



## A list of ethno-medicinally important trees of Ramnagar forest division in Kumaon

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### Abstract

The present study deals with ethno-medicinal uses of trees in the Ramnagar forest Division of Kumaon. The study records 50 species of tree belong to 25 different families are used to cure different ailments by the local people. The currently accepted botanical name, family, local names, parts used and the medicinal uses of those parts are given.

**Keywords:** Ailments, bhabar, ethno-medicine, kumaon, Ramnagar, traditional

### Introduction

Ramnagar Forest Division is an important forest division in Kumaon region of western circle of the forests of Uttarakhand. It is located between 28°52' and 29°27' 15'' N latitude and 78°46'15'' and 79°33' E longitude covering an area of 3944.33sq. km. The forest area is about 60 km long and 10km broad, ranging in altitude from 300m to 1100m above the sea level. It mostly occupies the Bhabar area with low Siwalik hills in some parts. Bhabar is a waterless area composed of bed of boulders and conglomerates. The area has a wide variety in its vegetation. The Sal forests are dominant in the area. Some deciduous species are associates with Sal forest. These deciduous riverian forest of *Dalbergiasissoo* and *Acaia catechu* on sandy and gravelly deposits along the rivers and streams. Deciduous miscellaneous forests of riverian type also occur in the area. Composed of many different species including *Mallotusphilippinensis*, *Bombaxceiba*, *Haldinacordifolia*, *Lagerstromiaparviflora*, *Holarrhenapubescens*, *Cassia fistula* etc.

These forests constitute an integral part of social life of the local people and tribes as they entirely or partly depend on these forests. These people depend on forest plants, especially on trees for various uses (*viz.* - food, fodder, fuel, and medicine).

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They have names in their own dialect and identification practice for every tree and rely on the medicinal uses of these plants because of their effectiveness and for negligible side effects. An attempt has been made to enlist the ethno-medicinal uses of some important trees of the area.

As the review of literature shows that a lot of research work have been done for the systematic of the higher altitudinal region of Kumaon *i.e.* (Watson, 1882), (Duthie, 1903-1929), (Champion, 1923), (Osmaston, 1927), (Gupta, 1962-1968) and (Jain, 1977-1996). Also a good number of worker have contributed a lot to the ethno-botany of higher region *i.e.* (Shah, 1971-1980), (Kalakoti and Pangtey, 1988), (Pangtey and Samant, 1989), (Uniyal, 1997), (Pande,1984) (Pande and Joshi, 1996-1999), (Joshi 1993). But a little (Pant, 1976) has been done for the lower altitudinal area. So, the present study is a step to fill up that lacuna.

### Material and Methods

The extensive field surveys were organized during the period of 2007-2009 for collecting the plant specimen and the area was frequently surveyed. Several attempts were made for collection/ study in different seasons. The work was conducted among the local people, local vaidyas, priests, villages heads, local tribes, farmers and middle aged women's to know their local name and local uses, because they have been using these plants for ages in their day to day life to cure different ailments. During survey the information gathered on the basis of prepared questionnaire *viz.*, local name, mode of



preparation, medicinal parts and parts used etc. Standard methods were followed for the collection of plant materials, mounting, preparation and preservation of plant species (Jain & Rao, 1978).

The preliminary identification was done with the help of manuals and floras and later confirmed after matching with the authentic specimens present in the herbaria of *Northern Circle of Botanical Survey of India*, Dehradun (BSD) and *Forest Research Institute*, Dehradun (DD). Out of these an alphabetical list including the plant name, local name, family, parts used and medicinal uses were also made (Table 1).

### Results and Discussion

The present study records 50 species of ethno-medicinally important trees belongs to 25 families. Among the documented medicinal species, the family Moraceae was most frequently represented with a total of (5 species), followed by Combretaceae and Caesalpiniaceae with (4 species each), Mimosaceae, Fabaceae, Apocynaceae, Meliaceae and Euphorbiaceae (3 species each), Verbenaceae, Rubiaceae, Anacardiaceae and Rhamnaceae, Lauraceae (2 species each); besides these 12 families (1 species each) were found to be used by the local communities for medicinal

purposes. The species are arranged in alphabetical order followed by the local name, family, parts used and the medicinal uses of those parts (Table 1). While on the basis of plant parts used by the local people, it was observed that the leaves of 21 species, roots of 15 species, Bark of 28 species, fruits of 13 species, Seeds of 7 species, flowers of 3 species and gum, latex, whole plant and leaf bud of 1 species each were used to cure different ailments (Fig. 1). The most widely used remedies are derived from bark followed by leaves and root indicates that these parts have strong medicinal properties. Regarding different disease categories, the majority of species are related to diarrhea, dysentery, skin disease, cough, cold, fever, piles, constipation, urinary troubles and body aches.

