

Ethnobotanical Studies on Wild Edible Plants of Tidong Valley of District Kinnaur (H.P)

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Abstract: *The wild edibles served as a dietary supplement and medicine for thousands of years, particularly in the tribal and rural areas of the Himalayas. India is home of large number of indigeneous tribes who are still untouched by the lifestyle of this modern world. These tribal people have their own culture, tradition, language and lifestyle. The state of Himachal Pradesh is inhabited by different tribal communities of which Kinnaura is one of them. Native people of Tidong valley in district Kinnaur are still dependent on natural plant resources and still collect root, shoot, fruits, flowers and other forest produce to supplement their main diet. A total of 44 wild food plants, belonging 38 genera and 28 families were reported from Tidong valley of which herbs, shrubs, trees and climbers are 25, 14, 4 and 1 respectively. As cultural and biological diversity are closely interlinked, the traditional knowledge of particular region has great potential to contribute to environmental conservation and management.*

Keywords: Edible plants, Ethnobotany, Kinnaur, Wild plants, Tidong, Tribes

1. Introduction

Ethno-botany is the study of relationship between plants and people. Traditional ethno-botanical knowledge is generated by a group of people through generations to generations who are living in close contact with nature. Since prehistoric times plants have been used virtually in all cultures as a source of food, medicine, fodder, fuel, dye, oil etc. Edible parts of wild plants (fruit, flower, leaves, tubers and rhizomes) are the nature's gift to mankind and these are not only delicious and refreshing but also the chief source of vitamins, minerals and proteins. These wild edible plants are the normal food of forest tribes and cattle grazers. These plants also plays very important role in the livelihoods of rural communities. Most rural communities depend on the wild resources including wild edible plants to meet their food needs in periods of food crises, as well as additional food supplement. Since ancient times, wild plants, played a very important role in human life and have been used for food, medicines, fiber and other purposes. It is estimated that in India about 800 species are consumed as food plants, chiefly by the tribal inhabitants. The state Himachal Pradesh located in Western Himalayan region is endowed with rich biodiversity which is unique and representative of the area. Various studies have been carried out on ethno-botanical and ethno-medicinal uses of floristic diversity in Himachal Pradesh (Uniyal and Chauhan, 1971; Chauhan, 1999; Uniyal *et al.*, 2006; Samant *et al.*, 2007; Sood and Thakur, 2004; Rana and Samant, 2011 and Sharma *et al.*, 2013). Kinnaur, the north-eastern frontier district of Himachal Pradesh lies on both the bank of the Satluj. It is secluded, rugged and mountainous region situated between 31° 05'50'' and 32° 05'15'' North latitude and between 77° 45' and 79° 00'35'' East longitude. Tidong valley is one of the seven valleys of district Kinnaur. This valley derives its name from 'Tidong' a large torrent arises on the Indo-Tibetan frontier. Holding a north-westerly course along the north-eastern base of the huge Raldang peak it falls into Satluj on the left bank. The stream which runs its course in the valley is known as Tirung or Tidong valley. It is about 56 kilometers in length and within itself the valley encloses villages of Kuno,

Charang and Thangi. There are few dwarf pines, mountain ashes and some bushes except on the north-western slope where one come across deodar and chilgoza. The land appropriate for the cultivation is 32 kilometers. The village Charang is highest about 3600 m high from mean sea level. Being rugged in nature, full of rocks, caves, the population of the valley is rather low and the communication with the outside world is confined to those who have to go in or come out unavoidably. The people of this valley also grow cereals, pulses and vegetables but most of them largely depend on plant resources growing in their surroundings to meet various food requirements. Though this knowledge is passing orally from one generation to another and it has not been documented yet. Documentation of such indigenous knowledge is essential and necessary for the conservation and utilization of biological resources.

