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## **Ethnobotanical Uses of Wild Medicinal Plants by Guddi and Gujjar Tribes of Himachal Pradesh**

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### **Abstract**

India is a rich source of plant flora of 2500 documented species and 600-700 species are having medicinal value<sup>1</sup>. About 150 are used commercially. It is reported that Western Himalayas are the abode of 50 percent plant drugs mentioned in the British pharmacopoeia. Medicinal plants are used for preventive, promotive and curative purposes. Eighty percent of the ingredients of drug formulation in ayurvedic are plant based<sup>2</sup>. In compliance with the CBD and WTO, India too has to conserve its natural resources from unfair exploitation<sup>3</sup>. The survey of the area was conducted during March, 2007-October, 2008. The two tribal communities viz. "Gaddis and Gujjars" were interviewed<sup>4-5</sup>. These two nomadic communities were asked to identify the plant and tell its use by them. The samples of the plants were crosschecked with the qualified ayurvedic practitioners of the area and some were identified by the author him self. However, Some of the samples were processed and identified with the help of literature available<sup>6-7</sup> in the library of Dr. Y.S. Parmar University of Horticulture and forestry Nauni Solan. The plant species of the area have been enumerated below in an alphabetic order. Each species have been provided with scientific name, local name, crude drug preparation (as per details provided by the folklore) and its local use. Twenty seven species of Ethnobotanical use were identified from this backward district of Himachal Pradesh.

**Key words:** Ethnobotanical, uses, Forestry Plants and trees, Gujjars, Gaddis, Himachal Pradesh.

## **Introduction**

India is a rich source of plant flora of 2500 documented species and 600-700 species are having medicinal value<sup>1</sup>. About 150 are used commercially. It is reported that Western Himalayas are the abode of 50 percent plant drugs mentioned in the British pharmacopoeia. Medicinal plants are used for preventive, promotive and curative purposes. Eighty percent of the ingredients of drug formulation in ayurvedic are plant based<sup>2</sup>. A repository of herbal wealth existing in different parts of Himachal Pradesh extending from plains to the cold desert of Lahaul and Spiti has been a boon to the poor villagers living in remote and tribal areas. Nearly 70-80 percent world population relies upon traditional medicines. Documentation of the indigenous knowledge and plants is the need of the hour. In compliance with the CBD and WTO, India too has to conserve its natural resources from unfair exploitation<sup>3</sup>.

Himachal has a long tradition of using herbs as household remedies also extracting the herbal wealth from the forest and selling to the local traders. However, a great diversity of medicinal and aromatic plants occurs in the state the pressure is on the traditionally known drugs consumed by the pharmacies. Chamba is a district of Himachal Pradesh and situated in the western part of the state. It lies in between 32°&10// to 33°&13// N latitude and 75 ° 45// 77 ° -33// E longitude covering an area of 674.16 Km Sq. It is such a diversified district that it cover four climatic zones viz. Low hill subtropical, Mid hill sub montane, High hill humid temperate zone and high hill dry temperate zone. The study was conducted in the three zones only viz. mid hill sub montane, high hill humid temperate zone and high hill dry temperate zone. The subtropical zone was left out because most of the drugs and plants have already been documented by earlier studies.

## **Methodology**

The survey was conducted during March, 2007-October, 2008. Folklore data was collected from the local healers called 'Vaids' from the Gaddi and Gujar community. Apart from this, the two communities viz. "Gaddis and Gujjars" were interviewed<sup>4-5</sup>. These two nomadic communities were asked to identify the plant and tell its use by them. The samples of the plants were crosschecked with the qualified ayurvedic practitioners of the area and some were identified by the author him self. However, Some of the samples were processed and identified with the help of literature available<sup>6-7</sup> in the library of Dr. Y.S. Parmar University of Horticulture and forestry Nauni Solan. The plant species of the area have been enumerated below in an alphabetic order. Each species have been provided with scientific name, local name, crude drug preparation (as per details provided by the folklore) and its

local use.

## Results

1) *Aconitum heterophyllum* wall syn. *Aconitum deinoorrhizum* Holmes ex stapf.

Family: Ranunculaceae

Local Names: Mitha jaihar/ Patrish(Chamba)\*, Ativish and Atish (Hindi)

Ethnobotanical uses: It is mainly used to treat the cough and cold. *Aconitum* and karroo when mixed in equal amount and mixed with multani mitti and honey can be used to treat chronic cough.

*Achyranthes aspera* Linn.

Family: Amaranthaceae

Local Names: (Chamba) umblkanda, Puthkanda or Umblokando

Ethnobotanical uses: . Roots are applied as paste around joints to treat pain. Its 3-5 seeds daily for 3-5 days are given to treat the dry cough.

