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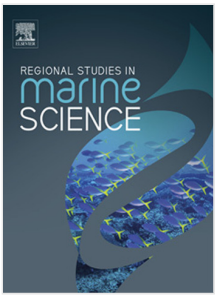

Composition and cross-shelf distribution of ichthyoplankton in the Tropical Southwestern Atlantic

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Composition and cross-shelf distribution of ichthyoplankton in the Tropical Southwestern Atlantic

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Abstract

The spatial distribution, abundance, and composition of ichthyoplankton are key ecological features for the conservation of biodiversity and sustainability of fisheries. Despite their importance, knowledge about these features in the equatorial waters of the planet is still scarce. The aim of this study was to assess these features in the Tropical Southwestern Atlantic (northeastern Brazil). Two oceanographic cruises were carried out (2010) on the continental shelf. The collections were performed at 54 stations distributed in three coast parallel profiles covering a wide geographical area (20,100 km^2). A total of 3723 fish larvae and 3829 fish eggs were sampled. Larval identification resulted in 15 taxa belonging to 13 families. Eggs of family Engraulidae were the most abundant and represented 40.8% of the total eggs. The largest concentration of fish larvae and eggs was found on the outer shelf, because of the mixture of coastal and oceanic species. On the continental shelf, the abundance of fish larvae was higher near the marine protected area, mesophotic reefs and large tropical mangrove ecosystems. The present results provide a baseline assessment of a poorly studied region of the planet along a coast with high turbidity, and sea surface temperatures. Moreover, the results highlight the need for rigorous monitoring to detect shifts in diversity and abundance of ichthyoplankton on a continental shelf with a large number of rich tropical ecosystems.

Key words: Fish eggs, fish larvae, tropical semiarid coast, South Atlantic

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