

Delwala Proposed Forest Reserve is a tropical rain forest of 15,609 km², situated in the Rakwana – Kalawana Mountain range, in the Ratnapure District. Timber was extracted from Delwala between 1988 – 1991 and at present 76% of its area is an undisturbed forest. Further study on its diversity and socioeconomics. As the altitude of Delwala varies from 212m to 1035m, it is believed to have an interesting species composition.

This study examined the change in structure and floristic composition with altitude at Delwala to emphasize the conservation value of this reserve. After a reconnaissance survey of the area and identification of the common plants, 15 plots (each 25 m x 25 m) were established at 275 m, 550 m and 800 m altitudes. All trees above 10 cm g.b.h. in these plots were sampled. As a result a total of 263 species in 63 families were encountered, including 158 endemic species.

Among the taxa identified, 198 were lowland wet zone species and 28 were montane or submontane species. The rest of the species were found in more than one zone, including dry zone. Thirteen threatened species were encountered, including *Medinilla maculata* GARDN., a taxa not been recollected for the past 100 years.

A clear difference in vertical structure and species composition was also observed with change in altitude. Based on IVI of this preliminary study, a *Schumechaeria - Palaquium - Anisophyllea* association and a *Shorea - Palaquium - Calophyllum* association can be proposed for the vegetation at 275 m and 800 m respectively. At mid elevation, the *Meua-Hopea-Hydnocarpus-Dichilanthe* association found may be unique to this forest.

The high diversity in this small area strengthens the proposal for managing Delwala as a conservation forest.