

ETHNO-MEDICINAL PLANTS PRESENT IN SACRED GROVES OF KORAPUT DISTRICT OF ODISHA, INDIA

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ABSTRACT

Sacred groves are the places, where numbers of plants are conserved and preserved and providing primary health care of surrounding people. Koraput district of Odisha is a tribal dominated area and has rich tradition of nature conservation through cultural and religious practices. Though maximum number of sacred groves has been reported from Koraput, there is hardly any scientific documentation of ethno-medicinal plant species in them. The present study has documented 30 ethno-medicinal plant present in different sacred groves of Koraput, which are distributed in 28 genera belonging to 21 different families in a systematic manner. Most of the medicinal plant species are distributed under the family Asteraceae followed by Combretaceae and Rutaceae. The plant part used for the medicinal purposes and the ailments related to the plants have also been recorded during the study.

INTRODUCTION

The uses of plants as medicines have been practiced from an ancient time and Rig Veda is one of the important earliest available documents, which emphasizes about herbal medicinal knowledge [1]. Now-a-days sacred groves are islands of biodiversity protecting a good number of plant and animal species including some rare, threatened and endemic taxa. In general, these are the repositories and nurseries of many of the local ayurvedic, unani, tribal and other folk medicines [2].

Over 46,000 species of plant have been described by Botanical Survey of India (BSI), 4,900 species of flowering plants are endemic to the country of which more than 7000 plant species have been recognized for their medicinal value and are used by village communities, particularly tribal communities [3]. Their traditional medicinal practices show the symbiotic relationship of human beings and nature which can be seen in sacred groves [4].

Koraput district of Odisha, India is the home for a

number of tribal communities and all have their own culture, customs, traditions and practices in connection with the rituals of their life cycle. Among most of the tribes, the deities are believed to reside in sacred groves, which are the ideal centres for a number of medicinal plants used for their primary health treatments [5]. However, the sacred groves found in various regions of India possess rich diversity of medicinal plants and provide suitable habitat for their sustainable natural regeneration [6]. Though the maximum number, 322 sacred groves, were recorded from Semiliguda block of Koraput district [7], but lack of systematic study on ethno-medicinal plants present in sacred groves within the district. So the present study deals with the systematic documentation of the ethno-medicinal plants present in sacred groves and its uses by the local tribal communities to cure their ailments.

MATERIAL AND METHODS

An ethno-botanical exploration was made to find out the ethno-medicinal plant diversity and its importance in some selected sacred groves of Koraput Forest Division (Odisha) during 2013-14 (figure 1). The Koraput district of Odisha lies between 18° 14' to 19° 14' N latitude and 82° 05' to 83° 25' E longitude with a total geographical area of

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8, 807 sq. Km (accounting 5.38% of Odisha state).

Observation and documentation of Ethno-medicinal plants:

Ethno-medicinal plant information present in different sacred groves were gathered through oral interviews of the local people specially the geriatric person, Dishari (priest) and the medicine men of the village. Different plants and its different parts used to cure different ailments are recorded during this interview. All the gathered information was cross checked with the people of other villages and other individuals practicing in or near the locality and comparison was made between the information provided by the people and the available literature. The plants were identified as per the local name and flora of Orissa by Saxsena and Brahumam [8].

RESULTS AND DISCUSSION

In the present study ethno-medicinal plants of different sacred groves of Koraput forest division were documented and the study revealed that these small forest patches of sacred groves play an important role in the primary health treatment of the local inhabitants and conservation of medicinal plants. Furthermore, natural sacred sites are maintained in a traditional way of life, as community based conservation which does not require governmental involvement and investment of money. The gathered data on ethno-medicinal plant and their parts uses to curing different diseases was presented in Table 1.

The present study has documented 30 ethno-medicinal plants present in different sacred groves of Koraput, which are distributed in 28 genera belonging to 21 different families in a systematic manner (Table 1). Most of the medicinal plant species comes under Asteraceae followed by Combretaceae and Rutaceae. The plants were used to treat many diseases like fever, dysentery, joint pain, asthma, stomach disorder, snake bite, skin disease, mouth disorder, indigestion, vomiting, cold and cough. The herbal medicines are taken orally along with different additives such warm water, common salt and milk. The additives are very important in this medicine since it is considered as increase or induce drug's action in the living system. They use more than one plant species for a particular disease or disorder and prepared medicine are mostly administered orally. Sacred groves of Koraput are the source house of a number of medicinal plants which provides benefit to the indigenous peoples associated with the groves. So, important medicinal plants need immediate conservation in order to avoid degradation and the deforestation of sacred groves. Their cultivation and establishment should be encouraged to prevent the extinction of potentially valuable species. For the conservation of these medicinal plant species in their natural habitat of sacred groves, initiative should be taken by the government authorities and the concerned Non-Government Organizations and creating awareness among the local people to maintain the loss of biodiversity.

