

# Important NTFP's of Udhampur Forest Division (Jammu & Kashmir)

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Suchita Sharma



## **Foreword**

A career in the Forest department is a blessing from the Almighty. Every day in the forestry profession is an opportunity to learn, enjoy and explore the nature. Good observation and documentation are the essential skills of the field forester. I gladly inform that Ms. Suchita Sharma, State Forest Service (SFS) officer trainee of 2020-2022 batch from Jammu and Kashmir is one among the rare professionals in the forest department possess such skills. She has brought out a wonderful compilation of Important NTFP's of Udhampur Forest division of Jammu & Kashmir, where she had undergone 4 months of the Job training. It is commendable that she made a brilliant attempt to compile the NTFPs. This compilation will help the Forest managers to add value to the NTFP sector, an important base line data and also for the researchers to further explore in this field.

I wish her success in the future similar endeavours also.

Best Wishes.



**V. Thirunavukarasu, IFS**  
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## **ACKNOWLEDGEMENT**

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I extend my sincere thanks to respected Course Director, SFS Batch 2020-22, Shri V. Karthick, IFS for his guidance, persistent encouragement and valuable inputs throughout the compilation of this work.

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I am highly indebted to DFO Udhampur Forest Division (J&K), Mrs Shaveta Jandial, IFS for giving me the opportunity and required space to study the NTFPs of the division and compile this work.

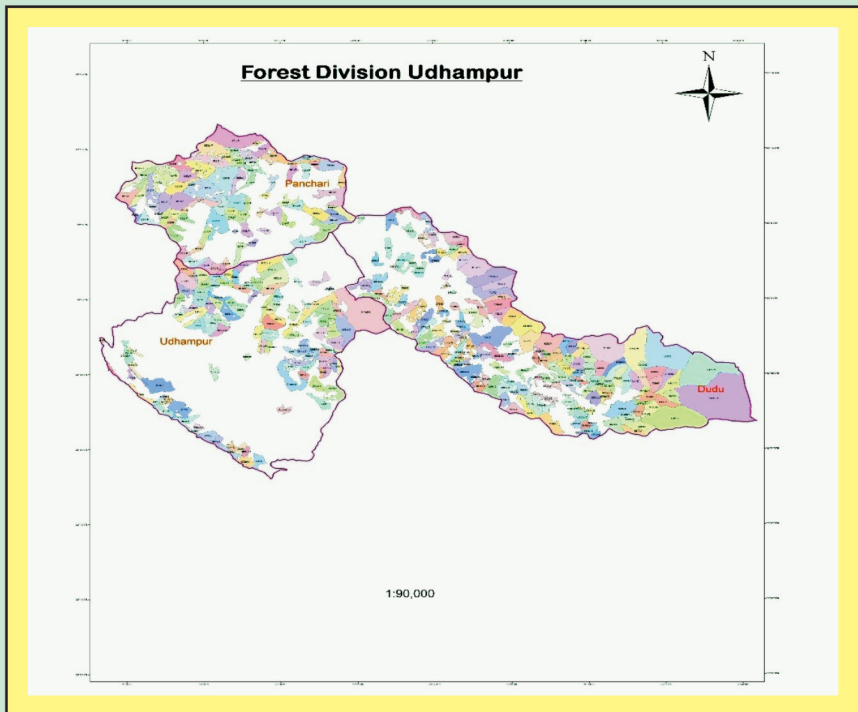
My sincere thanks to the officials and staff of J&K Forest Department for their persistent help and support.

I am especially grateful to Shri K. Muniasamy, PT&GI for his valuable time and inputs related to the layout and design of this publication.

Lastly, I would like to express my grateful thanks to my fellow Officer Trainees of SFS Batch 2020-22 and the Officer Trainees of the junior batches i.e., FRO Batch 2021-22 and SFS Batch 2022-24 for their constant encouragement and for providing the cordial atmosphere to come up with this work.

**- Suchita Sharma**

# Important NTFP's of Udhampur Forest Division (Jammu & Kashmir)



## **Introduction:**

Jammu and Kashmir owing to its hilly terrain and varied climate is blessed with floristic richness in different agro-climatic zones and vegetation types that are found along its vast altitudinal gradient. Forests are one of the most vital resources of Jammu and Kashmir spreading over an area of 20,194 sq. km. comprising of about 47.80% of its total geographical area. They are the means of providing livelihood to a vast array of population particularly those living in the fringe areas of forests. During the lean periods of agriculture, they derive their sustenance by collecting various NTFPs from the nearby forests.

