UNIVERSITI TEKNOLOGI MARA

EFFECTS OF ECOTOURISM ACTIVITIES TO TREE SPECIES DIVERSITY, COMPOSITION AND STAND STRUCTURE OF TAMAN NEGARA PAHANG

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ABSTRACT

Taman Negara Pahang is blessed with diverse of tree species due to its protected status in which logging and agriculture activities are prohibited within the area. However, ecotourism activities in protected area such as hiking, trampling and camping may result in some degree of changes to natural resource conditions especially to the forest richness, diversity, stand structure, composition and environment. Therefore, a study was conducted to evaluate the effects of ecotourism activities to the stated variables in Taman Negara Pahang. A total of 40 plots measuring at 20 × 25 m were established in three locations *viz.* camping areas, trekking trails and natural areas. Within each plot, all trees equal and greater than 1 cm DBH (diameter at breast height) were identified and measured, while data on light intensity and soil compaction were recorded. The analysis identified a total of 7,078 individuals belonging to 393 species and 63 families of tree. From the Analysis of Variance, there are no significant differences in the means of richness and diversity indices, stand structures and species composition among the three study sites ($p \geq 0.05$). However, this study found that significant difference in the variables of forest environment ($p < 0.05$) (i.e., light intensity and soil compaction). The ordination technique of Canonical Correspondence Analysis found that many tree species highly associated to light intensity and less number of tree species found when the soil become more compacted. As for the conclusion, part of ecotourism activities not affected the tree species diversity and stand structure in the study area but these activities provided significant impact to the forest environment especially to the light intensity and soil compaction and this may be influencing the pattern of tree species composition within Taman Negara Pahang. Results from this study may be useful for providing baseline information for effective planning and management of the park.

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