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

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The biological features of banana shrimp, Penaeus merguiensis (de man, 1888) from Kedah coastal water / Mohamad Arif Sapuan.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH UNTURKER RALANSIA TERLINGGARU (UNTU

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## MOHAMAD ARIF BIN SAPUAN

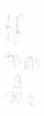
Research Report submitted in partial fulfilment of
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### DEPARTMENT OF MARINE SCIENCE FACULTY OF MARITIME STUDIES AND MARINE SCIENCE UNIVERSITI MALAYSIA TERENGGANU

#### **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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#### **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°39'N; 100° 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<sup>0.489CL</sup> (R<sup>2</sup>=0.741) and for female relationship was BW=1.424e<sup>0.55CL</sup> (R<sup>2</sup>=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<sub>50</sub> were 4.27 cm and 4.37 cm respectively. The value of CL<sub>50</sub> was taken from intersection point on 3<sup>rd</sup> 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.

# 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°39'N; 100° 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<sup>0.489CL</sup> (R<sup>2</sup>=0.741), manakala BW=1.424e<sup>0.55CL</sup> (R<sup>2</sup>=0.787) untuk udang betina. Berdasarkan taburan garis lurus antara panjang tempurung (CL) dengan meropodite kedua dan ketiga, nilai untuk saiz matang (CL<sub>50</sub>) 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.