

Insects diversity and abundance in coastal and inland forest of Perhentian Island, Terengganu, Peninsular Malaysia

ABSTRACT

Perhentian Island is one of the most famous tourism sites in Terengganu, Peninsular Malaysia. The impact of tourism activities as well as high construction of infrastructure and facilities can pose a threat to flora and fauna, particularly on insects. Therefore, this study aimed to determine the insects' diversity and abundance in the coastal and inland forest of Perhentian Islands using three insect's traps which were; Malaise traps, yellow pan traps, and pitfall traps. The traps (i.e. three points per plots) were left for seven days before the insects were collected. A total of 1382 individuals of insects consisting of 11 orders were successfully collected with order of Diptera and Hymenoptera dominate the number of individuals collected. The insect's individuals were slightly higher in the coastal forest with 699 individuals (11 orders) than in the inland forest with 683 individuals (9 orders). However, there was no significant difference ($P>0.05$) of insect's abundance recorded between the coastal and inland forest of Perhentian Island. The Shannon-Weiner Diversity Index (H') showed that the diversity of insects in the coastal forest was higher with $H'=1.51$ than inland forest with $H'=1.35$ respectively. We conclude that the insects' diversity and abundance in Perhentian Island is relatively high in coastal forest but low in inland forest. This research provides a basic information and dataset of insects' diversity and abundance which may useful for further ecological research at Perhentian Island in the future.

Keyword: Insects; Diversity; Population; Forest; Island