

INVERTEBRATE FAUNA AT RESIDENTIAL AREA OF NOBEL
UNIVERSITY SAINS DAN TEKNOLOGI MALAYSIA
GUSTAF PERENGGAN

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FAKULTI SAINS DAN TEKNOLOGI
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2006

CHIROPTERAN FAUNA AT RESIDENTIAL AREA OF KOLEJ UNIVERSITI SAINS
DAN TEKNOLOGI MALAYSIA (KUSTEM), TERENGGANU

By

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Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Applied Science (Biodiversity Conservation and Management)

Department of Biological Sciences
Faculty of Science and Technology
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
2006

This project report should be cited as:

Nurul Hanani, A.H. 2006. Chiropteran fauna at residential area of Kolej Universiti Sains dan Teknologi Malaysia. Undergraduate thesis, Bachelor of Applied Science in Biodiversity Conservation and Management, Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia, Terengganu.62p

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**JABATAN SAINS BIOLOGI
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PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: CHIROPTERAN FAUNA AT RESIDENTIAL AREA OF KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA (KUSTEM), TERENGGANU oleh Nurul Hanani Binti Abdul Halim no. matrik: UK 7894 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sabahagian daripada keperluan memperoleh Ijazah Sarjana Muda Sains Gunaan Pemuliharaan dan Pengurusan Biodiversiti, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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ACKNOWLEDGMENTS

First and foremost, I would like to thank God the Almighty for giving me the strength and endurance in completing this project. I am very grateful to acknowledge my indebtedness to my supervisor Mr Wong Chee Ho for his supervision, assistance, comments and guidance that have eventually accomplished my final year project within a proposed time.

Special thanks I dedicated to En Muhammad b. Embong, the lab assistance who accompanies us throughout the sampling period by assistance and huge amount of energy in setting up the nets with such assiduity. Nevertheless, I would like to take this opportunity to express my heartfelt thanks to my project partner Aina, Yan, Syazana, Choon Pei, Suria, Joann and Intan for their commitment, cooperation and regardless of time during our sampling period. Not forgetting to my thoughtful friends Rawaidah and Farah, also spent time with me to find references at UKM to make this project perfect.

On a more personal note, I wish to express my deepest gratitude to both my parents, Mr Abdul Halim b. Osman and Mrs Che Bonah Mahamood , my family and also to my special one, Mr Shahrolezad b. Hashim for their endless love, understanding and moral support in my studies. Lastly to whom ever it may concern which is involve directly or indirectly in completing this project.

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LIST OF ABBREVIATIONS / SYMBOLS

°	-	degree
%	-	percentage
no.	-	number
BCI	-	Bats Conservation International
IUCN	-	International Union for the Conservation Nature
WWF	-	World Wildlife Fund

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ABSTRACT

A study of bats diversity was conducted at residential area of Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) in 25 days within five months, starting from September 2005 until January 2006. The objectives of this study were to examine diversity of bat species and to enrich the inventory data of bat species for conservation purpose at residential area of KUSTEM. Eight mist nets were used as the capturing device. Species identification was based on the forearm measurement, weight, sex, maturity status and their reproduction. Bats were released after identification. A total of 24 individual bats were captured comprising of two families and four species. Three species were frugivorous bats, *Cynopterus brachyotis*, *C. horsfieldii* and *C. sphinx* from the family Pteropodidae. One insectivorous species, *Scotophilus kuhlii* was also captured from the family Vespertilionidae. *C. brachyotis* was the most common captured species (79.2%). Four of individuals that recaptures were recorded. Shannon-Weiner index is 0.7302 while Simpson Index is 0.3572. Overall, the species diversity of bats in residential area of KUSTEM were low due to the duration of study, types of capture methods, viability source of foods, weather condition and human activity.

**KEPELBAGAIAN SPESIES KELAWAR DI KAWASAN PERUMAHAN
SEKITAR KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
(KUSTEM), TERENGGANU.**

ABSTRAK

Kajian telah dijalankan bagi mengkaji kepelbagaian spesies kelawar di kawasan perumahan sekitar Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) selama 25 hari dalam tempoh lima bulan yang bermula daripada bulan September 2005 hingga Januari 2006. Objektif kajian ini adalah untuk mengenalpasti kepelbagaian spesies kelawar dan memperbaharui inventori data kepelbagaian spesies kelawar di kawasan perumahan sekitar KUSTEM bagi tujuan pemuliharaan spesies. Kaedah penangkapan menggunakan sebanyak lapan jaring kabus. Pengecaman spesies adalah berdasarkan ukuran lengan, berat, jantina, status kematangan dan peringkat pembiakan kelawar. Kelawar yang ditangkap dilepaskan semula selepas pengecaman. Sejumlah 24 ekor kelawar telah ditangkap, terdiri daripada dua famili dan empat spesies. Tiga spesies dari famili Pteropodidae, kelawar pemakan buah iaitu *Cynopterus brachyotis*, *C. horsfieldii* dan *C. sphinx*. Satu spesies kelawar pemakan serangga telah ditangkap iaitu *Scotophilus kuhli* dari famili Vespertilionidae. Dalam kajian ini, *C. brachyotis* merupakan spesies dominan dengan tangkapan tertinggi sebanyak 79.2%. Empat ekor kelawar ditangkap semula direkodkan. Indeks kepelbagaian iaitu Shannon – Weiner adalah 0.7302 sementara Simpson adalah bernilai 0.3572. Secara keseluruhannya, kepelbagaian spesies di kawasan perumahan sekitar KUSTEM adalah rendah disebabkan tempoh kajian, jenis alat tangkapan, kebolehdapatan makanan, keadaan iklim dan aktiviti manusia.