

Ethnomedicinal Plant Conservation Through Sacred Groves

R. K. Bhakat and U. K. Sen

INTRODUCTION

India is a land of diverse natural resources. It is also a country with the strongest traditions of nature conservation anywhere in the world. Since time immemorial, conservation of natural resources has been an integral aspect of many indigenous communities all over the world in general and India in particular. It is true that India has suffered an almost unabated devastation of its natural biological heritage, and much of what remains has been preserved through the ages because of a host of conservation-oriented socio-cultural and religious traditions. One such significant tradition of nature conservation is that of dedicating patches of forests or groves to some deities and spirits by the local people, both tribals and non-tribals. Such forest pockets, referred to as sacred groves, are more or less small to large chunk of traditionally preserved near-virgin forests maintained through people's participation. And folklores play a significant role in confirming the beliefs associated with the sacred groves. Though most of the indigenous people are illiterate, they have scrupulously nurtured their traditional customs, rituals, ceremonies and a way of forest life through folk beliefs with great fervour.

Although named differently in different states of India and managed by local people for various reasons, all sacred forests are islands of biodiversity protecting a good number of plant and animal species including some rare, threatened and endemic taxa. Sacred groves, in general, are repositories and nurseries of many of the local ayurvedic, unani, tribal and other folk medicines which are the original sources that slowly entered into the modern medicines after careful screening. Protection of a large number of medicinal plants in sacred forests of different parts of India are some of the well documented studies (Vartak et al., 1987; Bhakat and Pandit, 2003; 2004; Bhandary and Chandrasekhar, 2003; Pandit and Bhakat, 2007). With this realisation, the recent upsurge of interests in studying sacred groves vis-a-vis medicinal plants has not only established the topic as one of ecological

significance, but this tradition of nature conservation based on socio-cultural grounds has got a new-found value as well. Keeping this in mind, this article provides a glimpse into the phenomenon of sacred groves highlighting how human values, norms, social practices and ethics help preserve medicinal plants in tribal areas of West Midnapore district in West Bengal.

Study Area

The West Midnapore district is characterised by lateritic plains and hillocks clothed with mixed and dry-deciduous forests which harbour a good number of medicinal plants. On account of the district's unique locational character (this area comes under the middle tribal zone along with Jharkhand and Orissa), an overwhelming majority of tribals like *Bhumij*, *Kora*, *Lodha* and *Santhal* etc. residing in the forest-fringe villages not only depend on the surrounding medicinal plants for home remedies but also protect these plants through village sacred groves. In view of this, this paper deals with on account of roles played by three (3) rural sacred groves (Guptamani, Lohatikri and Nayagram) maintained by *Lodhas* in conservation of locally useful ethnomedicinal plants. In this article, the *Lodhas* are selected because of their existing conservation ethos with isolated totemic plants and sacred groves (Bhaumik, 1994; Deb and Malhotra, 1997).

The Sacred Groves

Guptamani Sacred Grove

The *Guptamani* sacred grove (popularly known as *Guptamani*) is situated along the Midnapore-Lodhasuli roadway (NH-6) under Jhargram police station. This 300-year-old grove is spread over 0.8 hectare land and houses a small temple of goddess *Guptamani* (a local forest deity mainly worshipped by *Lodhas*). The area contains cluster of woody plants along with few scattered herbaceous ground flora. In addition to daily prayer, the deity is worshipped annually twice during *Durga puja* and *Makar sankranti*

Table 1: List of ethnomedicinal plants found in Guptamani, Lohatikri and Nayagram sacred groves. (H-Herb, S-Shrub, T-Tree, C-Climber; G-Guptamani, L-Lohatikri, N-Nayagram).

