

**THE STUDY OF FIREFLY (COLEOPTERA:
LAMPYRIDAE) GENUS *PTEROPTYX* IN
WESTON, BEAUFORT, SABAH**



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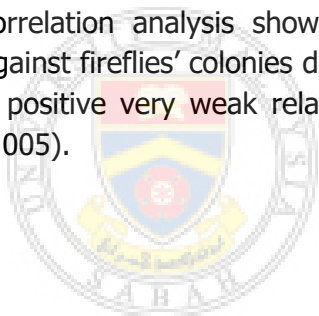


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ABSTRACT

Weston was visited by tourists for firefly watching activities by cruising along the river by boats since 1996. The aims of this study were to assess the health status of firefly congregating zones in Weston and to compare the patterns of firefly swarms against the firefly watching activities. Five sections of the river (Sg. Jam Jam and extension of Sg. Bukau-Sg. Maraba) were selected for river surveys for six moon cycles continuously from November 2011 till May 2012. On each moon cycle, a total of 8 nights of river surveys were done on eight phases of moon phase for every non-raining night. The density of each firefly colony was measured by using a percentage density chart. Parameters such as colony diameter size, wind force, height of the host plants, the abundance of leaves of host plants and relative humidity level were recorded. At the end of the river surveys, fireflies were caught using a sweep net for identification and preservation purpose. A total of 776 sights of fireflies colony were recorded during six cycles of moon. Three *Pteroptyx* species (*P. malaccae*, *P. tener* and *P. bearni*) were found in Weston. *Sonnerattia caseolaris* (Pidada / Berembang tree) trees were used by fireflies as their host plants. Pearson correlation analysis showed that tree height has a negative weak relationship against fireflies' colonies density ($r = -0.188$, $p = 0.00$); while, leaves abundance has a positive very weak relationship against fireflies colonies density ($r = 0.101$, $p = 0.005$).



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ABSTRAK

KAJIAN EKOLOGI KELIP- KELIP DI WESTON, BEAUFORT, SABAH

*Pekan Weston telah dikunjungi oleh pelancong untuk aktiviti pemerhatian kelip-kelip dengan bot dari sungai sejak tahun 1996. Kajian ini bertujuan untuk menilai status kesihatan zon kongregat kelip-kelip di Weston dan kesan aktiviti pemerhatian kelip-kelip terhadap kelip-kelip. Pemerhatian telah dijalankan di lima bahagian sungai (Sg. Si Jam jam, Lanjutan Sg. Maraba- Sg Bukau) untuk enam kitaran dari November 2011 sehingga Mei 2012. Pada setiap kitaran bulan, sejumlah lapan malam tinjauan telah dijalankan ke atas 8 fasa bulan untuk malam yang tidak hujan. Kepadatan setiap koloni kelip-kelip telah diukur dengan menggunakan carta peratusan kepadatan dan parameter seperti saiz diameter koloni, kelajuan angin, ketinggian tumbuhan perumah, kepadatan daun tumbuhan dan tahap kelembapan relatif telah direkodkan. Pada akhir kaji selidik, kelip-kelip telah ditangkap menggunakan jaring sauk untuk dikenalpasti dan pengawetan. Sebanyak 776 pemerhatian koloni kelip-kelip telah direkodkan sepanjang enam kitaran bulan. Tiga spesies kelip-kelip *Pteroptyx* (*P. malacca*, *P. tener* dan *P. bearni*) telah ditemui di Weston. *Sonnerattia caseolaris* (pokok Pidada / Berembang) merupakan tumbuhan perumah bagi ketiga-tiga kelip- kelip tersebut. Analisis korelasi Pearson menunjukkan bahawa ketinggian pokok mempunyai hubungan negatif yang lemah terhadap kepadatan koloni kelip-kelip ($r = -0.188$, $p = 0.00$) ; manakala, kepadatan daun mempunyai hubungan positif yang lemah terhadap kepadatan koloni kelip-kelip ($r = 0.101$, $p = 0.005$).*