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SACRED PLANTS AND THEIR ETHNO-MEDICINAL IMPORTANCE IN WEST BENGAL, INDIA

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ABSTRACT

Sacred groves contain religious or worship plants. Sacred groves found in different regions of India shows rich diversity of medicinal plants and provide suitable habitat for their sustainable growth and natural regeneration. Indigenous communities are conserving valuable biodiversity with these sacred grooves. Drugs obtained from these ethno-medicinal plants are believed to be much safer and exhibit a remarkable efficacy in the treatment of various aliments. The ethno-medicinal traditions play a reflecting and prominent role in human and environment interaction. A total of 30 sacred ethno-medicinal plant species distributed in 24 families were observed in West Bengal.

KEYWORDS: *Aliment, ethno-medicinal, indigenous community, religious, sacred grove, worship.*

INTRODUCTION

Sacred groves have been defined as a patch of religious forest that are rich in biodiversity and are conserved by local people on the basis of their cultural and religious belief and taboos (Khumbongmayum *et. al*., 2005). Sacred groves have very long and diverse history in human cultures and had shown ancient link between peoples and their environments. Indigenous communities all over the world lived in harmony with the nature and conserved its valuable biodiversity. Plant have a vital role in human welfare and are continued to be valued industrial, economic, commercial and medicinal resources and some subcontinent with its wealth and variety of medicinal, many of which are even today in common uses much of which is steadily being eroded (Anthwal *et. al*. 2006; Anish Babu *et. al*. 2004; Sasidharan, 2004). Many sacred plant species are the richest source of drugs of traditional systems of medicine and modern medicines (Hammer, 1999) because they are very rich in secondary

metabolites and oils which are of therapeutic importance. They are useful in various treatments because of their biocompatibility besides being less expensive, efficacy and availability throughout the world (Ahamed, 2002). The Sacred groves found in different regions of India posses rich diversity of medicinal plants and provide suitable habitat for their sustainable, natural regeneration (Ved *et. al.*, 2001; Boraiah *et. al*., 2003; Airi *et. al*., 2000). 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. Ethno-medicinal plants in sacred forests of different parts of India, some of the well documented studies (Vartak *et al*., 1987; Bhakat and Pandit, 2003; 2004; Bhandary and Chandrasekhar, 2003; Pandit and Bhakat, 2007). It is also observed that more than 35,000 plant species are being used around the world for medicinal purposes (Sukumaran, 2010). The Indian sub-continent approximately 8,000 species are considered medicinal and used by village communities, particularly tribal communities, or in traditional medicinal systems, such as the Ayurveda (Pei, 2001). Drugs obtained from plant are believed to be much safer (Katewa *et al.,* 2004) and exhibit a remarkable efficacy in the treatment of various aliments (Siddique *et.al.,* 1995). Bhakat and Pandit (2003) recorded from the Chilkigarh sacred grove in Midnapore district (West Bengal) 105 medicinal plant species of which 12 are threatened elsewhere in the district. Basu (2002) documented 36 ethno-medicinal plants which are used by tribal communities of the district of Purulia in West Bengal for treatment of various intestinal disorders, malarial infections and sexual diseases. The ethno-medicinal traditions play a reflecting and prominent role in human and environment interaction (Chopra *et.al*., 1956). Concurrently, many people in developed countries have begun to turn to alternative or complementary therapies, including medicinal herbs. Few plant species that provide medicinal herbs have been scientifically evaluated for their possible medical application. There is a need to record and document their knowledge of various medicinal plants, which are used for treating different ailments by local practitioners (Maikhuri et al. 1998). In this paper some of the plant species which have ethno-medicinal importance and held sacred in West Bengal are discussed.

MATERIALS AND METHODS

In selected study area the ethno-medicinal plants data were obtained from tribal people, Vaidyas or Kabiraj, Ojhas, local herbal drug sellers and the information collected from the available literature. Consultation and interviewed with the local communities to know how they used plants for medical remedies. The ethno-medicinal plant specimens were collected

and identified following standard taxonomic methods and some of them were processed for herbarium and that will be deposited in the herbarium in referred Institution.