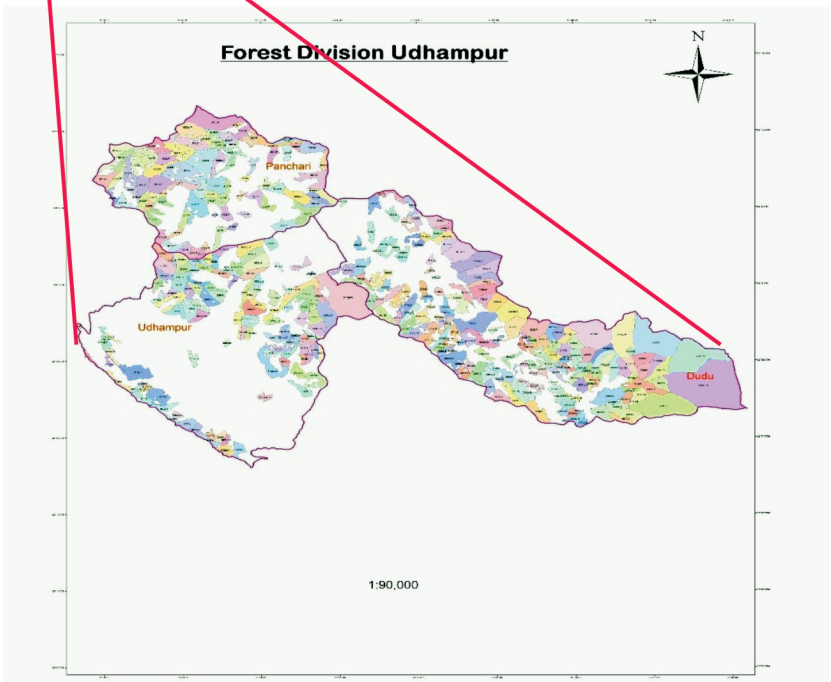
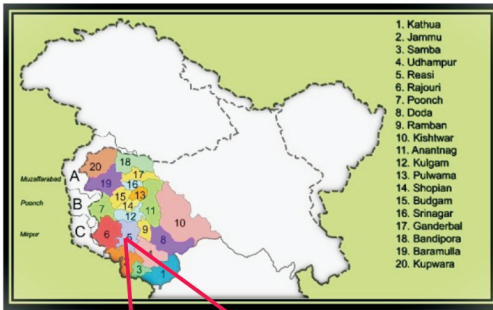
NTFPs are defined as “forest products consisting of goods of biological origin other than wood, derived from forest, other woodland and trees outside forests”. These may include seeds, flowers, leaves, rhizomes, roots of medicinal plants and mushrooms. The NTFPs in Jammu and Kashmir are generally collected by the State Forest Department through lease given to contractors. The UT harbours a wide variety of miscellaneous NTFP species that are collected by the people for self-use or petty sale to generate a part of their annual income. This dependence of local people on the NTFP resources reflects the significant impact of NTFPs on the rural livelihood, income generation and food security of the people of J&K.

## **Study Area:**

Udhampur Forest Division of Jammu and Kashmir is situated between 32°-46' to 33°-13' North latitude and 74°-54' to 75°-41' East longitude. The tract is hilly in nature with moderate, steep as well as very steep slopes and is traversed by numerous nallas and khads, presenting varied range of aspects. The altitude varies from 500 m in Gudhar to 4341 m at Kaplas.

Owing to vast altitudinal expanse, aspect, topography and edaphic factors, a variety of forest types exist in the division ranging from Dry Deciduous Scrub to high altitude Alpine Pastures. Most of the forests are coniferous, consisting of

Deodar, Kail, Chir and Fir, however some broad-leaved associates like *Quercus* spp, *Mallotus philippinensis*, *Acacia* spp., *Embllica officinalis* etc. are found mixed together at some places. These diverse forests harbour a plethora of Non-Timber Forest Species (NTFPs) from which the locals of this division derive their sustenance during some part of the year.



