Zootaxa 3753 (2): 177–186
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3753.2.7
http://zoobank.org/urn:lsid:zoobank.org:pub:74D353B7-4D92-4674-938C-B7A46BD5E831

A new species of *Supramontana* Carbayo & Leal-Zanchet (Platyhelminthes, Continenticola, Geoplanidae) from the Interior Atlantic Forest

LISANDRO NEGRETE[1, 2], ANA MARIA LEAL-ZANCHET[3] & FRANCISCO BRUSA[1,2,4]

[1]*División Zoología Invertebrados, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Paseo del Bosque s/n, La Plata, Argentina*
[2]*CONICET*
[3]*Instituto de Pesquisas de Planárias, Universidade do Vale do Rio dos Sinos, 93022-000 São Leopoldo, Rio Grande do Sul, Brazil*
[4]*Corresponding author. E-mail: fbrusa@fcnym.unlp.edu.ar*

Abstract

Supramontana argentina **sp. nov.** (Platyhelminthes, Continenticola, Geoplanidae) from north-eastern Argentina is herein described. The new species differs from *Supramontana irritata* Carbayo & Leal-Zanchet, 2003 from Brazil, the only species of this genus so far described, by external and internal morphological characters. *Supramontana argentina* **sp. nov.** is characterized by having a colour pattern with a yellowish median band, thin para-median black stripes, and two dark grey lateral bands on the dorsal surface. The most outstanding features of the internal morphology are a ventral cephalic retractor muscle almost circular in cross section, prostatic vesicle extrabulbar, tubular and very long, and penis papilla conical and blunt with a sinuous ejaculatory duct.

Key words: triclads, land planarian, Geoplaninae, Argentina, Neotropical Region

Introduction

The taxonomy of land planarians (Geoplanidae) is mainly based on a combination of external morphological features and internal anatomical characters, mostly of the copulatory apparatus, which are revealed by histological techniques (Winsor 1998). Some aspects of the internal morphology, especially of the cephalic region, have not been considered by some researchers, and are therefore unknown in many species (Carbayo & Leal-Zanchet 2003). The importance of studying these structures for taxonomy purposes was previously suggested by CG Froehlich (1955) and EM Froehlich (1978). The taxon is not sufficiently known, thus current classification is in continuous change.

The genus *Supramontana* Carbayo & Leal-Zanchet, 2003 (Geoplaninae) was erected to include one species of land planarian with a certain cephalic muscular specialization. This flatworm species possesses a cephalic retractor muscle consisting of fibres of the ventral cutaneous longitudinal muscular layer sunk into the parenchyma (Carbayo & Leal-Zanchet 2003). The existence of a retractor muscle in the cephalic region has been reported in other Geoplaninae genera. However, *Supramontana* is distinguished from the rest of the current Geoplaninae by a combination of characters of the internal morphology, such as ventral longitudinal cutaneous musculature in two layers, sub-neural parenchymatic muscle layer along the body, presence of a (permanent) penis papilla, and common glandular ovovitelline duct horizontal and dorsal to the female atrium. This combination of characters precluded the authors from placing the species in any of the known genera of Geoplaninae. In this paper we describe a new species of *Supramontana* that inhabits the southern portion of the Interior Atlantic Forest in north-eastern Argentina.

Accepted by W. Sterrer: 21 Nov. 2013; published: 6 Jan. 2014

Supramontana argentina **sp. nov.** differs externally from the type-species of the genus by its dorsal colour pattern. *Supramontana irritata* possesses a pale yellowish background with dark brown spots dispersed onto the dorsum which forms a distinct narrow median stripe and three pairs of narrow stripes, varying in intensity among specimens (Carbayo & Leal-Zanchet 2003). The new species shows a colour pattern with a striking yellow median band and one pair of black stripes on a dark grey background.

