

UNIVERSITI TEKNOLOGI MARA

**THE GASTROPOD COMMUNITY
STRUCTURE OF THE LUKUT
MANGROVES, NEGERI SEMBILAN**

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Dissertation submitted in partial fulfillment
of the requirements for the degree of
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CONFIRMATION BY PANEL OF EXAMINERS

I certify that a Panel of Examiners has met on 26th January 2016 to conduct the final examination of Nur Anis Fadilah bt Sukeri on her Master of Science thesis entitled “The Gastropod Community Structure of the Lukut Mangroves, Negeri Sembilan” in accordance with Universiti Teknologi MARA Act 1976 (Akta 173). The Panel of Examiners recommends that the student be awarded the relevant degree. The panel of Examiners was as follows:

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I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

This study reports on the distribution, abundance, community structure, morphometric relationship of mangrove gastropods from Sungai Lukut, Negeri Sembilan sampled from February to May 2015. The line transect with quadrat method was employed to sample the gastropods which were handpicked within quadrat (5m x 5m) from the root, stem, branch, floor and where possible leaves. Water physicochemical parameters namely dissolved oxygen, temperature, salinity and pH were measured *in situ*. Thirty six species of gastropod taxa from 13 families were recorded from 4 mangrove sampling sites (coastal and river mouth, fringing riverine, intact riverine and upstream). *Rhizophora apiculata* (1314 ind/hectare) and *Sonneratia alba* (750 ind/hectare) were the most represented among the mangrove trees while *Littoraria scabra* (1.219 ind/m²) and *Nerita lineata* (1.109 ind/m²) were the most abundant gastropod species sampled. Higher species richness (S = 0.99) of mangrove trees was recorded at the upstream mangroves while higher species diversity (H' = 0.31) and evenness index (J' = 0.28) of mangrove trees were recorded at the coastal and river mouth mangroves. For gastropod taxa, S = 1.81 was noted higher at the upstream mangroves while H' = 0.29 and J' = 0.26 of gastropod species sampled indices high species diversity and evenness index at the fringing riverine mangroves. The regression of shell length and weight showed positive allometric (*Columbella duclosiana*), negative allometric (*Sphaerassiminea miniata* and *Cerithidea obtusa*) and isometric (*Littoraria melanostoma*, *Littoraria conica* and *Drupa margariticola*) growth for the gastropods.

TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	xi
LIST OF PLATES	xii
LIST OF SYMBOLS	xiii
LIST OF ABBREVIATIONS	xiv
CHAPTER ONE: INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Significance of Study	3
1.4 Objectives	3
1.5 Scope and Limitation of the Study	3
CHAPTER TWO: LITERATURE REVIEW	4
2.1 Mangroves	4
2.1.1 Introduction	4
2.1.2 Mangrove taxonomy	5
2.1.3 Distribution and abundance of mangroves	5
2.1.4 Biota in the mangroves habitat	7
2.1.5 Functioning and adaptation of mangroves	7
2.1.6 Threats and environmental impacts on mangrove trees	8
2.2 Gastropods	9
2.2.1 Introduction	9