

Characterization of riparian plant community in lowland forest of Peninsular Malaysia

ABSTRACT

A riparian zone is the land adjacent to streams and rivers, known to be one of the most important habitats in the tropical forest. However, not many studies have been done in Peninsular Malaysia and no information particularly in lowland forest. The purpose of this study was to characterize the plant communities where two sites were chosen, Pasoh Forest Reserve (PFR) which includes two logged-over forests of compartments (Compt.) 47 and 55 and virgin reserve of Compt. 55. The second site was in Ayer Hitam Forest Reserve (AHFR) consists of regenerating forest of Compt. 15, Compt. 14 and Compt. 13, that had been last logged in 1970. Five pairs of 10x5 m plots were then built along the riparian area for each compartment and all plants were enumerated. Results showed that a total of 2579 individuals which represents 369 species, 213 genera and 80 families were found. Generally, riparian zones of lowland forest still dominated by Dipterocarpaceae, an important timber group in tropical forest PFR recorded a higher number of diversity (Fisher Alpha) and numbers of individual compared to AHFR. Composition of plants in PFR and AHFR were found not similar with only 46 species from 31 families were shared and analysis using Bray-Curtis Similarity coefficient, BCjk and Unweighted Pair Group Method with Arithmetic Mean (UPGMA), confirmed this differences. Results also found that water-loving species only comprise of 7.8 and 9.3% from the total number of species in PFR and AHFR, respectively. This study shows that riparian area in lowland forest of the Peninsular Malaysia is site-specific due to anthropogenic disturbance and logging history.

Keyword: Ayer Hitam Forest Reserve; Lowland forest; Pasoh Forest Reserve; Peninsular Malaysia; Riparian plant; Species diversity