RESULTS AND DISCUSSION

A total of 30 medicinal plant species distributed in 24 families were observed in West Bengal. Medicinal plants used by common people are given below with Latin name, family, local name, parts used and medicinal uses.

Table-1: Enumeration of the ethno-medicinal plants.

Plant Species	Families	Local Name	Part(s) used	Medicinal Use(s)
Azadirachta indica	Meliaceae	Neem	Leaf, Bark, Seed	Bark is useful in malarial fever. Seed oil is used in skin diseases and in lice. Leaf paste applied for Mumps. Water decoction of leaves is administered and applied for Skin infection.
Ficus benghalensis	Moraceae	Vata	Leaf	Infusion of bark is used in diabetes, dysentery and in seminal weakness.
Ficus glomerata	Moraceae	Jaggya dumur	Seed pulp	Diabetes, piles.
Ficus religiosa	Moraceae	Aswatha	Latex, fruits, root and bark	Bark is antiseptic, astringent, laxative. Bark used in diabetes, diarrhoea, leucoderma. Dried fruits pulverized and taken with water to cures asthma. The latex is good agent for inflammation, blood dysentery and haemorrhages. Aerial roots are given to women for inducing conception.
Musa X paradisiaca	Musaceae	Banana	Fruits and stem	Fruits used for control Diabetes. The Inflorescence stalks juice used for lowering high blood pressure.
Tagetes erecta	Asteraceae	Marigold	Leaf	Leaves are used for curing skin boils and ulcers.
Piper betle	Piperaceae	Pan	Leaf	The juice of whole plant is applied as eye drop in painful eyes due to conjunctivitis. Leaf juice is given to cure indigestion and killing lice.
Aegle marmelos	Rutaceae	Bel	Stem, bark, leaf fruit and seed	Used as laxative, diuretic, digestive. Fruits fleshy part is dried, powdered and used to children as anastigmatic for diarrhoea while Fruits pulp used for stomach ache. Leaves chewed and swallowed every morning help in healing stomach ulcer and also to reduced sugar of diabetes patient.

Butea monosperma	Fabaceae	Palash	Leaf	Fresh leaf juice used as aphrodisiac and enhances sperm count and treatment of diarrhoea. The dried bark is used as an appetizer and tonic. Bark is soaked in water overnight and taken in the morning to treat diabetes.
Ocimum canum	Lamiaceae	Bantulsi	Leaf	Used in skin diseases.
Ocimum sanctum	Lamiaceae	Tulsi	Leaf	Used to treat common cold, asthma, bronchitis, fever.
Ocimum tenuiflorum	Lamiaceae	Krishna Tulsi	Leaf	Fresh leaf decoction is taken twice a day for curing tuberculosis.
Anthocephaalus cadamba	Rubiaceae	Kadam	Leaf, stem and bark	Used as febrifuge, astringent; cures dyspepsia. Bark decoction taken orally in fever, diarrhoea and vomiting.
Curcuma domestica	Zingiberaceae	Haldi	Rhizome	Rhizome powder with boiled milk is taken at bed time during cough, cold and also used in healing injuries.
Cynodon dactylon	Poaceae	Durva	Whole plants	Washed leaves paste applied on cuts help in quick healing and its decoction (300 ml) taken orally in empty stomach early in the morning to control blood pressure. The juice with sugar is taken daily for a week to stop excessive bleeding during menstruation.
Terminalia arjuna	Combretaceae	Arjuna	Bark	Bark is useful as cardio tonic as well as cardio protective and expectorant. Bark in pasty form externally used in different skin diseases, against herpes and leucoderma.
Nyctanthes arbor-tristis	Oleaceae	Seuli	Leaf	Leaves juice use for treatment of Rheumatism, malaria, bilious fever, cold and cough.
Saraca asoca	Ceasalpiniaceae	Ashok	Bark and seed	Urinary problems, worms.
Caesalpinia pulcherima	Caesalpiniaceae	Krishna-chura	Root	Root decoction used in intermittent Fevers.
Peltophorum pterocarpum	Caesalpiniaceae	Radha-chura	Bark	The stem bark is useful in dysentery.
Catharanthus roseus	Apocynaceae	Nayantara	Leaf, root and buds	Leaf extraction useful in diabetes and hypertension. Root extraction contains two main alkaloids i.e Vincristine and Vinblastine which are acting as an anti cancerous agent.
Clitoria ternatea	Papilionaceae	Aparajita	Root	The root is administered with honey as a general tonic to children for improving mental faculty. Root bark-diuretic.
Madhuca indica	Sapotaceae	Mahua	Seed and bark	The oil obtained from seed is used as laxative. Bark used as astringent and