S. No.	Species	Local name	Part(s) used	Medicinal use(s)	Sacred grove(s)
1.	<i>Abrus precatorius</i> (C)	Kunch	Root, leaf, seed.	Substitute of liquorice; cures body pain, skin diseases.	G, L, N
2.	<i>Abutilon indicum</i> (S)	Patari	Root, bark, leaf.	Cures dysentery, hepatitis, diabetes.	G
3.	<i>Acalypha indica</i> (H)	Muktajhuri.	Whole plant, leaf.	Used as laxative; cures asthma, bronchitis.	G, L, N
4.	<i>Achyranthes aspera</i> (H)	Apang	Whole plant, leaf. urinary infections.	Used in rheumatism, snake bites,	G, N
5.	<i>Aegle marmelos</i> (T)	Bel	Stem bark, leaf, fruit, seed.	Used as laxative, diuretic, digestive.	N
6.	<i>Alangium salvifolium</i> (T)	Akarh	Whole plant, leaf.	Used in rheumatism, snake bites, urinary infections.	N
7.	<i>Andrographis paniculata</i> (H)	Kalmegh	Whole plant, leaf.	Cures dysentery, worm infection; used as liver tonic.	G, L, N
8.	<i>Anthocephalus cadamba</i> (T)	Kadam	Leaf, stem-bark. cures dyspepsia.	Used as febrifuge, astringent;	G
9.	<i>Aristolochia indica</i> (C)	Ishermul	Root, stem, leaf.	Used as tonic, stimulant; cures acidity, gastric problems.	L
10.	<i>Bauhinia vahlii</i> (C)	Lata kanchan	Root, bark, leaf, seed.	Used as aphrodisiac, tonic; cures dysentery.	L
11.	<i>Boerhaavia diffusa</i> (H)	Punarnava	Whole plant, leaf.	Cures liver disorders, anaemia; used as laxative, diuretic, expectorant.	G, L, N
12.	<i>Butea superba</i> (C)	Lata palas	Stem, bark, seed.	Bark/gum cures piles; Useful as sedative and antihelmintic.	L, N
13.	<i>Cassia fistula</i> (T)	Bandar lathi	Leaf, fruit, seed.	Used in fungal infections, urinary troubles.	G
14.	<i>Centella asiatica</i> (H)	Thankuni	Leaf	Used in jaundice, dysentery.	L, N
15.	<i>Croton bonplandianum</i> (H)	Churchuri	Leaf	Used as blood-coagulant, antiseptic.	G, L, N
16.	<i>Curculigo orchoides</i> (H)	Talmuli	Rhizome	Used as appetizer; cures diseases of blood and leucoderma.	L, N
17.	<i>Cleistanthus collinus</i> (T)	Parashu	Whole plant.	Root extract, leaves, fruits used as gastro-intestinal irritant and rheumatism.	G, L
18.	<i>Dioscorea bulbifera</i> (C)	Kham alu	Tuber	Used in dysentery, piles, ulcers, birth control.	L, N
19.	<i>Flacourtia indica</i> (S)	Bainchi	Root, leaf, fruit.	Used as diuretic; useful in skin diseases.	G, L
20.	<i>Gymnema sylvestre</i> (C)	Gurmar	Leaf	Used in diabetes.	L, N
21.	<i>Hemidesmus indicus</i> (C)	Anantamul	Root	Used as tonic; cures poisonous bites.	L, N
22.	<i>Holarrhena pubescens</i> (T)	Kurchi	Bark, seed. intestinal worms.	Used in dysentery, fever,	G, N
23.	<i>Jatropha gossypifolia</i> (H)	Bherenda	Shoot, leaf.	Used in dental diseases, carbuncles.	G
24.	<i>Ocimum canum</i> (H)	Bantulsi	Leaf	Used in skin diseases.	G, L, N
25.	<i>Ocimum sanctum</i> (H)	Tulsi	Leaf	Used to treat common cold, asthma, bronchitis, fever.	G, L, N
26.	<i>Solanum nigrum</i> (H)	Kakmachi	Whole plant.	Used in liver and skin diseases, dysentery, piles.	G
27.	<i>Streblus asper</i> (T)	Sheora	Bark, leaf.	Used as antiseptic, anti-inflammatory; cures sinusitis, bronchitis.	G, L
28.	<i>Strychnos nux-vomica</i> (T)	Kuchila	Leaf, bark, seed.	Used in diarrhoea, rheumatism.	L
29.	<i>Tridax procumbens</i> (H)	Tridaksha	Leaf	Used to check bleeding of wounds.	G, L, N
30.	<i>Vitex negundo</i> (S)	Nishinda	Leaf	Used as tonic, antiseptic, antihelmintic, tranquilizer.	G

(middle of January). The folk-beliefs goes that worshipping the goddess ensures protection from wild animals.

