

## Assessment of floristic composition of Kilim Geoforest Park, Langkawi, Malaysia.

### Abstract

The present study was carried out to analyze the species diversity and quantitative analysis of mangrove forest in three riverine ecosystems at River Kisap, River Ayer Hangat and River Kilim at Kilim Geoforest Park. One hundred plots, each of size 20 m × 20 m, were established at a distance of 250 m apart along the three rivers. Every existing species that occurred within the plot and trees of diameter at breast height of 1 cm and above were enumerated and identified. The data were analyzed for species richness, diversity and evenness. The species richness were computed based on the Jackknife method, species diversity index were calculated using Simpson's Index, Shannon-Wiener Index and Brillouin's Index. The evenness indexes were measured by Simpson's measure of evenness, Camargo's index of evenness and Smith and Wilson's index of evenness. A total of 11488 individual trees representing 58 species, 39 genus, and 23 families were recorded. The most abundant species was *Rhizophora apiculata* (3449) and *Ceriops tagal* (2060). The diversity results show that Shannon-Wiener, Simpson's index of diversity and Brillouin index was high (2.0 to 3.0), (0.7 to 0.8), to (2.0 to 3.0) respectively and the evenness index however was low (0.1 to 0.2).

Keyword: Floristic composition; Mangrove forest; Diversity index.