land flatworms and comments on a complex of species in the genus *Geoplana* Stimpson (Platyhelminthes: Continenticola)

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### Abstract

Three new species of *Geoplana* Stimpson, 1857 from south Brazil, *Geoplana ficki* **sp. nov.**, *G. carbayoi* **sp. nov.**, and *G. baptistae* **sp. nov.**, with dark, nearly homogeneous dorsum, reddish or orange venter, and eyes spreading over the dorsum, are described. The three can be included in the Graff group of “large, broad and flat species”, designated the *G. applanata*-group by C. G. Froehlich (1967). The first described species presenting this pattern was *G. rufiventris* Schultze & Müller, 1857. Later, several other authors described various species exhibiting the “dark dorsal surface and orange or reddish ventral side” pattern. These species constitute an assemblage which will be here designated the *G. rufiventris*-complex. Apart from presenting a similar pattern, a further considerable difficulty in differentiating these taxa from the other large, broad and flat species of the genus *Geoplana* which were included in Froehlich’s original *G. applanata*-group, resides in their possessing a very homogeneous copulatory apparatus. Characteristics of their external and internal morphology are here discussed to simplify the differentiation of sub-groups and comparison of species.

**Key words:** Geoplaninae, taxonomy, land planarians, triclads

### Introduction

When commenting on certain Neotropical land planarians, notably in specific reference to a group of large, broad and flat species, Graff (1899) designated *G. rufiventris* as its “type”. *Geoplana rufiventris* Schultze & Müller, 1857, first described on the basis of external morphology of specimens from Blumenau, south Brazil, has a dark dorsal surface and an orange or reddish ventral side. In his analysis of specimens from various provenances in south Brazil, Argentina and Paraguay, Graff (1899) appears to have been misled by the similarities of these external morphological characters, and considered his heterogeneous material as conspecific with *Geoplana rufiventris*