

## “Ethnobotany of Some Wildy Plants of Bihar”.

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**Abstract:** Today, ethnobotanical surveys include applied projects that have the potential to ameliorate poverty levels of these people, allowing them to make more educated decision about their future directions. These new approaches enhance the quality of the science, provide compensation for the cultural groups and take into account environmental concerns. This modern approach is based on an interdisciplinary team usually composed of an ethnobotanist, an anthropologist, an ecologist and a physician. Ethnobotany studies the complex relationship between uses of plants and cultures. The focus of ethnobotany is on how plants have been or are used, managed and perceived in human society includes plants used for food, medicine, divination, Cosmetics, dyeing, textile, for buildings, Tools, currency, clothing, rituals, social life and music. In the present discussion a little efforts on ethnobotanical studies of plants that grow in the forest area of Bihar.

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### I. Methodology

The present work is based on the outcome of ethnobotanical exploration conducted in 133 villages. regular visits to different tribal were made for a period spread over more than three years to collect a first hand account on ethnobotanically interesting species either at flowering or fruiting stage. In each village, family heads, elderly villagers, village head, experienced informants, village herbalist and traditional healers were interviewed for getting a better understanding of local customs, beliefs and habits. Answer to scientific questions based upon the Performa designed by Jain and Goel;1995 were sought and the information supplied by the informants as also the name of locality, altitude and local name were recorded in the field notebook for future reference and use. There is a traditional notion among the tribes that if any secret about the therapeutic value is revealed to anyone outside their own heirs, the efficiency of the plant will vanish.

#### 1.1 Alangium Salvifolium

##### 1.2 Classification :

Plantae  
Angiosperm  
Dicots  
Order           Cornales  
Family   Cornaceae(Alangiaceae)  
Genus           Alangitum  
Sps               Salvifolium

##### 1.3 Regional Names:

English:-           Sage leaquet Alansium  
Hindi-               Dhera, Ankol  
Sanskrit-           Ankot, Ankola, Peetasara, Itundika  
Marathi- Ankol  
Gujarati-           Ankol  
Tamil-               Elangi, Alandi  
Kannada-           Ankola  
Bangali- Aankol, Badh, Badh Aankod

##### 1.4 Reproductive Cycle : February - May

##### 1.5 Parts used: Root Bark, Oil, Leaves, Flowers, Seeds

## **II. Description**

Alangium is a small, bushy tree offering a dense canopy with a short trunk. It bears fragrant white flowers which have green buds. The petals of the flower typically curl backwards exposing the multiple stamens and a linear stigma distinctly sticking out. The fruits are spherical berry like and red in color. The prominent remains of the calyx can be seen distinctly with a white colour. The leaves are simple, alternate, oblong-lanceolate. The stunted branches end up with sharp ends making it look like thorns.

In India, this tree is mostly found near sandy riverine tracts and road cuttings. Flowering period between February and April and Fruits between March and May just in time before the rainy season starts. It sheds its leaves completely when it flowers and leaves start coming when it begins to fruit. It is considered as a holy tree and temples have been built near it. In India, it is commonly found in dry regions and native to Western Africa, Madagascar. Except Bihar, it is also found in Andhra Pradesh, Chhatisgarh, Goa, Gujrat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajsthan, Tamilnadu, Tripura, Uttar Pradesh, Uttarakhand, and West Bengal.

## **III. Ethnobotanical Uses**

Ankol is a highly useful tree where all parts of the plant serve some or the other medicinal purpose. Its root, root bark, seeds, oil and fruits are very useful for the body. Ankol is well known for its effectiveness in natural treatment and management of Rabies. Different parts of Ankola Plant have got separate medicinal value.

**Fruit:** Fruit has coolant properties and can be taken to relieve internal burning sensation and gut heat.

It also improves immunity and overall strength and stamina. Fruits are also good and give better results in case of impotency and male reproductive system problems. It can be given to relieve headache as well. Seed oil are used to treat digestive problems and intestinal colic due to related conditions. Seeds and oil of Ankola tree is very useful in the treatment of not only dog bite but Snake, Rat and Rodent bites also. Root Bark Works well in case of common cold, influenza and fever. In case of dog bite, Ankal root bark powder is given to the patient with milk. It is also effective in Rat bite, Snake bite and Spider bite. **Root:** The roots of tree are grind in lemon juice and taken twice a day for curing Asthma.

