

COMPARISON OF DIVERSITY AND ABUNDANCE OF
COLEOPTERA BETWEEN BUKIT BAKU FOREST
RESERVE, TERENGGANU AND CAMERON
HIGHLANDS, PAHANG

SHARON © SHARON ANNA BINTI SHAMSUDDIN

FAKULTI SAINS DAN TEKNOLOGI
UNIVERSITI MALAYSIA TERENGGANU
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Perpustakaan Sultanah Nur Zahirah (UMT)
Universiti Malaysia Terengganu

c/N 2865



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Bukit Bauk Forest Reserve, Terengganu and Cameron Highland
Pahang / Sharen@Sharen Aini Shamsuddin.

PERPUSTAKAAN
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

1100051236		

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PERPUSTAKAAN UMT

COMPARISON OF DIVERSITY AND ABUNDANCE OF COLEOPTERA BETWEEN
BUKIT BAUK FOREST RESERVE, TERENGGANU AND CAMERON
HIGHLANDS, PAHANG

By

Sharen @ Sharen Aini Binti Shamsuddin

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FAKULTI SAINS DAN TEKNOLOGI
UNIVERSITI MALAYSIA TERENGGANU**

**PENGAKUAN DAN PENGESAHAN LAPORAN
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **COMPARISON OF DIVERSITY AND ABUNDANCE OF COLEOPTERA BETWEEN BUKIT BAUK FOREST RESERVE, TERENGGANU AND CAMERON HIGHLANDS, PAHANG** oleh **Sharen @ Sharen Aini binti Shamsuddin**, no. matrik: **UK 10646** 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, Universiti Malaysia Terengganu.

Disahkan oleh:

Penyelia Utama

JAMILAH MOHD SALIM @ HALIM

Nama: Cik JAMILAH binti MOHD SALIM @ Halim

Jabatan Sains Biologi

Cop Rasmi: **Fakulti Sains dan Teknologi
Universiti Malaysia Terengganu
21030 Kuala Terengganu.**

Tarikh: **9/5/07**

Penyelia Kedua (jika ada)

Nama: Puan Wahizatu Atzan binti Azmi

WONG CHEE HO

Jabatan Sains Biologi

Cop Rasmi: **Fakulti Sains dan Teknologi
Universiti Malaysia Terengganu
21030 Kuala Terengganu.**

Tarikh: **9/5/07**

Ketua Jabatan Sains Biologi

Nama: Dr. Aziz bin Ahmad

Cop Rasmi:

DR. AZIZ BIN AHMAD
Ketua
Jabatan Sains Biologi
Fakulti Sains dan Teknologi
Universiti Malaysia Terengganu
21030 Kuala Terengganu

Tarikh: **9/5/07**

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LIST OF ABBREVIATIONS

CH	-	Cameron Highlands
BB	-	Bukit Bauk Forest Reserve
E	-	Evenness index
H	-	Diversity index
H'	-	Shannon-Weiner index
MBU	-	Makmal Biologi Umum
R	-	Richness index
R1	-	Margalef's index
SPSS	-	Statistical Package for Social Science
UMT	-	Universiti Malaysia Terengganu
mm	-	Millimeter
km	-	Kilometer
m	-	Meter
C	-	Celsius
MARDI	-	Malaysia Agriculture Research and Development Institute
W	-	Walt

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ABSTRACT

Tropical rain forests are highly diverse in ecosystems that provide various habitats for insects. Forest ecosystem is identified to harbour majority of insects populations. This study was conducted to compare the diversity and abundance of Coleoptera in Bukit Bauk Forest Reserve, Terengganu and Cameron Highlands, Pahang. Sampling of Coleoptera at Bukit Bauk Forest Reserve and Cameron Highlands were conducted based on elevations of 45 m, 145 m and 245 m above sea level and 450 m, 900 m and 1350 m above sea level respectively. Sample collections were conducted using light trap, canopy beating and visual counting under forest litter and tree bark. At Bukit Bauk Forest Reserve, 27 individuals from seven species representing four families of beetles were recorded and sampled. In Cameron Highlands, 114 individuals of 22 species representing seven families of beetles recorded and sampled. The diversity of beetles community in Cameron Highlands was higher than Bukit Bauk Forest Reserve, but vice versa for evenness. The possible factors affecting diversity and abundance of beetles between sites and within elevations are discussed.

**PERBANDINGAN KEPELBAGAIAN DAN KELIMPAHAN COLEOPTERA
DI HUTAN SIMPAN BUKIT BAUK, TERENGGANU DAN CAMERON
HIGHLANDS, PAHANG**

ABSTRAK

Hutan hujan tropikal mempunyai kepelbagaian ekosistem yang tinggi dengan menyediakan pelbagai habitat kepada serangga. Ekosistem hutan dikenalpasti menempatkan kebanyakan populasi serangga. Kajian ini dilakukan untuk membuat perbandingan kepelbagaian dan kelimpahan Coleoptera di antara Hutan Simpan Bukit Bauk, Terengganu dan Cameron Highlands, Pahang. Kajian dijalankan mengikut ketinggian iaitu 45 m, 145 m dan 245 m dari aras laut Hutan Simpan Bukit Bauk dan 450 m, 900 m dan 1350 m dari aras laut Cameron Highlands. Kaedah yang digunakan ialah perangkap lampu, memukul kanopi pokok, secara penglihatan serta mencari di bawah daun-daun kering dan kayu mati. Di Hutan Rimba Bandar Bukit Bauk, 27 individu daripada tujuh spesis mewakili empat famili telah dicatatkan dan dikumpulkan. Sementara itu, 114 individu daripada 22 spesis mewakili tujuh famili dicatatkan dan dikumpulkan di Cameron Highlands, Pahang. Kepelbagaian komuniti kumbang di Cameron Highlands lebih tinggi daripada Bukit Bauk, tetapi dengan keputusan yang sebaliknya untuk nilai kesamarataan. Faktor yang menyumbang kepada kepelbagaian dan kelimpahan Coleoptera di antara dua kawasan kajian dan ketinggian turut dibincangkan.