



Seasonal profiles of copepod abundance and diversity in relation to water masses in the coastal ecosystem of Chennai, bay of Bengal, India

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Copepods, a major component of marine zooplankton plays an important role in marine ecosystem. Their abundance and distribution are strongly influenced by hydrographic conditions where they live and have been suggested to be a good biological indicator for water masses. Copepod species diversity and abundance in relation to water masses over the coastal ecosystem of Chennai, Bay of Bengal, India were studied extensively based on the net plankton samples collected during post monsoon and pre monsoon season 2006. Cluster analysis was used to compare the similarity between the groups of copepods and Shannon Weiner index was calculated for copepod diversity which resulted in recognition of 3 groups (Groups 1-3) at 15 different sampling stations. Out of 36 taxa recorded in the study, 31 species belonged to Calanoids, 4 Cyclopoids and 1 species to Harpactoids.

The *Acartia spinicauda* was recorded as the dominant taxa and considered also as an indicator of pollution status in near shore stations. The seasonal population fluctuation during the period of study was found to be associated with the seasonal changes in the hydrographic profile of the coastal zone. The aim of this work is to offer a synthesis of our current knowledge on the diversity of the forms and their seasonal distribution profile of copepod diversity in the Coastal zone of Chennai city in the Bay of Bengal.

Key Words: Copepod; Abundance; Water masses; Marine ecosystem.