

## Stand Structure of Eastern Lanjak Entimau Wildlife Sanctuary

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### Abstract

The floristics composition, vertical, and horizontal structure of eastern Lanjak Entimau Wildlife Sanctuary was investigated in an attempt to understand the ecological state this forest. Five transects was established from Katibas and Bloh rivers. The transects were assessed to obtained floristics composition, stand density, diameter size distribution, and vertical vegetation layers. For class diameter between 5 cm and 30 cm dbh 37 families and 169 tree species and for trees with dbh > 30.1 cm 33 families and 101 tree species were recorded. Dipterocarpaceae was only represented by 9% of the total tree enumerated. The results showed that Euphorbiaceae dominated the area in term of number of species. However, the important species were *Xanthophyllum* sp. 4 and *Shorea parvifolia*. The largest and tallest trees recorded include *Shorea parvifolia*, *Shorea scaberrima*, *Koompassia excelsa*, *Koompassia malacensis*, and *Dipterocarpus crinitus*. Generally diameter size distribution for all species combined followed the reverse-J curve which is typical of uneven-aged forests. Horizontal and vertical vegetation data revealed that the forest structure characteristics suggest a continuous vegetation growth.

### Introduction

Survival of undisturbed old-growth natural forests in Borneo is threatened. The principal threats to these forests include forest clearance for agriculture and over exploitation. Current awareness in forest conservation has resulted in efforts and initiatives to keep the remaining undisturbed forest areas. However management of the natural forests is constrained by limited understanding of the state, conditions and functions of these forests in terms of structure, composition and regeneration. Precise estimates of standing inventory is essential not only for future management of this forest but more importantly contribute to the understanding of natural processes and functioning of forest ecosystem to maintain the unique ecological diversity. The main aims of this study are to investigate the forest structure of eastern Lanjak Entimau Wildlife Sanctuary (LEWS). Specifically the objective of this study was to assess the stand structure, species composition and floristic diversity of the study area in the eastern LEWS.