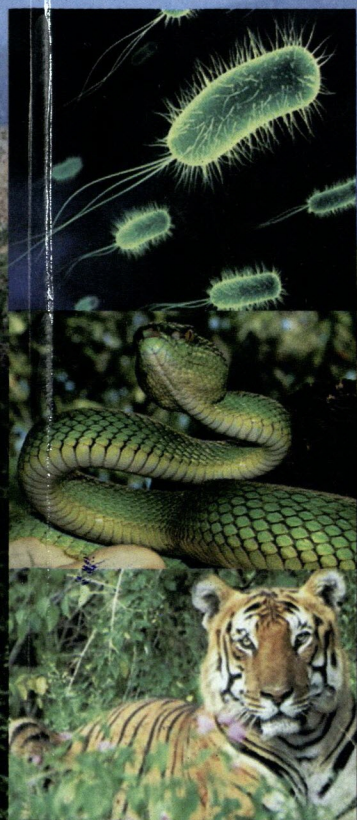


STATUS AND CONSERVATION OF BIO-DIVERSITY IN NORTH EAST INDIA



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Status and Conservation of Bio-diversity in North-East India

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1

Sacred Groves of India: Our Cultural Heritage

P.K. Hajra and Aparajita De

Abstract

A Sacred groves is patch of undisturbed forest preserved due to religious beliefs of the ecosystem people. They are protected traditionally by ecosystem people and are known by different names in different states. Their exact number and area are unknown. At least 13720 sacred groves have been reported in various regions of the country, but experts estimate that the actual number is likely 100,000 to 150,000.

Introduction

The sacred grove at Mawphlang, in the Shillong district of Meghalaya is known as 'Law Lyngdoh' and at Shillong peak as 'Law Kyntang' etc. Similarly sacred groves of Maharashtra are known as 'Deo-rai' 'Kans' in Karnataka 'Jahira' by the 'Hos', 'Jaher gada' by Santals 'Jhanka' by the Dudh 'Dhelki Kharia' and 'Sarana' by the Munda tribe etc. In northern part of Aravallis various forms of sacred groves are maintained. These are known as 'Kankarbani', 'Rakhat bani' devauranya, Vall, 'dev pani' etc. In western Rajasthan they are called as 'Orans'. Sacred groves may be forests, scrub jungles or thickets or may even be constituted by a

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few trees growing naturally and usually are dedicated to the local deity. These are protected traditionally by local inhabitants out of emotion, sentiments, reverence, respect etc. Ownership of these patches could be the forest, public works, revenue departments, Gram Panchayats, Community and private individuals. Sacred groves have been preserved by mankind in different parts of the country due to various reasons. These sacred groves may be compared with the Biosphere Reserves. These sacred groves are natural treasure houses of plants and can satisfy the aesthetic, scientific, cultural and recreational needs of mankind. They are important because they are *sanctum sanctorum* of threatened plants and animals. They act as an indicator and benchmark of forests that might have existed in the region i.e. relict vegetation. It is a natural laboratory, a habitat island, a genebank and a store house of ethno-medicine. They represent an ancient Indian conservation tradition. The tradition of groves has been referred to the India's earliest literature. The vedas describe the Ashramas or homes of the Rishis which were located in the forest. In epic literature, too, there is references to forest Ahsramas such as those of Vasishta, Shankuntala's father Kanva and so on. Kalidasa's evocative descriptions of prancing deer and singing birds of flowers in bloom and leafy creepers evoke an image of an idyllic forest rich in plant and animal life, the sacred groves of India's ecological tradition. The Indian tradition imbued plants and animals with diversity. Rivers and mountains were sacred and people preserved nature by venerating it. Geographical distribution of sacred groves in India.

J.D. Hooker (1848-50), the world famous and illustrated botanist who wrote seven volume treatise on the floral wealth of the Indian sub-continent, during his visit to India mentioned about the importance and nature of sacred groves in Khasia and Jaintia Hills. According to Hooker who visited Mawphlong in June, 1850 "It is extremely difficult

to give within the limits of this narrative any idea of the Khasia flora which is in extent and number of fine plants, the richest in India, and probably in all Asia."

