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A SURVEY ON ECTOPARASITES OF BATS IN KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA (KUSTEM) CAMPUS AREA

By

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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
A Survey on Ectoparasites of Bats in Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) Campus Area oleh **Noor Azlin Binti Asnam ,** No Matrik : **UK 7061** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi **Ijazah Sarjana Muda Sains Gunaan (Pemuliharaan dan Pengurusan Biodiversiti),** Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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SPECIAL DEDICATIONS .....

My deepest thanks to my beloved parent and all family members

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Angah.....Nor Zuraihah

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Fajrul.....Mohd Fajrul

Qimi.....Mohd Amirul Hakimi

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Abbreviations/Symbols	
KUSTEM	Kolej Universiti Sains dan Teknologi Malaysia
CCD	Camera Colour Digital
%	Percentage
M	Male
F	Female
NP	Non-productive
L	Lactating
PL	Post lactating
A	Adult
J	Juvenile
R	Recapture

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ABSTRACT

A study was conducted to examine the diversity of ectoparasites on bats at Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM). The study was carried out for six month from July 2004 to December 2004. The aims are to identify and to examine the ectoparasites composition among different species of bats. A total of 99 individuals of bats were captured, these including the species of *Cynopterus brachyotis, C. horsfieldii, Eonycteris major* and *Kerivoula papillosa*. Study revealed that the most infested bat was *C. horsfieldii* with 50% of infestation rate. A total of 42 ectoparasites were found on 25 infested bats. Ectoparasites were identified as *Ctenocephalides* sp, *Nycteribia* sp 1 and *Nycteribia* sp 2. *Nycteribia* sp 1 was the most abundance of ectoparasites. Based on gender of the host, there was a preference infestation on female. The studied also indicated the value of species diversity with Shannon-Weiner Index was 0.77 and Simpson's Index was 0.53. Study showed that bat species, weather and gender of the host influenced the numbers of ectoparasites collected. The nature of the infestation showed that ectoparasites might influence the bats survival. Further investigation should be done because of the bats play an important role in our community.

KAJIAN EKTOPARASIT PADA KELAWAR DI KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

ABSTRAK

Satu kajian telah dijalankan untuk mengkaji kepelbagaian ektoparasit yang terdapat pada kelawar di Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) selama enam bulan dari bulan Julai 2004 hingga Disember 2004. Objektif kajian adalah untuk mengenalpasti dan memeriksa komposisi ektoparasit pada spesies kelawar yang berbeza. Sejumlah 99 ekor kelawar yang ditangkap terdiri daripada *Cynopterus brachyotis, C. horsfieldii, Eonycteris major* dan *Kerivoula papillosa*. *C. horsfieldii* adalah spesies yang paling kerap dijangkiti ektoparasit dengan kadar jangkitan 50%. 42 ektoparasit yang ditemui menjangkiti 25 ekor kelawar dikenalpasti sebagai *Ctenocephalides* sp, *Nycteribia* sp 1 dan *Nycteribia* sp 2. *Nycteribia* sp 1 adalah ektoparasit yang paling kerap menjangkiti kelawar. Kelawar betina menunjukkan kekerapan jangkitan yang tinggi. Nilai Indeks Shannon-Weiner adalah 0.77 dan Indeks Simpson's adalah 0.53. Sepanjang persampelan, spesies kelawar, cuaca dan jantina mempengaruhi kedapatan ektoparasit pada kelawar. Kehadiran ektoparasit boleh mempengaruhi kehidupan kelawar.