

Ethnobotanical notes on some medicinal and aromatic plants of Himachal Pradesh

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Himachal Pradesh, which forms a part of the western Himalaya, is a repository of medicinal and aromatic plants and the traditional knowledge associated with these plants. Utilization of plant resources in their day-to-day life has been an age-old practice of the people inhabiting this hilly state. The people living in remote and tribal areas still depend on household remedies for healthcare. The present paper provides information on the indigenous therapeutic application and other traditional uses of 9 plant species that are used by the natives of Himachal Pradesh. Information provided includes scientific name, family name (in bracket), vernacular names, distribution, and ethnobotanical use clubbed with the common uses as recorded from the relevant literature.

Keywords: Ethnobotany, Himachal Pradesh, Tribes, Medicinal Plants, Aromatic Plants, Ethnomedicine, *Gaddi* Tribe, *Gujjar* Tribe, *Kinnura* Tribe, *Bhotia* Tribe, *Swangla* Tribe, *Lahaula* Tribe, *Pangwal* Tribe

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Himachal Pradesh, a hilly state with altitude ranging from 350 m to 7000 m above mean sea level (amsl), covers an area of 55,673 sq km¹. Physiographically, the state comprises of three distinct regions, the Shivalik or outer Himalaya, mid-hills and the greater Himalaya or high altitude zone. The outer Himalaya, that includes the area of Hamirpur, Kangra, Una, Bilaspur districts and parts of Solan, Sirmaur, Chamba and Mandi districts, commonly known as Shivalik hills, ranges from 350 m to 1500 m amsl elevation. The mid-hills comprising regions falling between the elevation range of 1500 m to 3500 m above sea level also known as temperate zone include parts of Sirmaur, Mandi, Kangra, Shimla, Solan, Chamba, Kullu, Kinnaur, and Lahaul-Spiti districts. The greater Himalaya or so-called high altitude alpine zone in the state generally starts from an elevation of 3500 m and above. It includes higher altitude areas of Lahaul-Spiti, Kinnaur, Kullu districts and Pangi tehsil of Chamba district. Because of varied altitudinal gradients and climatic conditions, the state harbours rich plant diversity, which includes around 3400 species of flowering plants¹ ranging from tropical-subtropical to temperate alpine floral elements.

The state of Himachal Pradesh is inhabited by various tribal and a tribal (rural) communities predominantly *Gaddi*, *Gujjar*, *Kinnura*, *Bhot* or *Bhotia*, *Swangla*, *Lahaula* and *Pangwal*. Amongst these ethnic groups, *Gujjar* is a nomadic tribe, whereas *Gaddis* are migratory pastoralists. The tribes like *Kinnura*, *Bhot*, *Swangla*, *Lahaula* and *Pangwal* are the permanent settlers and practice farming and rearing of goats, sheep and milching cattle. These tribes are rich in cultural heritage and have their own traditions and customs. They speak their own dialects like *Kangri* by *Gaddi*, *Kinnauri* by *Kinnaura*, *Lahauli* by *Lahaula*, *Pangwali* by *Pangwal* and *Bhoti* by *Bhotia* respectively. These native people are the custodians of indigenous traditional knowledge associated with their surrounding biological resources. They have been using these resources for various purposes in their daily life for ages.

Besides exploring floristic diversity and inventorization of plant resources of the state²⁻⁸, documentation of traditional knowledge on the utilization of plants has also been initiated by several workers during last two decades⁹⁻¹⁷. Ethnobotanical observations recorded during recent field study tours to different tribal and remote areas of the state and screening of relevant literature¹⁵⁻²¹ enabled authors to identify various species that are being used for

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different purposes by the inhabitants. Among such plants, 9 species were selected so as to provide traditional uses related to these taxa. Besides, providing medico-ethnobotanical uses, scientific name, family name, vernacular names in English (E) and Hindi (H), distribution, and common uses as recorded from the relevant literature are given¹⁸⁻¹⁹.

Observations

1. *Achillea millefolium* Linn. (Asteraceae)

Vernacular names: Yarrow (E), Gandana (H)

Distribution: Yarrow, a native to Europe, is also found widely distributed in Himachal Pradesh between the elevation ranges of 2300 m-3600 m amsl.

