



Ecological Studies on Southern Secondary Moist Deciduous Forest of Shendurney Wildlife Sanctuary, Kollam, Kerala, India

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Abstract: The current ecological studies conducted to examine the tree species diversity, richness, structure, and composition of the moist deciduous forest of Shendurney Wildlife Sanctuary, in Kollam district of Kerala state of India. The stratified random sampling method was employed and enumerated all the trees ≥ 10 cm diameter at breast height. Fifty-eight species of trees belonging to twenty-five families and forty-eight genera were recorded. The forest is dominated by *Terminalia paniculata*, *Aporosa cardiosperma*, and *Olea dioica*. The family Euphorbiaceae dominated the forest with a maximum Importance Value Index of 52.99, followed by Combretaceae 41.23 and Malvaceae 32.73. The Shannon-Weiner index (H') is 3.68, with Simpson's value 0.92. The density was 876.97 ha^{-1} and the basal area of $26.88 \text{ m}^2 \text{ ha}^{-1}$. The size class distribution displayed a completely L shape pattern. The significant number of species belonging to the lower girth class category (≥ 10 -30 cm) contributed to 43.1% of the total number of species. Out of the 58 species recorded, fifty-six species are contagiously distributed, and two species are randomly distributed. The present study can provide vital information for proper monitoring, planning, and management of phytodiversity of the moist deciduous forest of Shendurney Wildlife Sanctuary.

Keywords: Floristic composition and structure, Phytodiversity, Species diversity moist deciduous
