

Medicinal Plants used by the ethnic people of Tiun Hill Range of District Bilaspur, Himachal Pradesh, India

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Abstract: *The present study deals with the documentation of field observations on the traditional use of medicinal and aromatic plants by the inhabitants of the ethnic people of villages of Tiun hill range of District Bilaspur of Himachal Pradesh. The hill range is inhabited by different ethnic groups. A large number of plants of local flora are used to cure various ailments of humans and livestock. Total of 22 plant species are explored for the treatment of various diseases and other purposes. Some plants which are found common in the hill range are Acacia catechu, Acorus calamus, Andrographis paniculata, Citrus lemon, Juglens regia, Sapindus mukorssi, Withania somnifera etc. This study documents valuable information for traditional remedies and contributes to the usage of medicinal plants in the study area.*

Keywords: *Ailments, Aromatic, Diseases, Local communities, Plant diversity*

Introduction: Himachal Pradesh is known as Devbhoomi and a land with rich biodiversity. It is a treasure house of traditional knowledge. It has many rare medicinal plants. The people of the Shivalik region are also well known for the use of traditional knowledge to cure different ailments. Tiun hill range is one of the high hill ranges of the district Bilaspur and fall under Shivalik hill region, also known for its rich source of plant diversity. The paper is an attempt to highlight the worth of plant diversity used to cure the different ailments by the local people from time immemorial inhabiting the Tiun hill range of District Bilaspur, Himachal Pradesh. It is an established fact that ethnobotany (the ancient science) of human health had its origin in the state of Himachal Pradesh, the land of ‘Rishies’ and ‘Munies’ having a geographical extent of 55,673 sq kms ranging from 244-6,750m elevation under the lesser Himalayas. Altitudes in the district vary from the lowest 305 meters to the highest 1944 meters. The state has a rich diversity of plants that are being used in various Ethno botanical practices by the indigenous people since time immemorial. However, information pertaining to documentation of indigenous knowledge and practices relating to the utilization of the plant species of the state is very meager (Cook 1996, Srivastava 2003a, b; Seth 2006).

The Study Area: The Tiun hill range is situated in the Shivalik range of lower Himalaya. The Tiun hills are famous for Tiun fort, Sariun fort, Naurangarh fort, Hadimba temple and Sidh Gurumath. district Bilaspur of Himachal Pradesh has an area of 1,167 Km², and a population of 381,956. As of 2011, it is the 3rd least populous district of Himachal Pradesh (Kumar & Vyas 2019). The people who are residing in the villages of the hill range try to take a lot from the plant resources because cities are very far from their reach (villages). This is a small attempt which is made to explore and document their valuable knowledge on use of different plant parts.

Methodology: This paper is based on the methodology outlined by Jain (1987) and herbarium sheets of the plants were made as per the known herborizing practices outlined by Jain & Rao (1977). Botanical identification of the collected species was done with the help of regional floras (Chauhan 1999; Chowdhery & Wadhwa 1984; Collett 1902; Dhiman 1976, Polunin & Stainton 1984; Stainton 1988) and later carefully matched with the authenticated specimens at the herbarium of Botanical Survey of India, Dehradun, India.

Collection of data: Extensive field surveys were conducted in various villages situated in Tiun Hill range of District Bilaspur of Himachal Pradesh during the study period. The information pertaining to the data has been collected from the elders and knowledgeable persons who are a permanent resident of different villages and making use of the plant diversity of the hill range. Prior to the visit to research sites, a questionnaire was designed. The traditional usage of plant resources was accumulated with the questionnaire and through participatory techniques. Participation was fascinated by how people utilize plant material. The ethnomedicinal importance of the collected plants containing the information about the vernacular name of the plants, part used, and medicinal use was recorded through detailed discussion with local people and traditional healers (Jaiswal et al. 2021).

Results & Discussion: The results of the study are presented in Table 1. The genera of plant species from the study area are arranged in alphabetical order. For each species, scientific name, family, vernacular name, part used, traditional mode of its use as edible and medicinal, as well as diseases treated, are provided. A total of 22 plant species in 16 families are documented for the treatment of various chronic ailments in the studied area. The local people and traditional healers are using these plants to treat various diseases of humans. The greater number of ethnomedicinal plants are recorded from the families Acanthaceae, Anacardiaceae, Fabaceae, Liliaceae, Rutaceae and Zingiberaceae having 2 plant species each. Ten families namely Amaranthaceae, Araceae, Asteraceae, Juglendaceae, Lamiaceae, Lytheraceae, Meninspermaceae, Oxalidaceae, Rosaceae and Solanaceae species each. Figure 1 showing the ascending order of the no. plants parts employed for medicinal purposes. All the delineated species hold great potential for overall exploration for the welfare of mankind.

