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

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Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Biology
in the Faculty of Applied Sciences
Universiti Teknologi MARA

JULY 2017

ACKNOWLDGEMENTS

First of all, I love to thanks to Allah SWT for His bless and gave me and my friends to complete this research. I also want to express my thank you to my supervisor, Mr. Ajimi Jawan and my co-supervisor, Mdm. Siti Sarayati Binti Abd Mawah for their guide and helpful comments on this thesis. I would like to thanks to the laboratory assistants, Miss Anah Huda for providing the equipment needed during the field work. I also would like to extend my appreciation to Mdm. Rimi Repin, Assistant director of Taman-taman Sabah for helping me getting the permission and access to conduct study on Mount Minduk Sirung, Tambunan, and also thanks to Mr. Wailis, the field assistant for his helped throughout the rough field work. Last but not least, thanks to my friend, Mrs. Nur Masyitah Syafinah Binti Indara for her support and helped during field trip and throughout the project, and a big appreciations to my family especially my mother and father for being supportive, understanding, and for providing me the accommodation throughout my study.

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TABLE OF CONTENTS

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