### ECOLOGICAL ANALYSIS OF BEETLES POPULATION IN UNIVERSITI TEKNOLOGI MARA NEGERI SEMBILAN

# ADDIBA NUR SYAZWANNIE BTE ABD WAHID (2011296038) AIN SYAFIQAH BT SA'AT (2011821254) ALEEZA HANEE BT ALYKALLAM (2011435614) AMY ZAWIAH BINTI ABDULLA (2011806754) UNGKU AMIRUL ARIF BIN UNGKU ABDULLAH (2011284352)

### Mini Project Report Submitted in Partial Fulfillment of the Requirements for the

**Diploma in Science** 

in the Faculty of Applied Sciences

Universiti Teknologi MARA

#### **SEPTEMBER 2013**

ii

#### **TABLE OF CONTENT**

DECLARATION	iii
APPROVAL SHEET	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	Х
ABSTRACT	xi
ABSTRAK	xii

### CHAPTER 1 INTRODUCTION

1.1	Background	1
	Significance of study	
	Objective of study	

## CHAPTER 2 LITERATURE REVIEW

2.1	Importance of Beetles	4
2.2	Habitat of Beetles	6
2.3	Diversity of Beetles	7

### CHAPTER 3 MATERIALS AND METHODS

3.1	Capturing of Beetles	9
-----	----------------------	---

3.2 Killing of Beetles	10		
3.3 Pinning of Beetles			
3.4 Preserving the Beetles			
3.5 Identification of Beetles			
List of Equipment	14		
List of Chemicals/Media			
CHAPTER 4 RESULTS AND DISCUSSION			
4.1 Taxonomy Composition	15		
4.2 Diversity Indices	19		
CHAPTER 5 CONCLUSION	22		
REFERENCES			
APPENDICES			
CURRICULUM VITAE			

### LIST OF FIGURES

Figure 3.1 Capturing beetles using plastic cups	9
Figure 3.2 Beetles captured in cups	9
Figure 3.3 Dropping ethyl ethanoate onto the beetles	10
Figure 3.4 Pinning Process	11
Figure 3.5 Drying oven (40°C to 45°C)	12
Figure 3.6 Beetles captured to be identified	13
Figure 4.1 Beetles population in UiTM Negeri Sembilan	26

#### ABSTRACT

## ECOLOGICAL ANALYSIS OF BEETLES POPULATION IN UNIVERSITI TEKNOLOGI MARA NEGERI SEMBILAN

Beetles are under the order of Coleopteran. It can be found whether on land or in the water. In Malaysia, there are variety species of beetles can be found and it is believed by scientists that some of the species are yet to be discovered, especially in the unexplored and virgin tropical rain forest in Sarawak and Sabah. Beetles can also easily be found in UiTM Negeri Sembilan especially at night. The main objective of this study is to determine the taxonomy composition of beetles in UiTM Negeri Sembilan. The study is conducted around the area of UiTM Negeri Sembilan. The beetles found within this area are collected and is kept to be preserve. In UiTM Negeri Sembilan. It found that *Chrysina restlendens* species has the most number of beetles captured. Otherwise, the least species captured are *Halyomorpha halys* and *Heterocerus marginatus*. There are three different of diversity indices uses in this study which is Shannon-Weiner index, Richness index and Evenness index. Shannon-Weiner index shows a low diversity of 1.83, Richness index shows a low richness of 2.1 and the Evenness index shows of high evenness which is 0.83.