The present study has been designed to explore the ethno-medicinal significance of the trees of this region. The traditional knowledge about the these plant has been transmitted orally from one generation to other for centuries is becoming extinct, due to change in traditional culture or introduction of modern knowledge. Hence these traditional practices need proper documentation and along with documentation these plant species also need protection and conservation as they are depleting day by day due to various socio human activities and changes in the climate.

**Table 1: List of Ethno-Medicinally Important Trees and Their Uses**

S. No	Botanical Name	Local Name	Family	Parts used	Uses
1.	<i>Acacia nilotica</i> (L.) Willd. ex Del.	Babul	Mimosaceae	Leaves and Root	Leaves are used to cure diarrhea and bruised leaves are poultice and used to treat ulcers. Roots are used to cure tuberculosis also said to cure impotence.
2.	<i>Acacia leucophloea</i> (Roxb.) Willd.	Kikar	Fabaceae	Root bark	Root bark with water used to cure diarrhea, dysentery, wounds and skin diseases.
3.	<i>Acacia farnesiana</i> (L.) Willd.	Kachraud	Mimosaceae	Leaves, Bark, Flowers and Root	Roots chewed to treat sore throat. Decoction of Bark with ginger used as astringent wash for teeth and for bleeding piles. Bruised leaves with water given for gonorrhea and lotion made from leaves are used for skin diseases.
4.	<i>Aeglemarmelos</i> (L.) Corr.	Bel	Rutaceae	Leaf and Fruit	Leaves and unripe fruit decoction of the plant is taken for diarrhea, cholera and jaundice.
5.	<i>Ailanthus excelsa</i> Roxb.	Gokul	Simaroubaceae	Bark	Used to cure dysentery.



