

#### **Foreword**

Himalayas is the important abode of biological diversity. The higher reaches of Himalayas possess wide diversity of flowers. The Valley of Flowers in Uttarakhand is an important Tourist destination for flower lovers. Shri. Danish Khan, State Forest Service (SFS) officer trainee of 2020-2022 batch from Jammu and Kashmir has brought out a marvelous compilation of wild flowers of Kashmir. This compilation will add value to the beauty of Kashmir and will enthuse readers to explore the further. I warmly compliment his efforts in bringing out such wonderful booklet. I also wish him to continue his passion in documentation.

Best Wishes.

V. Thirunavukarasu, IFS APCCF & Principal CASFOS, Coimbatore

#### **PREFACE**

The valley of Kashmir is blessed with a wide spectrum of unique flora and fauna. Wild flowers are found throughout the vast expanse of forests of Kashmir especially the alpine zone of the valley. My On-the Job training provided me the access to many wild flowering plants and these treasure troves are not only treat to the eyes but also have many medicinal properties. Some of them are unique to the Himalayas while others are very alpine in character. A total of thirty two floral species have been included in this booklet for their beauty and medicinal properties. Such documentation is imperative given the fact that very scant information is available about these flowering plants. Besides that, owing to their sensitivity towards climate change, such documentation will be a step towards their conservation. In this booklet, an attempt has been made to mention local names of plants along with their botanical names, short description, uses and photographs for easy identification. The ability to identify wild flowers can change the way one looks at forests and may sow seeds of a new hobby in budding minds. I hope this book will heighten interest in wild flowers and contribute in a small measure towards saving them.

I extend my gratitude to respected Shri V. Thirunavukarasu, IFS and the learned faculty members of CASFOS Coimbatore for their guidance and encouragement. I would also like to thank esteemed senior forest officers of J&K Forest Department for giving me the opportunity to work on the wild flowers of Kashmir.

Danish Khan

# INDEX

S.No.

Scientific name

Vicia sylvetica

32.

**Common Name of Species** 

Wood Vetch

**Common Name of Species** 

Fingerkraut

Scientific name

Potentilla grandilora

16.

S.No.

1.	Androsace sarmentosa	Common Rock Jasmine	17.	Primula dendiculata	Drumstick Primrose
2.	Anemonoides blanda	Balkan Anemone	18.	Primula rosea	Rosy Primrose
3.	Anemonoides sylvestris	Kashmir Snowdrop Anemone	19.	Primula vulagris	Dog Tooth Primose
4.	Cerastium arvense	Field Mouse-ear	20.	Ranunculus acris	Meadow Buttercup
5.	Cirsium vulgare	Spear Thistle	21.	Sambucus wightiana	Kashmir Elder
6.	Erigeron strigosus	Daisy Fleabane	22.	Senecillis jacquemontiana	Jacquemont's Ligularia
7.	Frageria vesca	Wild Strawberry	23.	Senecio squalidus	Oxford Ragwort
8.	Geranium wallichianum	Lal Jari	24.	Saxifera paniculata	Alpine Saxifrage
9.	Iris kashmiriana	Kashmir Iris	25.	Sinopodophyllum hexandrum	Himalayan May Apple
10	Kalmia procumbens	Alpine Azalea	26.	Stachys floccosa	Woolly Woundwort
11.	Leontopodium alpinum	Edelweiss	27.	Strobilanthes wallichii	Kashmir Acanthus
12.	Myosotis alpestris	Alpine Forget-me-not	28.	Taraxcum spp.	Dendelion
13.	Myosotis sylvatica	Wood Forget-me-not	29.	Thymus praecox	Mother-of-thyme
14.	Persicaria affinis	Himalayan Bistort	30.	Tordylium apulum	Mediterranean Hartwort
15.	Persicaria orientalis	Princess-feather	31.	Valerian jatamansi	Indian Valerian

### **COMMON NAME:** COMMON ROCK JASMINE.

Botanical Name: Androsace sarmentosa.



Family	Primulaceae
Location	Langate Forest Division.
Habitat	It prefers mixed forests, rocky slopes and open woodland, at an elevation 2,700–4,000 m (asl)
Description	It is a perennial herb. Leaf rosettes solitary or several forming lax mats, 3-5 cm in diameter - slightly hairy leaves. Umbels of pink flowers with yellow eyes in late spring.
Uses	It is used in the treatment of disorders from tumours, inflammations of fluids and other serous fluid disorders.

