THE BIOLOGICAL FEATURES OF BANANA SHRIMP, *Penaeus merguiensis* (DE MAN, 1888) FROM KEDAH COASTAL WATER

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2012

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Universiti Malaysia Terengganu

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THE BIOLOGICAL FEATURES OF BANANA SHRIMP, *Penaeus merguiensis* (DE MAN, 1888) FROM KEDAH COASTAL WATER

By

MOHAMAD ARIF BIN SAPUAN

Research Report submitted in partial fulfilment of

the requirement for the degree of

Bachelor of Science (Marine Science)

Department of Marine Science,

Faculty of Maritime Studies and Marine Science

UNIVERSITY MALAYSIA TERENGGANU

2012

This project report should be cited as:

Sapuan, M.A. 2012.Biological features of banana shrimp, Penaeus merguiensis (de man, 1888) from Kedah coastal water. Undergraduate thesis, Bachelor of Science in Marine Science, Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu, Terengganu, 41p.

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DEPARTMENT OF MARINE SCIENCE
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

DECLARATION AND VERIFICATION FORM

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled: **The Biological Features of Banana Shrimp, *Penaeus merguiensis* (de man, 1888) from Kedah coastal water** By **Mohamad Arif Bin Sapuan**, Matric No. **UK 20215** has 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 **Bachelor of Science (Marine Science)**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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ACKNOWLEDGEMENT

First of all, I would like to give my highest gratitude to Allah, since i had completed my final year project successfully. I would like to thank for my first supervisor Associate Prof. DR. Muhammad Ikhwanuddin @ Polity bin Abdullah, for his supervision, inspiration, cooperation, that enables me to run this project smoothly. My heartfelt gratitude goes to second supervisor DR. Zainudin Bin Bachok for his comments, guidance and patience during this project. Without your help, i will not be able to finish this course successfully.

I would like to thank to DR Antonnina Bte Abdullah (Programme coordinator for marine science) for her advice and guidance for the standard format writing of this thesis. Thanks to all master student under DR Ikhwanuddin especially hafiz, Lemi, Pejal,hidayah for always helping me during sampling and data analysis.

Lastly, thank you for all my coursemates and housemate who help me a lot and always support me. May Allah give a reward for all your kindness and i will not forget all of you.

ABSTRACT

This study was done to determine the biological features of banana shrimp, *P. merguiensis* in terms of size distribution, sex ratio, carapace length (CL) and body weight (BW) relationship, and size of physical maturity. From total of 300 samples collected from Pulau sayak, Kedah ($5^{o}39'N$; 100^{o} 19'E) the sex ratio was identified as 0.91:1 where the female contributed 52.33 % of the population. The dominant male and female size range was 4.5-4.99 cm CL with 50.35% for male and 40.13% for female samples. The CL-BW relationship for male shrimp was attained as $BW=1.949e^{0.489CL}$ ($R^2=0.741$) and for female relationship was $BW=1.424e^{0.55CL}$ ($R^2=0.787$). The mean size range was 4.77 cm CL ± 0.36 for male and 4.85 cm CL ± 0.46 for female samples. According to the linear regression of carapace length (CL) against meropodite length on male and female of *P. merguiensis*, the results on CL_{50} were 4.27 cm and 4.37 cm respectively. The value of CL_{50} was taken from intersection point on 3rd meropodite length. The data obtained from this study can be used as baseline data which is useful in aquaculture field and to attain sustainable used.

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CIRI-CIRI BIOLOGY UDANG PUTIH, *PENAEUS MERGUIENSIS* (DE MAN, 1888) DI PERAIRAN KEDAH.

ABSTRAK

Kajian ini telah dijalankan bagi mengenal pasti ciri-ciri biologi udang penaeid, *P. merguiensis* dalam skop nisbah jantina, taburan saiz, perhubungan antara panjang tempurung dengan berat badan, dan saiz kematangan. Daripada jumlah keseluruhan 300 udang jenis ini yang diambil di pulau sayak, kedah ($5^{o}39'$N; 100^{o} 19'E),. nisbah jantan dengan betina adalah 0.91:1 peratusan udang betina merangkumi 52.33% daripada populasi tangkapan. Taburan saiz pula berlaku paling banyak antara saiz 4.5-4.99 cm CL untuk jantan dan betina. Untuk udang jantan, peratusan untuk selang saiz tersebut ialah 50.35% dan betina pula ialah 40.13%. Perhubungan antara saiz tempurung dengan berat badan udang jantan pula ialah $BW=1.949e^{0.489CL}$ ($R^2=0.741$), manakala $BW=1.424e^{0.55CL}$ ($R^2=0.787$) untuk udang betina. Berdasarkan taburan garis lurus antara panjang tempurung (CL) dengan meropodite kedua dan ketiga, nilai untuk saiz matang (CL_{50}) adalah 4.27cm dan 4.37cm. Data yang diperoleh ini amat penting bagi memastikan kestabilan dan produktiviti udang ini. Ia juga berguna untuk dalam bidang akuakultur dan sektor perikanan.