

STUDY OF SPECIES DIVERSITY OF *L. VICENNTIA*
FOREST TYPE IN MANGROVE AREA OF KELANTAN DELTA

MUHD MAZLI BIN MAT JUSOF

FACULTY OF SCIENCE AND TECHNOLOGY
UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
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**STUDY OF SPECIES DIVERSITY OF AVICENNIA FOREST TYPE IN
MANGROVE AREA OF KELANTAN DELTA**

By

MOHD NAZRI BIN MAT JUSOH

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TABLE OF CONTENT

ACKNOWLEDGEMENT		ii
LIST OF TABLES		vi
LIST OF FIGURES		viii
LIST OF APPENDICES		ix
ABSTRACT		x
CHAPTER 1	INTRODUCTION	1
	1.1 Justification	3
	1.2 Objective	3
CHAPTER 2	LITERATURE REVIEW	4
	2.1 Mangroves	4
	2.2 <i>Avicennia</i> species	5
CHAPTER 3	METHODOLOGY	7
	3.1 Study Area	7
	3.2 Sampling	8
	3.2.1 Phase I – Transect Line Plots	9
	3.2.2 Phase II – Data Analysis	11

CHAPTER 4	RESULT	13
4.1	Mangrove Existence	13
4.2	Number of Individual in Mangrove Area	20
4.3	Percent Cover of Mangrove	25
4.4	Community Structure of Mangrove	30
4.5	Statistical Data	31
CHAPTER 5	DISCUSSION	38
5.1	<i>Avicennia</i> Forest	38
5.2	Species existence, number of individual and percent cover	39
5.3	Community Structure, Species Index and Cluster Analysis	44
CHAPTER 6	CONCLUSION AND RECOMMENDATION	47
6.1	Conclusion	47
6.2	Recommendation	48
REFERENCES		49
APPENDICES		51
CURRICULUM VITAE		82

LIST OF TABLES

Table		Page
1	Formula involved in calculating data	12
2	List of mangrove species at each transects.	13
3.1	Existing of trees in Kuala Timur Island	14
3.2	Existing of trees in Kuala Barat Island	15
3.3	Existing of trees in Terendak Island	15
3.4	Existing of sapling in KualaTimur Island and Kuala Barat Island	17
3.5	Existing of sapling in Terendak Island	18
3.6	Existing of seedling in KualaTimur Island and Kuala Barat Island	19
3.7	Existing of seedling in Terendak Island	19
3.8	Number of trees KualaTimur Island and Kuala Barat Island	21
3.9	Number of trees in Terendak Island	21
4.1	Number of sapling in KualaTimur Island and Kuala Barat Island	23
4.2	Number of sapling in Terendak Island	23
4.3	Number of seedling in KualaTimur Island and Kuala Barat Island	24
4.4	Number of seedling in Terendak Island	25
4.5	Percent Cover of trees KualaTimur Island and Kuala Barat Island	26

4.6	Percent Cover of trees in Terendak Island	26
4.7	Percent Cover of sapling in KualaTimur Island and Kuala Barat Island	27
4.8	Percent Cover of sapling in Terendak Island	28
4.9	Percent Cover of seedling in KualaTimur Island	28
5.1	Percent Cover of seedling in Terendak Island	29
5.2	Community Structure of trees for 12 transect	30
5.3	Community Structure of sapling for 12 transect	30
5.4	Community Structure of seedling for 12 transect	31
5.5	Mean values and univariate measures of trees from all transect	31
5.6	Mean values and univariate measures of sampling point from all transect	32
5.7	Mean values and univariate measures of sapling from all transect	34
5.8	Mean values and univariate measures of sampling point from all transect	34
5.9	Mean values and univariate measures of seedling from all transect	36
6.1	Mean values and univariate measures of sampling point from all transect	36

LIST OF FIGURES

Figure		Page
1	The study area of Kelantan Delta	8
2	Map show the sampling location involved	9
3	Diagram of sampling plots layout	11
4	Cluster analysis for mangrove trees	33
5	Cluster analysis for saplings	35
6	Cluster analysis for seedlings	37

LIST OF APPENDICES

Appendix		Page
1	List of transect 1 until transect 12 with characteristics	51
2	Classification of crown shape and stem	77
3	Sampling location	78

ABSTRACT

A study was conducted to determine the *Avicennia* species that lived in mangrove forest of Kelantan Delta. It involved three main locations that were Kuala Timur Island, Kuala Barat Island and Terendak Island. In these areas, 12 transects with 36 plots were established in seaward margin, middle part and back of mangrove forest. Classification and feature of the trees such as species, height, crown shape and type of stem were recorded. Determination of mangrove species was decided according to species existence, number of individual and percent cover in certain plots. Univariate analysis was also performed using the PC-ORD statistical package version 3.0. Two *Avicennia* species were identified where *Avicennia alba* was the most dominant species that lived in seaward margin, middle part and back of mangrove forest. This species which consist of trees, saplings and seedlings occurred contagiously in three main part of mangrove forest. Other than this species, five mangrove trees were also recorded. Species diversity of *Nypa fruticans* (1.691), *Rhizophora apiculata* (1.33) and other species were lower compared to *Avicennia alba* trees (2.356).

ABSTRAK

Kajian ini telah dijalankan untuk menentukan spesis *Avicennia* yang mendiami hutan paya laut yang terletak di Delta Kelantan. Ia melibatkan tiga kawasan utama iaitu Pulau Kuala Timur, Pulau Kuala Barat dan Pulau Terendak. Pada kawasan ini, sebanyak 12 transek yang terdiri daripada 36 plot dipasang pada bahagian hadapan pantai, tengah dan belakang hutan paya laut. Klasifikasi serta ciri-ciri pokok seperti spesis pokok, tinggi, bentuk silara dan jenis batang direkodkan. Penentuan spesis bakau ditentukan melalui kaedah kewujudan spesis, bilangan individu dan peratus litupan dalam sesuatu plot. Selain itu, analisis 'univariate' turut dijalankan dengan menggunakan perisian statistik PC-ORD versi 3.0. Dua spesis *Avicennia* telah dikenalpasti di mana *Avicennia alba* merupakan spesis yang paling dominan yang tumbuh pada bahagian hadapan pantai, tengah dan belakang hutan paya laut. Spesis ini yang terdiri daripada pokok, anak pokok dan anak benih tumbuh secara seragam pada tiga bahagian utama hutan paya laut. Lima spesis pokok bakau yang lain turut direkodkan. Spesis divesiti bagi pokok *Nypa fructicans* (1.691), *Rhizophora apiculata* (1.33) dan pokok bakau yang lain adalah kecil berbanding pokok *Avicennia alba* (2.356).