## COMMON NAME: BALKAN ANEMONE/ WINTER WINDFLOWER.

Botanical Name: Anemonoides blanda.



Family	Ranunculaceae
Location	Pir Panjal Forest Division
Habitat	Natural habitat is sandy soil enriched by leaf mould in established woodlands, where they receive both full sun and part shade.
Description	Herbaceous tuberous perennials that flowers in spring with daisy like purple blue flowers.
Uses	Used to treat for gout and headaches. The sky-blue petals of the plant were used for dyeing.

## COMMON NAME: KASHMIR SNOWDROP ANEMONE.

Botanical Name: Anemonoides sylvestris.



Family	Ranunculaceae.
Location	Pir Panjal Forest Division
Habitat	Native to temperate meadows and dry deciduous woodlands.
Description	White Flowers with five petals & yellow anthers.
Uses	Root is used to as an anthelmintic and to treat pain.

### COMMON NAME: FIELD MOUSE-EAR.

Botanical Name: Cerastium arvense.



F	amily	Caryophyllaceae
Lo	ocation	Pir Panjal Forest Division ,
H	abitat	Common growing habitats include rocky alpine areas, valleys, meadows, fields, plains, in particular, human disturbed areas such as lawns and roadsides.
D	escription	A plant with several stems leaning on the ground. White flowers having 5 petals with two lobes
U	ses	Plant used to make astringent juices and tonics.



### **COMMON NAME:** SPEAR THISTLE.

**Botanical Name:** Cirsium vulgare.



	3.
Family	Asteraceae.
Location	Pir Panjal Forest Division
Habitat	Habitats include pastures, abandoned fields, areas along roadsides & railroads, cut-over woods.
Description	Spiny herbaceous biennial, much branched to about 1.5 metres high with a deep tap root.
Uses	Mixture of the soaked leaves & roots are used to heal a stiff neck, seizures & nervous disorders. The boiled leaves are effective diuretic and mildly drains the liver, as well as provides comfort when fevers are caused by an overworked liver.

### COMMON NAME: DAISY FLEABANE.

Botanical Name: Erigeron strigosus.



Family	Asteraceae.
Location	Pir Panjal Forest Division
Habitat	Anthropogenic (man-made or disturbed habitats), meadows and fields
Description	The flower head has tubular disk flowers in the center and ray flowers, these often strap-shaped, around the periphery. Flower color blue to purple pink to red & white.
Uses	Variety of uses for the plant as an astringent, diuretic, and expectorant.

## COMMON NAME: WILD STRAWBERRY.

Botanical Name: Frageria vesca.



Family	Rosaceae.
Location	Pir Panjal Forest Division (Doodhpathri)
Habitat	Shaded, fairly damp places in woodland.
Description	A perennial herbaceous plant with Five to Seven white hairy flowers, leaves with toothed margins.
Uses	Edible fruits. Prevents gout, removes tartar from teeth.

### COMMON NAME: LAL JARI.

Botanical Name: Geranium wallichianum.



Family	Geraniaceae.
Location	Langate Forest Division. (Viji Top)
Habitat	Temperate climates.
Description	Hardy flowering herbaceous perennial herb with paired rose-pink to red-purple flowers with pale centers. Flowers are large, 2.5-4 cm across
Uses	Traditionally been used as home remedy for backaches, joint pain, colic, & rheumatism.

### COMMON NAME: KASHMIR IRIS/ MAZAMOND.

Botanical Name: Iris kashmiriana.



Family	Iridaceae.
Location	Pir Panjal Forest Division (Tosamaidaan)
Habitat	Found growing from the valley bottom to high alpines along an altitudinal gradient ranging from 1600 to 4500 m.
Description	Flowers usually violet, bracts scarious at least in upper half.
Uses	Whole plant/Rhizomes used in folk medicine. Used to treat ailments like asthma, inflammation etc.

### COMMON NAME: ALPINE AZALEA.

Botanical Name: Kalmia procumbens.



Family	Ericaceae
Location	Langate Forest Division. (Viji Top)
Habitat	Prefers alpine or subalpine, rocky exposed habitat.
Description	Dwarf shrub, grows no more than 10 cm tall. The pink or white flowers grow in clusters from the upper leaf-axils and are shaped like a crown.
Uses	There are no direct records for usage of Kalmia procumbens, members of the genus Kalmia are known to be extremely poisonous.



