

STUDY ON GROWTH AND SURVIVAL OF EARLY STAGE LARVAE OF  
*Tachypleus gigas* (HORSESHOE CRAB) FEEDING ON COPEPOD

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2011

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STUDY ON GROWTH AND SURVIVAL OF EARLY STAGE LARVAE OF *Tachypleus*  
*gigas* (HORSESHOE CRAB) FEEDING ON COPEPOD

By

Mohd Arif Bin Mohd Yasin

Research Report submitted in partial fulfillment of  
The requirement for the degree of  
Bachelor of Science (Marine Biology)

Department of Marine Science  
Faculty of Maritime Studies and Marine Science  
UNIVERSITI MALAYSIA TERENGGANU  
2011

Mohd Arif, Y. 2011. Study On Growth and Survival of Early Stage Larva of *Tachypleus gigas* (Horshoe Crab) Feeding On Copepod. Undergraduate thesis, Bachelor of Science In Marine Biology, Faculty of Maritime Studies and Marine Science, Universiti Putra Malaysia Terengganu, Terengganu. 36p.

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DEPARTMENT OF MARINE SCIENCE  
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## DECLARATION AND VERIFICATION REPORT

### FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled: Study On Growth and Survival of Early Stage Larva of *Tachypleus gigas* (Horshoe Crab) Feeding On Copepod. By Mohd Arif bin Mohd Yasin, Matric No. UK 17580 have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the Degree of Science (Marine Biology), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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## **ACKNOWLEDGEMENTS**

**‘In the name of Allah, Most Gracious, Most Merciful’**

All sincere praises and thanks are due to Allah S.W.T for His limitless blessing on us. May Allah bestow peace and blessings upon Prophet Muhammad S.A.W and his family.

I would like to express my sincere appreciation to my supervisor, Prof. Dr Zaleha Kassim, for her attention, advice and time provided throughout the completion of this study.

My deepest gratitude also goes to my beloved parent, Mohd Yasin bin Salleh and Zainon binti Amran, sisters and brothers and also best friend for their moral support during my day in university.

I would also like to express my gratitude to all my colleagues for their assistance, exchange of brilliant ideas and creative suggestions, support, inspiration and precious moment during my study at UMT.

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## LIST OF ABBREVIATIONS

<b>°C</b>	-	Celsius
<b>L</b>	-	liter
<b>ppt</b>	-	part per thousand
<b>%</b>	-	percent
<b>cm</b>	-	centimeter
<b>&lt;</b>	-	less than
<b>&gt;</b>	-	more than
<b>ml</b>	-	millilitre
<b>L</b>	-	liter
<b>ppt</b>	-	part per thousand
<b>%</b>	-	percent
<b>cm</b>	-	centimeter

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**ABSTRACT**

Studies on the growth and survival of *Tachypleus gigas* larvae to copepod diet were conducted in the laboratory Aquatrop UMT. Seeds collected from the beach Balok, Kuantan where the egg is almost hatched at the '4 th of Embryonic moulting 'is taken from the natural environment. The study was conducted for 25 days to take care of trilobite larvae from the age of 5 days in 6 separate beakers to monitor the growth rate and survival rate of larvae of *Tachypleus gigas*. 3 of the beaker fed with copepod diet and another 3 beaker fed with Artemia as a control for this study. Results from this study showed the rate of growth and survival rates of copepod larvae with a diet lower than that of larvae with Artemia diet. 85% of the larvae fed copepod survive at the end of the study compared with 91% of the Artemia fed larvae. From this study, other than live food nutritional factors, the live food ability to avoid predator is also a factor to be considered in the early stage *Tachypleus gigas* feeding.

# KAJIAN TTUMBESARAN DAN KEMANDIRIAN LARVA PERINGKAT AWAL *Tachypleus gigas* (BELANGKAS) DENGAN DIET COPEPOD

## ABSTRAK

Kajian mengenai kadar tumbesaran serta kemandirian larva *Tachypleus gigas* dengan diet copepod telah dijalankan di dalam makmal Aquatrop UMT. Benih diperolehi dari pantai Balok, Kuantan dimana telur yang hampir menetas iaitu pada tahap '4<sup>th</sup> embryonic moulting ' diambil dari persekitaran semulajadi. Kajian selama 25 hari ini dilakukan dengan mengasuh trilobite larva bermula dari usia 5 hari di dalam 6 bikar berasingan untuk melihat kadar pertumbuhan serta kadar memandirian larva belangkas. 3 daripadanya di berikan diet copepod dan 3 lagi diberikan artemia sebagai kawalan bagi kajian ini. Keputusan dari kajian ini menunjukkan kadar tumbesaran dan kadar kemandirian bagi larva dengan diet copepod lebih rendah berbanding larva dengan diet artemia. 85% daripada larva yang diberi makan copepod hidup pada penghujung kajian berbanding 91% bagi larva yang diberimakan artemia. Dari kajian ini, selain faktor kandungan nutrisi makanan hidup, keupayaan makanan hidup seperti copepod untuk mengelak pemangsa juga merupakan faktor yang perlu diambil kira dalam pemakanan peringkat larva *Tachypleus gigas*.

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