

Sacred Groves of Meghalaya: A Review

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Abstract: *Sacred groves have been a topic of great ecological concern for many years now. Many research works and experiments have been conducted on them either ecologically, socio-economically or analytically. The findings have varied from one author to the other based on their motive and fields of study. This review paper highlights some of the works done on sacred groves with special emphasis on the sacred groves of Meghalaya in North-east India.*

Keywords: Sacred grove, traditions, deity, diversity, conservation

1. Introduction

Sacred groves are forest fragments of varying sizes, which are communally protected, and which usually have a significant religious connotation for the protecting community. Hughes and Chandran (1998) defined sacred grove as "segments of landscape, containing vegetation, life forms and geographical features, delimited and protected by human societies under the belief that to keep them in a relatively undisturbed state is an expression of an important relationship of humans with the divine or with nature". It is believed that the existence of sacred groves dates back several thousands of years when human society was in the primitive stage of development. Gadgil and Vartak (1975) traced the historical link of sacred groves to the pre-agricultural, hunting and gathering stage of societies, before human beings had settled down to raise livestock or till land. The concept of maintaining virgin forest is described in the Vedic literature and thus dates back to pre-Vedic period, i.e., about 3000 to 5000 years BC. In India, the earliest documented work on sacred groves is that of the first Inspector General of Forests, D. Brandis (1897). Sacred groves do not enjoy protection via federal legislation in India. However, the introduction of the protected area category community reserves under the Wildlife (Protection) Amendment Act of 2002 has introduced legislation for providing government protection to community held lands, which could include sacred groves. Sacred groves are sometimes associated with temples, monasteries, shrines, churches or with burial grounds.

The role of sacred groves in the conservation of biodiversity has long been recognized and documented by several researchers (Kosambi, 1962; Gadgil and Vartak, 1976). All forms of vegetation in the sacred groves are supposed to be under the protection of the reigning deity of that grove, and the removal of even a small twig is a taboo (Vartak and Gadgil, 1973). Typically, such groves are associated with the concept of a "presiding deity" who is revered by the community. Hunting and logging are usually strictly prohibited within these forest patches. Many scholars have worked on conservation of sacred groves in different parts of India (Gadgil and Vartak, 1975 and 1976); Boojh and Ramakrishnan, 1983; Khiewtam and Ramakrishnan, 1989; Rodgers, 1994; King *et al.*, 1997; Tiwari *et al.*, 1998, 1999; Sinha and Maikhuri, 1998; Sunitha and Rao, 1999; Basu, 2000; Kushalapaet *et al.*, 2001). Burman (1992) reported the

existence of sacred groves all along the Himalaya from the northwest to northeast, western Himalaya of Kumaun and Garhwal, Darjeeling and Meghalaya. The importance of sacred groves in conservation of biodiversity has recently gained wide acceptance; hence, several studies have been carried out in India to assess the biodiversity of the groves located in the Western Ghats and in the Central Himalayas (Chandrashekhara and Sankar, 1998; Singh and Saxena, 1998; Sinha and Maikhuri, 1998; Singh *et al.* 1998; Swamy *et al.* 1998). Researches on sacred groves of north eastern India is still limited and only a few studies have been made to document the phytodiversity of sacred groves (Hajra, 1975a, 1975b; Khan *et al.* 1997; Tiwari *et al.* 1998). The Sacred groves of Meghalaya have been studied ample attention of researchers however, the knowledge is scattered and no attempt has been made to collate and review the researches done so far. This paper is an attempt to review the up to date research on the sacred groves of Meghalaya.

Traditionally the tribal communities in Meghalaya have been preserving small patches of virgin forest since time immemorial based on their religious belief. According to the State Forest Department, sacred groves cover an approximate area of 1000 sq. km in the State. The sacred groves, serve as refugia for large numbers of endemic and rare plants of the region (Hajra 1975a, 1975b; Khan *et al.* 1997; Tiwari *et al.* 1998). Till date 111 sacred groves have been located in Meghalaya. The actual number of sacred groves may however, be many times more than this figure as no detailed state wide exploration of sacred groves has been done so far (Singh *et al.* 2007).

Declaring a patch of forest near the villages as sacred and protecting it on the grounds of religious and cultural beliefs is an age-old practice with the tribal communities in Meghalaya. The sacred groves have been in existence in the region since time immemorial and are considered to be the relic of the original forest vegetation of the region. These are among the few least disturbed forest patches in the region serving as the original treasure house of biodiversity. Over the past one decade or so, considerable amount of interest has been generated in the studies of sacred groves among the ecologists, taxonomists, foresters, environmentalists and anthropologists. First attempt of documenting sacred groves of the state was undertaken by Tiwari *et al.* (1998) wherein they had documented 79 sacred groves in Meghalaya. These sacred groves, called as „law Kyntang“, „Law Niam“ and