During the On Job Field Training in Udhampur Forest Division, an attempt has been made to study and compile 20 major NTFPs widely collected by the locals from the forests of the division. These are enlisted in Table 1 as under:

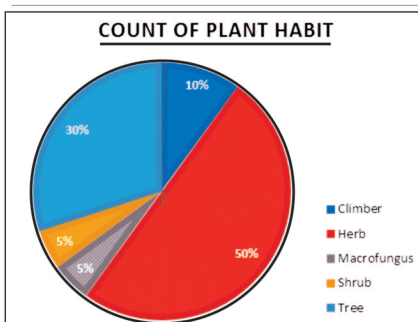
**Table 1. Important NTFPS of Udhampur Forest Division**

Sl No.	Botanical Name	Common Name	Family	Part used
1.	<i>Aconitum heterophyllum</i>	Atees	Ranunculaceae	Roots
2.	<i>Berberis lyceum</i>	Rasount	Berberidaceae	Roots and stem bark
3.	<i>Cedrus deodara</i>	Chillion Oil	Pinaceae	Roots and stumps
4.	<i>Centella asiatica</i>	Brahmi	Apiaceae	Leaves
5.	<i>Colchicum luteum</i>	Suranjan talakh	Liliaceae	Corms
6.	<i>Dioscorea deltoidea</i>	Yam	Dioscoraceae	Rhizomes
7.	<i>Jurinea dolomiaea</i>	Dhoop	Asteraceae	Roots
8.	<i>Morchella esculenta</i>	Guchhi	Morchellaceae	Whole fruiting body
9.	<i>Picrorrhiza kurroa</i>	Kaur	Plantaginaceae	Roots
10.	<i>Pinus roxburghii</i>	Chir (resin)	Pinaceae	Resin exuded from tree trunk.
11.	<i>Pistacia integririma</i>	Kakarsinghi	Anacardiaceae	Leaf & Petiole galls
12.	<i>Podophyllum hexandrum</i>	Berberidaceae	Bankakri	Rhizome
13.	<i>Punica granatum</i>	Punicaceae	Anardana	Dried seeds
14.	<i>Rubia cordifolia</i>	Majeeth	Rubiaceae	Roots
15.	<i>Saussurea lappa</i>	Kuth	Asteraceae	Roots
16.	<i>Taxus wallichiana</i>	Yew	Taxaceae	Leaves
17.	<i>Trillium qovanianum</i>	Nagchhatri	Melanthiaceae	Rhizomes
18.	<i>Valeriana jatamansi</i>	Mushakbala	Valerianaceae	Rhizomes
19.	<i>Viola odorata</i>	Banafsha	Violaceae	Above ground part
20.	<i>Xanthoxylum armatum</i>	Timru	Rutaceae	Fruit

These NTFPs are being dried and used for the self-consumption by the locals or sold to the consumers directly or through a middleman. On the basis of plant habit, these NTFPs can be broadly categorised into macrofungus, herb, shrub, climber and tree in the following proportion:

S. No.	Botanical Name	Plant habit
1.	<i>Aconitum heterophyllum</i>	Herb
2.	<i>Berberis lyceum</i>	Shrub
3.	<i>Cedrus deodara</i>	Tree
4.	<i>Centella asiatica</i>	Herb
5.	<i>Colchicum luteum</i>	Herb
6.	<i>Dioscorea deltoidea</i>	Climber
7.	<i>Jurinea dolomiaea</i>	Herb
8.	<i>Morchella esculenta</i>	Macrofungus
9.	<i>Picrorrhiza kurroa</i>	Herb
10.	<i>Pistacia integririma</i>	Tree
11.	<i>Podophyllum hexandrum</i>	Herb
12.	<i>Punica granatum</i>	Tree
13.	<i>Rubia cordifolia</i>	Climber
14.	<i>Saussurea lappa</i>	Herb
15.	<i>Taxus wallichiana</i>	Tree
16.	<i>Trillium govanianum</i>	Herb
17.	<i>Valeriana jatamansi</i>	Herb
18.	<i>Viola odorata</i>	Herb
19.	<i>Xanthoxylum armatum</i>	Tree
20.	<i>Pinus roxburghii</i>	Tree

Plant Habit	Count of Plant Habit
Climber	2
Herb	10
Macrofungus	1
Shrub	1
Tree	6
<b>Total</b>	<b>20</b>

