

## Ethnobotanical Study of Trees found in District Sonbhadra, Uttar Pradesh

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### Abstract

Under the present study an ethnobotanical survey was conducted to document the ethno-medicinal uses of trees found in the district Sonbhadra, Uttar Pradesh. The information was gathered from tribals, local people, medicine man (Vaidya) using an integrated approach of personal contacts, interactions, interviews with questionnaire , group discussion, field visits, botanical collection and our own observations during 2010-2012. Total 30 trees found near the villages and in the forest are documented for the therapeutic uses. The documented ethno-medicinal uses of plants mostly pertains to cure diarrhea, dysentery, diabetes, fever, cough, jaundice, poisonous bite, toothache, gastric troubles, skin diseases and women related problems. After the analysis of the table of documented trees, it was observed that most of the medicinal trees were from family Fabaceae. In addition to this it was also observed that people preferred those trees for therapeutic uses, which were found near their houses and agricultural field.

**Key words:** Ethnobotany, medicinal tree, Sonbhadra, traditional knowledge

### Introduction

Plants and plant based products have been employed since dawn of civilization for prolonging life of man by combating various ailments <sup>[6]</sup>. The history of growing trees and its use in the prevention and cure of diseases can also be traced back to the remote past. According to World Health Organization (WHO), as many as 80% of the world's people depend on traditional medicine for their primary healthcare need <sup>[2]</sup>, because there are considerable economic benefits in the development of indigenous medicines and in the use of medicinal plants for the treatment of various diseases. The traditional knowledge of using plants for therapeutic purposes is very rich in the tribal and villagers. This knowledge is transmitted exclusively through oral

communication from one generation to next generation using a script less language <sup>[4]</sup>. The valuable knowledge is therefore, in an unwritten form and requires urgent measures of conservation and documentation. In this regard, Sonbhadra district is one of the less studied regions of India for its ethnobotanical values <sup>[9]</sup>.

District Sonbhadra is an important district of Vindhyan region of Uttar Pradesh, which is very rich in plant biodiversity because of its variety of geology, land shape and climate. Due to these resources, the district is very rich in forest and herbal resources. About 36 percent of its geographical area is covered with dry mixed deciduous type of forest, which has several valuable tree species and more than 100 species of medicinal

plants. Presence of multipurpose trees on the farm land is another characteristic feature of the district. Several tree species are generally found scattered on the farmers' field under traditional agroforestry system. The rural and tribal people of the area largely depend on most of these trees to cure their common ailments. The tree has a very important role in their culture and heritage. Local inhabitants have high dependence on these multipurpose trees not only for providing fuel wood, fodder, fruit, small timber but also for the treatment of the many health problems.

Considering the paucity of information on the exploration of ethno medicinal value of tree species, present study was conducted with objective to enlist ethno medicinally important tree species growing in the area and to document indigenous health practices followed by local community in relation to locally available tree species.

### Material and Methods

The study was carried out in the area from year 2010 to 2012. The field survey was conducted in Ghorawal, Robertsganj, Chopan, Duddhi and Chatra blocks of the district as per the suggested methodology [5, 6, and 10]. Under this study the information was gathered from tribals, local people, medicine man (Vaidya) using an integrated approach of personal contacts, interactions, interviews with questionnaire, group discussion, field visits, botanical collection and our own observations. During this study many remote villages were visited to interact with the tribals. The information was verified and cross checked by contacting several other persons of the area. After that collected information was compared with

published literature. Then the trees are enumerated in alphabetical order, the botanical name, local name family and ethno botanical uses are documented and presented in table 1.

### Results and Discussion

The present ethnomedicinal survey has identified 30 tree species belonging to 15 families, which are used to cure human ailments (Table 1). Tribal people and local medicine man use different plant parts in curing different diseases, among these plant parts leaves and bark has most frequent use. It is quite clear from the table 1 that diarrhea, dysentery, diabetes, fever, cough, jaundice, poisonous bite, toothache, gastric troubles, skin diseases and women related problems are the main human ailments, for which locally available ethno- medicinally important trees are used. Similar types of findings were also reported by several workers. [1, 3, 7, 8]. Out of 30 tree species documented for ethno-medicinal value, maximum (8) belongs to family Fabaceae (Leguminaceae) followed by family Combricaceae (4) and Anacardiaceae (2). During the field survey it was also seen that about 9 tree species viz. *Azadiracta indica*, *Aegle marmelos*, *Albizia lebbeck*, *Anthocephalus cadamba*, *Butea monosperma*, *Madhuca latifolia*, *Emblica officinalis*, *Holoptelia intigrifolia* and *Cassia fistula* were found near the house hold and agricultural fields in the village, on which villagers depends to cure diseases. Rest of the tree species were found in the nearby forest area. Local people generally proffered locally available medicinal trees in stead of going to forest for collection of useful plant part to cure diseases. Trees found deep in the forest were rarely used to cure diseases. Therefore these tree species must be