Area under sacred groves, as estimated by different state-based studies

| <i>State</i> | <i>Number of groves</i> | <i>Area (in hectares)</i> |
|--------------|-------------------------|---------------------------|
| Karnataka | 1,214 | 5,947 |
| Kerala | 2,000 | 500 |
| Maharashtra | 483 | 3,570 |
| Meghalaya | 79 | 26,326 |
| Orissa | 322 | 50 |
| Rajasthan | 9 | 241 |
| Tamil Nadu | 10 | 127 |
| Uttaranchal | 1 | 5,500 |
| West Bengal | 297 | 17 |
| Total | 4,415 | 42,278 |

Source: For references, see www.downtoearth.org.in

On 30th Sept., 1850 while travelling from 'Joowye to Nurtiung' he also wrote about the monuments "those are placed near the grove of trees where several areas are covered with gigantic, generally circular, slabs of stones, from ten to twenty five feet broad, supported five feet above the ground upon other blocks. For the most part they are burried in brush wood and nettles and shrubs quantity of species of perennial woody plants enumerated 140 of which 60 were trees or large shrubs above 20 ft. high".

Subsequently N.L. Bor (1937) studied the sacred groves of Meghalaya and published an account of the plants of sacred groves along with Shillong peak and 'Lawkyntang'.

Raju (1964) also made some collections in sacred groves of Shillong and Mawphlang and published a preliminary

list of plants of sacred groves of Shillong. But no detailed study was made until the present author took up the work and published a booklet on 'Law-Lyngdoh' sacred groves of Mawphlong and highlighted about the rich plant wealth of the grove conserved through traditional faiths and which helped to have an original forest fragment intact. (Hajra, 1975).

Law Lyngdoh cover a considerable extent of rolling downs, is surrounded by grazed grasslands and pines. The area of the primeval forest will be about 1600 m in length and over 300 m in breadth. The evergreen pocket has not been disturbed and is existing for many generations and the vegetation is only subject to climatic factors, comprising a mixture of tropical and sub-tropical forests.

The vegetation composing this sacred grove is very different from that of the surrounding areas, which are marked by the dominating Khasi pine or *Pinus, kesiya*. The dominant trees inside the forests are *Rhodendron arboreum*, *Pyrus pashia*, *Shima khasiana*, *Camellia caduca*, *Myrica esculenta*, *Quercus griffithii*, *Castanopsis kurzii*, etc. The shrub layer is represented by *Berberis wallichiana*, *Mahonia pycnophylla*, *Lyonia ovalifolia*, *Agapetes obovata*, *Sarcandra glabra*, *Daphne bhoolua*, *Sarcococca saligna*, *Osbeckia stellata*, etc. The trunks and branches of the trees and shrubs are loaded with many ferns, orchids, lichens mosses and other epiphytes. The common ferns are *Dicranopteris linearis*, *Mecodium javanicum*, *Dryopteris paleacea*, *Lindsaea cultrata*, *Polypodium spp.*, *Lycopodium spp.*, etc. Besides these there, are number of epiphytes, a few parasitic and saprophytic plants also. According to Bor (1937), the vegetation represents the relict of what should have been once the vegetation of entire area. They contain an unusual wealth of species of great botanical, phytogeographical and economic value. Recently, Tiwari et al., (1999) published a book on sacred Forests of Megahalaya. These sacred groves play important role in 'in situ' conservation.