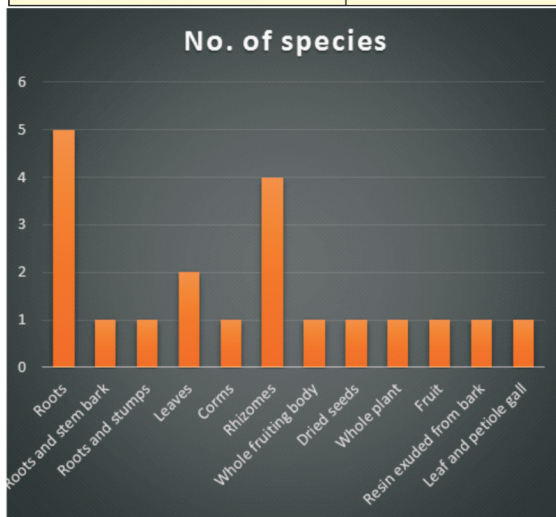




The NTFPs collected are removed of any soil or dirt and dried before storing or selling to the market by the villagers. Depending on the traditional knowledge disseminated among generations, different parts of plants are used for medicinal purposes or consumption by the locals; which is enlisted in Table 3.

**Table 3 PLANT PART USED**

Part used	No. of species
Roots	5
Roots and stem bark	1
Roots and stumps	1
Leaves	2
Corns	1
Rhizomes	4
Whole fruiting body	1
Dried seeds	1
Whole plant	1
Fruit	1
Resin exuded from bark	1
Leaf and petiole gall	1



The pictorial presentation of NTFPs with their taxonomic features and medicinal importance are documented in the following pages.

# 1. Atees

**Botanical Name:** *Aconitum heterophyllum*

**Common Name:** Atees

**Family:** Ranunculaceae

**Taxonomic features:**

- Herbaceous, the stem is clasping and erect.
- Flowers are large, hooded, white-violet in colour and occur in slender racemes.
- Branches are absent or rarely one or two in number.
- Leaves are glabrous, sessile, and variable in shape and size.
- The tubers are up to 3 cm long, conical at ends.



**Part Used:** Roots



**Medicinal importance:**

- Tubers are used as expectorant, febrifuge, anthelmintic, anti-diarrhoeal, anti-emetic, and anti-inflammatory.
- They are also used against poisoning due to scorpion or snake bite.

## 2. Rasount

**Botanical Name:** *Berberis lyceum*

**Common Name:** Rasount

**Family:** Berberidaceae

**Taxonomic features:**

- Shrubs, spiny or glabrous.
- Stems angular, terete or sulcate.
- Leaves simple, but usually with a joint at the junction of lamina and petiole, in whorls or fascicles.
- Inflorescences solitary or fascicled flowers axillary, cymes.
- Fruits few-seeded berry, blood red or black, ellipsoid to globose or ovoid, seeds about 2-10, reddish brown or black.



**Part Used:** Roots and bark.

Rasount is a crude, concentrated extract prepared from the roots and stem bark of *Berberis* by continuously boiling them in water.

**Medicinal importance:**

- Beneficial for skin problems like inflammation and psoriasis as it has anti-inflammatory and anti-psoriatic activity.
- Rasaunt is used in unani medicine for treatment of hemorrhoids or bleeding piles.



### 3. Chillion Oil/ Deodar Oil

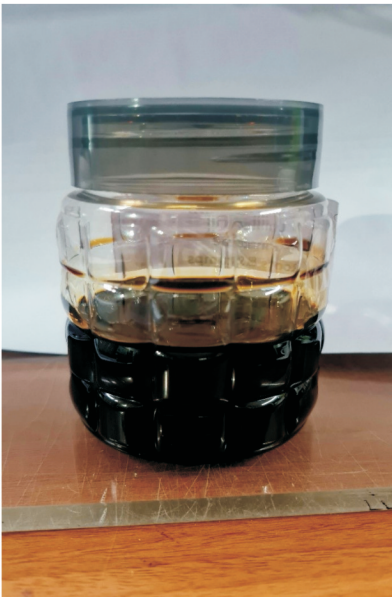
**Botanical Name:** *Cedrus deodara*

**Common Name:** Chillion Oil/  
Deodar Oil

**Family:** Pinaceae

**Taxonomic features:**

- The tree reaches upto 50 m high and up to 3 m in diameter.
- Crown conical when young, older trees rounded.
- Branches horizontally arranged, and end of the shoots pendulous.
- Needles blue-green, about 30 in a cluster, 3-5 cm long, acuminate.
- Cones solitary or in pairs; ovate or barrel-shaped; 7-10 cm long, 5-6 cm wide, rounded at the apex, bluish when young, reddish-brown when ripe.



