

The Living Fossil (Horseshoe crab)

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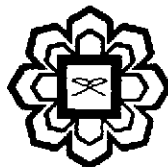
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CHAPTER – 20

Bionomics of Malaysian horseshoe crabs *Tachypleus gigas*

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Abstract

It is evident from recent reviews that relatively very little are known about the merostomate's (Horseshoe crabs) bionomics, despite of its familiarity to a large number of zoologists and palaeontologists. Horseshoe crabs are the remarkable creatures retaining their feeding behaviour unchanged over millions of years. Out of four extant species of horseshoe crab, three inhabit Malaysian coastal waters. In this study, we examined the food preferences and feeding ecology of *Tachypleus gigas* collected from east coast of peninsular Malaysia during March 2010-February 2011. Electivity Index (EI) of *T.gigas* was positive for bivalves, polychaetes and miscellaneous food items while it was negative for gastropods and crustaceans. During non-monsoon season, *T.gigas* prefers lesser number of polychaetes than bivalves while it was opposite during monsoonal period. Feeding intensity was higher during peak mating seasons (June - August 2010). Overall gut content analysis showed that mollusks were highly preferred by both the crab species more especially bivalves. Maximum values of Gastro Somatic Index (GSI) in male and female *T.gigas* were observed in July 2010 (2.56) and June 2010 (2.07) respectively indicating their high level of food preference during mating period. Seasonal variation in GSI value showed that male crabs intensely feed during Non-monsoon period while female crabs feed intensely during monsoonal period. Present result can be utilized for sustainable management of horseshoe crab fishery in Malaysia.

Key words: Horseshoe crabs; Electivity Index (EI); Gastro Somatic Index (GSI); horseshoe crab fishery; Feeding ecology.