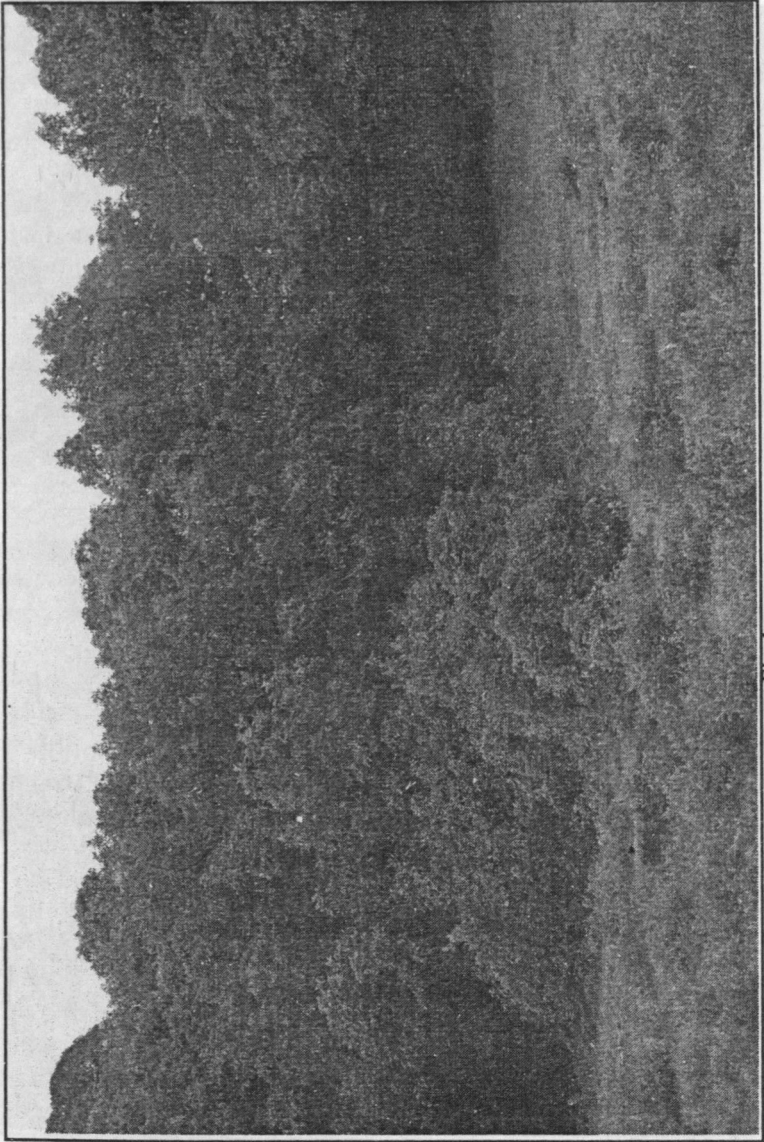


Fig 1

If sacred groves have so far been identified but detailed survey may prove many more from the same

list of plants of sacred groves of Shillong. But no detailed study was made until the present author took up the work



Fig. 2

In Sikkim also indigenous people conserve ecosystem having enormous diversity of plants and animals on religious belief. Most of these are the place of worship and have monastery at the summit. The 'Kabi' sacred groves being the place of union of Lepchas and Bhutias. Khetchipur sacred grove in West district, Mt. Mainam, Rabong, Tendong sacred groves in South district, Chuten sacred grove in East district are a few examples where biodiversity is well protected. Tree ferns i.e. *Cyathea spinulosa* and *Cyathea gigantea* which are becoming rare due to mainly habitat destruction are common in those sacred groves. *Camellia kissi* the wild relative of tea is common in some of the sacred groves. 'Red-panda' the state-Animal of Sikkim is reported from 'Kabi' sacred grove. Similarly *Dendrobium nobile* the State flower of Sikkim has also been reported from the sacred groves.

Mundas of Jharkhand inhabiting in Saraikala, Giridih, Jamshedpur and Gumla district also conserve patch of forest near their villages on religious belief. These are known as 'Sarana'. They believe that their Sylvan deities live in the forest patch. They offer flowers of Sal, Mahua and milk to appease the deities and ensure the well-being of the community. Santals of Jharkhand also maintain sacred groves near their villages and they are known as 'Jahar-gada'.

