# A PRELIMINARY STUDY OF BUTTERFLIES SPECIES IN UNIVERSITI TEKNOLOGI MARA NEGERI SEMBILAN

HASREENAJUA BINTI A RAHMAN (2011988657) RABA-ATUL ADAWIYAH BINTI ABU BAKAR (2010114789) RASHIDAH BINTI ABD. MANAF (2011714975) WAN HAZEI HARNIZA BINTI MOHD SARIFF (2011805176)

> Mini Project Report Submitted In Partial Fulfillment of the Requirements for the Diploma in Science In the Faculty of Applied Sciences Universit! Teknologi MARA

> > MARCH 2015

## **TABLE OF CONTENTS**

DECLARATION APPROVAL SHEET ACKNOWLEDGEMENTS TABLE OF CONTENTS LIST OF TABLES LIST OF FIGURES LIST OF ABBREVIATIONS ABSTRACT ABSTRAK		
CHAPTER 1 INTRODUCTION		
1.1 Background study	12	
1.2 Significance of study	13	
1.3 Objective of study	13	
CHAPTER 2 LITERATURE REVIEW		
2.1 Characteristic of butterflies	14	
2.2 The life cycle	17	
2.3 Range and habitat	19	
2.4 Importance of butterflies	20	
CHAPTER 3 MATERIALS AND METHODS		
3.1 Study sites	22	
3.2 Research methods	24	
3.2.1 Capturing of butterflies	24	
3.2.2 Killing of butterflies	25	
3.3 Spreading of butterflies	26	
3.4 Statistical analysis 3.4.1 Shannon-Weiner index	27	
3.4.2 Richness index	27	
3.4.3 Evenness index	28	
CHAPTER 4 RESULTS AND DISCUSSION	20	
<ul><li>4.1 Collection of butterflies</li><li>4.2 Diversity of butterflies</li></ul>	29	
T.2 Diversity of butternies	26	
	36	
CHAPTER 5 CONCLUSION	36 38	

### LIST OF TABLES

Table	Caption	Page
4.1.1	Number of families collected at UiTM Negeri Sembilan	34
4.1.2	Number of genera collected at UiTM Negeri Sembilan	34
4.1.3	Number of individuals collected at UiTM Negeri Sembilan	35

#### **LIST OF FIGURES**

Figure	Caption	Page
2.1	Morphology of butterflies	16
2.2	The life cycle of butterflies	17
3.1.1	Open grass field next to the lake	23
3.1.2	Forest behind of the administration building	23
3.1.3	Open field near the Applied Sciences Faculty	23
3.1.4	Forest behind college area	23
3.2.1	Preparation of triangle method	24
3.3	Spreading of wings	26
4.2	Diversity of butterflies in UiTM Negeri Sembilan	36

#### ABSTRACT

#### A PRELIMINARY STUDY OF BUTTERFLIES SPECIES IN UNIVERSITI TEKNOLOGI MARA NEGERI SEMBILAN

Butterflies are found all over the world and in all types of environments whether hot, cold, dry and moist, at sea level and high in mountains. Most butterfly species however founds in the tropical areas, especially tropical rainforest. After several years, there is some research about diversity of butterflies in UiTM Negeri Sembilan and decided to update data by doing the same research. The objectives of this study are to determine the species of butterflies in UiTM Negeri Sembilan and to determine the diversity of butterflies present in UiTM Negeri Sembilan. The experiment was done by catching some butterflies from different areas in UiTM Negeri Sembilan such as open grass field next to the lake, forest behind of the administration building, open field near the Applied Sciences Faculty and forest behind college area. Butterflies were collected during morning and evening by using collecting net. The sample then placed in an envelope in order to preserve the wings of butterflies. The butterflies then were put to open air and let it dried before pinning processes take place. Based on the result obtained, the species of butterfly that found at the forest near administration building and Applied Science Faculty area mostly are Junonia orithya, Mycalesis janardana sagittigera, Junonia almanac javana, and Eurema andersonii. Among all of the species found, Blue pansy (Junonia orithva) is the most common species of butterfly community in UiTM Negeri Sembilan. According to the result obtained, the value of diversity can be determined. The diversity of Shannon-Weiner Index for butterfly community in UiTM Negeri Sembilan was 1.59 while Evenness Index was 0.76 and the Richness Index was 2.26.