Biodiversity of sacred groves in Ratnagiri, Maharastra

Y.N. ULMAN, D.N. MOKAT AND J.M. TALATHI

Asian Journal of Environmental Science, Vol. 3 No. 2 : 90-96 (Dec., 2008 to May, 2009)

SUMMARY

Sacred Groves is a well protected piece of forest, which was preserved traditionally by attaching religious values to it. In today's method of conservation it is classified under *in-situ* conservation. The present paper gives an account of the biodiversity of plants and birds of the sacred groves in the vicinity of Dapoli. A study of the floristic and avifauna composition and its use by the local people is also incorporated. In the present study one grass species, fifteen climber species, fifteen herb species, twenty three shrubs species, fifty-one trees are reported. Ten endemic and eight threatened plants are also reported in this paper. When the vegetation found outside the sacred groves was compared to one found inside it, it was found that only *Teciona-Terminalia* species were common. Though man is reaching a modern era having knowledge of many scientific conservation techniques, the traditional conservation practice is endangered. Nearly all of the species found inside the sacred groves were used and exploited for their uses by the *Katkari* tribes living around the sacred groves. Due to the use of the sacred grove by local people for their daily needs, the depletion of the plants was on a rise and it is feared that if this continues at the same pace, many of the rare and endangered plants would be extinct. With the new inventions in the conservation techniques it is necessary that restrictions must be placed on the use of the sacred grove. It must be preserved as they serve as a potential gene bank.

See end of the article for authors' affiliations

Correspondence to :
J.M. TALATHI
Department of Agricultural Economics, College of Agriculture, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, RATNAGIRI (M.S.) INDIA

Key words : MFP's, Biodiversity, Sacred grove.

Sacred groves are the products of conservational practices. These are patches of forest land reserved and thus well protected. The success behind the reserved nature of sacred groves is the attachment of religious value to it. They were believed to be the abode of gods. These are locally known as *'Devrai'* in Maharashtra. A *'Devrai'* is a forest in which there are restrictions towards felling, hunting, encroachment, collection of minor forest products etc. thus serving as a virgin forest.

The biodiversity status of sacred groves is very high rated. They are rich in flora, fauna and avifauna. Most of the wild relatives of plants, rare, threatened and endemic plants are found in abundance. Since this part of the forest is untouched many of the rare bird species and arthropods find refugee in them. It therefore, indirectly helps in the balance of the ecosystem. It averts the problems of soil erosion, humidity, reduces temperature of the atmosphere. It serves as a perennial source of water. It also helps in watershed protection. The sacred groves have thick humus and litter layer enhancing water retention, root system development and gaseous exchange. The soil moisture retention characteristics of the sacred groves are higher when compared to the adjacent area (Prasad and Mohanan, 1995).

Hughes and Chandran (1998) illustrated that the sacred groves served as a refugia and possible centers of dispersal and restoration. Gadgil and Vartak (1975, 1976) reported the sacred groves in Raigad district of Maharashtra harbored solitary specimen of the gigantic liana *Entada phaselaides*. A study on the sacred groves of Maharashtra was done by Deshmukh and Gogate (1997).

This paper assess the biodiversity of plants and birds present in the sacred grove.

MATERIALS AND METHODS

For the proposed study, the study area was visited 3-4 times during each of the three seasons. Explorations were undertaken from one end through the center of the forest area to the opposite end and back. Quadrants of 10m x 10m for trees, 5m x 5m for shrubs and 1m x 1m for herbs were laid. The plant species were identified with the help of the herbarium sheets and books. The unidentified plants were collected and a herbarium sheet was prepared and identified with the help of local floras. The prepared herbarium sheets were then submitted to the College of Forestry, Dapoli.

For avifauna, point count method was used. In this the observer stood at random and

Accepted : August, 2008