## COMMON NAME: EDELWEISS.

Botanical Name: Leontopodium alpinum.



Family	Asteraceae.
Location	Langate Forest Division. (Viji Top)
Habitat	The plant prefers rocky limestone places at about 1800–3000 m (asl)
Description	Perennial plant has 2 to 10 yellow flower heads in a dense cluster, and, below these flower heads, 6 to 9 lance-shaped, woolly, white leaves are arranged in the form of a star.
Uses	Edelweiss has been used as traditional medicine against abdominal aches, bronchitis, diarrhea, dysentery, and fever.

### **COMMON NAME:** ALPINE FORGET-ME-NOT.

Botanical Name: Myosotis alpestris



Family	Boraginaceae.
Location	Langate Forest Division (Viji Top)
Habitat	Temperate biomes at of elevations of 3,000–4,300 metres (asl).
Description	Perennial species with a bushy habit that produces delicate blue small blue flower, with a yellow eye.
Uses	Whole plant is astringent and ophthalmic. Used as a lotion, it is an excellent remedy for many eye diseases. Once leaf juice was used to stop nose bleeds.

## COMMON NAME: WOOD FORGET-ME-NOT.

Botanical Name: Myosotis sylvatica.



Family	Boraginaceae.
Location	Pir Panjal Forest Division
Habitat	Temperate Biomes. Parks, gardens, roadsides, rich and moist forests,
Description	A hairy, tufted, spring-flowering plant that typically grows to 5-12" tall. Small, 5-lobed, blue flowers (3/8" diameter) with yellow or white eyes bloom in dense cymes in spring (April-May)
Uses	The whole plant is used to make medicines. Despite safety concerns, people take forgetme-not for lung problems and nosebleeds.

## COMMON NAME: HIMALAYAN BISTORT/KNOTWEED.

Botanical Name: Persicaria affinis.



Family	Polygonaceae
Location	Langate Forest Division (Viji Top)
Habitat	Temperate Mountains at altitudes of 3,000–4,800 m (asl).
Description	It is a creeping, mat-forming perennial, with narrow green leaves & lollipop spikes of pale pink flowers.
Uses	The leaves are astringent, diuretic, rubefacient & vermifuge. Contains tannins that can help improve diarrhea and mouth & throat irritation by reducing inflammation.

### **COMMON NAME:** PRINCESS-FEATHER.

Botanical Name: Persicaria orientalis.



Family	Polygonaceae.
Location	Tangmarg Forest Division.
Habitat	It is very common near waterbodies like marshes, low land, ponds etc.
Description	It is an annual plant with robust & erect stems about 1–2 m high and densely covered with villous hair. Inflorescences are spike-like (3–7 cm), slightly pendulous, with several spike-like clusters and panicles.
Uses	Usually used to treat rheumatism, dysentery, vomiting and diarrhoea, oedema, beriberi, carbuncle and scabies.



Botanical Name: Potentilla grandiflora.



Family	Rosaceae.
Location	Langate Forest Division
Habitat	This perennial plant grows primarly in the temperate biomes.
Description	Perennial plant 10 - 40 cm long long petiolate leaves spreading with spreading hairs all with 3 leaflets. 5 petals yellow longer than the 10 sepals all similar and welded at their base.
Uses	Extracts of the aerial and/or underground parts have been applied in traditional medicine for the treatment of inflammations & wounds.

# COMMON NAME: DRUMSTICK PRIMROSE.

Botanical Name: Primula denticulata.



Family	Primulaceae.
Location	Pir Panjal Forest Division (Doodhpathri)
Habitat	In the wild it grows in open places such as forest clearings and damp meadows and is often found along the snow melt line.
Description	Herbaceous perennial plant with pretty purple to mauvish-blue flowers with yellowish throats, in compact spherical heads.
Uses	used in treating conditions like cramps, paralysis, rheumatic pain, and insomnia in children.



## COMMON NAME: ROSY PRIMROSE.

Botanical Name: Primula rosea.



Family	Primulaceae.
Location	Pir Panjal Forest Division (Tosamaidan)
Habitat	Prefers damp places such as the edge of a pond or stream, snow-melts, in moisture- retentive neutral or acid soil
Description	Hardy herbaceous perennial With red-tinged leaves and clumps of rich and bright pink flowers.
Uses	Leaves of Primula are known as a remedy against wounds, fevers, ulcers, and sores.

### **COMMON NAME:** DOG TOOTH PRIMOSE

Botanical Name: Primula vulagris.



