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Seasonal variations of harpacticoid copepod and size-fractionated abundances in relation to environmental changes in Setiu Wetland

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Abstract

Aim: Harpacticoid copepods, an important component of fauna in marine environment, play a vital role in aquatic food webs as a source of food for other member of benthic community and the juveniles of predator fish species. Recent data on benthic plankton and nekton composition in coastal wetland of Setiu are useful and important in understanding the interaction between these organisms at different seasons. This maintains the diversity of fish in Setiu Wetland which is a major factor in developing the Wetland as a place for ecotourism and recreational fishing activity. The effort will directly or indirectly benefit the fisheries community living within the wetland which depends on the fisheries sector.

Methodology: Meiobenthos samples were collected by Ponar grab. The samples were fixed in 10% formalin and 1% Rose Bengal. Content of each specimen bottle was filtered through 102 µm and 62 µm sieve shaker, respectively. Harpacticoid were individually hand sorted and counted under dissecting microscope. Data obtained for harpacticoid composition were analyzed using Kruskal-Wallis test.

Results: Seasonal variation of harpacticoid composition for 100 µm sizes recorded the highest number during pre-monsoon with 3591.84 ind 10 cm⁻² followed by monsoon, 2569.68 ind 10 cm⁻² and post-monsoon 1545.84 ind 10 cm⁻², respectively. Salinity is the main physical parameters that can be attributed to the plankton diversity and acts as limiting factor that influences the distribution of plankton community. Significantly, harpacticoid copepod steadily increased during post-monsoon with rising trend of salinity verified the environmental influences on zooplankton abundances.

Interpretation: The results of this study indicated that different season demonstrated major impact on harpacticoid composition which may effect the availability of food source towards the small fishes as a live feed.

Keywords

Author Keywords: Climate change; Harpacticoid copepod; Seasonal composition; Setiu Wetland; Tropical zooplankton

KeyWords Plus: SEDIMENTS; SPAIN; COAST

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Cited References: 22Showing 22 of 22 [View All in Cited References page](#)*(from Web of Science Core Collection)*

1. **Potential effects of abiotic factors on the abundance and distribution of the plankton in the Western Harbour, South-Eastern Mediterranean Sea, Egypt** Times Cited: 1
By: Ahmed, M. M. H.; Hermine, R. Z. T.; Maged, M. A. H.; et al.
Oceanologia Volume: 8 Pages: 3-13 Published: 2014
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2. **Faunal diversity across a sandy shore** Times Cited: 47
By: Armonies, W; Reise, K
MARINE ECOLOGY PROGRESS SERIES Volume: 196 Pages: 49-57 Published: 2000
3. **Seasonal variability of plankton blooms in the Ria de Ferrol (NW Spain): II. Plankton abundance, composition and biomass** Times Cited: 33
By: Bode, A; Alvarez-Ossorio, MT; Gonzalez, N; et al.
ESTUARINE COASTAL AND SHELF SCIENCE Volume: 63 Issue: 1-2 Pages: 285-300 Published: APR 2005
4. **Invasive copepods in the Lower Columbia River Estuary: Seasonal abundance, co-occurrence and potential competition with native copepods** Times Cited: 22
By: Bollens, Stephen M.; Breckenridge, Joanne K.; Cordell, Jeffery R.; et al.
AQUATIC INVASIONS Volume: 7 Issue: 1 Special Issue: SI Pages: 101-109 Published: MAR 2012
5. **Diet feeding behavior of meiofauna and their relationships with microalgal resources** Times Cited: 1
By: Buffan, D. E.; Carman, K. R.
Limno. Oceanogr Volume: 45 Pages: 381-395 Published: 2000
6. **Temporal changes of a macrobenthic assemblage in harsh lagoon sediments** Times Cited: 33
By: Como, Serena; Magni, Paolo
ESTUARINE COASTAL AND SHELF SCIENCE Volume: 83 Issue: 4 Pages: 638-646 Published: AUG 1 2009
7. **Species richness and distribution of copepods and cladocerans and their relation to hydroperiod and other environmental variables in Donana, south-west spain** Times Cited: 57
By: Frisch, D; Moreno-Ostos, E; Green, AJ
HYDROBIOLOGIA Volume: 556 Pages: 327-340 Published: FEB 2006
8. **Benthic meiofauna community composition at polluted and non-polluted sites in New Zealand intertidal environments** Times Cited: 14
By: Hack, Lisa A.; Tremblay, Louis A.; Wratten, Steve D.; et al.
MARINE POLLUTION BULLETIN Volume: 54 Issue: 11 Pages: 1801-1812 Published: NOV 2007
9. **To what extent are the characteristics of nematode assemblages in nearshore sediments on the west Australian coast related to habitat type, season and zone?** Times Cited: 19
By: Hourston, M; Warwick, RM; Valesini, FJ; et al.
ESTUARINE COASTAL AND SHELF SCIENCE Volume: 64 Issue: 4 Pages: 601-612 Published: SEP 2005

10.

Times Cited: 1