Table 1: Plants used by Ethnic people for various uses

Plant Name/ Vernacular name	Family	Parts Used	Folk uses
<i>Acacia catechu</i> (L.f.) Willd. (Khair)	Fabaceae	Leaf & wood	Dry leaf powder mixed with amla and reetha powder is used to dye hair naturally and also increase the volume and shine of hair. Katha (wood part) is used to cure oral sores and blisters.
<i>Achyranthes aspera</i> Linn. (Puthkanda)	Amaranthaceae	Whole plant & Seeds	Whole plant powder mixed with honey taken on an empty stomach regulate digestion. Seeds taken regularly help to reduce body weight.

			Stems are used as to clean teeth and for the prevention of gum problems.
<i>Acorus calamus</i> Linn. (Barae)	Araceae	Rhizome & leaf	Rhizome powder taken with honey at bedtime good remedy for constipation and also stimulate appetite. Paste of leaf with rose water and honey is good for skin diseases like acne, dark spots.
<i>Adhatoda vesica</i> Nees (Bassuty)	Acanthaceae	Leaf	Decoction of leaves prepared in water is good remedy for rheumatic fevers. The decoction is also good in dysentery.
<i>Aloe-barbadensis</i> Mill. (Dwarya)	Liliaceae	Leaf	Aloe vera gel is good for constipation. Gel is good for hair growth.
<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees (Kalmegh)	Acanthaceae	Whole plant	Decoction prepared by whole plant in water is used to treat body infection and fever. Decoction prepared with kali mirch, methi, saunf, laung in water is useful in sore throat, coughs and allergies.
<i>Asparagus officinalis</i> L. (Sansaerbai)	Liliaceae	Roots	Root powder mixed with milk taken orally at bedtime treats constipation. Root powder with water provides relief during upset stomach. Dry leaf powder taken with honey thrice a day gives relief in cough.
<i>Bauhinia purpurea</i> Wall. (Karyala)	Fabaceae	Leaf	Leaves infusion is used for treating piles and as a laxative. Bark juice is used in diabetes and for expelling worms.
<i>Citrus lemon</i> Linn. (Neembu)	Rutaceae	Fruit	Lemon juice mixed with Mentha leaf juice is used to cure vomiting, headache, and stomach disorders and improve digestive problems of the body. Lemon juice with honey taken empty stomach in the morning help to control body weight.
<i>Curcuma longa</i> Wall. (Haldi)	Zingiberaceae	Rhizome	Turmeric powder boiled in hot milk is used as a treatment for internal injuries, stomachache and abdominal bloating. Turmeric powder mixed with gram flour, honey, and lemon juice is used to prevent acne and skin problems. Turmeric powder mixed with sarson oil is applied on the wound to prevent infection and to heal the wound early. Gargals of turmeric powder is used for the treatment of throat sores and mouth ulcers.
<i>Juglens regia</i> Linn.	Juglendaceae	Fruit	Dry part of fruit soaked in water overnight and consumed in the

(Khod)			morning for brain development, good for skin disorders and arthritis problems. Green portion of fruit is good to cure teeth problems and mouth sores. Leaf juice is used for the treatment of intestinal worms.
<i>Mangifera indica</i> Linn. (Aamb)	Anacardiaceae	Leaf	Mango leaf juice helps to cure diabetes, flatulence and blood pressure. Decoction prepared by boiling mango leaves in water with dalchini and Kali mirch with little honey used to cure cough and sore throat.
<i>Murraya koenigii</i> (Linn.) Spreng. (Gandhelu)	Rutaceae	Leaf	A tea prepared by curry leaves increase digestion and improves bowel movement and treats piles. Juice of leaves is consumed to relieve kidney pain and help to control high uric acid.
<i>Ocimum sanctum</i> Linn. (Ram tulasi)	Lamiaceae	Leaf	Juice prepared by tulasi leaves consumed in an empty stomach is good appetizer, prevent gas problems, constipation and removes kidney stones. Decoction prepared by tulasi leaves, kali mirch, laung with sendha namak is used to cure cold and chest congestion.
<i>Oxalis corniculata</i> Linn. (Khati-amli)	Oxalidaceae	Leaf	Poultice of leaves made with bhringraj oil to cure headaches. Raw leaves are chewed to treat mouth sores.
<i>Psidium guajava</i> Linn. (Amrood)	Myrtaceae	Fruit	Ripe fruit is eaten before meal is used to give relief in constipation. Guava leaf is used for stomachache and mouth sores.
<i>Punica granatum</i> Linn. (Anaar)	Lythraceae	Seed	Seed juice is used by anemic people to increase the blood level, also increase the functioning of heart. Bark juice used to expel intestinal worms.
<i>Sapindus mukorossi</i> Gaertn. (Gandhela)	Anacardiaceae	Seed	Seed form natural lather like soap used to wash hair and cloths. Paste of fruits prepared with amla powder in sarson oil apply on head to remove lice, control greying of hair and stimulate hair growth.
<i>Spilanthes paniculata</i> Wallich ex DC. (Akarkara)	Asteraceae	Flower	Flowers chewed for the treatment of toothache. A medicine is prepared from flowers with the kali mirch, ajwain, laung and tulasi for the prevention of mouth problems in infants. Flower tea is used to treat cough, cold and digestion problems.
<i>Tinospora cordifolia</i>	Menispermaceae	Leaf & stem	Paste prepared from stem and leaf