Table 1. Ethnobotanical uses of trees found in district Sonbhadra

S.No	Botanical name	Local Name	Family	Plant part used	Ethnobotanical use
1	<i>Acacia catechu</i> Linn.	Khair/ Kattha	Fabaceae	Bark, Root	Diarrhoea, sore throat, Skin diseases, Rheumatism
2	<i>Aegle marmelos</i> Linn	Bel	Rutaceae	Leaf, fruit	Leaves are used in diabetes, fruits act as a astringent, used in diarrhoea, dysentery and piles
3	<i>Albizia lebbek</i> Linn	Siris	Fabaceae	Bark, leaf,	Paste of bark is applied in mouth ulcers, used in cough and as antidote to snake bite. Leaf juice used to cure night blindness and also used as blood purifier and anti-inflammatory agent
5	<i>Anogeissus latifolia</i> Roxb.	Dhaura	Combretaceae	Bark, leaves	Bark is used in liver complaint and applied externally in wound healing. The juice of leaves is given in purulent discharge from ear.
6	<i>Anthocephalus cadamba</i> Miq.	Kadam	Rubiaceae	Leaf	Leaf juice is used in stomach pain, wounds, fever
7	<i>Azadiracta indica</i> Juss	Neem	Miliaceae	Bark, fruit, twig, seed oil	Bark is used in rheumatism, constipation, fever and cough, Leaves are used in skin diseases, diabetes, tuberculosis, small pox, and toothache, twigs are used as a toothbrush to cure pyorrhea. Oil is used in skin diseases, leprosy and ulcers
8	<i>Bauhinia purpurea</i> Linn	Gulabi kachnar	Fabaceae	Leaf, Bark	Leaf is used in jaundice. Stem bark is used to cure wounds
9	<i>Bauhinia variegata</i> Linn	Kachnar	Fabaceae	Flower, Bark,	The flowers are laxative, dried buds are used to cure diarrhea. Leucorrhoea, Bark decoction is also used in diarrhea, mouth ulcer
10	<i>Bombax cieba</i> Linn	Semal, Semar	Bombacaceae	Latex, bark, leaves	Latex is used in dysentery; bark is used in leucorrhoea and dysentery. Leaves are used in anaemia and rheumatic pain.
11	<i>Boswellia serrata</i> Roxb. Ex Colebr	Salai	Burseraceae	Resin, leaves	Resin is used in rheumatic and joint pain and in hair tonic, Leaves are used in wound healing
12	<i>Buchanania lanzan</i> Spreng	Cheronji, Char/ Pyar	Anacardiaceae	Bark, leaves, seed	Seed oil is applied to glandular swellings of neck. Bark is used in diarrhoea stomach pain. The leaves are valued for their tonic and cardiotonic properties and their powder is a common medicine for wounds.
13	<i>Butea monosperma</i> (Lamk.) Taub	Dhak/Cheul	Fabaceae	Leaf, flower, seed	Leaf juice is used in worm infestation. Flower is used for eczema and leaves for the treatment of leucoderma
14	<i>Cassia fistula</i> Linn	Amaltas	Fabaceae	Flower	Flower paste is used in burns
15	<i>Dalbergia sisso</i> Linn	Sesham	Fabaceae	Leaf, Bark	Leaves are used in liver disorder, jaundice and gonorrhoea. Bark powder is used in bleeding piles and diarrhea.
16	<i>Diospyros melanoxyton</i> Roxb	Tendu	Ebinaceae	Root, flower	Root paste is used in scorpion sting. Flowers are used to cure leucorrhoea, dysentery
17	<i>Embllica officinalis</i> Gaertn	Aonla	Euphorbiaceae	Fruit, Bark	Fruit is used in stomach trouble and hair oil, anemia, eye diseases, tonic

18	<i>Holoptelia integrifolia</i> (Roxb.) Planch	Chilbil	Ulmaceae	Leaf	Leaves are used in body inflammation and suppuration of boils
19	<i>Lagerstroemia parviflora</i> Roxb.	Siddha/	Lytheraceae	Bark	Bark is used in lactation problems
20	<i>Lannea coromanealica</i>	Jhingan/Gurja	Anacardiaceae	Bark	Stem bark juice is applied on cut and injuries
21	<i>Madhuca latifolia</i> Roxb.	Mahua	Sapotaceae	Flower, flower, twigs. Leaves	Flower is used in rheumatism. Alcohol obtained from flower is applied externally in body pain. Twigs are used in pyorrhea. Leaves ash mixed with butter/ghee is applied on burns and scalds
22	<i>Mallotus philipinensis</i> Lam.	Rohini	Euphorbiaceae	Fruit	Fruit powder is used in skin diseases and blisters in the ear
23	<i>Metaygyn aparviflora</i> (Roxb.) Korth	Kaima/ Gurahi	Rubiaceae	Leaf	Leaf paste is applied externally on wounds
24	<i>Pterocarpus marsupium</i> Roxb.	Bija sal/Biya	Fabaceae	Stem, Leaves	Decoction of stem is given in diabetes. Paste of leaves is applied in skin diseases.
25	<i>Schleichera oleosa</i> (Lour.) Oken	Kusum	Sapindaceae	Flower	Flower is used as a hair tonic.
26	<i>Semicarpus anacardium</i> Linn	Bhela	Anacardiaceae	Seed	Seed oil is used externally in rheumatism
27	<i>Terminalia arjuna</i> (Roxb.)ec DC	Arjun	Combretaceae	Bark	Dysentery, high blood pressure
28	<i>Terminalia bellirica</i> (Gaertn) Roxb.	Bahera	Combretaceae	Fruit	Stomach trouble, Used as laxative, menstrual disorder
29	<i>Terminalia chebula</i> (Gaertn) Retz.	Harra	Combretaceae	Fruit	Stomach trouble, used as a purgative,
30	<i>Zyzyphus numelaria</i> (Burm.f.) wt. and Arn	Jharberi	Rhamnaceae	Bark, fruit	Decoction of bark is used in dysentery. Fruits are used in digestive problems

conserved by promoting its plantation to protect it from overexploitation. Local ethnomedinal knowledge must be preserved by proper documentation, so that our future generations can be benefited. In addition to this clinical studies are also required to validate the herbal preparation from these trees, which can establish therapeutic properties of these preparations for safe use.

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