D71 SOME PHYSICO-CHEMICAL PARAMETERS AND THE COMPOSITION, DISTRIBUTION AND SEASONAL FLUCTUATION OF ZOO - PLANKTON IN CLAM, COCKLE AND OYSTER BEDS IN THE DUTCH BAY OF THE NORTH-WEST COAST OF SRI LANKA

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The culture of commercially important clams and cockles demands water quality and spat settlement in natural clams / cockle beds. The present study was initiated to study some of the hydrobiological and ecological features of clam, cockle and oysterbeds in the Dutch Bay of the North-west coast of Sri Lanka. Physico-chemical parameters such as air and water temperature, salinity, dissolved oxygen, inorganic phosphate, transparency, suspended solids and the amount of chlorophyll were measured once a month at 5 stations of the bay. Zoo-plankton samples were also collected and analysed quantitatively and qualitatively.

The water temperature varied from 21.6°C to 31.8°C whereas the amount of dissolved oxygen varied from 4.0 mg/l to 11.2 mg/l. The highest salinity was recorded as 41‰ during the South-West monsoon period and dropped down drastically at some locations during the rainy season. The chlorophyll values fluctuated from 0.18 gμ/l to 40 gμ/l. The most abundant taxonomic group of zoo-plankton was calanoids (71%) followed by cyclopoids 18% and chaetognaths (6%). The availability of jelly fish larvae and Lusifers was very seasonal with a peak in monsoon period. The amount of bivalve larvae recorded highest values just after the South West monsoon.