The plants is very useful in curing the following diseases:

Ascites, Asthma, Painful urination, Diarrhoea, Dysentery, Gout, Dengue fever, Skin diseases.

It is beneficial in snake & mice poison.

1. The Juice of *Alangium salvi folium* used in Cough, Swelling, ache & Gouts.
2. Boiled leaves are bind on the orchitis to cure them.
3. Applying oil of this plant on white leprosy patches, for improves quickly.
4. Heal the wound with the sharpen weapon quickly after applying its oil on it.
5. Mix the oil with turmeric and water into wheat flour and make the powder. This powder remove the scars of small pox.
6. Mix the oil in Sesame oil applying on hairs for grand growth and will the lice.
7. Root bark kills the intestinal worm.
8. Make paste of leaves with black peeper give relief from respiratory problem.
9. Ankol seeds works as a general tonic and increase physical endurance and exercise stamina in athletes.
10. For cure of Asthma the roots of the tree are ground with lemon juice and taken in dose of half teaspoon twice a day. This should be taken two hours before meal.
11. For diarrhea, the fruits are useful. Eat ten grams fruit pulp with honey three times a day and drink leaves juice with milk. Take root bark powder with butter milk.
12. Externally apply poultice of Ankol leaves for cure gouts.
13. Cook three grams root powder and two gram dry ginger powder in boiled rice water and take 2-3 times a day to remove Dengue fever.
14. Prepare paste of the root bark and apply externally to cure skin disease

### **3.1 Medicinal Properties of Roots**

Analgesic, Anti inflammatory, Anti arthritic, Anti rheumatic, Anti spasmodic, Muscle relaxant, Carminative, Anticancer, Anti hypertensive, Hypoglycemic

**3.2 Oil :** Antipruritics, Demukent.

**3.3 Stem :** Anti diarrheal, Antimetic.

**3.4 Leaves:** Analgesic, Anti rheumatic.

**3.5 Fruits:** Laxative or purgative, Aphrodisiac, Expectorant, Carminative, Antidote of snake bites, Antidote of scorpion stings.

**3.6 Name the diseases and parts of the plant that having curable capacity:**

Diarrhea (Stem & roots), Vomiting (Stem), Constipation (root), Piles (roots), Worms (roots), Asthma (Leaves), Rheumatic Pain (Leaves & roots), Backache (roots), Hypertension (root), Boils –(Oil), Itching – (Oil), Scabies – (Oil).

**3.7 Side effect of this plant :**

1. The maximum daily doses of Ankol should not exceed from 2 grams a day.
2. Excess dosage and unwise use of Ankol can result in reverse side effects. These side effects are following:
3. Stomach becomes weak, eyes yellow and headache appears.
4. Severe burning sensation, Stomach upset, Discomfort feeling in the abdomens, Headache, Vertigo (reeling sensation), Insomnia.

**3.8 Antidote of this plant**

Shankhpushpi (*Convolvulus pluricaulis*) is antidote of Ankol toxicity. It is boiled in cow’s milk and then sugar is added in the milk. This Shankhpushpi milk helps reducing side effects that occurs due to excess or wrong dosage of any part of ankol plant.

**3.9 Spiritual importance:**

The plant is described in:

Epic	Kand	Shloka	Location
Ramayana	Kiskindhakand	4.1.80	Pumpa lake

**3.10 Asparagus racemosus**

**3.11 Classification :**

Plantae  
Angiosperms  
Monocotyledons  
Order : Liliales  
Family : Liliaceae  
Genus : Asparagus  
Species : racemosus

**3.12 Common Name :** Shatavar, Shatavari.

**3.13 Regional Names :**

Hindi : Shatavar, Halyun, Seetmuli, Merchuba.  
English : Asparagus, Garden asparagus.  
Bengali : Hillua  
Gujrati : Dholimusali, Safedmusli, Ujlimusli  
Marathi : Safedmusli.

