



ROLE OF FUNGI IN SACRED GROVES

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Abstract

Sacred groves are the places responsible for conservation of biodiversity. These areas are not destructed areas. We have visited a sacred grove at Taminhi. Observed some fungi in the sacred groves. Fungi have their role in cycling of nutrients in the sacred groves.

Keywords- fungi, sancred groves, vinzai devrai

Introduction

Sacred groves are preserved patches of forest areas. Sacred groves are the places of natural vegetation reserved under the name of gods. Such sacred groves were preserved in ancient Asisa, Africa, Europe, America and Austrpacific region (Hughes and Chandran, 1998). They are found in the past as well as in the present among people with many religions.

An International Organisation UNESCO is taking lot of interest in sacred sites for making funds available throughout the world. (Hay-Edie and Hadley, 1988). Sacred groves reserved several hundred hectares areas. The largest sacred grove was the Halesorabakan having an area about 400 ha (Brandis nd Grant, 1868).

Sacred groves are repositories of rare, endangered, species. In comparison to adjoining landscape elements (Bhakat, (2004), Bhagwat & et.al. (2005), Khan et. al., (2008). Sacred groves particularly deal with the study of species composition, dominance, distribution rare, endemic, conservation, microflora and fauna. (Vartak and Kumbhojkar, (1984), Puspanghadan et. al. (1996), Upadhaya et. al. (2003), Kumbongmayum et. al., (2005).

The role of sacred groves is in conserving the flora and fauna. Various type of vegetation is recorded in sacred groves. Sacred groves of Eastern ghat is of dry evergreen forest vegetation. The growing plants are with two-layered canopy. The dominant plants of groves belonging to the families like Fabaceae, Moraceae, Capparidaceae, Ebenaceae, Rubiaceae and Rutaceae. (Parthasarthy, (1997), Sukumaram, (2005, 2007).

Eastern Ghat groves have dry evergreen forest vegetation with characteristic two-layered canopy, dominated by members of Fabaceae, Moraceae, Capparaceae, Ebenaceae, Rubiaceae and Rutaceae (Parthasarathy, 1997; Sukumaran, 2005, 2007).

Sacred groves dealt with the lower micro and macro flora and fauna. The availale light conditions at ground level due to canopy gaps

created by tree falls facilitate rapid growth of seedlings and provide suitable microenvironment for rapid growth of lower plants on ground level. (Khumbongmayum et al. 2005, Laloo et al 2006).

Material and Methods

We have visited two sacred groves namely Vinzai devrai and Shankar devrai at Taminhi, Mulshi taluka, Pune on 2/7/2017 Observed some fungi. Photographs were taken.

Result and Discussion

Following fungi are found at vinzai devrai, Tamini **Fungi**- Fungi play vital roles in the biosphere. They are essential to the recycling of nutrients in all terrestrial habitats because they are the dominant decomposers of the complex components of plant debris, such as cellulose and lignin. Fungi are unicellular or multicellular eukaryotic organisms. They play an important role in cycling of nutrients due to their ability to decompose organic matter. Ecologists consider decomposition of organic matter is the major ecological role of fungi. In the sacred groves many organisms depend on fungi for survival. Wood fungi have their great role in breaking down lignin content of wood by their enzymes. Therefore they are referred as wood decomposers. Uncommon fungi like *cordyceps* entomogenic fungi and *Clathrus* basket fungi observed.

Podoscypha petaloides



Dacryopinax spathularia/ tremella



Elatrus foot balls net like forms
Marasmius



Xylaria



Cordyceps • *Fungi-Insect Association*
This fungus is entomogenous fungi. They have symbiotic relationship with them. Insects like ants, termites and beetles cultivate fungi for food purpose. Some insects use fungi for depositing their eggs. Developing larvae derive nutrition from fungi.



Wood rotting fungi- ***Ganoderma***



Agaricus



Panaeolus



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References-

Bhagwat S, Kushalappa CG, Williams PH, Brown NC. 2005. A Landscape Approach to Biodiversity Conservation of Sacred Groves in the Western Ghats of India. *Conservation Biology*, 19:1853–1862.

Bhagwat, S.A., C.G. Kushalappa, P.H. Williams and N.D. Brown. 2005b. The role of informal protected areas in maintaining biodiversity in the Western Ghats of India. *Ecology and Society* 10(1): 8.

Bhakat RK, Pandit PK. 2004. An inventory of medicinal plants of some sacred groves of Purulia district, West Bengal. *Indian Forester*, 130: 37–44.

Brandis, D. and Grant, 1868. Joint report no.33, dated 11th May, on the kans in the Sorab taluka, Forest Department, Shimoga.

Hay-Edie, T. and Hadley, M. 1998. –see PS Ramakrishnan et al Ed.

Hughes JD, Chandran MDS. 1998. Sacred groves around the Earth: An overview. In: Ramakrishnan PS, Chandrashekhara UM, Saxena KG (eds), *Conserving the sacred for biodiversity management*. New Delhi, Kolkata: Oxford & IBH Publishing Co. Pvt. Ltd., pp. 69–86.

Hughes, J.D. and Chandran, M.D.S. 1998 - see PS Ramakrishnan, et al Ed.

Hughes, D.J. and Chandran, S.M.D. 1998. Sacred groves around the earth An Overview. Pages 69–86 In Rama-krishnan, P.S. Saxena KG and Chandrashekhara, U.M. (Editors) *Conserving the Sacred for Biodiversity Management UNESCO Oxford-IBH Publishing, New Delhi*

Khan ML, Khumbongmayum AD, Tripathi RS. 2008. Sacred groves and their significance in conserving biodiversity: An overview. *International Journal of Ecology and Environment Science*, 34: 277–291.

Khumbongmayum AD, Khan ML, Tripathi RS. 2005. Ethnomedicinal plants in the sacred groves of Manipur. *Indian Journal of Traditional Knowledge*, 4: 21–32.

Laloo RC, Kharlukhi L, Jeeva S, Mishra BP. 2006. Status of medicinal plants in the disturbed and the undisturbed sacred forests of Meghalaya, northeast India: population structure and regeneration efficacy of some important species. *Current Science*, 90: 225–232.

Parthasarathy N, Karthikeyan R. 1997. Plant biodiversity inventory and conservation of two tropical dry evergreen forests on the Coromandel coast, south India. *Biodiversity and Conservation*, 6: 1063–1083.

Pushpangadan P, Rajendraprasad M, Krishnan PN. 1998. Sacred groves of Kerala — A synthesis on the state of-art-of knowledge. In: Ramakrishnan PS, Chandrashekhara UM, Saxena KG (eds.), *Conserving the sacred for biodiversity management*. New Delhi, Kolkata: Oxford & IBH Publishing Co. Pvt. Ltd., pp. 193–209.

Upadhaya K, Pandey HN, Law PS, Tripathi RS. 2003. Tree diversity in sacred groves of the Jaintia hills in Meghalaya, northeast India. *Biodiversity and Conservation*, 12: 583–597.

Vartak VD, Kumbhojkar MS. 1984. Notes on the lianas of some sacred groves in Western Maharashtra. *Biovigyanam* 11:214–215.