				inflammation.
Shorea robusta	Dipterocarpaceae	Sal	Root, Stem, bark	Stem, bark juice is given in mouth ulceration. Root extract is given in bleeding piles.
Calotropis gigantea	Asclepiadaceae	Akanda	Root and leaf	Indigestion, Gastric troubles. A leaf warm with "Ghee" is applied to relief from paralysis, rheumatism and body pain.
Hibiscus rosa sinensis	Malvaceae	Joba	Flower	Cough, genitourinary weakness.
Euphorbia neriifolia	Euphorbiceae	*Manasa*	Leaf and stem	Leaf juice is used in *kajal* for treatment of eye infection. Aqueous leaf extract is used to treat cough and cold.
Rauvolfia serpentina	Apocynaceae	*Sarpagandha*	Root, leaf	Root extract is given to reduce blood pressure and hypertension. Leaf juice is applied in eye infections.
Datura metel	Solanaceae	Dhutura	Leaf	One tea spoon leaf decoction is given daily in amenorrhea.
Nelumbo nucifera	Nelumbonaceae	Lotus	Seed, rhizome and flowers	Seed used as spleen tonic. Rhizome used as diuretic and anti diabetic. Flower extract used for hypertension and weakness.

To cure various diseases local traditional healers were using leaves (15) most commonly followed by bark (14), seed (6), roots tuber (6), latex (1) and one whole plant. The plants were used for wound healing, throat infection, diarrhea, hypertension, diabetes, piles, asthma, cold and cough, sexual diseases, and skin diseases; one plant each to cure stomach ulcer, tumor, conjunctivitis and tuberculosis. *Calotropis gigantean* (Akanda) used for treating nervous disorders and *Catharanthus roseus* (Nayantara) have active anticancer properties. Active ingredients are taken internally with additives such as oil (sesame, castor and coconut), milk, Ghee, common salt and honey or applied externally in the form of infusion, decoction, paste or powder. Most of the plants used in medicines are either mixed with other ingredients or single.

CONCLUSION

This ethno-medicinal knowledge has been transmitted orally from generation to generation. It is also observed that some sacred plants in that area are fast eroding. Ethno-medicinal plants need immediate conservation in order to conserving through sacred groves. Their cultivation and establishment should be encouraged to prevent the extinction of potentially valuable species. Medicinal plants play an important role in providing knowledge to the researchers in the field of ethno-botany and ethno-pharmacology, so this article will attract the attention of

ethno-botanists, phytochemists and pharmacologists for further critical investigation of medicinal plants present in West Bengal, India.

