

Intertidal meiobenthos from Deception Island (Antarctica). A place of ice and fire.

Rubal Marcos^{1,2}, Veiga Puri^{1,2}, Lastra Mariano^{3,4}, López Jesús^{3,4}, Troncoso Jesús^{3,4}

¹CIIMAR, Matosinhos, Portugal

²University of Porto, Porto, Portugal

³University of Vigo, Vigo, Spain

⁴ECIMAT, Vigo, Spain

Information about the diversity and structure of intertidal meiobenthic assemblages in Antarctica is very scarce. The aim of this study is to explore the diversity and structure of intertidal meiobenthic assemblages in on four different beaches of Deception Island. At each beach different sites separated by 10s of metres were sampled, and at each site two tidal levels (high and low) were considered. A total of four cores (10 cm²) were collected at each site and tidal level. The environment of the four intertidal beaches was very different, with beaches from coarse to gravel sands and particularly the temperature that range from 4.5 to 40 °C. Results showed a relative low diversity with only 12 different taxa and very low abundance, only 591 individuals were found in a total of 64 samples. In general nematodes were the dominant group with 370 individuals followed by harpacticoids (70 individuals), tubelarians (48 individuals), nauplii (40 individuals) and rotifers (28 individuals). The other seven taxa showed total abundances lower than 10 individuals (Figure 1). This poor diversity and abundance contrast with the meiobenthic structure of intertidal sandy beaches on other latitudes but, are in concordance with previous results by Kotwicki et al., (2005). We did not find significant differences on the meiobenthos assemblage structure among the studied beaches or tidal levels. Moreover, no clear relationship between meiobenthic assemblage and the studied environmental variables was found, suggesting that other ecological drivers such as food availability may be the responsible of the observed pattern of distribution. This study provides valuable baseline information about the diversity and structure of intertidal meiobenthic assemblages in an area poorly studied.

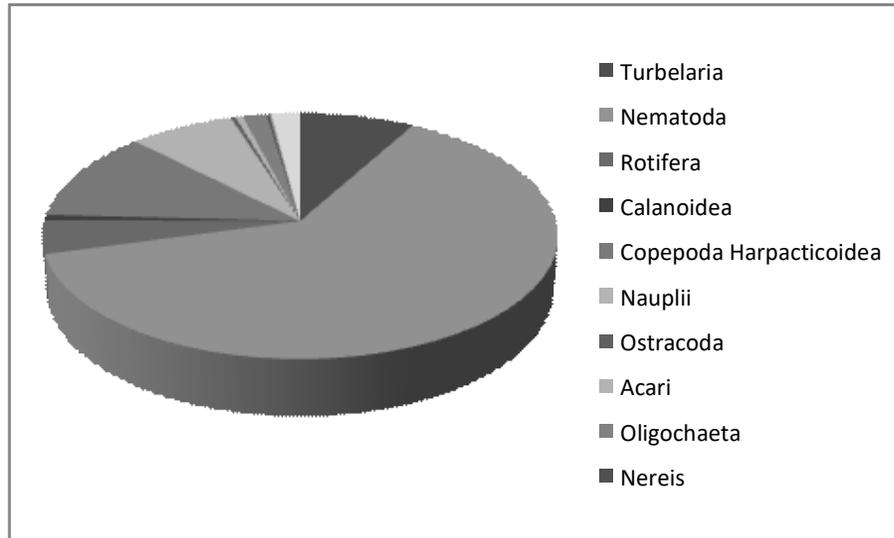


Figure 1. Relative abundance of the different taxa found in the study.

References

Kotwicki, L. Szymelfenig, M. De Troch, M. Urban-Malinga, B. Gheskiere, T. and JM. Weslawski, Latitudinal biodiversity patterns of meiofauna from sandy littoral beaches. *Biodiversity and Conservation* 14, 461-474, 2005.