THE MEIOBENTHOS OF TWO ABYSSAL SITES IN THE NE ATLANTIC WITH A PRESUMED CONTRASTING FOOD SUPPLY

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The meiobenthos, with emphasis on the abundance and biomass spectra of nematodes, was investigated at abyssal sites in the NE Atlantic. The northern site is situated on the Porcupine Abyssal Plain (PAP; 48°50'N 16°30'W) where there is evidence for a high, seasonal input of organic matter derived from the overlying water column. The southern site is the oligotrophic station of the French EUMELI programme off Mauritania (21°N 31°W), and is characterized by low primary productivity in the overlying water column and consequently by lower organic input to the deep-sea floor. The low nematode density and biomass at the EUMELI site (89 ind/10 cm^2, 8.52 μg wwt/10 cm^2), in contrast to the PAP site (254 ind/10 cm^2, 54.16 μg wwt/10 cm^2), supports the assumption of a lower food supply in this area. Similarly, mean individual body weight is significantly smaller at the oligotrophic EUMELI site (0.0241 μg dwt) compared to the PAP site (0.0511 μg dwt), supporting the hypothesis that mean nematode body size is correlated with food availability. However, differences are much less obvious when the geometric mean and the median individual body size values are compared. The abundance size spectra for the two localities diverge appreciably only in the upper quartile, so that the differences in mean individual body weights are caused by the relatively greater abundance of larger nematodes at the more eutrophic PAP site.