

A review analysis on environmental factors influencing morphology and behaviour of estuarine Mollusc

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ABSTRACT

The phylum mollusca, the second largest non chordate group of organisms inhabits all types of terrestrial and aquatic habitats. Benthic invertebrates represent an important group in the mangrove food web; influence various functional aspects in the ecosystem like energy flows, nutrient re-mineralization in the sediment etc. In this article, strong relationship between various environmental factors on molluscs in estuarine habitats is discussed. Analysis have been made on the influential environmental variance such as temperature, light, pH, tidal cycle, salinity, soil substratum, humidity and other environmental attributes on the behavioural response and external structure of molluscs.

Key words: Environmental factors, Benthic mollusc, Morphology, Behaviour, Adaptation.

Introduction

Estuarine environment being one of the most productive natural habitats supports a unique assemblage of flora and fauna especially adapted to live at the margin of the sea. To survive within the intertidal zone of coastal environments, plants and animals may have to withstand exposure to desiccation, osmotic stress, temperature stress, UV radiation, as well as problems associated with gas exchange and accumulation of metabolic wastes during their periodic exposure to air. Henceforth, intertidal organisms exhibit adaptive structural, behavioural and physiological modifications or adaptation in response to such environmental stresses

(Vermeij, 1973). Molluscs being the predominant fauna in the mangrove play a significant ecological role in the structure and functioning of this ecosystem, show a great complexity in their trophic status due to their presence at different levels in the food web as detritivore, filter feeders, herbivores and predator (Kotté-Mapoko *et al.*, 2017). The nature of the molluscan community is strongly influenced by physical conditions of the environment (Kabir *et al.*, 2014). Availability of food and shelter with spatio-temporal variation and hydrodynamic forces in the estuarine region create microhabitats for macrofauna and directly or indirectly affect the quality of living of immigrating larvae and juveniles of benthic organisms (Ronnback, 1999). Pulmonate