**Part Used:** The chips from tree stumps are boiled in water to extract Cedar wood oil by steam distillation.

**Medicinal importance:** Cedar wood oil is used in acne treatment, pain relief, stress and anxiety relief, better sleep, hair growth and also has antibacterial properties.

## 4. Brahmi

**Botanical Name:** *Centella asiatica*

**Common Name:** Brahmi

**Family:** Apiaceae

**Taxonomic features:**

- The plant is a small trailing herb
- Stem is glabrous, striated and rooting at nodes.
- Leaves are fleshy, orbicular to reniform.
- Petiole is long, smooth on upper surface and hairy below.
- Flowers are pink and white in fascicled umbels.
- The fruits are oblong, dull brown, laterally compressed, pericarp hard, thickened and woody white.



**Part Used:** Leaves



**Medicinal importance:** It is used for antimicrobial, antidiabetic, anti-inflammatory, anti-depressant, and memory-enhancing properties. It is widely sold as a dietary supplement in capsule, powder, tincture, and topical formulations.

## 5. Suranjan Talkh

**Botanical Name:** *Colchicum luteum*

**Common Name:** Suranjan Talakh

**Family:** Liliaceae

**Taxonomic features:**

- It is an annual alpine herb.
- It has rapier-like leaves, short scape, and golden yellow flowers.
- Corms are almost conical, brownish in colour, with one side flat and other rounded, and can be either translucent or opaque.
- Leaves are 15–30 cm long and 0.8–1.5 cm broad and few in number.



**Part Used:** Corms

**Medicinal importance:**

- Used as a carminative, laxative, and an aphrodisiac.
- Colchicines are effective in the treatment of gout, rheumatism, and diseases of liver and spleen.
- Externally, the corms are applied as paste to lessen inflammation and pain.



## 6. Yam/ Tald

**Botanical Name:** *Dioscorea deltoidea*

**Common Name:** Yam/Tald

**Family:** Dioscoreaceae

**Taxonomic features:**

- Herbaceous, perennial vines.
- The stem is smooth, green twiner.
- The leaves are symmetrical, heart-shaped with acuminate apex borne on 1-2 inch long leaf stalk.
- The roots are tuberous and large.



**Part Used:** Rhizomes

**Medicinal importance:**

- the plant has been used as an anti- rheumatic and to treat ophthalmic conditions.
- It has also been used to rid the body of intestinal worms as well as parasites.
- The powder from the rhizomes of the plant is taken orally to cure dysentery, abdominal pains and piles.



## 7. Dhoop

**Botanical Name:** *Jurinea dolomiaea*

**Common Name:** Dhoop

**Family:** Asteraceae

**Taxonomic features:**

- It is a prostrate stemless perennial herb with a rosette of longer spreading lobed leaves often with purple mid-veins.
- Flower-heads are up to 4 cm long, very shortly stalked, in an umbel-like head.
- Leaves are oblong blunt in outline, pinnately lobed;



**Part Used:** Roots

**Medicinal importance:**

- A decoction of the root is given in the treatment of colic and puerperal fever.
- The juice of the roots is used in the treatment of fevers.
- The bruised root is applied as a poultice to eruptions.
- The root extract is used as an incense.





## 8. Guchhi

**Botanical Name:** *Morchella esculenta*

**Common Name:** Guchhi

**Family:** Morchellaceae

**Taxonomic features:**

The fruiting bodies are fragile to brittle, characterized by a head (or cap) with pits completely surrounded by distinct ridges supported by a hollow stalk having predominantly brown, yellow, cream, grey and black colour.



**Part Used:** Whole fruiting body

**Medicinal importance:**

- low in carbohydrates, calories, and sodium and is cholesterol and fat-free.
- can decrease the risk of cancer, especially prostate cancer, due to their high levels of selenium and niacin.
- have antioxidant properties which help in boosting the immune system and enable the body to fight with various common illnesses and diseases.
- help in the treatment of diabetes and maintaining low blood sugar levels in the body.
- Effective against Joint pains.