REFERENCES

1. Ahmed M, Ahamed RN, Aladakatti RH, Ghosesawar MG. Reversible anti-fertility effect of benzene extract of *Ocimum sanctum* leaves on sperm parameters and fructose content in rats. *J Basic Clin Physiol Pharmacol.* 2002; 13(1): 51-9.
2. Airi S, Rewal RS, Dhar U. and Purohit AN. Assessment of availability and habitat preference of JAtamansi – a critically endangered medicinal plant of west Himalaya, *Curr Sci.* 2000; 79: 1467.
3. Anish Babu VB, Antony VT, Binu Thomas and Prabhu Kumar KM. *Ficus spp*. a valuable tree species in sacred groves. *J Sci Bot.* 2004; 4: 74-76.
4. Anthwal A, Ramesh CS and Sharma A. Sacred Groves: Traditional Way of Conserving Plant Diversity in Garhwal Himalaya, Uttaranchal. *J Amer Sci*. 2006; 2(2): 35-43
5. Basu R. Studies on sacred groves and taboos in Purulia district of West Bengal. *Indian Forester*. 2000; 126(12): 1309-1318.
6. Bhakat RK and Pandit PK. Role of a sacred grove in conservation of medicinal plants, *Indian Forester.* 2003; 129: 224-232.
7. Bhakat R and pandit PK. An inventory of medicinal plants of some sacred geoves of purulia District West Bengal, *Indian Forester*. 2004; 130: 37-43.
8. Bhandary MJ and Chandrasekhar KR. "Sacred groves of Dakhina Kanada and Udupi districts of Karnataka." *Current Science*. 2003; 85: 1655-1656.
9. Boraiah KT, Vasudeva R, Shonil A. and Kushalappa CG. Do informally managed sacred groves have higher richness and regeneration of medicinal plants than state – managed reserve forests?., *Curr Sci.* 2003; 84: 804.
10. Chopra RN, Nayar SL, Chopra LC. Glossary of Indian Medicinal Plants. Council of Scientific and Industrial Research, New Delhi.1956.
11. Hammer KA, Carson CF, Riley TV. Antimicrobial activity of essential oils and other plant extracts, *Journal of Appl. Microbiol*. 1999; 86(6): 985.
12. Katewa SS, Choudhari BL and Jain A. Folk herbal medicines from tribal areas of Rajasthan, India, *J. Ethnopharmacol.* 2004; 92: 41–46.
13. Khumbongmayum AD, Khan ML, Tripathi RS. Biodiversity conservation in sacred groves of Manipur, northeast India: population structure and regeneration status of woody species. *Biodiversity and Conservation*. 2005; 15: 2439–2456.

14. Maikhuri RK, Nautiyal S, Rao KS and Saxena KG. Role of medicinal plants in the traditional health care systems: A case study from Nanda Devi Biosphere Reserve. *Current Science*. 1998; 75(2): 152-157.
15. Pandit PK and Bhakat RK. "Conservation of biodiversity and ethnic culture through sacred groves in Midnapore district, West Bengal, India". *Indian Forester*. 2007; 133: 323-344.
16. Pei SJ. Ethnobotanical approaches of traditional medicine studies some experiences form *Asia, Pharma Bio*. 2001; 39: 74-79.
17. Sasidharan N. Biodiversity documentation for Kerala, Part-6: Flowering plants, Kerala Forest Research Institute (KFRI), Peechi. 2004; 438-441.
18. Siddhiqui MAA, John AQ, Paul TM. Status of some important medicinal and aromatic plants of Kashmir Himalaya. *Advances in Plant Sciences*.1995; 8: 134-139.
19. Sukumaran S, Raj ADS. Medicinal Plants Sacred groves in Kanyakumari district, southern Western Ghats, *Indian J. Trad, Knowl.* 2010; 9(2): 294-299.
20. Vartak VD, Kumbhojkar MS and Nipuge DS. Sacred groves in tribal areas of Western Ghats: treasure trove of medicinal plants, *Bulletin of Medico-Ethno-Botanical Research*, 1987; 8: 77-78.
21. Ved DK, Parithima CL, Morton Nancy and Darshan S. Conservations of Indian's medicinal plant diversity through a novel approach of establishing a network of insitu gene banks, In: Uma Shankar R, Ganeshaiah K N and Bawaks (eds) Forest Genetic Resources: Status Threats and Conservation Strategies, (Oxford and IBH New Delhi), 2001.