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COMPOSITION AND ABUNDANCE OF DRAGONFLIES COMMUNITY AND THEIR MICROHABITAT PREFERENCES IN KUSTEM

By

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Research Report submitted in partial fulfillment of
the requirements for the degree of
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PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk COMPOSITION AND ABUNDANCE OF DRAGONFLIES COMMUNITY AND THEIR MICROHABITAT PREFERENCES oleh Elsie Pius Ganggan no. matrik: UK 9167 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 (Sains Biologi), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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LIST OF ABBREVIATIONS

KUSTEM - Kolej Universiti Sains dan Teknologi Malaysia

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ABSTRACT

A rich collection of 84 individuals dragonflies from eight species representing one family (Libellulidae) have been recorded in six locations in KUSTEM campus area during five months of sampling period (August until December 2005). All the sampling sites represent different vegetation and substrate structure. More dragonflies collected in dry season compared to wet season. Biological indices (Shannon-Weiner, Margalef, Menhinick and Eveness indices) revealed that a higher diversity, species richness and more even distribution of dragonflies were detected in Station D than other stations. F-test also revealed that the distribution and abundance of species were varied among stations. The assemblages of dragonflies were strongly associated to natural microhabitat in relation of vegetation and availability. Most preferred microhabitats were open water with slow flowing, overhanging vegetation and floating microhabitat, either as a place for mating, perching or laying eggs. Thus, a higher number of diversity and abundance for dragonflies' community can be found in microhabitats that have more vegetation.

KOMPOSISI DAN KELIMPAHAN PEPATUNG DAN JUGA KECENDERUNGAN MIKROHABITAT DI KAWASAN KAMPUS KUSTEM

ABSTRAK

Sebanyak 84 individu pepatung yang terdiri daripada lapan spesies mewakili satu family (Libellulidae) telah direkodkan di kawasan kampus KUSTEM dalam tempoh lima bulan persampelan (Ogos sehingga Disember 2005). Kesemua lokasi persampelan mewakili perbezaan vegetasi dan struktur substrat. Lebih banyak pepatung dikumpulkan pada musim kemarau berbanding pada musim tengkujuh. Indeks Biologi (Shannon- Weiner, Margalef, Menhinick and Eveness indices) menunjukkan diversiti yang tinggi , kekayaan spesies yang tinggi dan juga taburan pepatung yang lebih banyak dikesan di Stesen D berbanding lokasi yang lain. Ujian F juga menunjukkan taburan dan kelimpahan spesies berbeza-beza di antara stesen-stesen. Perhimpunan pepatung dipengaruhi kuat berdasarkan kepada microhabitat, struktur vegetasi dan juga tempat teduhan. Mickrohabitat yang digemari pepatung ialah kawasan air yang terbuka dan air mengalir perlahan, vegetasi berjuntai dan juga mikrofit terapung samada untuk menjalankan aktiviti samada untuk mengawan, tempat perhinggapan mahupun bertelur. Oleh itu, taburan dan kelimpahan komuniti pepatung yang lebih tinggi boleh di jumpai pada mikrohabitat yang mempunyai vegetasi yang tinggi.