(Willd.) Hk. F. & Th (Giloy)			powder with amla and shikakai powder is good for hair growth. Decoction prepared from stem in water boost the immune system, cure diabetes, reduces fever and joint pain.
<i>Withania somnifera</i> Linn. (Ghodgandh)	Solanaceae	Leaf	Dry powder of leaves mixed with honey taken orally thrice a day is used to treat joint pains. Decoction prepared by leaves with ginger is used for breathing problems.
<i>Zingiber officinale</i> Rosc. (Aaddah)	Zingiberaceae	Rhizome	Juice of ginger rhizome with lemon juice and salt is used to treat nausea, vomiting, stomachache and intestinal infection. Zingiber tea is used to relieve menstrual cramps, migraine headaches and muscle pain.

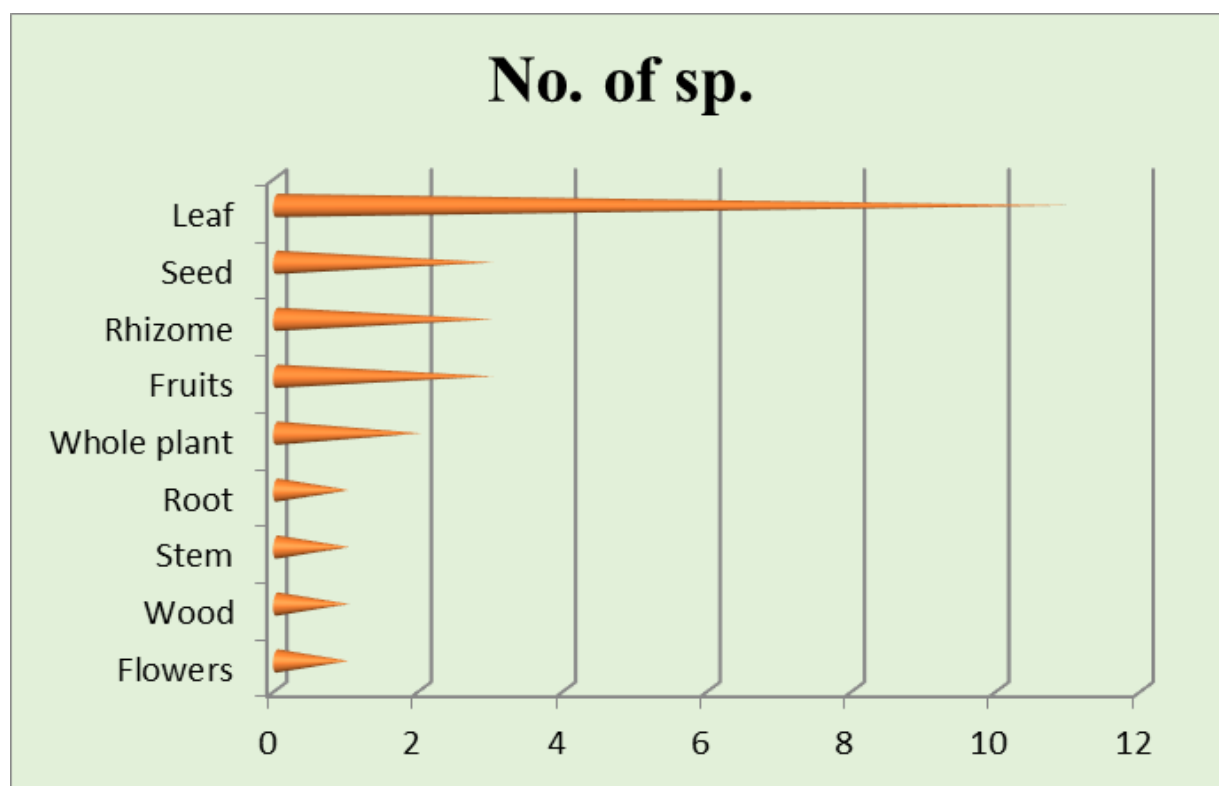


Figure 1: Histogram showing the number of plant parts used by the Ethnic People

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