THE COMPOSITION AND DIVERSITY OF DRAGONFLY (INSECTA: ODONATA) COMMUNITY IN SUNGAI [illegible], HULU TERENGGANU, TERENGGANU

[illegible]

FAKULTI SAINS DAN TEKNOLOGI
UNIVERSITI MALAYSIA TERENGGANU
2007

The compositon and diversity of dragonfly (insecta:odonata) community in Sungai Tersat, Hulu Terengganu, Terengganu / Fairos Abdul Rahim.

THE COMPOSITION AND DIVERSITY OF DRAGONFLY (INSECTA:ODONATA) COMMUNITY IN SUNGAI TERSAT,HULU TERENGGANU, TERENGGANU

By

Fairos Binti Abdul Rahim

Research Report submitted in partial fulfillment of
the requirements for the degree of
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Department of Biological Sciences
Faculty of Science and Technology
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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II
RESEARCH REPORT VERIFICATION

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: THE COMPOSITION AND DIVERSITY OF DRAGONFLY (INSECTA:ODONATA) COMMUNITY IN SUNGAI TERSAT, HULU TERENGGANU, TERENGGANU oleh Fairos Binti Abdul Rahim, no. matrik: UK 10372 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,Universiti Malaysia Terengganu.

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Abbreviation

E	evenness index
R	richness index
H'	Shannon-Weiner index
UPGMA	Unweighted Pair group Methods using Arithmethic Average

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ABSTRACT

The importance of this study was an indication of ecosystem quality at the study site. A study on composition and diversity of dragonfly was conducted in Sungai Tersat, Hulu Terengganu. This river was considered as a disturbed area that distressed by human activities. 204 individuals from 13 species were collected. Libellulidae was the most dominant family with 58% of total individual collected, followed by Platycnemididae (36%), Gomphidae (3%) and Chlorocyphidae (3%). Station 2 scored the highest values of Diversity Index (H=9.007), Richness Index (R=12.786) and Evenness Index (E=1.924). The composition and diversity of dragonfly was influenced by microhabitat preferences and environment condition. Light humidity was significantly influenced the dragonfly distribution whereas relative humidity did not influenced the dragonfly distribution. Riparian area along the river bank was most preferred by dragonfly compared to other microhabitats.

KOMPOSISI DAN KEPELBAGAIAN KOMUNITI PEPATUNG (INSECTA:ODONATA) DI SUNGAI TERSAT, HULU TERENGGANU, TERENGGANU

ABSTRAK

Kepentingan yang diperoleh daripada kajian ini ialah pengukuran kualiti ekosistem di kawasan kajian. Kajian tentang komposisi dan kepelbagaian pepatung telah dijalankan di tiga lokasi di bahagian tengah Sungai Tersat, Hulu Terengganu, di mana sungai ini adalah dikategorikan terganggu oleh aktiviti manusia. Hanya sejumlah 204 spesies individu daripada 13 spesies diperolehi. Libellulidae adalah famili yang paling dominan dengan mewakili 58% daripada keseluruhan kajian. Ini diikuti pula dengan famili Platycnemididae sebanyak 36%, Gomphidae 3% dan Chlorocyphidae 3%. Kepelbagaian, kekayaan dan kesamaan spesies adalah paling tinggi di stesen 2 dengan nilai 9.007 bagi kepelbagain, 12.786 bagi kekayaan dan 1.924 bagi kesamaan. Komposisi dan kepelbagaian pepatung di Sungai Tersat dipengaruhi oleh pelbagai bentuk mikrohabitat dan keadaan persekitaran. Keamatan cahaya tidak mempengaruhi taburan pepatung manakala kelembapan relatif mempengaruhi taburan pepatung. Vegetasi di tebing sungai merupakan mikrohabitat paling banyak diduduki oleh pepatung berbanding mikrohabitat yang lain.