

BAT DIVERSITY AT MANGROVE AREAS OF KOLEJ  
UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA  
(KUSTEM) TERENGGANU

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2006



BAT DIVERSITY AT MANGROVE AREAS 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  
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KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA  
2006

This project should be cited as:

Lee, C. P. 2006. Bat diversity at mangrove areas of Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM), Terengganu. Undergraduate thesis, Bachelor of Applied Science in Biodiversity Conservation and Management, Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia, Terengganu. 110p.

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**JABATAN SAINS BIOLOGI  
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**PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: BAT DIVERSITY AT MANGROVE AREAS OF KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA (KUSTEM), TERENGGANU oleh Lee Choon Pei no. matrik: UK8812 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian 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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## ACKNOWLEDGEMENTS

Foremost, I would like to express my deepest gratitude to Mr. Wong Chee Ho, for his kindness of giving opportunity to me to carry out this final year project and his advices and generous support throughout the duration of this project.

I also like to thank Mr. Muhammad Embong, Joann Christine, Suriya Krishnan, Suganthi, Julia Johari, Raja Noor Balqhis and Intan Nurlemsha for their pleasant company and valuable assistance in setting and removing net, retrieving bats and processing bats. Also, Mr. Muhamad Razali bin Salam for helping in identifying plant species in mangroves and Mr. Zahanapi Hassan for providing KUSTEM plan. Their numerous help will never be forgotten.

Special thanks I dedicated to Dr. Tigga Kingston, Rakhmad Sujarno Kudus, Matthew J. Struebig, Trevor Bond, Su Mei Toh, Reizl Nery Pamaong, Santhi Nurul Kamilah and other members of Malaysia Bat Conservation Research Unit (MBCRU) for empowering my knowledge of bats and expanding my experience in implementing a complete research for bat conservation. Never forget, the co-operation of the Malaysian Meteorological Department in providing weather data. Last but not less, I express my appreciation to Mr. Vikrant for his helpful comments on the earlier draft.

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## LIST OF ABBREVIATIONS

BP	-	before the present
s.c.	-	superior colliculus
°	-	degree
spp.	-	species
ha	-	hectare
N	-	north
E	-	east
°C	-	degree Celsius
cm	-	centimeter
m	-	meter
g	-	gram
%	-	percentage
N	-	number of individual
±	-	more or less
mm	-	millimeter
p	-	probability
s	-	second

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## ABSTRACT

A study which aimed to generate a checklist and determine richness, diversity, evenness and abundance of bats species at mangrove areas of Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) was carried out from August 2005 until January 2006 with 240 net-nights. Two stations were selected and four mist nets were set randomly at each station. A total of 192 captured bats and 12 recaptured bats from five species of family Pteropodidae were recorded. *Cynopterus brachyotis* was dominant, followed by *C. horsfieldi*, *C. sphinx*, *Eonycteris spelaea* and *Rousettus amplexicaudatus*. The sex ratio of male: female was almost even with 1:1.09. The capture rate varied within sampling months. The percentage of recapture was low because of the avoidance of net or emigration of captured individuals. Bats in mangroves are reproductive active which coincided with fruiting season of mangroves and seem to have no specific breeding season. High capture yielded at places which were shaded from light and near water bodies. However, in consideration of potential bias and weakness of mist net, it is suggested that constant attention is needed and future work should include a variety of technique.

**KEPELBAGAIAN KELAWAR DI HUTAN PAYA LAUT KOLEJ  
UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA (KUSTEM),  
TERENGGANU**

**ABSTRAK**

Satu kajian untuk menyediakan data perintis dan menentukan kekayaan, kepelbagaian, keseimbangan dan persamaan spesies kelawar telah dijalankan di hutan paya laut Kolej Universiti Sains dan Teknologi (KUSTEM). Kajian ini bermula dari Ogos 2005 sehingga Januari 2006 dengan 240 malam perangkap. Dua stesen telah dipilih dan empat jaring kabus dipasang secara rawak di setiap stesen. Sebanyak 192 ekor kelawar dan 12 ekor kelawar tangkapan semula daripada lima spesies dalam famili Pteropodidae telah direkodkan. *Cynopterus brachyotis* adalah dominan, diikuti dengan *C. horsfieldi*, *C. sphinx*, *Eonycteris spelaea* dan *Rousettus amplexicaudatus*. Nisbah seks jantan:betina adalah hampir sama dengan 1:1.09. Kadar tangkapan berbeza pada setiap bulan. Peratus tangkapan semula adalah rendah disebabkan oleh pengelakan dan emigrasi kelawar yang tertangkap. Reproduktiviti kelawar di hutan paya laut adalah aktif dan bersandar dengan musim berbuah dalam hutan paya laut. Tangkapan adalah tinggi apabila tempat kajian terlindung daripada cahaya dan berdekatan dengan air. Namun, oleh sebab jaring kabus mempunyai ralat dan kelemahan, perhatian berterusan diperlukan dan kajian lanjut perlu dijalankan dengan pelbagai teknik.