



<http://dx.doi.org/10.11646/zootaxa.4027.2.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:9096376A-C64F-46D7-8E75-55B56E495A4F>

Three new species of *Diplocirrus* Haase, 1915 (Polychaeta: Flabelligeridae) from Campos Basin in SE Brazil

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Abstract. Currently, 16 species of Flabelligeridae have been recorded in Brazil, four in the genus *Diplocirrus*: *D. glaucus* Malmgren, 1867 from Ubatuba, *D. capensis* Day, 1961 from Santos (São Paulo State) and *Diplocirrus* sp. from off north of Rio de Janeiro. *Diplocirrus glaucus australis* Nonato, 1981 is considered a *nomen nudum*. In the present study, three new species are described: *Diplocirrus rugosus* sp. nov., *Diplocirrus salazarvallejoi* sp. nov. and *Diplocirrus acafi* sp. nov., all collected from soft bottoms off southeast Brazil. A key to all *Diplocirrus* species is provided.

Key words: Annelida, polychaetes, morphology, taxonomy, Habitats Project

Introduction

Diplocirrus is a genus of the Flabelligeridae family proposed by Haase (1915) following earlier observations by von Marenzeller (1889) and de Saint-Joseph (1898). The genus is characterized by abundant clavate or subcylindrical (often anteriorly swollen) body papillae, all chaetae multiarticulated capillaries, thick neurochaetae, and sessile branchiae. Although both branchial and chaetal features are employed to distinguish flabelligerid genera, their delineation is sometimes unclear because branchial features are in the eversible anterior end, which is rarely exposed (Salazar-Vallejo & Buzhinskaja 2011).

In Brazil, Petti (1997) and Paiva (1990, 1993) recorded *Diplocirrus glaucus* (Malmgren, 1867) in Ubatuba (São Paulo State, Brazil). However, its type-locality is the Scandinavia, and its presence in Brazilian waters seems unlikely. Nonato (1981) also described *D. glaucus australis* in Ubatuba, which was followed by other authors who recorded this subspecies in other nearby locations (Morgado & Amaral, 1988; 1989; Paiva, 1990). Currently, this taxon is considered a *nomen nudum* (Amaral *et al.*, 2013). *Diplocirrus capensis* Day, 1961 from South Africa was recorded by Shimabukuro (2011) in Santos (São Paulo State, Brazil). More recently, *Diplocirrus* sp. was reported by Bolívar (1990) and Machado *et al.* (2012) in Rio de Janeiro State.

Salazar-Vallejo & Buzhinskaja (2011) revised all *Diplocirrus* species and regarded *Bradiella* Rullier, 1965 and *Diversibranchius* Buzhinskaja, 1993 as junior synonyms based on type and additional material. At that point, the genus *Diplocirrus* contained nine species and no species has been described from the Western South Atlantic.

Three new species are described from Campos Basin, southeast Brazil: *Diplocirrus rugosus* sp. nov., *Diplocirrus salazarvallejoi* sp. nov., and *Diplocirrus acafi* sp. nov.

Material and methods

Material was collected during two sampling campaigns during the Habitats/Petrobras – Campos Basin Environmental Heterogeneity Project, coordinated by CENPES/Petrobras. All necessary permits for the described field studies were obtained prior the beginning of the samplings. Sampling was authorized and conditioned by environmental licenses (Prior Licenses no. 284 2008 and Operation no. 782 2008) issued by the Brazilian Environmental Agency (IBAMA).