These groves are saved from biotic factors because of the customs connected with the worship of deities. The dominant trees in the forests are *Shorea robusta*, (Sal) *Buchanania lanzan* (Piyal, Tarup), *Lannea coromandelica* (Doka), *Adina cordifolia* (Karam), *Diospyros melanoxylon* (Tendu), *Semecarpus anacardium* (Bhehra), *Terminalia chebula* (Harra), *Anogeissus latifolia* (Dhawa), *Terminalia alata* (Asan) and *Madhuca laongifolia* var *latifolia* (Mahua). The shrubs and herbs are represented by *Cleistanthus collinus*, *Phyllanthus* sp., *Nyctanthes*, *Ziziphus*, *Ventilago* sp., *Indigofera linifolia*, *Desmodium* sp., *Costus speciosus*, *Croton* sp., *Sida* sp., *Oldeulaudia* sp. etc. In Jharkhand about 21 sacred groves have so far been identified but detailed survey may prove many more from the state.

The different eco regions of Rajasthan possess a rich social cultural and ethnic heritage and biodiversity is protected from the sandy plain to the hills of Aravallis and Vindhyan. The socio-religious traditions play an important role in conservation of biodiversity. There are lands attached to temples. These lands support good vegetation and the dominant plants are *Prosopis cineraria*, *Salvadora persica*, *Tecomella undulata* etc. As these lands are attached to temple they are ascribed a religious value and trees are not cut or felled, however grazing is usually permitted (S.N. Bhise, 1997). Fallen twigs are collected for local use. The rule is followed by all members of the community. These are known as 'Orans'.

In Bishnoe villages large sized Khejri trees i.e. *Prosopis cineraria* are very common because Bishnoi community protect these trees and also provide protection to deer and black buck.

In Aravallis and Vindhyan hills there are cluster of large trees around the village temple. These groves are located on top of small hills where according to the faith of local people their deity resides either in the form of Bherinj, Baroji, or Mataji. Vegetation in the catchments of small streams are also protected. Trees like *Syzygium cumini*, *Terminalia bellirica*, *Aegle marmelos*, *Diospyros montana*, *Albizia* sp. etc. are common in these forests.

In the northern Aravallis specific patches of forests are protected by communities for specific purposes. People do not harm sacred groves because of socio-religious traditions and fear of the unknown. They are known as "Kanker Bani", Rakhat-Bani-Dev Bani etc. Ek-Panya Baoji sacred grove situated in the Udaipur district of Rajasthan occupies an area of 8.75 hectares. The ownership of the land is with the Devasthan Department.

Forest Department in southern Rajasthan started a programme of Aravalli Deovan Sanraksan Abhiyan (1992)

i.e. Aravallis sacred grove conservation to save these groves (Pandey 1977). According to Pandey 1977, in the sacred groves of Rajasthan common trees are *Anogeissus pendula*, *Diospyros melanoxylon*, *Syzygium cumini*, *Mangifera indica*, *Ficus religiosa*, *Ficus benghalensis*, *Ficus glomerata*, *Terminalia arjuna*, *Azadirachta indica*, *Butea monosperma*, *Boswellia serrata*, *Prosopis cineraria* etc.

In south India sacred groves exist and several studies have been made by different ethno-botanists in Andhra Pradesh, Karnataka and Tamil Nadu.

The C.P.R. Environmental Education Centre carried out an extensive survey at the sacred groves of Tamil Nadu and around 450 have been recorded. The centre also prepared a National Policy on conservation of sacred groves which was submitted to the Ministry of Environment and Forest. The centre has also published a book on sacred groves of Tamil Nadu. W.W.F. India has published a book on sacred groves of Andhra Pradesh. ca 750 sacred groves have been reported from Andhra Pradesh.

The Karnataka has several groves along the Western Ghats and the west coast ca 1,424 sacred groves have been reported from Karnataka. Sacred groves may range in size from part of an hectare to several hundred hectares. They are known as 'Kans' in Simoga and Uttar Canada. The 'Kan' is dominated by lofty trees like *Syzygium gardneri*, *Dipterocarpus indicas*, *Vateria indica* etc. (Subhas Chandran, 1977). A proper demarcation of the sacred forests was not carried out resulting many of them losing their identity. Compared to the 'Kans' the devarakadas of Coorg got greater attention for protection.

