



Sacred groves: Traditional way of conserving plant diversity

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Abstract

Sacred groves are the forest patches conserved by the local people intertwined with their sociocultural and religious practices. For the present study, Udhadavne sacred grove namely 'Maruti Ban' was selected and studied. Frequent visits were made and observations regarding floristic and ecological data were noted. Ethno botanical aspects of medicinal plants were studied. Some rare and endemic plant species were also noted. Totally 150 species of floristic plants were listed. It shows the richness in biodiversity of Udhadavne sacred grove. This sacred grove is specially conserved for tree species. *Memecylon umbellatum* and species of *Ficus* were found dominant. Some medicinal, endemic and rare plants were also protected accordingly. These observations indicate that the sacred groves are the traditional way of conserving plants.

Keywords: Sacred grove, Plant diversity, Conservation

INTRODUCTION

India has a rich tradition of nature conservation in which sacred groves are the type of conservation through tradition. Sacred groves are the forest patches conserved by the local people intertwined with their socio-cultural and religious practices. These groves are with harbor rich biodiversity and play a significant role in the conservation of biodiversity (Upadhey *et al.*, 1987, 1997).

Various indigenous communities all over the world lived in harmony with nature and thus conserved biodiversity. In the course of time science and technology developed and industries were established and expended to meet the increasing demands of the people and to take care of various developmental activities. Modernization and commercialization of agriculture in order to increase productivity are the cause of disappearing knowledge among the people. So there is strong need to initiate people's participation. Training for promoting traditional knowledge and conserve the biodiversity is also important. Through this traditional knowledge and such strict taboos have led to the preservation in these sacred groves of forests in their virgin form. The sacred groves are the store houses of valuable medicinal endangered and threatened plants having high economic value (Gadgil and Vartak, 1975; Kumbhojkar and Kulkarni, 1998). So sacred groves also included into the one type of in-situ conservation. Hence the present study was undertaken.

STUDY AREA

The area under study is from Akole Tahasil comes under northwest part of Ahmednagar district which is situated between 18°

20' and 19° 59' north latitude and 73° 40' and 75° 43' east longitude, with an area of 6666 square miles. The average elevation of the crest lime within the limit of the district is about 1300m. The Akole Tahasil is a small part of western ghat having its own richness in bio diversity. Western part of Akole is declaimed as Kalsubai-Harishchandragad Wild life Sanctuary in 1986, having an area of 361.71 sq. km. Sanctuary comprises number of sacred grooves. 'Maruti Ban' sacred groove at village is one of them.

The Udhadavne sacred groove conserves the 1.21 hector area with moist deciduous and semi evergreen type of forest. Climate is highly humid in rainy season and dry in summer. Soil of the area is reddish brown basaltic porous and having low water holding capacity. Area has great potential form economic and botanical point of view. The area has richest diversity of biological species including number of rare, endemic and endangered plant species.

MATERIAL AND METHOD

The frequent visit conducted in different climatic seasons. The plants found were observed listed. Photograph of some important plant species were also taken. As per as possible, plants were identified in the field. Remaining plants were collected and brought in the laboratory for further identification. Herbarium were prepared and preserved. They were identified with the help of standard floras and books (Cooke 1967, Nayar and Sastry, 1988, Pradhan and Singh, 1999, Sharma *et al.*, 2001, Almeida, 2001, Yadav and Serdesai, 2002). On the basis of morphological description and criteria used, the numbers of medicinal, endangered, rare and endemic plant species were noted.

OBSERVATION AND DISCUSSION

The present investigation comprises 150 species of plants belonging to different families. Ethno-botanical aspects of some plants were studied. Some rare and endemic plant species were also noted. This sacred grove is specially conserved for tree species. *Memecylon umbellatum*, *Mangifera indica*, *Terminalia chebula*, *T. crenulata* and species of *Ficus* were found dominant. For

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each species botanical name, family, local names, parts used were discussed. During the survey, it was revealed that the tribal and villagers of Udhadvane have much faith in using the plants as a

source of wood. The indigenous people of study area are dependent on forests for their daily live hood.

