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NICHE SEPARATION AND THE ROLE OF DOMINANTS AMONG TINTINNID CILIATES, GRAZERS OF THE MICROZOOPLANKTON

In tintinnids lorica oral diameter, roughly equivalent to mouth size, correlates with several ecological traits. I examined niche separation by equating it to this morphological trait. Temporal changes in the tintinnid community of the Bay of Villefranche (N.W. Mediterranean Sea) were explored based on weekly sampling over an annual cycle. Although overall abundance and species richness varied widely, community average oral diameter reflected changes in the identity of the dominant or most abundant species. The dominant species, the "#1", the second most abundant,"#2", and the third most abundant, "#3" shifted together; changes in the identity of the #1 species were accompanied by changes in the identities of the #2 and #3 species. The lorica oral diameters of #2 and #3 species almost invariably differed from the #1 species. The differences were similar in magnitude and scaled with the size of the dominant species. Overall, the lorica oral diameters of the #2 and #3 differed by 40% from that of the #1 species. Deviations from the average of 40% decreased with relative dominance of the #1 species. The relative dominance of the most abundant species also appeared to influence the species abundance distribution of the entire tintinnid assemblage. Thus, the characteristics of the most abundant species, its morphology and relative dominance, structured the tintinnid community. Financial support provided by the ANR Biodiversité/Pôle Mer PACA project AQUAPARADOX.