## 9. Kaur

**Botanical Name:** *Picrorrhiza kurroa*

**Common Name:** Kaur

**Family:** Plantaginaceae

**Taxonomic features:**

- It is a small perennial herb.
- Stem is small, weak, creeping, erect at flowering, leafy, and slightly hairy.
- Roots are about 5–10 cm long.
- Rhizomes are jointed, greyish-brown, cylindrical, irregularly curved with branching and rooting at the jointed nodes.
- Leaves are 5–10 cm long, almost radical, sharply serrate, turning black on drying.
- Flowers are very small, white or pale blue purple, in dense terminal spikes.



**Part Used:** Roots

**Medicinal importance:** It has traditionally been used to treat disorders of the liver and upper respiratory tract, reduce fevers, and to treat dyspepsia, chronic diarrhoea, and scorpion sting.



## 10. Kakarsinghi

**Botanical Name:** *Pistacia integrima*

**Common Name:** Kakarsinghi

**Family:** Anacardiaceae

### **Taxonomic features:**

- It is a dioecious tree with spreading branches.
- The plant is deep-rooted and can grow up to a height of 25 m.
- Leaves are large, pinnately compound with 25 cm length and consists of 2 to 6 pairs of lanceolate leaflets.
- The leaves and petioles contain galls that are horn-shaped, rugose and hollow.
- Flowers are small, reddish, arranged in panicles. Fruits are purple to blue, globular with diameter of 4-6 mm.



**Part Used:** Galls produced in leaf and petiole by an insect *Dasia acidifactor*.

### **Medicinal importance:**

- It is used in the treatment of ailments like diarrhoea, dysentery, fever, vomiting, skin diseases and respiratory disorders.
- Its essential oils are used in many therapeutic applications such as anti-bacterial, antioxidant, anti-inflammatory, cardio-protective, anti-cancer, antidiarrhoeal, anticonvulsant and muscle relaxant



## 11. Bankakri

**Botanical Name:** *Podophyllum hexandrum*

**Common Name:** Bankakri

**Family:** Berberidaceae

**Taxonomic features:**

- It is succulent erect herb, glabrous, up to 30 cm tall with creeping long knotty rhizomes. Stem one or two, simple, leafy without top.
- Leaves alternate, palmate, up to 25 cm in diameter, deeply divided in 3-5 lobes, toothed, purple spotted.
- Flowers are white to pinkish in colour, 4 cm across, appear in the fork of the stem.



**Part Used:** Rhizomes

**Medicinal importance:**

- Rhizomes are used against typhoid fever, jaundice, dysentery, chronic hepatitis, rheumatism, skin diseases, tumorous growth, kidney & bladder problems.
- Plant is also used for gonorrhoea, and syphilis.
- It is used as a purgative and also for treatment of vaginal warts.
- Two derivatives of podophyllotoxin, called eloposide and teniposide are employed for treatment of cancers.



## 12. Majeeth

**Botanical Name:** *Rubia cordifolia*

**Common Name:** Majeeth

**Family:** Rubiaceae

**Taxonomic features:**

- Perennial climbing herb.
- Stem branched, branches, rigid, quadrangular, glabrous or prickly-hispid, specially on the angles.
- Leaves in a whorl, one pair of each whorl usually larger than the other with longer petioles, ovate-cordate, entire, acute, acuminate-cuspidate, cordate at base rarely rounded.
- Inflorescence of axillary and terminal paniculate cyme, trichotomously branched, few-many flowered.
- Fruit 4-5 x 3.5-5 mm, didymous or globose by suppression of one carpel, purplish black when ripe.



**Part Used:** Roots

**Medicinal importance:**

- It is commonly used as a blood purifier.
- It has many other therapeutic properties like calcium channel blocking, anti-diabetic, anti-stress, and anti-platelet.
- It has anti-cancerous activity.



## 13. Kuth

**Botanical Name:** *Saussurea lappa*

**Common Name:** Kuth

**Family:** Asteraceae

**Taxonomic features:**

- It is an upright, robust, tall, perennial herb growing to a height of 1–2 m. Root is stout of about 60 cm having a strong, characteristic odour.
- The leaves are lobate, stalked and are about 1 m long.
- Flowers are dark bluish purple to black coloured arranged in axillary and in terminal clusters.
- Fruit is about 3 mm long, curved, cupped and compressed.
- The root is having a strong characteristic aromatic odour.