List of some plants and their ethno-botanical uses from Udhadvane sacred groove

Botanical name	Local/ vernacular name	Family	Ethno-botanical use
<i>Artocarpus heterophyllus</i>	Phanas	Moraceae	Source of food seeds used as vegetable
<i>Bombax ceiba</i>	Sawar	Bombacaceae	Fruit paste apply on wounds to cure pain
<i>Carisa congesta</i>	Karvand	Apocynaceae	Fruits are edible
<i>Dioscoria bulbifera</i>	Kand	Dioscoreaceae	Bulbs are edible
<i>Syzygium cumini</i>	Jambhul	Myrtaceae	Fruits are edible fruit juice best for diabetic patients
<i>Mangifera indica</i>	Amba	Anacardiaceae	Fruits are edible used for pickles
<i>Terminalia chebula</i>	Hirda	Combretaceae	Fruit juice help in curing cough. Fruits used as tannins
<i>Terminalia bellirica</i>	Behada	Combretaceae	Massaging the gums and teeth, cleaning teeth, relieving coughs, Fruits used as tannin
<i>Terminalia crenulata</i>	Ain, Sadada	Combretaceae	Wood
<i>Ziziphus jujube</i>	Bor	Rhamnaceae	Fruits are edible
<i>Memecylon umbellatum</i>	Anjan	Melastomataceae	Wood
<i>Madhuca longifolia</i>	Moha	Sapotaceae	Flowers used for fermentation
<i>Abrus precatorius</i>	Gunj	Fabaceae	Seeds used in skin diseases
<i>Emblca officinals</i>	Awala	Euphorbiaceae	Fruits edible, medicinal seeds
<i>Asparagus racemosus</i>	Shatawari	Liliaceae	Medicinal, appetite, cooling
<i>Woodfordia fruticosa</i>	Dhayti	Lythraceae	Medicinal, flowers, leaf
<i>Tinospora cordifolia</i>	Gulwel	Menispermaceae	Medicinal, stem
<i>Clematis triloba</i>	Ranjai	Ranunculaceae	Medicinal, leaf, stem
<i>Leea crispa</i>	-	Leeaceae	Fruits edible, , root tonic
<i>Butea monosperma</i>	Palas	Fabaceae	Medicinal
<i>Crotolaria retusa</i>	Khul-Khula	Fabaceae	Edible fodder

List of rare, endemic plants from Udhadvane sacred groove

Botanical name	Local name vernacular	Family
<i>Dioscorea belophylla</i>	<u>Kand</u>	Dioscoreaceae
<i>Delphinium malbaricum</i>	-	Ranunculaceae
<i>Ceropegia media</i>	-	Asclepiadaceae
<i>Habenaria grandifloriformis</i>	-	Orchidaceae
<i>Memecylon umbellatum</i>	<u>Anjan</u>	Melastomataceae
<i>Pimpinella rollae</i>	-	Apiaceae/Umbelliferae
<i>Smithia agarkari</i>	-	Fabaceae/Papilionaceae
<i>Piper talbotii</i>	-	Piperaceae
<i>Utricularia</i> sps.	-	Lentibulariaceae
<i>Pinda concanansis</i>	<u>Panda</u>	Apiaceae/Umbelliferae
<i>Canscora diffusa</i>	-	Gentianaceae
<i>Chlorophytum bharuchae</i>	-	Liliaceae
<i>Eriocaulan</i> sps.	-	Eriocaulaceae

Due to various factors such as changing environmental conditions, biotic factors, destruction of habitat etc. some endemic species are facing threats for their existence.

RESULT AND CONCLUSION

Though this traditional way or religious concept, the rare endangered and endemic species get conserved. The most area of sacred grove acquired by a dominant species *Memecylon umbellatum* ranged from 80-100 plants. Some rare *Dioscoria* sps. also found 10-20 in number. Ethno-medicinal plants also found. Rare, Endemic species were also found in that sacred grove. All these species were conserved through the traditional way.

So this tradition or religious faith for conserving or protecting the forest patches in the resemblance of some deity is a very best way for conservation of biodiversity all over the world by take consideration the present problem.

Present work has also involved three important components. Identification of rare, endemic and medicinal plants for conservation through ethno-botanical studies, standardization of propagation practices and the transfer of propagation, cultivation and

conservation knowledge to different local communities.

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