

The Living Fossil (Horseshoe crab)

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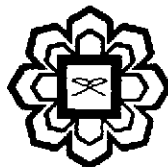
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CHAPTER -14

Effects of salinity on the early growth of *Tachypleus gigas* larvae- An *In vitro* study

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Abstract

Tachypleus gigas (Muller) the Southeast Asian horseshoe crab, is found to nest on sandy beaches in Malaysia, thus biological information about survival of this living fossil become crucial. Laboratory experiments were carried out to investigate the effect of salinity on the growth of the hatched larvae was also investigated. Eggs of *T. gigas* were collected from the newly nests made on breeding beach of Pekan, Pahang (Lat 3° 56.915'N; Long 103°21.933' E) in Peninsular Malaysia. Triplicates of five different salinities (15, 20, 25, 30 and 35 ppt) were chosen for the experiments. A vernier caliper was used for size measurement under a stereo microscope. The shortest molting time occurred at 15 ppt (25 days after hatching). Total size changes in larvae were also highest at 15 ppt but lowest at 35 ppt. There was no mortality in larvae maintained in all treatments. Early larval development would also affected by the salinity stress but its seemed tolerable.

Key words: Nesting ground, horseshoe crab, *T.gigas*, egg hatching success, tolerable larvae.

Introduction

Horseshoe crab, a chelicerate arthropod, is an ancient animal survived from ancient time to date, thus called as living fossil. The extraordinary defense mechanism is due to the blood property in this animal. It has now becomes a great contribution to the world of medical and pharmaceutical