**3.14 Reproductive Cycle :** October- November

**3.15 Parts used :** Root, Leaves

**3.16 Description:**

**3.17 Asparagus racemosus (satavar, shatavari, or shatamull)** is a species of asparagus common throughout Nepal, Sri Lanka, India and the Himalayas. It grows 1–2 m tall and prefers to take root in gravelly, rocky soils high up in piedmont plains, at 1,300–1,400 m elevation. It was botanically described in 1799. Because of its multiple uses, the demand for *Asparagus racemosus* is constantly on the rise. Because of destructive harvesting, combined with habitat destruction, and deforestation, the plant is now considered "endangered" in its natural habitat. The plant has perennial roots, which send up each year and erect branching a stem several feet in height. instead of true leaves, modified branches, the cladodes occur. It thrive best in fertile well drained soil in the most temperate region with abundance of sunshine. The delicate shoots are eaten fresh. For the best flavour asparagus should be cooked within 12 hours of picking. there are 94% water in it, but it still contains more protein. New succulent shoots which come up every year constitute the Asparagus; large quantity canned. young stems are eaten green or bleached after boiling. Shatavari is an Indian word meaning a woman who has a hundred husband’s or cure hundred diseases.

**3.18 Reproductive Cycle :** October- November.

**3.19 Habitat :** Damp places.

**3.20 Used Part :** Root, Stem, Tender young shoots --- cooked as vegetable.

**3.21 Ethnobotanical Uses:**

Shatavari is the most important herb in Ayurvedic medicine for dealing with problems connected women's fertility. The rhizome is a shooting tonic that acts mainly on the circulatory digestive respiratory and female reproductive organs.

1. The root is alterative, antispasmodic, aphrodisiac, demulcent, diuretic, galactagogue and refrigerant.
2. It is taken internally in the treatment of infertility, loss of libido, threatened, miscarriage, menopausal problems, hyper acidity, stomach ulcer, and bronchial infections.
3. Externally it is used to treat stiffness in the joints.
4. The root is used fresh in the treatment of dysentery.
5. The whole plant is used in the treatment of diarrhoea, rheumatism, and brain complaints.
6. The squeezed root is used for washing clothes.

### 3.22 Butea monosperma

#### 3.23 Classification:

Plantae  
Angiosperms  
Dicotyledons  
Order : Fabales  
Family : Fabaceae  
Genus : Butea  
Sps. : monosperma

#### 3.24 Regional Names:

Hindi	Palarh, Dhak, Palah, , , tesu, chichra, desuka jhand,
English	Parrot tree, Flame of forest, Bastard teak
Punjabi	Keshu
Gujrati	Kesudo
Telugu	Modugu Chettu
Kerela	Plaus & Chamata (Note :Chamata is the vernacular version of sanskrit word 'Samidha' small piece of wood that use for agnihotra or fire ritual.)
Marathi	Palaash
Urdu	Palashpapra
Assamere	Polash (polax)
Sanskrit	Palash, Lakshataru, Brahmopadapa
Kannada	Muttuga
Malyalam	Brahmavriksham, Kimshukam

#### 3.25 Reproductive Cycle: March - May

#### 3.26 Used parts: Root, Stem, Leaves, Flower.

#### 3.27 Description:

Popularly known as flame of the forest belongs to the family fabaceae. It locally called as Plas, Palash, Dhak or Khakar and found in mixed or dry deciduous forest. It is a medium sized tree with crooked branches and large three foliate leaves. Large flowers are scarlet red with orange tinge. Leaf like pods are flat and one seeded. Different parts of the tree are being used since ages in medicine and for other purposes.

It is a terrestrial plant. It is capable of growing in water logged situations, black cotton soils, saline, alkaline. This tree gets up to 50 ft. high, with stunning orange to red coloured flower clusters. It is a erect medium sized dry season - deciduous tree. The leaves are pinnate, with an 8 - 16 cm petiole and three leaflets large and stipulate each leaflet 10 - 20 cm long. The flowers are 2.5 cm long, bright - orange red and produced in racemes upto 15 cm long. The fruit is a pod 15 - 20 cm long and 4 - 5 cm broad.

It loses its leaves as the flowers develop in the months between January - March.

## IV. Ethnobotanical Uses

The wood is dirty white and soft and being durable under water is used for well - curbs and water scoops, good charcoal can be made from it.

1. Flowers are astringent to bowel, in cure cough, leprosy, gout, skin diseases, thirst, sensation.
2. Flower juice is useful in eye diseases.
3. The dye is useful in enlargement of spleen.
4. Flowers are depurative as a poultice, they are used to disperse swelling and to promote menstrual flow.
5. They are given to pregnant women in case of diarrhea.

