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A new genus and new species of Sclerodactylidae (Holothuroidea: Dendrochirotida) from the south-western Atlantic coast

LUCIANA MARTINS[1], CAMILLA SOUTO[1] & CARLA MENEGOLA[1]

[1]Departamento de Zoologia, Instituto de Biologia, Universidade Federal da Bahia, Av. Barão de Jeremoabo s/n, Campus Universitário, Ondina, Salvador-BA, Brazil, CEP: 40170-290.
E-mail: lribeiromartins@yahoo.com.br, camillasouto@yahoo.com.br, carla.menegola@gmail.com

Abstract

In this paper, we diagnose a new genus of Sclerodactylidae, *Coronatum* **gen. *et* sp. nov.**, from shallow waters of the south-western Atlantic Ocean. *Coronatum baiensis* **sp. nov.** has a compact calcareous ring with short posterior processes and a unique set of body wall ossicles, composed of two-pillared tables, which do not have any morphological affinities with *Euthyonidiella dentata* and *Pseudothyone belli*, the other two known Brazilian sclerodactylid species. Identification keys and photographs of living specimens and ossicles are provided. This paper increases to twelve the number of known Sclerodactylinae genera and to two the number of species of this subfamily in this region.

Key words: Echinodermata, Sclerodactylinae, Taxonomy, identification key, Brazil

Resumo

Neste artigo nós diagnosticamos um novo gênero de Sclerodactylidae, *Coronatum* **gen. et sp. nov.**, de águas rasas do Sudoeste do Oceano Atlântico. *Coronatum baiensis* **sp. nov.** tem um anel calcário compacto com processos posteriores curtos e um conjunto único de ossículos na parede corporal, composto por torres com dois pilares, que não possui afinidades morfológicas com *Euthyonidiella dentata* e *Pseudothyone belli*, as outras duas espécies brasileiras desta família. Chaves de identificação e fotografias de espécimes vivos e ossículos também são apresentadas. Este artigo aumenta para doze o número de gêneros conhecidos de Sclerodactylinae e para dois o número de espécies desta subfamília nesta região.

Palavras-chave: Echinodermata, Sclerodactylidae, Taxonomia, chave de identificação, Brasil

Introduction

The relationship among Cucumariidae, Sclerodactylidae and Phyllophoridae has been the subject of much debate. Panning (1949) and Heding & Panning (1954) distinguished cucumariids and phyllophorids by the number of tentacles (10 and more than 10, respectively). However, Pawson & Fell (1965) noted that this classification concealed evolutionary trends. Therefore, they suggested that these families should be distinguished by the morphology of the calcareous ring: cucumariids with radials and interradials lacking posterior processes (simple calcareous ring); sclerodactylids with undivided posterior processes; and phyllophorids with posterior processes composed of a mosaic of small pieces (complex calcareous ring). Based on this classification, the family Sclerodactylidae encompasses transitional forms between cucumariids and phyllophorids (Thandar 1989).

Thandar (1989) disagreed with this classification because sclerodactylids and phyllophorids could have divided or undivided posterior processes. According to him, emphasis should be placed on the morphology of the radial and interradial plates of the calcareous ring and not on their processes. He therefore proposed a new classification for these two families: sclerodactylids with compact plates and phyllophorids with plates composed of a mosaic of small pieces.

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