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Zooplankton vertical distribution across the tropical Atlantic Ocean

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Vertical distribution of main zooplankton species involved in active flux in the tropical Atlantic Ocean was studied in a transect from Brazil to the Canary Islands. The survey was carried out during April, 2015 using an opening-closing MOCNESS 9 nets from 800 m depth to the surface in 12 stations. We also analyzed the epipelagic strata (0-200 m) using micro (Calvet 53 μm) and mesozooplankton (WP2, 200 μm) nets. According to the decreasing temperature and stratification along the transect, a gradient of increasing mesozooplankton abundance was observed in the epipelagic zone, being maximum in the oceanic upwelling area off Mauritania. Copepods were the most abundant group (82%) with more than 155 species identified, being the smaller size always predominant. *Clausocalanus* were the most abundant one (18%) with *C. furcatus* dominating. They were followed by small *Oncaea* species (17%), *Paracalanus* (14%) and *Oithona* (9%) in the whole water column analyzed. Large copepods (Calanoids, Euchaeta, Pleuromamma, etc...) although important in biomass in the epipelagic strata during the night and in mesopelagic during day, were quantitatively less important (<20%). The most dominant copepod species and their vertical distribution are analyzed in relation to the different oceanographic zones.

Keywords: Zooplankton, copepod composition, vertical distribution, Tropical Atlantic Ocean

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