Diversity and abundance of some insect fauna in Krau Wildlife Reserve Forest, Malaysia

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Concerned about habitat changes due to logging and rapid development, Universiti Teknologi MARA researchers recently conducted a study on

the diversity of the important Hymenoptera group, which includes bees, wasps and ants. Their results will be useful in forest conservation programmes.

This study was initiated due to the changes taking place to the natural habitat of insects due to logging and development. These activities pose a great threat to insect communities in the forest.

The study focused on Hymenoptera known as the most important group of insects in any terrestrial ecosystem. Bees, wasps and ants are some of the insects in this group. They are important pollinators of flowering plants as well as predators of many arthropods. As such, many of them can be classified as the key stone species in a particular ecosystem.

Preliminary observation showed that the Hymenopteran were quite diverse at the Krau Wildlife and Forest Reserve (KWFR), Pahang, geographically considered as a lowland dipterocarp forest, which is connected to the Malaysian National Park. The objective of this study was to determine the level of biodiversity, abundance and richness of Hymenoptera in Kuala Lompat, Krau Wildlife Forest Reserve and to study its relationship, if any, between changes in environmental gradient from forest fringes and deeper into the forest.

The findings of this study indicated that certain species of insects were found in abundance along the fringes of the forest where many species of flowering plants were found. However, closed and narrow areas deeper in the forest with many trees, shrubs and grass provided shelter for the insects from predators for example birds and therefore constituted a higher diversity of Hemiptera compared to those found at the forest fringes or along the river which is more open and exposed to predators.

In conclusion, the study area in KWFR forest, Kuala Lompat recorded

1236 specimens and 55 morphospecies of insects under order Orthoptera, Hemiptera and Diptera. For Orthoptera and Diptera, forest fringes recorded the highest abundance while for Hemiptera, the most abundant individuals were found in the interior of the forest. Orthoptera, Hemiptera and Diptera could be used as a bio indicator in Malaysian forest because their ease in identification process and well known taxonomic. This method is useful and should be used by ecologist in forest conservation program.

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