

Echinodermata, Ophiomyxidae, *Ophioscolex glacialis* Müller and Troschel, 1842: First record of the species for the South Atlantic

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ABSTRACT: *Ophioscolex glacialis* Müller and Troschel, 1840 (Ophiuroidea: Ophiomyxidae) was registered for first time off the Brazilian coast, from the Campos Basin of Rio de Janeiro, Brazil. The specimen was sampled during a environmental monitoring.

The Class Ophiuroidea is the most widely adapted among echinoderms, found from Tropical to Polar regions and the intertidal zone to large depths (Hendler 1995). Part of the success of this group can be attributed to its mobility, small size and ability to use crevices and spaces under rocks as well as other natural refuges for protection (Hyman 1955). Among Ophiuroidea, the Ophiomyxidae family is characterized by: epidermis covering the small scales of the disk and arms; small and often imperceptible or absent radial shields; dorsal plates of arms very low or absent; lateral plates of the arms in lateral or subventral position; upper and lower muscle fosse of the arms subequal; jaws as wide as long, with papillae which may be simple, lobed or rough.

In the genus *Ophioscolex* the second oral tentacle appears superficially, outside the mouth slit. The brachial spines rises laterally positioned, covered by thick skin. *Ophiomyxa flaccida* (Say, 1825) and *Ophioleptoplax brasiliiana* Tommasi and Abreu, 1974 are the only species of Ophiomyxidae found in Brazil until now. This paper presents the first record of *Ophioscolex glacialis* Müller and Troschel, 1842 for the Brazilian coast, from regions of the continental slope off the coast of Rio de Janeiro state.

The species was collected with a sampler box-corer with an opening of 0.25 m² and preserved in glycerin alcohol (950 ml of alcohol to 50 ml of glycerin). To a better visualization, the specimen was dried on absorbent paper, before being examined under a stereoscopic microscope (magnifying glass). Identification was done with the aid of specific literature (Paterson 1985; Sthör 2005). The measurement of diameter of the disc (the distance from the distal edge of the radial shield to the opposite interradial region) was made with the aid of digital caliper to the nearest 0.01 mm.

The examined material was one specimen collected in Campos Basin, Rio de Janeiro in 08 May 2007 at 900 m deep (21°34'51" S, 38°05'13" W). The specimen was deposited in the collection of the Laboratory of Marine

Invertebrates (LABIMAR), Department of Biosciences, Universidade Federal de Sergipe, and registered with number UFISTAB-80.

This specimen presents pentagonal disk with light interradianal reentrancy, measuring 8.44 mm, covered by thick skin. Radial shields small, united anteriorly and widely separated in the distal region (Figure 1A). In the dorsal and interradianal regions of the disk the tegument form streaks which are more pronounced around the radial shields. Oral interradianal region similar to aboral. Oral shields wider than long, with anterior end slightly rounded and the posterior end elongated (Figure 1B).

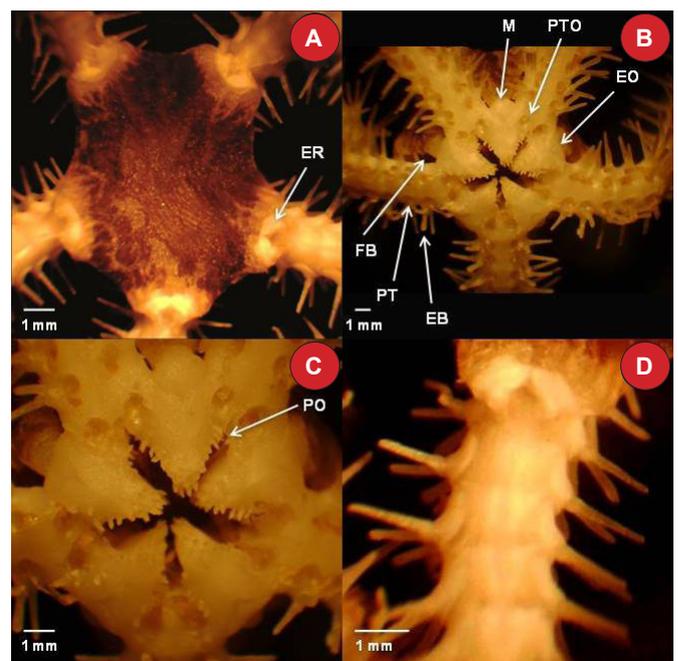


FIGURE 1. *Ophioscolex glacialis* Müller and Troschel, 1842. A) Aboral view; ER - Radial shield. B) Oral view; M - Madreporite; PTO - Second oral tentacle pore; EO - Oral shield; FB - Bursal slit; PT - Tentacle pore; EB - Brachial spine. C) Mouth view with the jaws; PO - Oral papillae. D) Arm view; Dorsal plates absent.

Adoral shields stretched and united previously separating the oral shield of the first lateral brachial plate. Short jaws with four spiniform apical oral papillae, similar to the teeth and below them. Three to four oral papillae irregularly distributed along each jaw (Figure 1C). One or two oral papillae inside of the oral slit. The second oral tentacle pore situated close to the adoral shield, with one or two tentacle scales slightly larger than the oral papillae. Arms measuring 40.34 mm, and dorsal plates absent (Figure 1D). Elongated lateral plates with 2-4 spines close to the disk, and three spines on the following segments, all slightly compressed, with rounded ends and finely denticulate. Narrow ventral plates, tentacular pores large without tentacle scales. Extended podia of slightly orange color. The disk is brown in alcohol, being more darkened in the interradianal reentrancy. The arms, jaws and radial shields are whitish.

Ophioscolex glacialis have bathymetric distribution from 50 to about 2,727 m deep (Stöhr 2005). The geographic distribution of this species includes the North Atlantic Ocean and beaches of the Arctic (Paterson 1985).

The record of *Ophioscolex glacialis* off the Brazilian coast contributes to increase the knowledge about the marine fauna of Brazil. Moreover it helps to understand the distribution pattern of this species in the world.

LITERATURE CITED

- Hendler, G., J.E. Miller, D.L. Pawson and P.M. Kier. 1995. *Sea stars, sea urchins, and allies: echinoderms of Florida and the Caribbean*. Washington and London: Smithsonian Institution Press. 390 p.
- Hyman, L.H. 1955. *The invertebrates: Echinodermata, the coelomate bilateria*. London: McGraw-Hill Book Company. 763 p.
- Paterson, G.L.J. 1985. The deep-sea Ophiuroidea of the North Atlantic Ocean. *Bulletin of the British Museum (Natural History) Zoology Series* 49(1): 1-162.
- Stöhr, S. 2005. Who's who among baby brittle stars (Echinodermata: Ophiuroidea): post metamorphic development of some North Atlantic forms. *Zoological Journal of the Linnean Society* 143(1): 543-576.

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