ETHNOBOTANY OF THE BATEK TRIBE IN KUALA KOH, KELANTAN, MALAYSIA

By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science

March 2019

FS 2019 91

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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Chair : Professor Rusea Go, PhD
Faculty : Science

Plants and environment play important roles in Batek tribe culture. They possess a high level of knowledge related to forests due to unique intimacy with the forests and their heavy dependents on forests produce for their livelihood. The indigenous knowledge among Batek tribe is inherited from generation to generation through verbal communication from the eldest, but none of this knowledge has been considered, neither has it been documented systematically. Deforestation in the nearby area caused the resources of medicinal plants that were once abundant depleted tremendously. Due to this urgent call, therefore the objective of this study is to document the traditional uses of various indigenous plants, which are commonly used among Batek tribe, to determine the most frequently used species by measuring the relative importance of each species and identify the level of homogeneity among information gathered within the Batek community, to identify the plant part, modes of preparation and ways of administration used for medication of each medicinal plant. In this study, an ethnobotanical survey was conducted using semi-structured questionnaire method to obtain information on the use of medicinal plants for traditional healthcare among Batek people in Kuala Koh, Gua Musang Territory, Kelantan.Then, the literature searches were carried out for the evaluation on the current status of investigations on these plants. This study has recorded 50 species belonging to 36 families of medicinal plants used by the Batek tribe. *Spatholobus ferrugineus* (Zoll. & Moritzi) Benth, *Eurycoma longifolia* Jack and *Marantodes pumilum* (Blume) Kuntze had the highest RFC. Leaves were the most frequently used plant's part (42%). Fifty percent of medications are prepared as decoctions, and mostly administered orally. This study provides the first ethnobotanical study on medicinal plants used among Batek tribe in Kuala Koh. Future studies towards conserving the reported species and standardizing traditional herbal medicine administration are recommended.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

ETHNOBOTANY KAUM BATEK DI KUALA KOH, KELANTAN, MALAYSIA

Oleh

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Abstrak Tumbuhan dan alam sekitar memainkan peranan penting dalam budaya suku Batek. Mereka mempunyai tahap pengetahuan yang tinggi berkaitan dengan hutan kerana hubungan yang unik dengan hutan dan kebergantungan tinggi mereka dengan hutan untuk kelansungan hidup. Pengetahuan pribumi di kalangan suku Batek diwarisi dari generasi ke generasi melalui komunikasi lisan dari generasi awal, tetapi pengetahuan ini tidak dipandang serius, dan tidak didokumentasikan secara sistematik. Penebangan hutan di kawasan berdekatan mengakibatkan sumber tumbuhan ubatan yang dahulunya banyak berkurangan. Oleh sebab itu, objektif kajian ini adalah untuk mendokumenkan penggunaan tumbuhan asli, yang biasa digunakan dalam kalangan suku Batek, untuk menentukan spesies yang paling sering digunakan dengan mengukur kepentingan relatif setiap spesies dan mengenal pasti tahap homogeniti di kalangan maklumat yang dikumpul dari komuniti Batek, dan mengenal pasti bahagian tumbuhan, cara penyediaan dan cara penyaluran yang digunakan untuk setiap tumbuhan perubatan. Dalam kajian ini, kaji selidik etnobotanikal telah dijalankan menggunakan kaedah soal selidik separa berstruktur untuk mendapatkan maklumat mengenai penggunaan tumbuhan ubatan untuk penjagaan kesihatan tradisional di kalangan orang Batek di Kuala Koh, Jajahan Gua Musang, Kelantan. Kemudian, carian literatur dijalankan untuk penilaian mengenai status semasa penyelidikan mengenai tumbuhan ini. Kajian ini telah merekodkan 50 spesies dari 36 famili tumbuhan yang digunakan oleh kaum batek. *Spatholobus ferrugineus* (Zoll & Moritzi) Benth, *Eurycoma longifolia* Jack dan *Marantodes pumilum* (Blume) Kuntze mempunyai RFC tertinggi. Daun adalah bahagian tumbuhan yang paling sering digunakan (42%). Lima puluh peratus ubat-ubatan disediakan melalui kaedah rebusan, dan kebanyakannya diambil melalui oral. Kajian ini memberikan kajian etnobotani pertama mengenai tumbuhan ubatan yang digunakan di kalangan suku Batek di Kuala Koh. Kajian masa depan ke arah pemuliharaan spesies yang dilaporkan dan penyeragaman pengurusan ubat-ubatan herba tradisional amat disyorkan.

ACKNOWLEDGEMENTS

This research is made possible through the help and support from everyone, including: lecturers, parents, family members and friends First and foremost, I would like to take this opportunity to express my profound gratitude and deep regard to my supervisor, Prof. Dr. Rusea Go for her understanding, patience and most importantly his exemplary guidance, valuable feedback and constant encouragement throughout the duration of the project. Also for my co-supervisor Dr. Shamsul Khamis and Dr. Rosimah Nulit for their valuable suggestions were of immerse help throughout my project work.

