MEROPLANKTON-PHYTOPLANKTON INTERACTION AT BRANSFIELD STRAIT, ANTARCTICA

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It was believed that Antarctic marine invertebrates developed adaptations to respond to cold and to strong seasonality in an area where primary production is reduced to a short period during the austral summer. Among the strategies proposed, non pelagic larval development was considered as adaptation to Antarctic conditions. However recent studies have revealed a relatively high diversity and abundance of larval forms of Antarctic invertebrates being planktotrophic some of them. In this communication we explore the relationships between distribution of main meroplanktonic groups with phytoplankton in the Bransfield Strait, Antarctica. Echinoderm larval abundance and cryptophyceae densities was the single significant positive relationship found (. Echinoderm larvae can ingest phytoplankton, bacteria, and detritus as well as directly absorb dissolved organic solutes. However, laboratory studies show that microalgae on size range 2-30 µm are the preferred food source. In Central Bransfield Strait where echinoderm larvae occur in relatively high abundances, Cryptophyceae represent more than 75% of the total biomass with a spherical diameter of 6 µm, so suitable to be ingested by these larvae. We propose that distribution of larvae of echinoderm is determined not only by hydrographic conditions but by cryptophyceae densities.