„Law Lyngdoh“ in Khasi hills, „KhlooBlai“ in Jaintia hills, and „AshengKhosi“ in Garo hills, are owned by individuals, clans or communities, and are under direct control of the clan councils or local village Dorbars/Syiemships/Dolloiships/ Nokmaships. The sacred groves show a wide variation in their size and forest canopy cover. The information collected on the status of 56 sacred groves of Meghalaya by Tiwari et al (1998) showed that 12.5% of them are undisturbed (100% canopy cover), 25% are dense (> 40% canopy cover), 20% are sparse (10-40% canopy cover), while 42.5% of the groves are highly degraded and have even less than 10% canopy cover. The fact that 57.5% of the sacred groves are still in good condition and some of them are quite intact despite various kinds of anthropogenic disturbances such as shifting cultivation, unregulated tree felling, forest fires and deforestation prevalent in the area, shows that the religious beliefs and taboos have certainly contributed to the protection of the sacred groves. The phytodiversity of some of the least disturbed sacred groves of Meghalaya namely; Law Lyngdoh at Mawphlang, Law RynkiewSwer at Swer, Mawiong sacred grove at Mawsmi; Law Adong/Law LyngdohMawlong at Mairang, and Raliang and Ialong in Jaintia hills districts have been recently studied in detail by the researchers at the North Eastern Hill University, Shillong (Khiewtam and Ramakrishnan, 1989; Tiwari et al 1998, Zamir and Pandey, 2002; Upadhaya, Pandey, Law and Tripathi, 2002). These sacred groves are extremely rich in floral and faunal elements. The species content in these sacred groves is very high. Trees like *Castanopsistribuloides* var. *ferox* (Fagaceae) are not allowed to be cut by the local people. The information on floristic richness of the sacred groves of Meghalaya collected from the published literature has revealed that at least 514 species representing 340 genera and 131 families are present in these sacred forests. The sacred groves contain several valuable medicinal and other economically important plants. Some of the endangered taxa are to be found only in the sacred groves (Tiwari et al 1998). Apart from trees and shrubs, a wide variety of lianas, orchids, ferns, bryophytes and microbes abound in these sacred forests. The sacred grove biodiversity compares favorably with the biodiversity in the core area of some of the biosphere reserves in this region (e.g. Nokrek Biosphere Reserve), which are being managed by the state forest departments. This bears testimony to the efficacy of the traditional forest management systems practiced by the local communities.

Ecological researches on the Mawsmi sacred forest near Cherrapunjee in the East Khasi Hills have shown that the trees' fine root systems in the surface layer of soil, particularly the part located over the mineral soil, facilitate rapid uptake of nutrients released by decomposing forest litter. In addition, the roots also intercept nutrients from rainfall wash-offs. The presence of fine root biomass of up to a maximum of 14,000 kg/ha in the soil to a depth of 30 cm is therefore crucial in mopping up the nutrients and keeping the soil alive (Khiewtam and Ramakrishnan 1993). Haridasan and Rao (1985) reported the occurrence of about 54 species of rare and threatened plants in the sacred groves of Meghalaya.

The importance and utilization of traditional knowledge and biodiversity conservation in the sacred groves of Meghalaya

have also been described by Jeeva, et al (2005). They observed that the religious beliefs and myths attributed with the deities help to preserve a large number of forest patches. The *in-situ* conservation practice of the tribal communities in the form of sacred groves is their traditional ecological heritage, which conserves the population of varied species in their natural habitat, which can be considered as a „working model“ of conservation.

Tree diversity in sacred groves of Ialong and Raliang sacred groves of Jaintia Hills was investigated by Upadhaya et al (2003). They observed that spatial distribution of species richness was not uniform in the forest; rather, both groves were a mosaic of low- and high-diversity patches. This seems to be the result of the combined effect of non-extreme stable environmental conditions and gap phase dynamics within the forest (Whittaker 1972). Barik et al. (2006) documented 91 sacred groves in Meghalaya with 19 sacred groves in the West Khasi Hills and 38 in the East Khasi Hills. Their management and biological importance was also covered in the study. In this study, 12 sacred groves were documented which had not been reported by Tiwari et al (1998). They argued that the sacred groves serve as micro-level biodiversity hotspots in other wise degraded landscape.

Singh *et al.*, (2007) reported few new sacred groves and described a total of 111 sacred groves: 8 in East Garo Hills, 8 in West Garo Hills, 3 in Ri-Bhoi, 38 in East Khasi Hills, 19 in West Khasi Hills and 35 in Jaintia Hills district. Singh and Shanpru (2010) did some works on the Ethnobotanical plants in sacred groves of Meghalaya which included ethnobotanical usage of a total of 102 species under 84 genera and 58 families. Out of this, 43 species are of medicinal importance, 28 species of wild edible fruits and seeds and 16 species of wild leafy vegetables. Besides these, it also included 7 wild species, whose tubers, roots, corm and rhizome are edible and also 8 species whose inflorescence, flowers and flower buds are eaten by the local people. This study further emphasized on plant diversity richness of the sacred groves. Large numbers of plants found in these forests are of economic importance, which are well recognized and utilized by villagers/tribal people residing in the adjacent areas. Their use varies from place to place and from tribe to tribe and they may be for medicinal, edible and commercial purposes.

The researches on sacred groves conclude that sacred forests/groves present an alternative view of conservation that is led by norms and taboos rather than formal legal frameworks. They protect a wide variety of habitats and hold considerable potential for biodiversity conservation. Such sites offer protection to habitats and species that are excluded from formal protected area networks, and this approach to conservation has greater acceptance among local people. However, sacred forests face a number of challenges that need to be addressed. Greater sensitivity towards these conservation traditions is necessary. For effective conservation and management of sacred forests, their importance must be established in international flora in order to attract conservation funding. Sacred forests are not just cultural monuments; they are conservation areas that can provide a culturally-sensitive model for community based natural resource management (Ormsby and Bhagwat, 2010).

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