In addition, I would like to sincerely express gratitude to my parents and family members who always been there for me as a strong pillar in completing this research thesis. I would like to dedicate this study to my father Mat Esa bin Deraman and my mother Kamariah binti Ismail for their love, hardship and support throughout my life.

My deeply thanks also goes to the headman (Tok Batin), of Batek tribe at Kuala Koh who permitted me to do my study on their tribe. Lastly, a great gratitude to Mr Dome who volunteering giving all his gathered information and knowledge regarding the tribe. My thanks and appreciation to all “Prof Rusea“ research team for their encouragement, and insightful comments and preserving as my assistances throughout the time it took me to complete this project. I thank them for their contribution and their good-natured support.

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LIST OF ABBREVIATIONS

B	Bark
BCE	Before Common Era
ca	Circa
CE	Common Era
CR	Critically Endangered
EN	Endangered
EW	Extinct
EX	Extinct
F	Fruit
ICF	Informant Consensus Factor
IK	Indigenous Knowledge
IUCN	International Union for Conservation of Nature
JAKOA	Jabatan Kemajuan Orang Asli
L	Leaf
LC	Least Concern
NT	Near Threatened
PFR	Permanent Forest Reserve
R	Root
RFC	Relative Frequency of Citation
VU	Vulnerable
WP	Whole Plant

CHAPTER 1

INTRODUCTION

1.1 Overview of Study

The Batek is an indigenous minority tribe from the Negrito group of Peninsular Malaysia and account for only 0.8% of total Orang Asli populations (Tacey, 2013). They were encountered by the Russian naturalist and explorer Nicolas Miklucho-Maclay on December 1874 during his expedition across the Malay Peninsula. Most Batek groups were mobile forest-dwelling foragers and gatherers until the recent past. The heavy dependent, intimacy of Batek people on the forest and the utilisation of its biodiversity for their daily life has indeed shaped the gathering of valuable indigenous knowledge that the communities have traditionally inherited for many generations from their ancestors since early age (McLean 2010; Mohmod, 2012).

Batek tribe is the holders of exclusive languages, medicinal practices, beliefs and possess priceless indigenous knowledge and practices for the sustainable forest resource management. They are the best custodian of the forests they call home. They have a spiritual connection to the forest that advances their traditional knowledge on daily utilisation of forest resources. The health of forest is central to their culture and gives them the responsibility to care for it. Their hereditary forest has an essential importance for their cultural survival and collective physical as indigenous peoples. Ethnobotany plays a very important role in health issues of Batek community and they also address healing practices as well as the healthcare seeking process. This indigenous knowledge passed down from generation to generation and closely interwoven with Batek's cultural values. They learn how maximize to use the nature in their daily life. However, deforestation of the nearby area cause the resources especially the medicinal plants that were abundant before difficult to obtain.

Ethnobotany is the study of people of a specific region and culture that utilises plants for a wide diversity of primary survival and aesthetic purposes. The easiest definition explains it as the study of the indigenous knowledge and use of plants in aboriginal societies in the past and present. It provides information regarding the traditional uses of plant wealth which can be utilized in integrated tribal development. This information has been orally passed from generation to generation which led to the improvement of the traditional health care system around the world (Gurib-Fakim, 2006).

1.2 Problem Statement

The indigenous knowledge among Batek tribe is passed from generation to generation verbally from elder generation to the younger one but none of this knowledge has been taken seriously by them. In recent years, folk medicine is no longer attractive to the younger generation. They are unable to recognize the herbs and possess very little knowledge on the importance of the medicinal plants (Amran, 2014). In recent years, folk medicine is considered taboo by their younger generations and was neglected due to readily available modern medicine. Deforestation in the nearby area caused the resources of medicinal plants that were once abundant depleted tremendously. As a plant species is lost from a locality, the information contained in it will also rapidly eroding and finally become lost forever. In addition, there is no dedicated ethnobotanical survey carried out among the Batek tribe. Urgent ethnobotanical documentation and subsequent conservation measures are, therefore, required to salvage this indigenous knowledge from further loss.

Thus, the aim of this study, which focusing on the documentations of the traditional uses of medicinal plants Batek people in Kuala Koh, Gua Musang District, Kelantan.

1.3 Objectives of Study

This research is a botanical documentation on indigenous uses of medicinal plants used by Batek tribe community in Kuala Koh, Gua Musang Territory, Kelantan.

The objectives of the study were:

1. To identify and document the traditional uses and remedies of various medicinal plant which commonly used among Batek tribe.

2. To determine the most frequently used species by measuring the relative importance of each species and also to identify the level of homogeneity among information gathered within the Batek community.

3. To identify the plant part, modes of preparation and ways of administration used for medication.

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