Indian Journal of Ecology (2018) 45(3): 462-469

Manuscript Number: 2703
NAAS Rating: 4.96

Structural and Floristic Diversity of Different Landscape in Western Ghats of Kodagu, Karnataka, India

V. Maheswarappa and R. Vasudeva

Department of Forest Biology and Tree Improvement, College of Forestry, Sirsi-581 401, India
E-mail: cv_mahesh@rediffmail.com

***Abstract*:** The study was under taken to assess the structural and floristic diversity in selected landscape elements of Kodagu district which lies in Western Ghats, Karnataka.In natural forest and sacred grove, random sample plot of 20 X 20 m and for coffee plantations 25X50 m plot was laid out. The data on species richness, composition and number of individuals, height and DBH (≥10 cm DBH) were collected. Differences occurred between the natural forest, sacred grove and coffee plantation landscape in terms of speciesrichness, number of individuals observed, composition and association of species in each landscape elements. In evergreen forest belt coffee plantations had higher Shannon diversity and species richness (3.611 and 7.864, respectively) indicating the species *in situ* and per se *circa situ* conservation plays an important role as compared to natural forest and sacred grove. In transitional belt, Shannon diversity and species richness was more in sacred grove (3.834 and 11.55, respectively) as compared to natural and coffee plantations due more number of sacred grove or devarakaadus in the belt. There was higher species richness and Shannon diversity in coffee plantations of dry deciduous belt (20.96 and 3.853, respectively) as management practices in coffee owners by retaining the remnant native tree species as compared to natural and sacred grove which are highly posed to anthropogenic factors. The IVI values are also differs with respect to climatic and management practices between landscape elements and more of *Mangifera indica, Ficus racemosa, Ficuss bengalensis, Acrocarpus fraxinifolius* and *Garcinia gummi- gutta*. Hence, coffee plantations can help to protect the tree species, sustain smallholder production and offers more scope for conservation of biodiversity.

***Keywords*:** Landscape, Conservation, Circa situ, Anthropogenic factors, Bioclimatic zone, Floristic diversity