Lohatikri and Nayagram Sacred Groves

The *Lohatikri* and *Nayagram* sacred groves named after their nearby villages of same name are located 10 k.m. away from Midnapore town under Kotwali police station. Each grove is spread over a small piece of 0.6 hectare land and represents 100-year old relict forest patch consisting mainly of few old deciduous and evergreen trees. The groves stand as isolated forest islands at the outskirts of villages along the regenerating Sal forests. *Baram*, a local folk deity is the presiding goddess of these two groves. During the annual *Paus sankranti* [a ritual celebrated on the last day of Bengali month *paus* or first day of *magh* (13-15 January)], local people, mainly *Lodhas*, gather inside the groves and worship the deities. Animal sacrifices (goat, pig and hen) are offered during the rituals when localized village fairs are held for two days. The deities are represented by burnt clay idols of elephants and horses placed under tallest trees. Since each of the groves is abode of deities and spirits, people neither do cut any plant of the grove or nor disturb the area, thus strictly adhering to the taboos and ethics. The folklore goes that worshipping the deities heralds well-being and prosperity of the villagers.

METHODOLOGY

In the course investigation for one year, the three sacred groves were surveyed. Identification of plants was done on the basis of "spot identification" method. Medicinal including ethnomedicinal values of plants were ascertained in consultation with (Pal and Jain, 1998; Pakrashi and Mukhopadhyay, 2001; Bhakat and Pandit, 2003; 2004; Paria, 2005). For local uses, a cross-section of tribals were interviewed and cross-interviewed.

Ethnomedicinal Plants

The present study of three sacred groves reveals a total of 30 species of medicinal and ethnomedicinal plants covering herbs, shrubs, trees and climbers (Table 1). Out of 288 medicinal species of undivided Midnapore district (Pakrashi

and Mukhopadhyay, 2001), these groves together represent about 10.41 percent of the plants. While 8 species are common in all the three sacred groves; 3, 2, and 6 plants are common in Guptamani - Lohatikri groves, Guptamani - Nayagram groves and Lohatikri - Nayagram groves respectively. While, six species are restricted only to the Guptamani grove, the Lohatikri and Nayagram groves harbour three and two exclusive species, respectively. Among the studied species, although many are facing various threats outside the groves, *Aristolochia*, *Gymnema*, *Holarrhena* and *Strychnos* need instant attention because of decline of their populations in the countryside and in the nearby forest areas.

CONCLUSION

The present status of sacred groves everywhere is a matter of deep concern as they are gradually declining and disappearing from the countryside. Their presence in agricultural lands; grazing, fragmentation of the grove-owning families and erosion of cultural and religious beliefs and taboos are the major reasons. In view of this, and due to failure of pure legal protective measures in guaranteeing conservation, it has become imperative to search for alternative solutions based on indigenous knowledge of the people. Therefore, there is an urgent need not only to protect sacred groves, but also to revive and reinvent such traditional practice of nature conservation and environmental management.

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ABSTRACT Many indigenous communities all over the world protect forest patches by dedicating them to local deities. Such forest pockets, referred to as sacred groves, are pieces of forests and or clusters of trees maintained on socio-religious grounds. Irrespective of their size and origin, all sacred groves are islands of biodiversity protecting a host of plant species including medicinal plants. These groves in general act as repositories and nurseries for many of the local unani, ayurvedic, tribal and other folk-medicines. Owing to protection offered on socio-religious grounds, these groves also harbour many of the regionally and locally disappearing forest-based medicinal plants. With this background, this paper deals with an account of protective role played by three (3) sacred groves maintained by *Lodhas* of West Midnapore district in West Bengal towards conservation of ethnomedicinal plants. The study for the first time records occurrence of thirty (30) sacred grove based species of which few are becoming rare and rarer in the adjoining forest areas due to fragmentation of their populations. This study, therefore, calls for the protection of the sacred groves and also draws attention towards immediate need to revive and reinvent such a unique Indian way of *in-situ* conservation of biodiversity. It also recommends to explore other *ex-situ* conservation initiative for the better management of regionally vanishing precious medicinal plants.

Authors' Address: R. K. Bhakat and U. K. Sen, Ecology and Taxonomy Laboratory, Department of Botany and Forestry, Vidyasagar University, Midnapore 721 102, West Bengal, India
E-mail: rkbhakat@rediffmail.com, udayasen@rediffmail.com

Address for correspondence: R. K. Bhakat, Ecology and Taxonomy Laboratory, Department of Botany and Forestry, Vidyasagar University, Midnapore 721 102, West Bengal, India
E-mail: rkbhakat@rediffmail.com