*Angelica glauca* Edgew

Family: Umbeliferae(Apiaceae)

Local Names: Chora, egue(Chamba) and Choraka

Ethnobotanical uses: Its roots are given to the animals and human when loss of appetite is there 5-10 gm of crushed roots are for 3-5 day are sufficient to double the hunger and liver tonic.

*Artemisia scoparia*

Syn; *Artemisia brevifolia* Wall.syn: *A. maritime* Linn.

Family: Compositae(Asteraceae)

Local Names: Haul(Chamba)\*and Nurcha

Ethnobotanical uses: The leaves of the plant are used to stop the intestinal bleeding in the animals. The leaves are administered either orally or in decoction form through a bamboo made 'nalka'.

*Asculus indica* Colebr.

Family: Hippocastanaceae

Local Names: Goon (Chamba), Bankhor and Kanor

Ethnobotanical uses: *Asculus indica* is used by the Gaddis and Gujjars of Bharmour and Salooni areas for the soap making and its flour after many washings is used for treatment of ailments such as Joint pain

***Asparagus abscedens* Roxb.**

Family: Liliaceae

Local Names: Sansfai(Chamba), Shatabari

Ethnobotanical uses: The roots of this plant are dug and outer bark is removed. The roots so cleaned are put in the Brassica oil and the formulation is used to stop the hair fall.

***Acrorus calamus* Linn.**

Family: Araceae

Local Names: Baryan, Bare and Bach

Ethnobotanical uses: It is found in the mid hill region of Chamba. Roots of the plant are macerated in the form of paste and applied to the chest of the patient suffering from chest congestion and bronchitis.

***Aguja bractosa* Wall. Ex Benth.**

Family: Lamiaceae(labiatae)

Local Names: Neelkanthi

Ethnobotanical uses: It is found in the mid hill region of Chamba and Bharmour region of the district and is called '**neelkanthi**'. Its roots are used to treat the snakebite. The roots are applied in the form of paste and in the form of decoction.

***Centella asiatica* (Linn.) Urban**

Syn: *Hydrocotyle asiatica* L.

Family: Umbellifereae

Local Names: Brahmi(Chamba) and Mandukparni(Hindi)

Ethnobotanical uses: It is found in the cool and wet areas. The whole plant called "Panchang" is used in the treatment of leprosy, boils and skin diseases. Its major use is as memory enhancer when given in the decoction form to the patient suffering from loss of memory.

***Cinnamomum tamala* Neres & Ebesm**

Family: Lauraceae

Local Names: Mitha patter (Chamba),Tajpata and Gurupatraj

Ethnobotanical uses: Its leaves are used by the Salooni people as mouth freshener and bark is used for making decoction in treatment of internal heat

***Dactylorhiza hatagirea* Soo**

Syn: Orchis latifolia L.

Family: Orchidaceae

Local Names: Salmpanja

Ethnobotanical uses: It is found in the high hill region of Chamba. Its roots are crushed into fine powder and filtered through cotton cloth and given to the person suffering from general weakness, loss of alertness, diabetic, lose motions. Person suffering from the impotency is also given the powdered drug to regain erection.

***Dioscoria deltoides* Wall.ex Kunth.**

Family: Dioscoreaceae

Local Names: Kuth(Chamba) and Singli mingli

Ethnobotanical uses: It is found in high hill region of Chamba. The rhizomes are used in messaging the joints and crushed rhizomes are used with kneaded flour and salt to animals in treatment of digestive ailments and in treatment of common cold.

***Emblica officinalis* Gaertn.**

Family: Euphorbiaceae

Local Names: Amla and Aonla

Ethnobotanical uses: It is very common tree in low hill region of the district. Harad, Baheda and Aonla are mixed in equal quantity and crushed to form fine powder. Its fruits are used to cure the stomach diseases, eye infection, fever, and arthritis. Brassica oil mixed with aonla fruits is used to blacken the hairs.

***Ficus bengalensis* Linn.**

Family: Moraceae

Local Names: Fagudaq/Bar(Chamba), Bargad(Hindi)

Ethnobotanical uses: Its leaves are used in internal injury by the people of mid hill region such as Chamba, Salooni and Tisa blocks of the district.

***Jatropha curcus* Linn.**

Family: Euphorbiaceae

Local Names: Jablotha(Chamba), Jmal ghota(Hindi)

Ethnobotanical uses: Its seeds are given to the patients to induce the vomiting. Oil is extracted from the seeds and applied in the joint region of the body to relieve the pain from arthritis.

***Junipers dolomia***

Syn: *Jurnea macrocephala* Benth.

Family: Compositae/Asteraceae

Local Names: Dhoop

Ethnobotanical uses: It is one of the endangered species of alpine region of Chamba and exploited mostly for fragrance and used in the scented agar battis.

