

Seasonal distribution of zooplankton composition and abundance in a sub-tropical mangrove and salt marsh estuary

ABSTRACT

Zooplankton composition and abundance at two stations located in exposed (station I) and protected (station II) areas of Bakkhali sub-tropical estuary, Cox's Bazar, Bangladesh were investigated monthly from January 2006 to December 2006. Thirty-three zooplankton taxa were identified. The major groups of zooplankton encountered were Copepoda, Chaetognatha, Mysidaceae, Luciferidae, Amphipoda, Acetes, Hydromedusae, Cladoceran, Decapod and fish larvae. The percent composition of Copepoda was the highest (79.5-84.8%) among zooplankton groups followed by Chaetognatha (5.5-6.0%) and Mysidaceae (3.3-6.8%). The abundance of zooplankton was relatively higher (87674 individuals/m³) in protected (mangrove) as compared to exposed (salt marsh; 68719 individuals/m³) site during the study period. Canonical Correspondence Analysis indicated that the abundance of copepods was influenced by rainfall, water temperature and transparency in this estuarine environment, and considered coastal and estuarine dominant.

Keyword: Zooplankton; Mangrove; Salt marsh; Estuary; Sub-tropical