

## Diversity of pelagic fish larvae in a latitudinal gradient across the Atlantic Ocean estimated through DNA Barcodes and visual identification

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Mid-trophic pelagic fish are essential components of marine ecosystems because they represent the link between plankton and higher predators. Moreover they are the basis of the most important fisheries resources, for example in African waters. In this study we have sampled pelagic fish larvae in the Eastern Atlantic Ocean across a latitudinal gradient between 37°N and 18°S. We have employed Bongo nets for plankton sampling and conducted DNA analysis (Barcoding) for accurate species identification. From a total of 403 larvae we have identified 56 fish species. Some of them are cosmopolitan and others are latitude-specific, as expected. The latitudinal pattern of diversity did not exhibit a temperate-tropical cline; instead it was correlated with environmental conditions with a maximum in subtropical zones. These results are important in the context of ecosystem functioning and may serve for designing ecosystem-based management of fisheries resources.

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