Ecology of Microzooplankton in a Tropical Monsoonal Estuary

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Seasonal average abundance of microzooplankton (organisms x104 l-1) in Zuari estuary varied between 0.44 (monsoon) and 1.13 (post-monsoon) and largely dominated by protozoan ciliates. There were significant (P<0.001) correlations of microzooplankton with salinity, chlorophyll a and bacterial biomass. Interestingly, microzooplankton forms a large organic carbon pool of the Zuari estuary forming 24-40% of the total living carbon components particularly during post- and premonsoon, which is possibly supported by non-living particulate carbon (detritus). Experimental studies on the other hand revealed significant microzooplankton grazing rate (d-1) consuming 30-82% of phytoplankton standing stock that largely dominated by pico- and nano-fraction. This study recognizes the role of microzooplankton as an important consumer of phytoplankton in a tropical monsoonal estuary.

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