Family	Primulaceae.
Location	Pir Panjal Forest Division (Tosamaidan)
Habitat	Can be found growing in moist, high altitude alpine meadows, grassy slopes, & forest openings at 1500- 4000 m (asl)
Description	Himalayan perennial herb with mauvish blue flowers while blooming, with compact heads when dry.
Uses	Having antibacterial properties, it is used against wounds & fevers.

## COMMON NAME: MEADOW BUTTERCUP.

Botanical Name: Ranunculus acris.



Family	Ranunculaceae.
Location	Tangmarg Forest Division
Habitat	A wide range of damp and dry grassy places such as meadows, pastures, lawns, verges and dunes, as well as mountain rock ledges.
Description	Bright glossy yellow flowers, about 25 mm across.
Uses	The plant is crushed & applied as a poultice to the chest to relieve colds and chest pains.

### **COMMON NAME:** KASHMIR ELDER.

Botanical Name: Sambucus wightiana.



Family	Viburnaceae.
Location	Tangmarg Forest Division
Habitat	Mountain pathways at altitudes of 2200-3600 m (asl).
Description	Woody herb growing up to 1 11.5 m tall, with green stems Numerous tiny white flowers are borne in flat-topped clusters 5-10 cm across. Flowers are mm across, with 5 spreading petals and protruding stamens.
Uses	The herb is commonly used in the treatment of liver and kidney complaints.



## COMMON NAME: JACQUEMONT'S LIGULARIA.

Botanical Name: Senecillis jacquemontiana.



Family	Asteraceae.
Location	Sindh Forest Division
Habitat	At elevation of 3000-4000m from Pakistan to Kashmir.
Description	It is a shrub 4-5 ft tall. Stem is hairless, reddish brown, grooved. Leaves are broadly ovate-heart-shaped, basally heart-shaped. Flower-heads numerous pedunculed, in elongated or conical racemes, heterogamous, radiate, 2-2.5 cm in diameter.
Uses	Plant has various actions of anthelmintic, antiscorbutic, diaphoretic properties.

## **COMMON NAME: OXFORD RAGWORT.**

Botanical Name: Senecio squalidus.



Family	Asteraceae.
Location	Pir Panjal Forest Division.
Habitat	Native to mountainous, rocky or volcanic areas.
Description	A short-lived perennial herb. It is a yellow-flowered herbaceous plant. It has a composite flowe head known as a capitulum which is actually a cluster of florets.
Uses	Used for treating irregular or painful menstrual periods and symptoms of menopause.

### COMMON NAME: ALPINE SAXIFRAGE.

Botanical Name: Saxifera paniculata.



Family	Saxifragaceae.
Location	Langate Forest Division (Viji Top)
Habitat	Calcareous habitats.
Description	It is an alpine perennial and herbaceous plant. The most easily identifiable feature is its highly dense basal rosette of leaves, which are leathery, flat and stiff.
Uses	Used for treating urinary stones.



## COMMON NAME: HIMALAYAN MAY APPLE/BAN KAKDI.

Botanical Name: Sinopodophyllum hexandrum.



Family	Berberidaceae.
Location	Sindh Forest Division
Habitat	Subtropical to temperate open forests, altitude 2500-4000 m.
Description	Pale pink flowers and bulbous fruit
Uses	Root & rhizomes (though poisonous) have anticancer,

properties.

antifungal and immunodulatory



## **COMMON NAME: WOOLLY WOUNDWORT.**

Botanical Name: Stachys floccosa.



Family	Lamiaceae.
Location	Tangmarg Forest Division (Gulmarg).
Habitat	Grows primarily in the temperate biomes.
Description	Perennial herb with stems ere 40-150 cm, sturdy, obtuse guadrangular, unbranched or with few branches, with a dense white woolly long hairs, leafy. Sepal current greyish-green. Flowers are white pink to pale purple,
Uses	Considered to have anti- inflammatory, antioxidant, analgesic, renoprotective, anxiolytic and antidepressant activity.

### COMMON NAME: KASHMIR ACANTHUS/KANDALI.

Botanical Name: Strobilanthes wallichii.



Family	Acanthaceae.
Location	Langate Forest Division
Habitat	Temperate and tropical zones of Asia.
Description	Herbaceous perennial, tende upright, branching, evergree subshrub with oval, toother leaves and spike of tubulated purple to violet-blue flower Purple blooms appear or once every twelve year (Celebrated as Kand Festival in the Pithoraga District in India).
Uses	Leaf extracts have antibacterial properties, thoug

poisonous as well.



