

THE CHARACTERISTICS OF RATTAN IN PENINSULAR MALAYSIA

BY

NOFIDARUS BIN MOHD RAZI

**FINAL PROJECT SUBMITTED IN PARTIAL FULLFILLMENT FOR THE
DIPLOMA IN WOOD INDUSTRY
UNIVERSITI TEKNOLOGI MARA**

2004

Acknowledgements

I would like to express my deepest appreciation and sincere gratitude to my supervisor Cik Mazlin binti Kusin and members of the supervisory committee for Prof. Madya Abdul Jalil bin Ahmad and also for En Wan Nazri bin Abdul Rahman such as our program leader, all lecturer and staff and also all people who involve in making this thesis success

Thanks a lot for my friend that their supported and give their hand to make my final project are success without any problem. Without them, I can't finish this thesis. Thanks again for them.

Finally, for my lovely family especially for my dad and mom for their moral and financial support throughout the years of my study. I love u all.

May Allah S.W.T bless us all

Table of Contents

	Pages
Approval sheet	i
Dedication	ii
Acknowledgement	iii
List of Tables.....	vi
List of Figures	vii
List of Plates	viii
Abstract	xi
Abstrak.....	xii

Chapter

1	Introduction	
	1.1 General Background.....	1
	1.2 Objective.....	1
2	Literature Review	
	2.1 Rattan Taxonomy.....	3
	2.2 Morphological Consideration; The Structure of Rattan	
	2.2.1 Rattan Habit.....	6
	2.2.2 The Rattan Stem.....	8
	2.2.3 Cane Anatomy.....	10
	2.2.3.1 Epidermis.....	11
	2.2.3.2 Hypodermis.....	12
	2.2.3.3 Cortex.....	13
	2.2.3.4 Central Cylinder.....	13
	2.2.3.5 Composition of Vascular Bundle.....	14
	2.2.4 Rattan Root System.....	15
	2.2.5 Rattan Leaves.....	16
	2.2.5.1 The Sheath.....	17
	2.2.5.2 The Petiole.....	18
	2.2.5.3 Leaf Rachis.....	19
	2.2.5.4 Leaflets.....	19
	2.2.6 Climbing Organ.....	20
	2.2.7 Flowering Behaviors.....	21
	2.2.8 Rattan Fruit.....	23
	2.2.9 The Inflorescence.....	24
	2.2.10 Germination.....	28

3	The Ecology and Natural History of Rattan	
3.1	Introduction.....	31
3.2	Rattan Distribution.....	32
3.3	Soil and rock Types.....	33
3.4	Climatic Requirement.....	34
3.5	Light Requirement.....	34
3.6	Soil Moisture Requirement.....	35
3.7	Relationship between Animal.....	36
	3.7.1 Predation by herbivores.....	36
	3.7.2 Dispersal.....	36
	3.7.3 Anti Rattans.....	37
3.8	The Importance Rattan Species in Malaysia.....	38
	3.8.1 <i>Calamus manna</i>	38
	3.8.2 <i>Calamus tumidus</i>	39
	3.8.3 <i>Calamus scipionum</i>	40
	3.8.4 <i>Calamus caesius</i>	41
	3.8.5 <i>Calamus tracyhcoleus</i>	42
3.9	The Uses of Rattan.....	43
4	Discussion	
4.1	The Selection of Rattan Species.....	46
4.2	The Selection of Planting Site.....	48
4.3	Rattan Proccesing Industry In Peninsular Malaysia.....	49
	4.3.1 Boiling or Curing.....	51
	4.3.2 Drying of Oil- Cured Rattans.....	53
	4.3.3 Sulphur Fumigation.....	55
	4.3.4 Grading.....	56
	4.3.5 Storage.....	58
5	Conclusion	60
	Bibliography	61
	Vita	62

ABSTRACT

THE CHARACTERISTICS OF RATTAN IN PENINSULAR MALAYSIA

BY

NOFIDARUS BIN MOHD RAZI

OCTOBER 2004

Rattan is a one characteristic feature in Malaysia forest. Rattan is spiny climbing palms belonging to a Palmae. The entire commercial supply of rattan in Peninsular Malaysia presently comes from the forest and it is the most important minor forest product. It belongs to a large subfamily of the palms known as the Calamoideae. Out of these 600 species found throughout the world, about 104 species can be found in the forest of Peninsular Malaysia. However, only about 20 species are widely used commercially. Among these are rotan manau (*Calamus manna*), rotan manau tikus (*C. tumidus*), rotan semambu (*C. scipionum*), rotan irit (*C. trachcoleus*) and rotan sega (*C. caesius*). But, only *C. trachcoleus* and *C. caesius* are commonly used for commercial. Rattans enter world commerce as rattan stick, cane, core and split cane as a raw material for the construction of cane furniture. Rattan is characterized by being light, strong and durable it also can be manufactured into a variety of product such as basket, fish traps, ropes and others.