6.	<i>Alstoniascholaris</i> (L.) R.Br.	Chitvan	Apocynaceae	Bark and Latex	Decoction of bark is used to cure diarrhea and malaria. The latex is applied to cure ulcers and also for the skin diseases.
7.	<i>Azadirachtaindica</i> A.Juss.	Neem	Meliaceae	Leaves, Flowers and Seeds	Used as an anti bacterial and antiviral; Cures skin infections.
8.	<i>Albizialebbeck</i> L.	Kalasisiris	Mimosaceae	Stem Bark	Used to cure various allergic conditions and skin diseases.
9.	<i>Bauhinia purpurea</i> L.	Khairwaal	Caesalpiniaceae	Root and Bark	Decoction prepared from roots given for abdominal disorders. Bark used for diarrhea and gall bladder stone.
10.	<i>Bauhinia variegata</i> L.	Kachnar	Caesalpiniaceae	Root and Flowers	Roots used for diarrhea and dysentery. Fresh flowers used to treat high blood pressure.
11.	<i>Bombaxceiba</i> L.	Semal	Bombacaceae	Root, Leaves and Bark	Paste of leaves is used over wound. Crushed root extract soup is given for pneumonia and women diseases. Decoction of stem bark is useful in diarrhea.
12.	<i>Buteamonosperma</i> (Lam.) Taub.	Dhak	Fabaceae	Bark, Leaf and Seeds	Used in night blindness, cures piles and dysentery.
13.	<i>Broussonetiapapyrifera</i> (L.) Vent.	Paper malwari	Moraceae	Bark, Fruits and Leaves	Leaf juice is used in dysentery and for skin diseases. Fruit is used for stomachache.
14.	<i>Bischofiajavonica</i> Blume.	Paanisemal	Euphorbiaceae	Leaves	Leaves juice is used for sores.
15.	<i>Cassia fistula</i> L.	Amaltas	Caesalpiniaceae	Root, Fruit and Seeds	Fruit pulp is used in constipation. Powder of seeds is used in abdominal pain.
16.	<i>Cinnamomumtamala</i> (Buch.-Ham.) Nees&Eberm.	Tejpatta	Lauraceae	Leaf, Bark	Bark is used in gonorrhoea. Leaves used as stimulant, carminative and useful in colic, diarrhea and for diabetes.
17.	<i>Caseariatomentosa</i> Roxb.	Chilla	Flacourtiaceae	Root	Decoction of root is given for diabetes.
18.	<i>Dalbergiasissoo</i> Roxb.	Shisham	Fabaceae	Root	Decoction of root is useful in diarrhea.
19.	<i>Ficusbenghalensis</i> L	Bargad	Moraceae	Leaf Bud	Used to treat leprosy.
20.	<i>Ficusglomerata</i> Roxb.	Gular	Moraceae	Stem bark	Extract of stem bark with water is used to cure diarrhea.
21.	<i>Ficusreligiosa</i> L.	Peepal	Moraceae	Leaves, Bark, Seeds, Fruit, Latex and Root	Leaves are useful for bleeding wounds, constipation, dysentery, boils and mumps. Fruit is used to treat dehydration. Roots are useful for the treatment of. Gout. Bark is used to heal wounds and for jaundice.
22.	<i>Gmelinaarborea</i> Roxb.	Kamhaar	Verbenaceae	Root, Fruits and Leaves	Paste of leaves is used for headache. Roots are used to cure sexual debility in males and for habitual abortion in females. Fruits are used in dysentery.
23.	<i>Gardenia turgida</i> Roxb.	Thanela	Rubiaceae	Fruits	Fruits are used to cure dysentery and diarrhea.
24.	<i>Haldinacordifolia</i> (Roxb.) Ridsdale	Haldu	Rubiaceae	Bark	Bark is used as antiseptic to heal wounds.
25.	<i>Holarrhenapubescentis</i> (Buch.-Ham.) Wall. ex G. Don	Kuda	Apocynaceae	Bark and Seed	Decoction of bark is used in amoebic dysentery and diarrhea and also useful in piles.
26.	<i>Holopteleaintegrifolia</i> (Roxb.) Planch.	Kanju	Ulmaceae	Bark and Seed, Leaves	Bark is used for rheumatism. Paste of seed and bark is used for treating ringworm. Bark and leaves are used to cure diabetes, leprosy and other skin diseases.
27.	<i>Kydiacalycina</i> Roxb.	Pula, Patta	Malvaceae	Leaves	Paste of leaves is applied in body pains and

