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Distribution and diversity of gelatinous zooplankton in Indian EEZ

P. Sampathkumar*, P. Ezhilarasan, A. Kannathasan and K. Balamurugan

CAS in Marine Biology, Faculty of Marine Sciences, Annamalai University,
Parangipettai-608 502, India.

*sampathcas@gmail.com

Abstract

Link between increases of gelatinous zooplankton and global warming is recent emerging research in world Ocean. Indian seas are less documented areas of the world regarding gelatinous zooplankton taxonomy and ecology. Considerable amount of work has been done to understand zooplankton populations in Indian waters have tended to focus mainly on copepods, the major zooplankton component. The other groups are being of secondary importance in terms of numerical abundance and hence not treated in detail as distributional pattern and their seasonal variation. To fulfill the gap, the present study was made on survey of gelatinous zooplankton in Indian EEZ during 2008-2012 to explore the distributional patterns and diversity of gelatinous zooplankton. The result showed that new occurrences of salps species of *Pegea socia* and hydromedusae of *Haliscera bigelowi* were identified for the first time from Arabian Sea. Totally, 115 species of gelatinous zooplankton were recorded in the Indian EEZ. Among them, 11 species of Scyphomedusae, 22 species of Hydromedusae, 17 species of Siphonophores, 5 species of Ctenophore, 9 species of Doliolids, 17 species of Salps, 15 species of Appendicularians and 19 species of Chaetognaths were recorded. The vertical distributional abundance was ranged from 7.37 to 1266.276 inds/100m³ and diversity was ranged from 3.176 to 3.91 bits/inds in the Arabian Sea. In the Bay of Bengal, abundance was ranged from 11.69 to 1174.11 inds/100m³ and diversity was ranged from 2.19 to 3.94 bits/inds. In the two water mass, maximum abundance and diversity was observed in 0-50m depth and minimum was in 500-1000m depth. Abundance of gelatinous zooplankton was gradually decreased upto 200m depth and sudden decreased below 200m to 1000m depth.

Key words: Gelatinous zooplankton, distribution, diversity and Indian EEZ