D-05 Floristic diversity of four woodland types in the Upper Hantana Campus land

R M C S Ratnayake[1], I A U N Gunatilleke[2], C V S Gunatilleke[2], L R Jayasekara[1]
[1]Dept of Botany, University of Kelaniya, [2]Dept of Botany, University of Peradeniya

In the Upper Hantana Campus land, woodlands dominated by *Paraserianthus, falcataria, Alstonia macrophylla, Pinus caribaea* and mixed species are found in proximity to one another displaying a range of structural and floristic diversity. This paper presents a comparison of the floristic diversity of these 4 woodlands. The vegetation over 10 cm gbh in 15 plots selected to represent each woodland type was sampled. All individuals recorded were girthed and identified to their respective species. The ecological and floristic diversity of the woodland types were compared using different diversity indices and species rank abundance plots. In this study 2924 individuals enumerated, represent 48 families, 102 genera and 124 species, of which 21 were endemic and 20 were exotic to Sri Lanka. The highest density, floristic richness, proportion of endemics and plant diversity was recorded in the *Alstonia* woodland, followed in decreasing order by that in the *Paraseriathus falcataria* woodland, mixed woodland, and *Pinus* woodland.

The species rank abundance plots revealed that the *Pinus* woodland fits the geometric series type of plant distribution whereas each of the other woodlands fit the log series or log normal type of distribution. Of the 124 species recorded, 75% were restricted to either one or two of the woodland types sampled and of them 17 (13.7%) were endemic.

The broad-leaf species woodlands show better natural regeneration and establishment of a variety of species and consequently harbour greater floristic richness and diversity as compared with that of *Pinus* woodland. These woodlands showed different degrees of human disturbance, which may be one of the contributing factors for the differences observed among them. These results provide baseline ecological information for conservation oriented multiple use management of these woodlands.