6. It is also useful to prevent put from urinogenital tracts of males.
7. Flowers are crushed in milk and sugar is added. If drunk per day for a month helps to reduce body heat and chronic fever.
8. Flowers are soaked in water overnight and a cup of this infusion is drunk every morning against leucorrhoea, till cure.
9. Seeds are crushed in milk and this mixture about two spoons is taken orally to treat urinal complaints.
10. Powdered seeds are consumed by children as remedy against intestinal worms.
11. The seeds increase the semen.
12. Leaves are good for the disease of the eye.
13. Petiole is chewed and the juice is sucked to cure cough, cold and stomach disorders.
14. Gum is applied for cracks on foot sole.
15. The Gum is used as a remedy for pain in waist.
16. The root cures night blindness and other defects of sights, useful in elephantiasis.
17. Stem bark powder is used to apply on injury caused due to axe. Stem juice is applied on goiter of human being. Paste of stem bark is applied in case of body swellings.
18. The ash of young branch is prescribed combination with other drugs in case of scorpion sting.
19. *Butea monosperma* is used for timber, resin, fodder, medicine and dye. The trunk is used as it as specimen, or as a background component of the canopy.
20. The flowers yield an orange dye, which is used to prepare traditional Holi Colour.
21. The gum from the tree called 'Kamrkas' in Hindu is used in certain food dishes.
22. Root powder is applied on injury of snake bite. Spoonful of root powder mixed with water is drunk as an antidote for snake bite.
23. Leaf juice is dropped into eyes to treat conjunctivitis.
24. Leaf powder about two spoonfuls per day for a month is drunk mixed with a cup of water to cure diabetes.
25. Extract of fresh leaves is employed to kill intestinal worms.
26. Leaf extract about three to four spoons is drunk at night for two to three months. It checks irregular bleeding during menstruation.
27. Bark fibres are obtained from stem for making cordage.
28. Stem bark powder is used to stuff fishes.
29. Green leaves are good fodder for domestic animals.
30. Fresh leaves are used for making dinning plates and bowls.
31. Leaves are also used for making pattal (Plate).
32. Flowers and young fruits are used as vegetable by tribals.
33. Flowers are boiled in water and cooked to obtain a dye.
34. Fresh twigs are tied on horns of bullocks on occasion of 'Pola' festival in Maharashtra.
35. In India young leaves are good fodder eaten mainly by buffaloes.
36. Wood wakes a fuel of moderate quality. Leaves are sometimes used as a fuel. The wood is burnt for gunpowder charcoal.
37. A coarse fibrous material obtained from the inner bark is used for cordage, caulking the seams of boats and making paper.
38. A bright yellow to deep orange, red dye, known as butein, prepared from the flowers is used especially for dyeing silk and sometimes for cotton.
39. People of 'Mithila (Bihar) obtained Orange colour from its flower and used in famous Madhubani paintings.
40. The tree is an important host for the Lac insect (*Laccifer lacca*), which produces shellac.

#### **V. Spiritual importance**

1. It is said that the tree is a form of Agnidev, God of Fire. It was a punishment given to him by Goddess Parvati for disturbing her and hold Shiva's privacy.
  2. From its wood, sacred utensils are made.
  3. The flowers are offered as in place of blood in sacrifice rituals to goddess kali.
  4. The dry stem prices are used to make ingredients of sacred fire.
  5. The middles leaflet is supposed to represent Lord Vishnu the left Lord Brahma and the right Lord Shiva hence its worship is enjoyed in chaturmis.
  6. *B. monosperma* is used in the construction of the 'Suchha' (holy spoon), with which aahuti is put into the fire during Puja, the Chouwki, on which the person sits and takes part in the Pooja and the toran (temporary entry or door frame) which is prepared at the time of marriage.
  7. A stem twig is used as 'dand' during the 'Yogopavit' sanskar of Brahmins.
- Butea monosperma* is called Brahma in *Yajurveda* (35/4) and Som in *shatpath Brahman* (6/6/3/7).

The plant is described in :

Epic	Parva	Shloka	Location
Mahabharata	Shalya parva IX	36.58	Sarswati river

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