

DIVERSITY OF MACROMOTHS (LEPIDOPTERA: HETEROCERA) IN PERLIS STATE PARK, KEDAWI REGION, MALAYSIA: NEW DISTRIBUTIONAL RECORD OF NOCTUID

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ABSTRACT

This study aimed to determine the macromoths species diversity in Perlis State Park, Kedawi Region, Malaysia. Two sampling series were conducted on 17th - 21st April 2015 and 12th - 16th November 2015. Modified Pennsylvanian light trap with 160 W mercury vapor bulb was used to attract the macromoths in ground ($\leq 2\text{m}$) and lower canopy ($\geq 20\text{m}$) levels. A total of 386 individuals comprising 182 species from 13 families were recorded in 10 nights of sampling. The macromoths diversity was considerably high with Fisher's alpha diversity index of $\alpha = 134.5$ and Shannon's diversity index, $H' = 4.777$. Noctuidae was the highest family recorded in terms of species number, while family Arctiidae was the highest for the number of individuals collected.

Keywords: Diversity, macromoths, ground level, lower canopy level, Perlis State Park

ABSTRAK

Kajian ini bertujuan untuk menentukan kepelbagaian spesies rama-rama makro di Taman Negeri Perlis, Rantau Kedawi, Malaysia. Dua siri persampelan telah dijalankan pada 17 - 21 April 2015 dan 12 - 16 November 2015. Perangkap cahaya Pennsylvanian yang diubahsuai dengan mentol wap raksa 160 W telah digunakan untuk menarik rama-rama makro pada dua ketinggian iaitu aras tanah ($\leq 2\text{m}$) dan kanopi rendah ($\geq 20\text{m}$). Sebanyak 386 individu yang terdiri daripada 182 spesies daripada 13 famili telah direkodkan selama 10 malam persampelan. Kepelbagaian rama-rama makro adalah cukup tinggi dengan indeks kepelbagaian alpha Fisher ialah $\alpha = 134.5$ dan indeks kepelbagaian Shannon, $H' = 4.777$. Noctuidae adalah famili yang tertinggi dicatatkan dari segi bilangan spesies, manakala famili Arctiidae adalah jumlah individu yang tertinggi dikumpulkan.

Kata kunci: Kepelbagaian, rama-rama makro, paras tanah, paras kanopi rendah, Taman Negeri Perlis