Common use: In ancient times, it was known as *Herba militaris*, being used to staunch war wounds. It has long been taken as a strengthening bitter tonic and different kinds of bitter drinks have been prepared from it. Yarrow is used to recover from colds & flu. It is also considered as a useful remedy for menstrual problems and circulatory disorders.

Ethnobotanical use: The leaves are chewed in acute toothache. Initially, it produces pungent taste, followed by cooling tingling sensation and allays the pain. The leaves and the flowering tops of the plant are used to cure gastric problems and fever. A decoction of whole plant is employed for bleeding piles (Fig. 1).

2. *Angelica glauca* Edgew. (Apiaceae)

Vernacular names: Angelica (E), Chora (H)

Distribution: Angelica is distributed in western Himalaya between 2000 m-3000 m altitudes. In Himachal Pradesh, it has been reported from Dhuladhar range, Chhota and Bara Bhangal areas, Chamba, Shimla, Kullu and Sirmour districts.

Common use: Angelica is used to reduce muscular spasms in asthma and bronchitis. It is also used to ease rheumatic inflammation, to regulate menstrual flow and as a stimulant to increase appetite. The stems are candied for culinary use.

Ethnobotanical use: The roots are used as a flavouring agent in vegetable, meat and pulses. The roots are used in treating dyspepsia and stomachache amongst the natives of Himachal Pradesh.

3. *Hyssopus officinalis* Linn. (Lamiaceae)

Vernacular names: Hyssop (E), Jufah (H)

Distribution: Hyssop, a native to the Mediterranean region, is commercially cultivated in Europe, Russia and India. The plant is found in Himalaya from Kashmir to Kumaon between the altitudes of 2600 m – 3800 m. In Himachal Pradesh, it is found in Chamba, Kinnaur, and Lahaul-Spiti districts.

Common use: Hyssop has been reported to be used in coughs, bronchitis and cold. It is a useful remedy for asthma in both children and adults, especially where the condition is exacerbated by mucus congestion. Hyssop is used as a flavouring agent.

Ethnobotanical use: The plant is used to cure colds, cough and lung complaints. Flower tops are also used as substitute of saffron (Fig. 2).

4. *Juniperus communis* Linn. (Cupressaceae)

Vernacular names: Juniper (E), Hauber (H)

Distribution: Juniper is found in Europe, southwestern Asia and North America. In Himachal Pradesh, the plant grows between 3000 m-4200 m elevations in Chhota and Bara Bhangal in Kangra, Kullu, Kinnaur, Churdhar in Sirmour, Mani Mahesh in Chamba and Pattan valley in Lahaul-Spiti districts.

Common use: Juniper is used as tonic, diuretic and also as an antiseptic medicine for urinary tract. It is considered as an effective remedy for curing chronic arthritis, gout, rheumatism and stomach disorders.

Ethnobotanical use: The fruits and oils are used for flavouring food products. The twigs are used as incense. The twigs are also used in various socio-religious rituals particularly in driving away of evil spirits. The native people also use the plant as a remedy for joints pain (Fig. 4).

5. *Origanum vulgare* Linn. (Lamiaceae)

Vernacular names: Wild Marjoram (E), Ban-tulsi (H)

Distribution: Marjoram, a native to Asia, is cultivated for commercial purpose. In India, the herb is found in the temperate Himalaya from Kashmir to Sikkim between 1800-3600 m elevations. In Himachal Pradesh, it is widely found in districts of Chamba, Kangra, Shimla, Kinnaur, Kullu, Lahaul-Spiti and Sirmour between 1800-3300 m elevations (Fig. 5).

Common use: Marjoram tea is an age-old remedy for digestion, increasing sweating and regulates menstruation. It clears sinuses on inhaling steam

of the plant. Wild marjoram is useful to settle flatulence and stimulates the flow of bile. It is considered as an effective remedy for cough, tonsillitis, bronchitis and asthma. The diluted oil is used in toothache and joints pain.

Ethnobotanical use: The paste of the leaves and terminal shoots along with 2-3 black pepper is applied on boils, cuts, wounds, ulcers and eczema. The leaf paste is applied on burns.

