402

SEASONAL AND INTERANNUAL VARIABILITY IN THE NEARSHORE BIOLOGICAL OCEANOGRAPHY OF RYDER BAY, NORTHERN MARGUERITE BAY, ANTARCTICA

A Clarke, M P Meredith, M I Wallace

British Antarctic Survey, Cambridge, United Kingdom

We summarise biological oceanographic data from the first eight years of the Rothera Oceanographic and Biological Time Series (RaTS) programme, undertaken in Ryder Bay, northern Marguerite Bay, Antarctica since 1997. CTD casts have been taken weekly, when ice and weather conditions allow, providing an invaluable data series covering the full annual cycle. In this paper we summarise data for temperature, salinity and chlorophyll, emphasising both the seasonal picture and interannual variability. The surface waters reveal both substantial meteoric water input and the effects of ice. Water at lower depths reveals the signature of input from Upper Circumpolar Deep Water from the Antarctic Circumpolar Current flooding onto the shelf. The chlorophyll maximum is around 15m early in the season, but in some years a deeper maximum is evident towards the end of the summer. The bloom is dominated by larger cells (>20 microns), and vertical flux is constrained to a few weeks in mid-summer. These long-term data reveal the impact of ENSO events, and are important in providing a year-round context for more detailed oceanographic work, typically undertaken in the austral summer. They also provide a valuable environmental context for ecological work undertaken in nearby waters.