

# The Living Fossil (Horseshoe crab)

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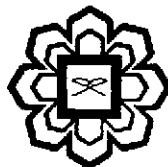
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## CHAPTER – 21

### Feeding Ecology of Mangrove horseshoe crab *Carcinoscorpius rotundicauda*

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#### Abstract

First time report on the feeding ecology and food preference of mangrove horseshoe crab *Carcinoscorpius rotundicauda* at their nesting grounds along the Pahang coast is given in this study. Samples were collected between March 2010 and February 2011. Major macrobenthic gut contents (Bivalves, Gastropods, Crustaceans, Polychaetes and miscellaneous food items including plant materials) were analyzed using conventional step. An electivity index (EI) was calculated for the frequent food items observed in the gut region of *C.rotundicauda* during monsoon and non monsoon seasons. The EI was negative for crustaceans and positive for all the other food items including bivalves, gastropods and polychaetes and miscellaneous food items (which include insects, amphipods, Isopods, larval and juvenile stages of fishes, foraminifera and other Annelidan worms). It was interesting to note that *C.rotundicauda* prefers less number of bivalves than polychaetes during non monsoon seasons while it was reverse during monsoonal period. Male crabs intensely prey on gastropods and female prefers polychaete worms during the peak mating/nesting season at Pahang nesting grounds (June - August 2010). Seasonal variations in food composition showed that mollusks form a main item especially gastropods. Unidentified organic matters in gut content analysis of *C.rotundicauda* showed high preference towards plant materials. Gastro Somatic Index (GSI) analysis showed that the feeding intensity of male crabs is higher during Non-monsoon period while it was higher during monsoonal period in female crabs.

**Key words:** Horseshoe crab; *Carcinoscorpius rotundicauda*; Electivity Index; Gastro Somatic Index; Horseshoe crab nesting; Pahang nesting ground.