

The Living Fossil (Horseshoe crab)

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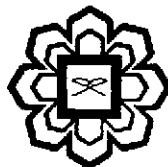
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CHAPTER – 16

Sediment Profiling of the Estuarine Nesting Ground of Horseshoe Crabs at East Peninsular Malaysia

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Abstract

A detailed investigation was carried out to determine the sediment nature of estuarine nesting ground of Malaysian horseshoe crabs (*Tachypleus gigas* and *Carcinoscorpius rotundicauda*) at Pekan estuary, Pahang coast, Malaysia. A complete year data on sediment size and sorting values were calculated following published methods. Mean sediment size analysis (ϕ) showed that the distribution of sediment at the Pekan nesting ground was median sediment ($1.073 \pm 0.388\phi$) at non monsoon and coarse sediment ($0.641 \pm 0.075\phi$) at monsoon season. Sediment sorting value analysis clearly showed that the nature of sediments at Pekan nesting ground were of moderately well sorted. Interestingly, no significant difference in the sediment size and its sorting values were observed in selected estuary during different monsoonal cycles. Field observation showed that the horseshoe crab prefers estuarine nesting ground (Pekan, Pahang coast) for spawning over coastal beach nesting grounds (eg, Balok, Pahang coast). The results clearly showed that the sediment nature at the Pekan estuary is still conducive for the better nesting of Malaysian horseshoe crabs.

Key words: Horseshoe crabs; *Tachypleus gigas*; *Carcinoscorpius rotundicauda*; Nesting ground; Sediment profiling, Pekan

Introduction

Estuaries are critical interfaces between the marine and terrestrial environment. The deposition of the fine 'mud' fraction occurs as a result of the interaction between currents, tides and salinity. Microphytobenthos is also an important ecological mechanism contributing to the distribution of fine sediment through processes of sediment sequestering and stabilisation (Black and Paterson,