



Calcareous benthic foraminiferal biofacies along a depth transect on the southwestern Marmara shelf (Turkey)

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Résumé en anglais

A total of 200 calcareous benthic foraminiferal species were identified in 30 surface samples collected across a depth transect in the southwestern Marmara Sea. Q-mode cluster and canonical correspondence analyses performed on the foraminiferal species abundance data revealed three clusters. Environmental parameters collected at each sampling station allowed the correlation between foraminiferal clusters and watermass characteristics, such as water depth, temperature, salinity and dissolved oxygen concentrations. Cluster A (55-130 m) is characterized by species typical of muddy substrates in the circa-littoral zone and related to declining dissolved oxygen values. Cluster (140-350m) is characterized by deep-infaunal dysoxic and suboxic species indicative of circa-littoral and upper epibathyal environments and strongly related to low dissolved oxygen values and increased water depth. Cluster C (15-50m) is characterized by neritic species typical of the infra-littoral environment. This cluster is further subdivided into three subclusters that reflect brackish surface flow (influenced by low salinity, higher temperature), pycnocline (rising salinity, falling temperature) and infra-littoral to circa-littoral transitional environments (higher oxygen from the Mediterranean countercurrent and the subsurface chlorophyll maximum), respectively.

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