### **COMMON NAME:** DENDELION.

Botanical Name: Taraxcum spp.



Family	Asteraceae
Location	Pir Panjal Forest Division
Habitat	The plant grows in temperate regions of the world in lawns, on roadsides, disturbed banks, and other areas with moist soils.
Description	Herbaceous perennial plant. Flowers composed of numerous small florets.
Uses	Leaf, flower & root used to treat infections and as diuretic agent.

## **COMMON NAME:** MOTHER-OF-THYME.

Botanical Name: Thymus praecox.



Family	Lamiaceae.
Location	Tangmarg Forest Division (Gulmarg)
Habitat	Dry grassland, heaths, dunes, screes & amongst rocks. It grows primarly in the temperate biomes.
Description	Is a creeping, woody-based perennial. The plant measures of to 6 inches tall and it forms a dense mat that tolerated moderate foot traffic. The leaves are fragrant, and bluish-green is color. The flowers are tiny, tubular pinkish-purple blooms that appear from June to September.
Uses	The herb is used in preparations of natural herbal remedies, such as syrups, tinctures, infusions,

decoctions, tea, and oil.

## **COMMON NAME: MEDITERRANEAN HARTWORT**

Botanical Name: Tordylium apulum.



Family	Apiaceae
Location	Langate Forest Division
Habitat	It's habitat is that of cultivated, uncultivated and meadows-pastures, on arid soils in summer, below the lower mountain belt.
Description	The species is hermaphrodite. It is an herbaceous annual that can grow from 20 - 51 cm tall. It thrives in full sun and moist soils. It blooms in spring with clusters of tiny white flowers.
Uses	The leaves of the plant are edible and are used as a potherb and salad vegetable

in Greece. In Italy it is used as

## COMMON NAME: INDIAN VALERIAN.

Botanical Name: Valerian jatamansi.



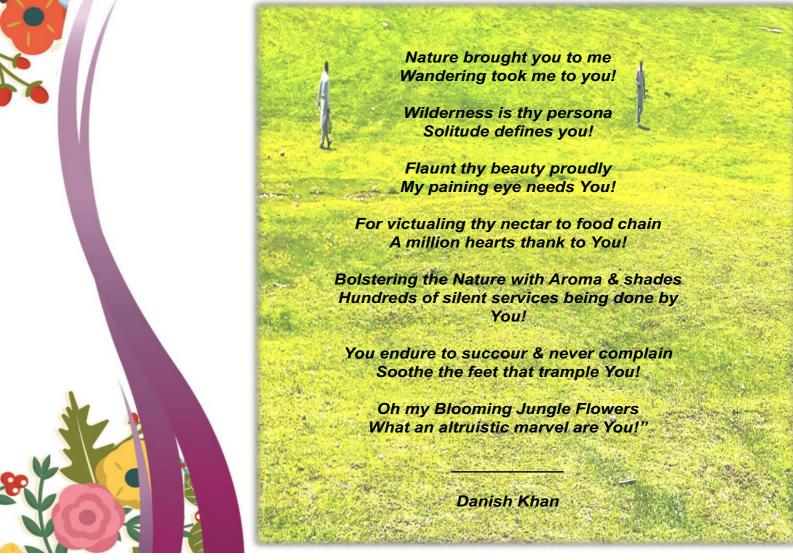
Family	Caprifoliaceae.
Location	Pir Panjal Forest Division
Habitat	Sub-tropical and temperate zones of the Himalayas. 1500 - 3600 metres.
Description	Up to 50 cm high. Pinkish white flowers arranged in clusters on terminal shoots.
Uses	Aromatic herb is used as analeptic, antispasmodic and sedative.

## **COMMON NAME: WOOD VETCH.**

Botanical Name: Vicia sylvetica.



Family	Fabaceae
Location	Sindh Forest Division
Habitat	Local species is found in heathy ground, on steep bushy banks, in thickets & scrub as well as open scrubby areas.
Description	Herbaceous perennial with climbing stems The flowers are 15 to 20 mm long arranged in racemes of up to 18 flowers. The petals are white with purple veins.
Uses	Potential health benefits like anti-Parkinson, antidepressant, anticonvulsant, antimicrobial, cytotoxic, antioxidant, anti- inflammatory and antidiabetes.





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