**Part Used:** Roots.

**Medicinal importance:** It is used in chronic gastritis, rheumatoid arthritis, asthma and bronchitis in traditional medicine and in inflammation-related diseases.



## 14. Yew

**Botanical Name:** *Taxus wallichiana*

**Common Name:** Yew

**Family:** Taxaceae

**Taxonomic features:**

- It is an evergreen, under-storey tree upto 30 m tall, with a spreading crown
- The bark is reddish-grey or reddish brown, thin, smooth, peeling off in longitudinal narrow shreds. Leaves in to 2 rows, needle-like, 1.5-2.8 by 0.2-0.25 cm, usually curved, acuminate, margins, slightly inrolled, dark-green and shining above.
- Flower inconspicuous, yellowish.
- Seed hard, surrounded by a red fleshy aril, looking like a berry, about 7 mm in diameter.



**Part Used:** Leaves

**Medicinal importance:**

- The leaves have been used internally in the treatment of asthma, bronchitis, hiccup, indigestion, rheumatism and epilepsy.
- A homeopathic remedy is made from the young shoots and the berries. It is used in the treatment of many diseases including cystitis, eruptions, headaches, heart and kidney problems, rheumatism etc.



## 15. Nagchhatri

**Botanical Name:** *Trillium govanianum*

**Common Name:** Nagchhatri

**Family:** Melanthiaceae

**Taxonomic features:**

- It is a perennial rhizomatous herb with a 15–20 cm tall stem.
- It bears 1 or 3 broadly ovate, acute, stalked leaves.
- The flowers are small with 6 yellow basifixed stamens and a whorl of both petals and sepals.
- The fruit is a red berry containing multiple seeds.



**Part Used:** Rhizomes

**Medicinal importance:**

- In folk medicine, the rhizomes of *T.govanianum* are used to treat boils, dysentery, and inflammation, menstrual and sexual disorders, as an antiseptic and in wound healing.
- The plant has analgesic, anti-inflammatory, anticancer and antifungal properties.





## 16. Mushkbala

**Botanical Name:** *Valeriana jatamansi*

**Common Name:** Mushkbala

**Family:** Valerianaceae

**Taxonomic features:**

- It is an aromatic herb up to 50 cm high.
- Rootstock is thick, with 6–10 cm thick, long fibrous roots knotted by uneven circular ridges.
- The plant has several stems, that are 15–45 cm long.
- Leaves are of two types, radical and cauline.
- Radical leaves are cordate–ovate, 2.5–8 cm, toothed or sinuate, long stalked, while cauline leaves are few, small, entire or lobulate.
- Flowers are white or tinged with pink and occur in flat-topped corymbose clusters on erect, nearly leafless peduncles.



**Part Used:** Rhizomes and roots.

**Medicinal importance:**

- Rhizomes and roots have antipyretic and diuretic properties, and are used as hepatic and nervine tonic.
- They are cooling, stimulant, hypotensive, and sedative.
- They are useful in epilepsy, hysteria, hypochondriasis, nervous unrest, and skin diseases.



## 17. Banafsha

**Botanical Name:** *Viola odorata*

**Common Name:** Banafsha

**Family:** Violaceae

**Taxonomic features:**

- It is a glabrous or pubescent herb, about 15cm in height. Its root stocks are very stout and stolons are cylindrical.
- Leaves are dark green, tough, broadly ovate or cordate in shape with crenate margin. They are 1.5 to 5 cm in size.
- Flowers are solitary, axillary forming central flowering rosettes, and are deep violet in shade with bluish-white base, sweet, scented.
- Fruits are in the form of capsules, round, three angled and often purplish in colour.



**Part Used:** Flowers and leaves.

**Medicinal importance:**

- It is used for treating respiratory ailments, insomnia, cough, asthma, bronchitis, whooping cough, fever, constipation, burning sensation, burning eyes, skin disorders, cystitis, throat infection and rheumatism.
- Also used as a cardio-tonic, and tonic for brain, liver, and stomach.



