

PHYTOPLANKTON BIOMASS IN THE BRANDSFIELD STRAIT (ANTARCTICA): COUPLING WITH MESOSCALE STRUCTURES

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During the Antarctic summer, the phytoplankton distribution in the central area of Bransfield Strait is not affected by the major nutrients but it is associated with hydrographical conditions. In the deep chlorophyll maximum (DCM), the microplankton constitutes a small fraction of phytoplanktonic biomass, being the most representative species, *Corethron criophylum*, *Thalassiosira* spp y *Proboscia* sp, with maxima contributions to the total biomass of 9, 7 and 4 %, respectively. Most of the biomass corresponds to cryptophycean population (22-90 %), followed of ultraplankton (7-47 %), the rest of nanoplankton (0.7-18 %) and picoplankton (0.4-15 %). There is a very good correlation between the biomass and the chlorophyll fluorescence signal in the flow cytometer (FL3) ($r_2 = 0.96$), whereas there is a greater dispersion in the correlation biomass-CTD fluorescence ($r_2 = 0.67$).

The hydrographic front established by the isohaline of 34.4 defines the limit of the distribution of most of the species. Thus, the cryptophycean population and *Corethron criophylum* are concentrated in the Transitional Zonal Water with Bellingshausen influence (TBW), relatively warm, low salinities and stratified waters. The rest of the species are shut away in the Transitional Zonal Water with Weddel Sea influence (TWW), relatively cold, salty and mixed waters that flow towards the southwest by the southern margin of the Straits of Bransfield.