

**Influence of rain fall and sand grain size on the distribution
of crustacean macro-fauna in the North Western coast of Sri Lanka**

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A monthly survey was performed over a period of one year from October 2003 to September 2004 in a sandy and in a muddy coastal area in Mannar Island to see the influence of rainfall and sand grain size on the distribution of macro crustaceans. In both study areas, six sampling sites were selected and vertical transects (with 0.5 x 0.5 m² quadrant in 1.5 m uniform interval) were laid with 100 m distance along the shore. To ensure the constant sampling of the same areas during sampling, permanent marks were set in the study site. Random sampling was also performed and the samples were identified with the help of invertebrate keys and references. Wherever appropriate student t-test was done to compare the differences. Shore crabs, *Gammarus sp* *Balanus sp.* and *Lepas* were recorded. In muddy shore abundance of all four species was high when compared to sandy shore. Mean numbers of crabs (6.08±1.13) and Gammarus (188.58 ±11.2) per m² are significantly high in muddy shore compared to that of sandy shore (3.18± 0.63, 146.69 ±12.00). Distribution of Crabs and *Gammarus* positively correlated with rain fall, but not with temperatue or humidity while the distribution of *Balanus* and *Lepas* shows no relationship with any of the climatic factors. In sandy shore, there was no correlation between climatic factors and the distribution of crustaceans. It is concluded that increasing sand grain size decreases the abundance of all reported crustaceans while rain fall influences the distribution of some crustaceans in muddy shore but not in sandy shore

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