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Studies on biodiversity of pelagic fishes of Mangalore coast, Karnataka, India

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The present investigation was taken up to assess the status of pelagic fish biodiversity of Mangalore coast (Lat. 12°50'54"N; Long. 74°50'11"E). The data for the present study was collected from the trawlers and purse seiners operating from Mangalore fishing harbour over a period from September-2012 to April-2013 and sampling was done once in fortnight. A total 69 species belonging to 49 genera, 20 families and 6 orders were recorded during the study period. Oil sardine contributed 26.97% of total landing followed by Indian mackerel (26.30%). The family *Carangidae* contributed 21.74% of total number of species, followed by *Clupeidae* 17.39%. Diversity indices such as Margalef's richness index, Shannon-Wiener index (H'), Simpson index (λ), Hill diversity number (N_1) and (N_2) and Evenness (J') were calculated. The values of Shannon-Wiener index (H') (at $\log_{10}$) ranged between 1.1553 and 1.2679. The average value recorded was 1.20, whereas highest value was recorded during month of October 2012. The Simpson index (λ) ranged from 0.0650 to 0.0979, the average value was 0.0836. Highest values for Hill diversity number (N_1) and (N_2) were recorded during the month October 2012 and lowest during the month of November 2012. The value of evenness (J') ranged from 0.8134 to 0.9311. It was found to be lowest during the month of October 2012 and highest during January 2013. Hierarchical cluster analysis technique showed the similarity in species composition and abundance was observed between the month of October and December 2012 (97.92%) and minimum inter-relationship was between September and December 2012 (64.27%). The same pattern was also evident in the Non-metric Multi Dimensional Scaling plot where samples from Monsoon fell on one side and those from post-monsoon and pre-monsoon on the other side of the map demonstrating the close similarity with (80%) in species composition and abundance during different seasons. The stress value, which was overlying on the MDS plot (0.01), showed an excellent ordination of the samples collected. Studies have indicated that the Mangalore coast is one of the major fishing harbours and having rich biodiversity; during the study period, there was good recruitment to the fishery immediately after the ban period, but the increased recruitment did not last for more than 2 to 3 months; a good deal of pelagic biodiversity was observed.

Biography

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Notes:

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