In Kerala the sacred groves are locally known as 'Kavu' and are associated with the ancestral places of worship for the Namboodiri, Nair etc. These groves are very rich in flora and fauna about 772 species of flowering plants in just 761 of Kerala's 2,000 groves have been reported. They act

as micro-watersheds of freshwater systems used by local communities. (Down to Earth, Dec. 2003) South Kerala's groves are intertwined in the agroforestry system of the region. Birds that reside here keep a check on insect populations and also replenish the phosphorus deficient soil by their droppings. Snakes control the rodent population etc. Our knowledge of the sacred groves of Maharashtra are mainly due to the work of Vartak and Gadgil (1981). The sacred groves of Maharashtra are known as 'Deo-rai'. All forms of life in such sacred groves are believed to be under the protection of the reigning deity and removal of even the dead wood is a taboo. Vartak (1996) reported about 300 sacred groves from Maharashtra. According to a recent report there are about 1600 sacred groves in Maharashtra.

Some of the important plants reported from the sacred groves are *Canarium strictum*, *Entada purseatha*, *Tinospora sinensis*, *Caryota urens* etc.

Similarly in Himachal Pradesh it appears that there are about 5,000 sacred groves, in Haryana 240 sacred groves, in Madhya Pradesh 21 sacred groves, in Chattisgarh 600 sacred groves, in Orissa 322 sacred groves, in West Bengal 670, Manipur 365, Arunachal Pradesh 58 and in Assam 40 sacred groves.

Discussion and Conclusions

The ecology of the sacred grove is inextricably linked to the society that protects it. The society of Ecological Restoration India has undertaken a sacred grove restoration project in Goa, utilizing volunteers organized by Earthwatch Institute. The project aims to restore a degraded grove; create a native plant nursery; inventory the plants, animals and soil, document traditional management practices; and educate local communities about grove restoration techniques. The NCL centre for Biodiversity informatics is developing a web-interfaced multimedia database to document the

biodiversity status of sacred groves; it will also include such information as culture and traditions, conservation history, taboos and stories associated with them.

For protecting these natural habitats, multidisciplinary research should be undertaken and a proper working plan should be formulated for implementation. Success of such an endeavour will depend on a firm policy of the government, devoted experts, active social workers, local involvement and motivated participation of the tribal communities.

The Wild Life (Protection) Act 1972 is also implemented by the forest department and extends to all forest as well as non- forest areas. Wildlife had been defined here as 'all uncultivated flora and fauna'. In theory this act is applicable to all flora and fauna within the sacred groves even today but has not been effectively enforced on account of perhaps administrative and logistic limitations of the forest department. There is no need to declare sacred groves as reserved forest nor to interfere with the traditional practices presently in vogue in its management. The existing rules under the Wildlife act can be suitably augmented by the government to specifically cover and give importance to sacred groves so that in case of any perceived danger of its wildlife heritage the forest department could intervene under the provisions of Wildlife act and rules as a back up supporting agency same type of joint participation management.

A comprehensive study should be undertaken to review the legal status of the sacred groves in different parts of the country.

It appears that in terms of the legal tenurial rights, the sacred groves fall under three categories.

- (i) Under the control of state Forest department.
- (ii) Under the control of revenue and other government departments and

(iii) Privately owned.

A large number of sacred groves in Maharashtra are under the control of Forest department. Legally all sacred groves in Meghalaya are under the control of district councils.

Deveakadus in Kodagu district of Karnataka are under the control of revenue department. Roy Burman (1996) mentioned that many sacred groves in western Maharashtra under the control of revenue department. He also mentioned that few thousand temples and their groves in western Maharashtra were brought under the scrutiny of the government by forming the Paschim Maharashtra Deosthan Prabodhan Samiti in 1960's. There are also several sacred groves owned privately.

Appropriate legal framework for management, networking individuals and *agencies for exchange of information*. Linking biological conservation with cultural integrity etc.

The sacred forests of Meghalaya have definite legal status since they are considered as classified under the United Khasi-Jaintia Hills Autonomous District Act 1958 and enjoy protection under such acts, rules and regulations.

In Meghalaya there are about 79 sacred groves covering an area of 12,000 ha.

According to Tiwari *et al.* (1999) out of 56 sacred groves studied only 12.5% are undisturbed and on the basis of area a little over 1% of the total is undisturbed. This proves in spite of district Act there is shrinkage of number and area.

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