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THE COMPOSITION, DISTRIBUTION AND THE SEASONAL FLUCTUATION OF PHYTOPLANKTON AND ZOOPLANKTON IN THE TRINCOMALEE BAY

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The phytoplankton and zooplankton are almost universally distributed in all adequately water bodies including the oceans, bays lagoons and many other fresh water habitats. They are of very great importance in all sizeable water bodies as a primary producer and the primary consumers for their dependants including filter feeding mollusc fish and other micro and macro fauna.

This study indicates the main types of Plankton with their composition, distribution and seasonal fluctuation in the Trincomalee Bay. Plankton samples were collected from eight stations of the Trincomalee Bay, (Nicholson Cove, Sober Is, Mangrove Cove, Boom Cove, Malay Cove, Clappenburg Bay, Koddiyar Bay and Thambalagama Bay) fortnightly for period of 1½ years using a net with the mesh size of 55 µm for phytoplankton and 250 µm for Zooplankton. They were analysed quantitatively and qualitatively as far as possible to genera.

The major taxonomic groups of Phytoplankton were categorically recorded under classes Chlorophyceae, Bacillariophyceae, Dinophyceae and Cyanophyceae. The dominent Phytoplankton group was Bacillariophyceae and the most Abundant types were Chaetoceros sp Biddilphia sp and Rhizosolenia sp. Peridinium sp and Ceratium sp contributed their highest % to the Dinophyceae group. The abundance of Chaefoceros sp Biddulphia sp Peridinium sp and Ceratium sp fluctuated significantly during the study period and a Bacillariophyceae bloom was observed in March and July.

Calanoid copepods were the most abundant group of zooplankton whereas cyclopods, mysids and arrow worms also represented a major contribution to thie faunal composition. Larval stages of Periferens, Coetenterates Echinoderms and Lamellibranchiates were also found in considerable numbers and the abundance of some types clearly fluctuated seasonally. Lamellibrach larvae showed the highest fluctuation during the study period with two peaks in April - July and October - Febraury.

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