## 18. Timru

**Botanical Name:** *Zanthoxylum armatum*

**Common Name:** Timru

**Family:** Rutaceae

**Taxonomic features:**

- Timru is an evergreen, thorny shrub or small tree, attaining a height up to 6 m.
- Leaves are 4–20 cm long, imparipinnate, pungent, and aromatic with glabrous, narrowly winged petiole having two stipular prickles at the base.
- Leaflets are lanceolate, glabrous on the underside, and occur in two to six pairs.
- The plant can be recognized by its shrubby habit, dense foliage, with pungent aromatic taste, prickled trunk and branches, and small red, subglobose fruits.
- Flowers occur in dense terminal or sparse axillary panicles and are green to yellow in colour.



**Part Used:** Fruits

**Medicinal importance:**

- Fruits, seeds, and bark are used as aromatic tonic in dyspepsia and fever.
- Fruits and seeds are beneficial in dental troubles, thus used to prepare dental paste and powder.
- Tender twigs are used to brush teeth and used as a remedy for toothache.
- The essential oil from fruits has deodorant and antiseptic properties.



## 19. Anardana

**Botanical Name:** *Punica granatum*

**Common Name:** Anardana

**Family:** Punicaceae

**Taxonomic features:**

- The plants are mostly shrubs or small trees attaining a height of 5-7 m.
- The stem is smooth with dark grey bark, quadrangular when young. Branches sometimes spiny.
- Leaves are opposite or sub-opposite, often crowded on short lateral shoots, short- petiolated, simple, entire, exstipulate, 2-8 cm long, oblong or obovate, glossy, bright green, glabrous.
- Inflorescence is terminal or axillary.
- Flowers brilliantly orange-red.



**Part used:** Dried seeds

**Medicinal importance:**

- Improves Cardiac Health.
- Antioxidant
- Aids for Digestive Health.
- Dental Hygiene Protection.
- Elevates the Levels of Haemoglobin.
- Fight Cancer.
- Reduce Joint Pain and Arthritis.
- Improves memory.



## 20. Resin

**Botanical Name:** *Pinus roxburghii*

**Common Name:** Chir

**Family:** Pinaceae

**Taxonomic features:**

- Trees upto 55 m tall.
- Bark dark red-brown, thick, deeply and longitudinally fissured, scaly.
- Needles 3 per fascicle, slender, flabellate-triangular in cross section, 20-30 cm × 1.5 mm, resin canals 2, median, base with persistent sheath 2-3 cm long.
- Seed cones shortly pedunculate, ovoid, 10-20 × 6-9 cm.
- Seed scales oblong, thick, stiff; apophyses strongly swollen, conspicuously transversely ridged; umbo triangular, protruding.
- Seeds 8-12 mm long.



**Part used:** Resin exuded from tree trunks.

**Medicinal importance:**

- It is beneficial in respiratory problems such as bronchitis and asthma.
- Its application reduces joint pain and inflammation due to its anti-inflammatory and analgesic properties.



**A quick pictorial guide to some dried NTFPs**



***Punica granatum***  
Anardana



***Taxus wallichiana***  
Yew



***Morchella esculenta***  
Guchhi



***Berberis lyceum***  
Rasount



***Dioscorea deltoidea***  
Yam



***Xanthoxylum armatum***  
Timru

**A quick pictorial guide to some dried NTFPs**



***Podophyllum hexandrum***  
Bankakri



***Saussurea lappa***  
Kuth



***Valeriana jatamansi***  
Mushakbala



***Trillium govanianum***  
Nagchhatri



***Centella asiatica***  
Brahmi



***Viola odorata***  
Banafsha

**A quick pictorial guide to some dried NTFPs**



***Aconitum heterophyllum***  
Atees



***Rubia cordifolia***  
Majeeth



***Colchicum luteum***  
Suranjan Talakh



***Jurinea dolomiaea***  
Dhoop



***Pistacia integerrima***  
Kakarsinghi



***Picrorrhiza kurroa***  
Kaur



Notes : \_\_\_\_\_

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Myself Suchita Sharma hailing from Rajouri, Jammu & Kashmir, presently undergoing SFS induction Training (2020 - 22 batch) at Central Academy for State Forest Service, Coimbatore. I did my post graduation in Botany from University of Jammu, with specialisation in Plant Pathology.



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