

DIVERSITY AND ABUNDANCE OF PLANKTONIC COMMUNITIES IN THE DEEP WATERS OFF THE GALICIAN COAST (NW SPAIN).

Planktonic communities play pivotal roles within marine ecosystems, affecting their structure, functioning and services. Although they have been extensively studied in the epipelagic ocean, the knowledge about these communities in the dark ocean is rather short. In this study, we explored patterns of abundance and biomass of a wide variety of taxonomic groups from the prokaryotes to mesozooplankton in the epi-, meso- and bathypelagic waters off the Galician coast. As expected, ciliate and zooplankton abundances are depleted in the bathypelagic waters relative to abundances of prokaryotes and nanoflagellates. The rate of decrease of zooplankton biomass with depth is twice as that of prokaryotes and nanoflagellates, indicating that relative contribution of mesozooplankton to the total plankton biomass decreases with depth. Overall, the diversity of prokaryotes in the dark ocean is almost as high as in the epipelagic layer, although the phylotypes are different. The major fraction of epipelagic ciliates belongs to alloricate genera, whereas tintinnids dominate the deep ciliate populations. Small copepods were dominant in the epi- and meso-pelagic zone. By contrast, foraminiferans, big copepods and myctophic fishes were more abundant in the deep ocean.