

**DISTRIBUTION OF SUN BEAR (*Helarctos malayanus*) AT MOUNT  
MINDUK SIRUNG IN TAMBUNAN, SABAH**

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## CHAPTER 2 LITERATURE REVIEW

### Princessayangsheriezuraini Binti Lawrence

2.1	Canine behavior	12
2.2	Characteristics of canine and domestication	13
2.3	Ecology of bear in Sabah	14
2.4	Factors affecting distribution of the bear	15
2.5	Canine ecology	15
2.5.1	Competitive and agonistic relationship	16
2.5.2	Dispersal and tactics	17
2.6	Study design	17
2.6.1	Bear sign surveys	18
2.6.2	Camera trapping method	18

## CHAPTER 3 METHODOLOGY

3.1	Apparatus	20
3.2	Study site	20
3.3	Sample size selection	21
3.4	Bear sign surveys	23
3.4.1	Random bag process method	23

## TABLE OF CONTENTS

	<b>Page</b>
<b>ACKNOWLEDGEMENTS</b>	iii
<b>TABLE OF CONTENTS</b>	iv
<b>LIST OF TABLES</b>	vi
<b>LISTS OF FIGURES</b>	vii
<b>LISTS OF ABBREVIATIONS</b>	viii
<b>ABSTRACT</b>	ix
<b>ABSTRAK</b>	x
<b>CHAPTER 1 INTRODUCTION</b>	
1.1 Background study	1
1.2 Problem statement	3
1.3 Significance of the study	5
1.3.1 Academic	5
1.3.2 Researcher	6
1.3.3 Management of Taman-taman Sabah	6
1.3.4 Management	7
1.3.5 Social	7
1.4 Objective of the study	8
<b>CHAPTER 2 LITERATURE REVIEW</b>	
2.1 Sun bear species	9
2.2 Physical appearance	11
2.3 Feeding behaviors	12
2.4 Conservation status and distribution	13
2.4.1 Status of sun bear in Sabah	14
2.5 Factors effecting distribution of sun bear	15
2.5.1 Foraging ecology	15
2.5.2 Competitive and agonistic relationship	16
2.5.3 Biogeographic factors	17
2.6 Study design	17
2.6.1 Bear sign surveys	18
2.6.2 Camera trapping method	18
<b>CHAPTER 3 METHODOLOGY</b>	
3.1 Apparatus	20
3.2 Study site	20
3.3 Sample site selection	22
3.4 Bear sign surveys	23
3.4.1 Random line transect method	23

## ABSTRACT

### DISTRIBUTION OF SUN BEAR (*Helarctus malayanus*) AT MOUNT MINDUK SIRUNG IN TAMBUNAN, SABAH

Sun bear (*Helarctus malayanus*) is the smallest bear species from the eight bear species in the world (Servheen, 1997; Wong, 2002a) was found distributed throughout the tropical forest of south-east Asia (Servheen, 1997; Wong 2002a; Thai National Parks, 2016) including islands of Borneo. Continuous study on distribution of sun bear is essential because the study can contribute better understanding regarding sun bears distribution and habitat preferences. The study was conducted in February 2017 within Mount Minduk Sirung in Tambunan, Sabah. The aims are to identify the distribution of sun bear within Mount Minduk Sirung in relationships with its microhabitat and to determine the biogeographic factors that influence the distribution of sun bear within the study areas. Bear sign surveys and habitat surveys were conducted along the line transects to detect the bear sign and evaluate the microhabitat characteristic and biogeographic factors. The result showed that sun bear was only distributed at lower montane forest within Mount Minduk Sirung (< 1500 m asl) whereas its habitat consists of low of vegetations and rocky outcrop frequency. Their habitat preferences are also highly influenced by the elevation ( $r = -0.518$ ,  $p < 0.05$ ) followed by competitor presence ( $r = -0.458$ ,  $p < 0.05$ ), forages available ( $r = 0.183$ ,  $p < 0.05$ ), Water resources ( $r = 0.147$ ,  $p < 0.05$ ) and the least was human activity ( $r = -0.112$ ,  $p < 0.05$ ). The bear sign frequency was found to have a positive correlation with the availability of forages and water resources while it is negatively correlated with the elevation, competitor presence, and human activity. The result showed that the frequency of bear sign encountered may increases when the availability of water resources and forages increased. While the bear sign frequency decreases when elevation, competitor presence and human activity increases. In a nutshell, both microhabitat characteristics and biogeographic factors play an important role in the habitat preferences of the sun bear, at the same time influenced their distribution. It is recommended to include camera traps method in this study because data can be more reliable with images as a prove for the existence of the sun bear.

## CHAPTER 1

### INTRODUCTION

#### 1.1 Background Study

Sun bear (*Helarctos malayanus*) is the smallest bear species from the eight bear species (Servheen, 1997; Wong, 2002a). This bear species is found inhabiting the tropical forest of south-east Asia (Servheen, 1997) and distributed throughout the eastern India, Bangladesh, Myanmar, Thailand, Peninsular of Malaysia, Laos, Cambodia, Vietnam to Southern Yunnan Province in China, and on the islands of Sumatra and Borneo (Thai National Parks, 2016). Sun bear is also known as the Honey Bear due to its fondness of eating honey (Thai National Parks, 2016; Wong, 2002) and also from its features of the orange u-shaped marking on its chest. The sun bears are usually afraid and tend to avoid human, however it may attack people when defending their young or suddenly encounter with human (Sethy and Chauhan, 2013). Sun bear is an omnivorous species even though they are classified in the order of carnivore. Several study conducted on food habits of Malayan sun bear showed that they are omnivorous in which their diet consist