***Primula macrophylla***

Syn: *Primula nivalis* D. Don

Family: Primulaceae

Local Names: Ccharmar (Chamba)

Ethnobotanical uses: It's found in the region covering the altitude upto 1800 meter above mean sea level. It is used to control the acidity. Its leaves are used after crushing. The tablets of size 5-10 gm are prepared and administered orally to the person suffering from acidity and ulcer.

***Picrorhiza karoora* Royle ex Benth.**

Family: Scrophulariaceae

Local Names: Kaur (chamba) and Kutki

Ethnobotanical uses: Its roots are used to improve the appetite. The decoction of this with ajwan is also given to purify the blood in case of skin infection

***Podophyllum heterophyllum***

Syn: *Podophyllum hexandrum* Royale

Syn: *P. emodi* Wall.

Family: Podophylaceae

Local Names: Bankakri

Ethnobotanical uses: It is found in the high hill region of Chamba. Its roots are crushed and given to the patient suffering from cancer.

***Rheum australe:***

Syn: *Rheum emodi* Wall. Ex Meissn.

Family: Polygonaceae

Local Names: Chukri (Chamba) Revandchini (Hindi)

Ethnobotanical uses: It is used as tooth cleaning powder and sprayed over the wounds for early healing. Roots are also given to the animal in cold. Roots along with the ash guard are fed to the animal suffering from loss of appetite and general weakness.

*Sapindus mukrossii* Gaertn.

Family: Sapindaceae

Local Names: Dodae(Chamba) and Ritha (Hindi)

Ethnobotanical uses: The tree is found in the subtropical part of the study area which is the winter abode of these communities. Its roots are used in treating the poison. *Sapindus mukrossii* fruits are mixed with the *Asculus indica* seeds and a shampoo is prepared to wash the warm clothes and hairs by local people.

*Swertia chiriyata* Karst.

Syn: *S. Chirata* buch. Ham.

Family: Gentanaceae

Local Names: Chiraita

Ethnobotanical uses: Its roots and stem is used to treat fever, 'Atisar', anal diseases, cough, and cold. The general use of the plant parts is in the powder form, however decoction is also prepared from the plant stem and roots by boiling them in water.

*Texus baccata*. Hook.f.

Syn: *Texus wallichiana* Zucc

Family: Taxaceae

Local Names: Rakhala /Birhmi(Chamba) and Himalayan Yew(Hindi)

Ethnobotanical uses: It is used by the local people for making black tea though. It is bitter in nature but assumed to be the most refreshing and energetic

*Terminalia bellerica* Roxb.

Family: Combretaceae

Local Names: Bahera

Ethnobotanical uses: *Terminalia bellerica* is used to treat the eyes, heart problems and ear infections. Its fruits are mixed with aonla to control the hair loss.

*Tinospora cordial* (Willd.) Miers.

Family: Menispermaceae

Local Names: Amrita and Giloe Amlora (Chamba)

Ethnobotanical uses: Its local name is Amlora. Its water extraction is used to treat the animals in fever and water boiled extract is used in treatment of foot diseases.

*Viola odorata* Linn.

Family: Violaceae

Local Names: banfsa

Ethnobotanical uses: It is used in the treatment of sleeplessness and fever. Flowers of the plant are boiled in the water and the decoction as prepared is given to the patient.

*Vitex nigundu* Linn.

Family: Verbenaceae

Local Names: Banna, Nirgundi and Sambhalu

Ethnobotanical uses: Leaves of *Vitex nigundu* decoction is used in internal injury. Its leaves are also tied around (tying is called 'Dava') the area of the body having internal injury. The leaves are burnt in the fire during rainy season to keep the mosquitoes away from the animals and human beings

## Discussion

Nearly 27 species of medicinal plants have been listed in the paper. Similar kind of observations regarding flora of Bilaspur district of Himachal Pradesh India were made by Bhardwaj(2006). A multiple of home remedies are employed for the treatment to cure the stomach diseases, eye infection, fever, and arthritis, blacken the hairs, refreshing mind, the hair loss, general weakness, loss of alertness, diabetic, lose motions and impotency.

Mostly the drugs are prepared in the form of paste, powder, decoction, extract, smoke, and even as tea. Many of the reported species are commonly used as folk medicines either directly i.e. in fresh. Studies on the traditional medicinal plants have revealed that the local people of Chamba are not prosperous economically and prefer local medicines due to low cost and ignorantly also.

The information generated from the present study regarding the medicinal plant use by Guddies and Gujjar tribes need a thorough phytochemical investigation including alkaloid extraction and isolation along with few clinical trials. The knowledge regarding the natural habitat it will help to further conserve these species *in situ*. The claimed therapeutic uses of the plant species call for the modern scientific studies to establish the safety and effectiveness and to promote the scientific cultivation, which will protect forests and conserve the wild flora.



\* (Chamba) : refers to local name of the plant by the tibial people prevalent in Chamba only.

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