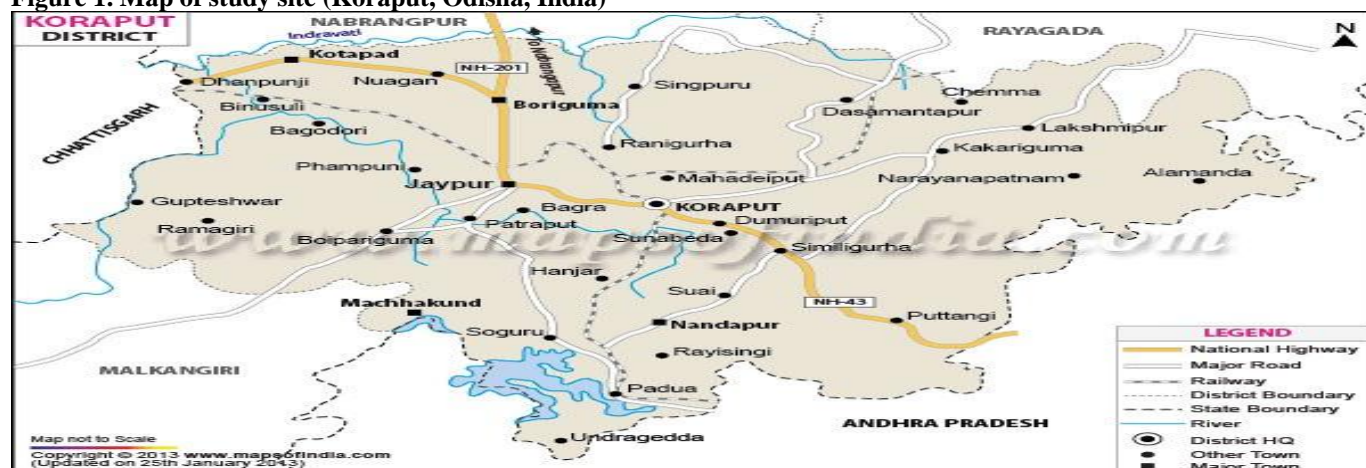
Table 1. List of Ethno-medicinal plants and their uses present in different sacred groves of Koraput

Sl No.	Name of the plant	Family	English Name	Parts use	Medicinal Importance
1	<i>Achyranthes aspera</i> L.	Amaranthaceae	Prickly Chaff flower	Leaf	Medicine for vomiting and dysentery
2	<i>Aegle marmelos</i> L.	Rutaceae	Wood apple	Leaf	Medicine for stomach disorder and promote digestion
3	<i>Ageratum conyzoides</i> L.	Asteraceae	Goat weed	Leaf	Medicine for scabies and ring worm
4	<i>Asparagus recemosus</i> Willd.	Liliaceae	Satabari	Tuber	Medicine for joint pain
5	<i>Azadiracta indica</i> L.	Meliaceae	Neem tree	Leaf	Medicine for skin disease and mouth disorder
6	<i>Biden pilosa</i> L.	Asteraceae	Spanish needle	Leaf	Medicine for toothache and leg ulcer
7	<i>Blumea lacera</i> L.	Asteraceae	Kakronda	Leaf	Medicine for scabies and ring worm
8	<i>Calotropis gigantea</i> L.	Asclepiadaceae	Giant milk-weed	Latex	Latex used for cure chronic fever and snake bite
9	<i>Cassia occidentalis</i> L.	Caesalpiniaceae	Coffee senna	Leaf	Leaf pest is instant medicine for wound
10	<i>Centella asiatica</i> L.	Apiaceae	Indian Penny wart	Leaf	Medicine for stomach disorder and asthma
11	<i>Citrus aurantifolia</i> Christm.	Rutaceae	Lime	Fruit, Leaf	Fruit is Medicine for vomiting and Leaf pest is for headache



12	<i>Colocasia esculenta</i> L.	Araceae	Elephant ear taro	Tuber	Tuber pest is medicine to cure boils
13	<i>Curcuma aromatic</i> Salisb.	Zingiberaceae	Wild turmeric	Leaf	Instant medicine for wound
14	<i>Lannea coromandelica</i> Houtt.	Anacardiaceae	Indian Ash tree	Leaf	Medicine for mouth disorder
15	<i>Lantana camara</i> L.	Verbenaceae	Wild sage	Leaf, Flower	Medicine for joint pain
16	<i>Mimosa pudica</i> L.	Mimosaceae	touch me not	Root	Root is used as medicine for tooth pain and snake bite
17	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Four o'clock plant	Tuber	Grounded tuber is taken as medicine for fever and stomach pain
18	<i>Murraya koenigii</i> L.	Rutaceae	Curry Leaf Tree	Leaf	Medicine for dysentery
19	<i>Ocimum sanctum</i> L.	Laminaceae	Sacred basil	Leaf	Medicine for cold
20	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Amla	Seed	Medicine for indigestion
21	<i>Plumeria rubura</i>	Apocyanaceae	Temple tree	Bark, Flower	Medicine for cold and cough
22	<i>Pongamia pinnata</i> L.	Fabaceae	Indian beach	Seed	Oil is prepared from seeds apply in hair for strongness and also in skin for preventing skin disease and mosquito bite.
23	<i>Rauvolfia serpentine</i> L	Apocynaceae	Serpentine root	Root	Medicine for bowel pain
24	<i>Shorea robusta</i> Roth.	Dipterocarpaceae	Sal tree	Seed	Medicine for cold
25	<i>Solanum nigrum</i> L.	Solanaceae	Black nightshad	Seed, Leaf	Seeds used for teeth pain and leaf for asthma
26	<i>Terminalia arjuna</i> Roxb.	Combretaceae	Arjuna tree	Bark	Bark of the tree is roasted in warm water for drinking which cures stomach disease
27	<i>Terminalia belirica</i> Gaertn.	Combretaceae	Belericmyrobalan	Fruit	Medicine for jaundice
28	<i>Terminalia chebula</i> Retz.	Combretaceae	Chebulicmyrobalan	Fruit	Medicine for stomach disease
29	<i>Tamarindus indica</i> L.	Caesalpinaceae	Tamarind plant	Seed Testa	Medicine for digestion
30	<i>Tridax procumbens</i> L.	Asteraceae	Coat button	Leaf	Leaf juice is used as instant medicine for wound

Figure 1. Map of study site (Koraput, Odisha, India)



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