

GROWTH AND SURVIVAL RATE OF *Rhizophora mucronata*
VIVIPAROUS SEEDLING USING RILEY ENCASEMENT
METHOD AT KG. PENGKALAN GELAP, SETIU,
TERENGGANU

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SCHOOL OF MARITIME STUDIES AND MARINE SCIENCE
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Growth and survival rate of *Rhizophora mucronata* viviparous seedlings using riley encasement method (rem) at Kampung Pengkalan Gelap, Setiu, Terengganu / Azifah Mohd Yusof.

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**GROWTH AND SURVIVAL RATE OF *Rhizophora mucronata*
VIVIPAROUS SEEDLINGS USING RILEY ENCASEMENT
METHOD (REM) AT KAMPUNG PENGKALAN GELAP, SETIU,
TERENGGANU**

By

Azifah binti Mohd Yusof

**Research Report submitted in partial fulfillment of
the requirements for the degree of
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DEPARTMENT OF MARINE SCIENCE

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE

UNIVERSITI MALAYSIA TERENGGANU

DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:

Growth and survival rate of *Rhizophora mucronata* viviparous seedling using Ridley Encasement Method (REM) in Kampung Pengkalan Gelap, Setiu Terengganu by Matric No. **UK23296** 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 **Bachelor of Science (Marine Biology)**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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LIST OF ABBREVIATION

cm	-	centimeter
SS	-	Sum of square
df	-	Degree of freedom
MS	-	Mean square

GROWTH AND SURVIVAL RATE OF *Rhizophora mucronata* VIVIPAROUS SEEDLINGS USING RIDLEY ENCASEMENT METHOD (REM) IN KAMPUNG PENGKALAN GELAP, SETIU, TERENGGANU

ABSTRACT

A study was conducted in mangrove nursery in Kampung Pengkalan Gelap, Setiu, Terengganu to determine the growth of three months old *Rhizophora mucronata* seedlings in two different planting method that are Ridley Encasement Method and conventional method. The objective of this study is to study the survival rate and the initial growth of the *Rhizophora mucronata* seedlings. This study also wants to compare the growth and the survival rate of *Rhizophora mucronata* seedlings using the Ridley Encasement Method and conventional method. The height of the seedling was measured and the numbers of the seedling was counted twice in a month until the thirteen weeks. The seedlings that planted using conventional method showed the increased in height and number of leaves through the days compare to the Ridley encasement method that fluctuated throughout the observation days. Eventually, the seedlings survival rate planted in Ridley Encasement Method is higher than conventional method. It is suggest that to experimental Ridley Encasement method to the high energy shoreline that exposed to high wave to test the full potential of this method to establish new mangrove area in preventing coastal area erosion.

**KADAR PERTUMBUHAN DAN KEBERJAYAAN ANAK POKOK
Rhizophora mucronata MELALUI PENANAMAN MENGGUNAKAN TEKNIK
PEMBUKUSAN RIDLEY DI KAMPUNG PENGKALAN GELAP, SETIU,
TERENGGANU.**

ABSTRAK

Satu kajian telah dilaksanakan di tempat nurseri bakau yang terletak di Kampung Pengkalan Gelap, Setiu, Terengganu untuk menentukan kadar pertumbuhan anak pokok *Rhizophora mucronata* yang berusia tiga bulan menggunakan dua teknik penanaman berbeza iaitu antara Teknik Pembukusan Ridley dan teknik konvensional. Objektif kajian ini adalah untuk mengkaji kadar keberjayaan dan kadar pertumbuhan awal anak pokok *Rhizophora mucronata*. Kajian ini juga mahu membandingkan kadar pertumbuhan dan kadar keberkesanan anak pokok *Rhizophora mucronata* menggunakan teknik pembukusan Ridley dan teknik konvensional. Ketinggian anak pokok diukur dan bilangan daun dikira dalam tempoh masa sebulan dua kali dan berterusan selama tiga belas minggu. Anak pokok yang ditanam menggunakan teknik konvensional menunjukkan pertambahan dalam ketinggian dan bilangan daun mengikut masa berbanding anak pokok yang ditanam menggunakan teknik konvensional yang kadar ketinggian dan bilangan daun berubah mengikut masa. Walaupun begitu, kadar keberjayaan anak pokok lebih tinggi menerusi penanaman teknik pembukusan Ridley berbanding teknik konvensional. Adalah dicadangkan untuk menguji teknik pembukusan Ridley di kawasan persisiran pantai yang mempunyai tenaga yang kuat dan terdedah kepada hakisan untuk menguji potensi yang penuh untuk mengembalikan kawasan bakau laut baru untuk mengelakkan hakisan persisiran pantai.