

EUKARYOTIC PHYTOPLANKTON FROM BELLINGSHAUSEN SEA AND MARGUERITE BAY, ANTARCTIC: CHLOROPHYLL A AND FLOW CYTOMETRY ANALYSIS**Authors**

Eduardo Miranda, Maria Cordélia Machado & Frederico Kurtz

Affiliation and Address

Universidade Santa Úrsula Rua Jornalista Orlando Dantas 59 - Botafogo, Rio de Janeiro, Brazil

Abstracts

Chlorophyll a and flow cytometry studies were developed on the surface water of Marguerite Bay (MB) and at the water column (0-100 m) of Bellingshausen Sea (BS) during January 2002. The cells of nanoplankton and picoplankton were analyzed regarding the chlorophyll a and the ratio of the accessory pigments (chlorophyll b and c). Water temperature ranged from 0.29 to 0.70°C at MB and -0.80 to 1.60°C at BS. The salinity at the surface showed small variation, with higher values at deeper water. The highest concentrations of dissolved nutrients were found in BS. The surface water of MB (g.L⁻¹). At 25 m depth, μ 7.4 presented the highest chlorophyll a concentration (were the exit water of MB meets BS's water, chlorophyll a concentration was even g.L⁻¹, indicating a micro algae bloom. The picoplankton μ higher, reaching 55.66 m presented the lowest contribution to total concentration at they μ between 0.2-2 m predominated at BS and MB. μ two studied areas. Nanoplankton cells between 2-10 m indicated that the biomass at μ The lower contribution of cells largest than 10 the studied areas is sustained by nanoplankton cells smaller than m. μ 10.