

ANNUAL CYCLE OF THE DENSITY, BIOMASS AND SPECIES COMPOSITION OF TINTINNIDS (CILIATA) AND ASSOCIATED MICROPLANKTERS AT POTTER COVE (ISLA 25 DE MAYO, SOUTH SHETLAND ISLANDS).

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Temporal fluctuations of microzooplankton (20-200 μm) in the Southern Ocean are scarcely known. In order to assess the dynamics of Antarctic tintinnid species in a neritic environment, 21 surface (1 m) samples were collected at a fixed station located in Potter Cove (62°14'S 58°39'W) between March 1996 and February 1997. Density (ind l^{-1}) of tintinnid species and other microplankters (mostly heterotrophic, shell-bearing groups) was estimated by counting cells under an inverted microscope. Biovolume calculations and biomass conversion factors ($\mu\text{gC l}^{-1}$) applied depended on the group and species considered. Tintinnids were represented by 8 species and 12 morphotypes belonging to 4 genera. *Codonellopsis balechi* was the dominant taxon, with a maximum contribution to total tintinnid abundance and biomass of 68% and 64% during February, followed by *C. gaussi*, *Cymatocylis convallaria* and *Amphorides laackmanni*. The main change in the tintinnid assemblage took place in April, when there was a replacement of morphotypes of *Laackmaniella naviculaefera* and *C. convallaria*. With the exception of *C. balechi*, which always showed an agglutinated lorica, all species commonly exhibited a hyaline one. Tintinnids and dinoflagellates were the dominant groups in terms of density, and showed the same temporal trend: a main peak in summer ($>10^3 \text{ ind. l}^{-1}$), a secondary one in autumn, and a sharp decrease during winter and spring ($<25 \text{ ind. l}^{-1}$). Their contribution to biomass, instead, was dissimilar: 69% for tintinnids and 7% for dinoflagellates. This is basically attributed to differences in the size of cells. An unidentified taxon, probably a phototrophic dinoflagellate, was registered only in December, and reached a maximum density of 1750 ind. l^{-1} (18% of total microplanktonic biomass). Typical marine microzooplankters such as radiolarians, forams and pteropods showed irrelevant concentrations throughout the cycle examined. Temperature and sea ice coverage seem to be the main factors affecting the composition and density of species. Abundance of tintinnid species and some other microplankters were found similar to those reported for rich Antarctic environments.