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ASSESSEMENT OF SHORT-TERM TEMPORAL VARIABILITY IN THE COMMUNITY STRUCTURE OF TINTINNIDS, PLANKTONIC CILIATES OF THE MICROZOOPLANKTON

An assessment of short-term temporal variability in the community structure of tintinnids, planktonic ciliates of the microzooplankton in the open NW Mediterranean Sea in autumn 2004.

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There are few data on the temporal variability of biodiversity metrics with regard to marine plankton. We sampled an open water site in the N.W. Mediterranean Sea subject to little advection. On 20 dates over a 4-week period in autumn 2004, large volume samples (10 l) were obtained from 6 depths between the surface and 90 m at the Dyfamed Station midway between the French coast and Corsica. Quantitative estimates of the tintinnid community varied considerably compared to qualitative descriptors. Average water column concentrations of tintinnids ranged from 10 - 50 l^{-1} and varied with chlorophyll concentrations. Numbers of tintinnid species varied between 24 and 33, from day to day and values of the Shannon H' index ranged from 2 to 2.7. However, identity of the dominant species (the most abundant species, collectively representing ≥ 50% of total individuals) was constant. Species rank- abundance curves for all dates were nearly identical and mostly closely resembled log-series distributions rather than log-normal or geometric distributions.