



Phytosociological Analysis in Semi-Arid Region of India: A Case Study from Yadgir District, Karnataka

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ABSTRACT The present study covers structure, composition and distribution of vegetation in semi-arid ecosystem in respect of trees and shrubs and inventory of herbs. In the primary vegetation layer the highest density (individuals/hectare) was recorded for *Prosopis juliflora* (133 individuals/ha) lowest for the species namely *Dalbergia sissoo* and *Terminalia catappa* (0.21 individuals/ha). The vegetation composition consists of 26.7 percent of tree species, 17.2 percent of shrubs, 42.5 percent herbs and 13.3 percent climbers forms the structure of natural ecosystems. The people of study region are using the plant diversity for various purposes for example medicine (78 species), fuel wood (26), fodder (23), edible (17), oral hygiene (11), timber (9), and other uses (3). Diversity indices for studied in semi-arid ecosystem found less than that of other ecosystems in India. The area available under forest cover is very less, that is, 3.64 percent of the studied landscape. Hence, strong conservation methods are required to protect the biodiversity for sustainable socio-ecological development.