

(107)

Floristic Survey in Dombagaskanda Forest Reserve in Kalutara District, Sri Lanka

Jayaratne V.C.P., Singhakumara B.M.P.*

Department of Forestry & Environmental Science, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
**balangodasinghe@gmail.com*

Abstract

Dombagaskanda (aka Bodhinagala) forest reserve which is a lowland tropical rainforest found in Kalutara District of Sri Lanka and it's the nearest tropical rain forest that can be reached from the city of Colombo. Bodhinagala forest hermitage and monastery has been in the heart of the forest from 1950s. People visit the monastery and this creates disturbance and anthropogenic pressure to the forest. For conservation and to develop sustainable management strategies for the forest, the floristic composition and richness of the forest needs to be understood. This study was carried out to investigate the plant associations and communities in Dombagaskanda forest reserve, to examine the floristic composition and diversity of the forest reserve along the topographic gradient and to record the endemic and threatened plant species of the forest reserve. Plots of size 20×20 m, 5×5 m and 1×1 m were laid down to record woody perennials of diameter \geq 5 cm, saplings of height \geq 1m and seedlings of height $<$ 1 m respectively. A total of 18 plots were sampled, 6 each for ridge, mid slope and valley of the forest in purposively selected undisturbed areas of the forest. A total of 98 species belonging to 55 families and 76 genera were recorded. Out of the species recorded, 41(43%) are endemic species, 53 (57%) are indigenous species, two species are invasive and one is exotic (3%). Eighteen globally threatened species and 33 nationally threatened species were recorded. According to the relative density values, the most common species is *Horsfieldya iryagedhi* and the most common family is Myristicaceae in ridge, mid slope and valley of the forest reserve. The most dominant family in all three altitudes is also Myristicaceae and the most dominant species in ridge and mid slope is *Horsfieldya iryagedhi* and in the valley *Artocarpus nobilis* is dominant. When the Shannon's diversity indices are considered, there is no significant difference ($p>0.05$) in diversity, evenness and dominance in ridge, mid slope and valley of the forest. The data found out through this study can be used to understand the importance of conserving this rainforest and to develop conservation strategies and more studies on soil and disturbed areas of the forest would be of vital importance.

Keywords: Dombagaskanda, Threatened species, Endemic species, Valley, Dominant species