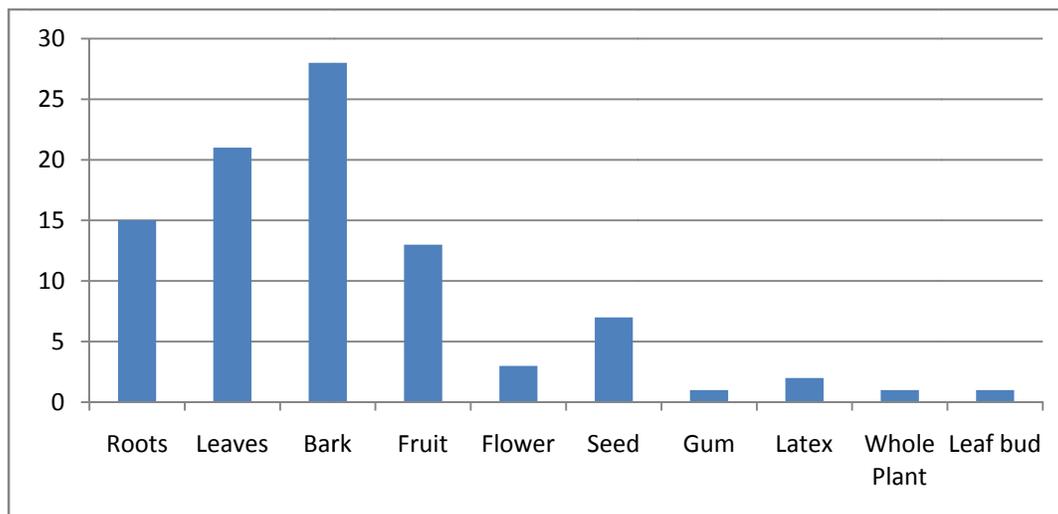


A list of ethno-medicinally important trees

					also for skin diseases.
28.	<i>Litsea chinensis</i> Lam.	Maida	Lauraceae	Bark	Paste of bark is used for sprains, bruises and rheumatic and gouty joints. Powdered bark, with honey is prescribed internally in sprains, fractures, rheumatic affections and in sciatica.
29.	<i>Lagerstroemia parviflora</i> Roxb.	Dhuri	Lythraceae	Leaves	Leaves are useful to control blood pressure, urinary dysfunctions and also in the treatment of diarrhea.
30.	<i>Madhuca indica</i> J.F. Gmel.	Mahuwa	Sapotaceae	Bark	Bark is used to cure ulcers and bleeding gums.
31.	<i>Mallotus philippinensis</i> (Lam.) Muell.-Arg.	Rohini	Euphorbiaceae	Fruits	Powder of ripe fruit is mixed with ghee to cure wounds and it is adapted for the expulsion of tape worm.
32.	<i>Mangifera indica</i> L.	Aam	Anacardiaceae	Bark and Leaves	Extract of bark is used to cure diarrhea. 2-3 drops of fresh leaf juice is used in earache.
33.	<i>Melia azedarach</i> L.	Bachain	Meliaceae	Root	Paste of root is applied on headache.
34.	<i>Nyctanthes arbor-tristis</i> L.	Harsingar	Oleaceae	Leaves	Decoction of leaves is used to cure sciatica.
35.	<i>Oroxylum indicum</i> (L.) Vent.	Arlu	Bignoniaceae	Bark, Fruits and Seeds	Bark is used in diarrhea and dysentery. It stimulates digestion, cures fevers, cough and other respiratory disorders.
36.	<i>Phyllanthus emblica</i> L.	Amala	Euphorbiaceae	Bark and Fruit	Cures blood dysentery, hair falling, piles anemia. Very useful for pregnant ladies before and after delivery.
37.	<i>Spondias pinnata</i> Kurz	Jungliaam	Anacardiaceae	Dried fruits, Leaves and Bark	Juice of leaves is used in earache. Bark is used to cure diarrhea and dysentery. Fruits are given for ulcers and burning sensation
38.	<i>Shorea robusta</i> Gaertn.	Sal	Dipterocarpaceae	Whole Plant	Used in healing wounds and cures chest pain.
39.	<i>Syzygium cumini</i> (L.) Skeels.	Jamun	Myrtaceae	Bark	Extract of bark is used to cure diarrhea.
40.	<i>Terminalia alata</i> Heyn ex Roth.	Sain	Combretaceae	Bark	Bark is used in diarrhea and dysentery.
41.	<i>Terminalia chebula</i> Retz.	Harad, Haritaki	Combretaceae	Bark, Fruit and Root	Used as disinfectant; cures diarrhea and skin diseases. Roots boiled with water used to check abortion or miscarriage.
42.	<i>Terminalia arjuna</i> Roxb. ex DC.	Arjun	Combretaceae	Bark and Leaves	Leaves are used as a cover for sores and ulcers. Juice of fresh leaf is used in earache. Bark is used in heart diseases as cardiac tonic.
43.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Bahera	Combretaceae	Fruits	It is used for headache, leucorrhoea, liver diseases and gastrointestinal problems.
44.	<i>Tamarindus indica</i> L.	Imli	Caesalpinaceae	Bark, Leaf and Fruit	Used in diarrhea, asthma, ulcers and in urinary problems.
45.	<i>Trema orientalis</i> (L.) Blume.	Jivanti	Moraceae	Leaf	Cures epilepsy and blood flow to urine.
46.	<i>Tectona grandis</i> L. f.	Sagon	Verbenaceae	Bark	Decoction of bark is useful in diarrhea.
47.	<i>Toonaciliata</i> Roem.	Tun	Meliaceae	Gum	Gum obtained from bark is used to cure fever and diarrhea
48.	<i>Wrightia tomentosa</i> Roem. & Schult.	Indrajaw	Apocynaceae	Bark, Leaves and Root	Bark is used as anti-dysenteric and for menstrual disorders. Leaf and root is used for toothache and fever.
49.	<i>Ziziphus jujuba</i> Lam.	Ber	Rhamnaceae	Root	Powder of root is used to cure dysentery.
50.	<i>Ziziphus nummularia</i> W.&A.	Kathber	Rhamnaceae	Root	Powder of root is used to cure diarrhea.



Fig. 1: Plant partwise Ethno-medicinal Uses



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