6. *Taraxacum officinale* Weber ex Wiggers (Asteraceae)

Vernacular names: Dandelion (E), Karnphool (H)

Distribution: Occurring naturally in Asia. Dandelion is found throughout the temperate Himalaya, from Kashmir to Khasi hills of Meghalaya and Mishmi hills of Arunachal Pradesh. In Himachal Pradesh, the plant is found widely distributed in grasslands, pastures from lower altitudes to alpine meadows.

Common use: Both the Persians and the East Indians use it for liver complaints. The leaves are diuretic. The roots are used as a blood purifier. It also acts as a mild laxative and improves appetite and digestion.

Ethnobotanical use: The roots are used in kidney and liver complaints. The whole plant is crushed into a paste and given orally in snakebites and paste is also applied externally on wound. The leaves are effectively used for fomentation in swollen parts, boils and sprains. The sheep and goats browse it as a potent fodder.

7. *Thymus linearis* Benth. (Lamiaceae)

Vernacular names: Wild Thyme (E), Ban-ajawain (H)

Distribution: Thyme is a native to the west Mediterranean to southwest Italy. In India, it is found widely distributed in Himalayan region from 1800-4000 m elevations. In Himachal Pradesh, the plant is frequently found in the open, rocky slopes and pastures.

Common use: The plant is used as an infusion or syrup to treat flu and colds, coughs, whooping cough, chest infections, and bronchitis. Wild thyme has anti-catarhal properties and useful in clearing a stuffy nose, sinusitis, and ear congestion. It has been reported to be used to expel threadworms and roundworms in children. It is also used in herbal baths and pillows.

Ethnobotanical use: The juice of the herb is used in fever, coughs, colds and stomach complaints.

The plant decoction is used as herbal tea as a preventive measure for indigestion (Fig. 6).

8. *Valeriana jatamansi* Jones (Valerianaceae)

Vernacular names: Valerian (E), Mushk-bala (H)

Distribution: Valerian is a native to Europe and western Asia. The plant occurs abundantly in the temperate Himalaya from Kashmir to Khasi hills between 1500-3500 m elevations. In Himachal Pradesh, it is quite common in forests as undergrowth between 1600-3600 m elevations in Chamba, Kangra, Mandi Sirmour, Kullu, Shimla and Kinnaur districts.

Common use: The valerian roots act as tranquilizer and used for relieving nervous tension, insomnia and headache. It decreases muscular spasm and is useful in treating bowel syndrome, stomach and menstrual cramps.

Ethnobotanical use: Locally, the plant is used as antispasmodic, carminative and in acute stomachache. Decoction is used as a remedy in insomnia and nervous exhaustion. It is also used in *Dhoop* (incense) and blending the tobacco (Fig. 3).

9. *Viscum album* Linn. (Loranthaceae)

Vernacular names: Mistletoe (E), Banda (H)

Distribution: It is native to Europe and northern Asian. In Himachal Pradesh, it is found on the plants of Rosaceae family, Walnut and Willows between 1200-2500 m amsl.

Common use: Mistletoe is chiefly used to lower blood pressure, to ease anxiety and promote sleep. In low doses it also relieves panic attack and headache. Mistletoe is also prescribed for epilepsy. It contains viscotoxins that inhibit tumours and stimulate the immune system.

Ethnobotanical use: The decoction made from whole plant is given in enlarged spleen. The plant is used as nutritious fodder for cattle in Kinnaur area and given particularly to calves and goat kids (Fig. 7).

Conclusion

The present observations revealed that the native people of Himachal Pradesh particularly those living in remote and high altitude areas are largely dependent upon the surrounding plant resources to meet their day-to-day requirements. In addition to the above mentioned species, the local people also use many other plants. These plants form an integral form of their lifestyle and hence have always been revered.



Fig. 1 *Achillea millefolium* Linn.



Fig. 2 *Hyssopus officinalis* Linn.



Fig. 3 *Valeriana jatamansi* Jones



Fig. 4 *Juniperus communis* Linn.



Fig. 5 *Origanum vulgare* Linn.



Fig. 6 *Thymus serpyllum* Linn.



Fig. 7 *Viscum album* Linn.

However due to recent developmental activities and market inclination, a decline in traditional knowledge has been observed. Therefore, greater efforts are required to document traditional knowledge of the local people so as to prepare a comprehensive account of it, which will open new vistas in plant research.

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