Regarding the internal morphology, both species have an extrabulbar and unpaired prostatic vesicle, with its proximal region rather straight and dilated, and a sinuous distal portion. In *S. irritata* the ejaculatory duct is a straight canal without openings of secretory cells in its epithelium, but in *S. argentina* **sp. nov.** this duct runs sinuously through the penis papilla and receives abundant secretion. The penis papilla is similarly shaped in both species, but it is pointed in *S. irritata* and blunt in *S. argentina* **sp. nov.** Also, the male atrium is only partially occupied by the papilla in *S. irritata*, whereas the papilla occupies the whole cavity of the male atrium in *S. argentina* **sp. nov.** The female reproductive system of *S. argentina* **sp. nov.** is similar to that of *S. irritata*, except for the common glandular ovovitelline duct, which is longer in *S. irritata* (~1 mm) than in *S. argentina* **sp. nov.** (about half of this length).

The finding of a second species of *Supramontana* consolidates the identity of this genus, reinforces the diagnosis of the genus provided by Carbayo & Leal-Zanchet (2003), and extends its distribution range along the Atlantic Forest.

Acknowledgements

The authors are grateful to Fundación Vida Silvestre Argentina and Ministerio de Ecología y Recursos Naturales Renovables from Misiones province for permission to conduct sampling at RVSU, and especially to the park managers Ariel Tombo and Laura Aréjola for support during fieldwork. We are thankful to the Administración de Parques Nacionales and INTA San Antonio for permission to conduct sampling at CAMB and INP. We thank Marcelo Kostlin for his support during fieldwork at INP. We also thank Idea Wild for providing optic equipment. This work was partially financed by CONICET (Consejo Nacional de Investigaciones Científicas y Técnicas), Agencia Nacional de Promoción Científica y Tecnológica (FONCyT) PICT 2007-01287, Ministerio de Ciencia, Tecnología e Innovación Productiva, Argentina and Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, Brazil (MINCYT/CAPES 202/2012) and UNLP (Universidad Nacional de La Plata) 11/N600. Dr. Hugh Jones, Dr. Fernando Carbayo and an anonymous reviewer are acknowledged for their constructive suggestions.

References

Carbayo, F. & Leal-Zanchet, A.M. (2003) Two new genera of geoplaninid land planarians (Platyhelminthes: Tricladida: Terricola) of Brazil in the light of cephalic specialisations. *Invertebrate Systematics,* 17, 449–468. http://dx.doi.org/10.1071/it01035

Di Bitetti, M.S., Placci, G. & Dietz, L.A. (2003) *Una Visión de Biodiversidad para la Ecorregión del Bosque Atlántico del Alto Paraná: Diseño de un Paisaje para la Conservación de la Biodiversidad y prioridades para las acciones de conservación.* World Wildlife Foundation, Washington DC, 154 pp.

Froehlich, C.G. (1955) Sôbre morfologia e taxonomia das Geoplanidae. *Boletins da Faculdade de Filosofia, Ciências e Letras da Universidade de São Paulo, Série Zoologia*, 19, 195–279.

Froehlich, E.M. (1978) On a collection of Chilean landplanarians. *Boletim de Zoologia da Universidade de São Paulo*, 3, 7–80.

Galindo-Leal, C. & Câmara, G. (2003) Atlantic Forest Hotspot Status: An Overview. *In:* Galindo-Leal, C. & Câmara, G. (Eds.), *The Atlantic Forest of South America: biodiversity status, threats, and outlook*. Island Press, Washington DC, pp. 3–11.

Giraudo, A.R., Povedano, H., Belgrano, M.J., Krauczuk, E., Pardiñas, U., Miquelarena, A., Ligier, D., Baldo, D. & Castelino, M. (2003) Biodiversity Status of the Interior Atlantic Forest of Argentina. *In:* Galindo-Leal, C. & Câmara, G. (Eds.), *The Atlantic Forest of South America: biodiversity status, threats, and outlook*. Island Press, Washington DC, pp. 160–180.

Romeis, B. (1989) *Mikroskopische Technik*. Urban und Schwarzenberg, München, 697 pp.

Winsor, L. (1998) Aspects of taxonomy and functional histology in terrestrial flatworms (Tricladida: Terricola). *Pedobiologia*, 42, 412–432.