

Permeable frontiers in the open sea: The case of Swordfish in the Atlantic Ocean

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Abstract

There is a vivid debate about the border location between North and South Atlantic swordfish stocks. Climate oscillations, East Atlantic (EA) and North Atlantic Oscillation (NAO), have a major impact on the Northern Hemisphere climate and weather conditions. The initial hypothesis of present study was that if it is considering the southern frontier, each stock will be differentially affected by both climatic oscillations, which would imply the existence of a strong border. However, a similar effect on both sides of the border would result in a permeable barrier. The results suggest that the combined effects of EA and NAO affect both the North and the South Atlantic swordfish stocks in similar ways, and consequently, the location of the border may reside farther north than the current management boundary at 5°N. © 2021, Universidad De Valparaíso, Chile. All rights reserved.

Author keywords

Atlantic Ocean; Climatic oscillations; East Atlantic pattern; North Atlantic Oscillation