2. Material and Methods

Ethnobotanical study of wild edible plants was conducted between April, 2010 to April 2011 in the Tidong valley of district Kinnaur. During survey information was collected from Tidong valley of district Kinnaur. The usual personal observations, oral interviews, discussions with the villagers were the bases of collection of data about the uses of the plants. At the end of each interview, the plant specimens were collected, dried by using routine botanical collection and herbarium techniques, identified and preserved (Jain & Rao, 1997). Samples of recorded herbs, shrubs and trees were identified in the laboratory with the help of (Polunin and Stainton, 1984 & Stainton, 1988) and local floras (Chowdhery and Wadhwa, 1984; Dhaliwal and Sharma, 1999; Aswal and Mehrotra, 1994; Nair, 1977). Plants species voucher specimens of recorded plants have been kept in Department of Botany Himachal Pradesh University Shimla (H.P.) India

3. Results and Discussion

As the issues related to food security and availability of healthy nutritious food is quite important for the human

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beings in the present scenario. Wild plants are more nutritious and provides additional nutritional supply for maintaining their vitality and sound health. The knowledge and utilization pattern of edible wild plants vary according to different localities and communities which reflects their culture and traditions. Such knowledge appears to be the result of continued reliance of local communities on the wild edible plants. It has been observed that the tribal people of Himachal Pradesh are still dependent on natural plant resources for meeting their livelihood requirement. However, most of the wild edibles are consumed on seasonal basis depending upon their availability. During the survey 44 wild food plants, belonging 38 genera and 28 families were reported from Tidong valley of which herb, shrub, tree and climber is 25, 14, 4 and 1 respectively (Table -1). The result of the study revealed that knowledge about the edibility of most wild edible plant species is still maintained among the study communities and these wild food plants are eaten by most of the families during their availability. The

extreme cold arid conditions enforced these tribal people to depend upon nature for their food, shelter, medicine, fodder, fuel and other necessities of life. Besides this these wild food plants fulfill not only the food requirements but also serves the medicinal purposes in their day to day life. It is generally found that the local inhabitants play a significant role in taking conservation measures to protect the plant resources in their vicinity. As today the land holdings is decreasing and population is increasing rapidly, hence it is very necessary to search for other possible source of food. Documentation of wild edible plants from ethno-botanical approach is important for enhancing the understanding of indigenous knowledge systems and for conservation. But in recent times, the old traditional practices in many tribal communities are at risk and gradually decline due to modernization hence there is urgent need to study such knowledge systems and find innovative ways of tapping their potential for the welfare of mankind.

Table 1: List of Plants with Botanical Name, Family, Common name, Habitat and Part used

S. No	Plant	Family	Common name	Habit	Parts used
1.	<i>Aesculus indica</i>	Hippocastanaceae	Indian Horse-Chestnut, Kanor	Tree	Nuts
2.	<i>Alliaria petiolata</i>	Brassicaceae	Poorman's Mustard	Herb	Leaves
3.	<i>Allium oreoprasum</i>	Alliaceae	Lostang, jungli lostang	Herb	Leaves
4.	<i>Silene conoidea</i>	Caryophyllaceae	Trakla	Herb	Seeds
5.	<i>Berberis lyceum</i>	Berberidaceae	Kashmal, Chutrum Chatroi, Kulsho	Shrub	Fruits
6.	<i>Bunium persicum</i>	Apiaceae	Kala-jirah, Siah-Zirah,	Herb	Fruits
7.	<i>Cannabis sativa</i>	Cannabaceae	Cannabis, Hemp, marijuana, Bhang, Charas, Ganja	Herb	Flowers, Leaves
8.	<i>Capparis spinosa</i>	Capparaceae	Caper plant, Kakri	Shrub	Buds and Fruits
9.	<i>Capsella bursa-pastoris</i>	Brassicaceae	Shepherd's purse, Kan	Herb	Leaves
10.	<i>Carum carvi</i>	Apiaceae	Mako zeera	Herb	Leaves, Seeds, Root
11.	<i>Celtis australis</i>	Ulmaceae	Kharak, Kru	Tree	Fruits
12.	<i>Chenopodium album</i>	Chenopodiaceae	Bathua, sag	Herb	Leaves
13.	<i>Chenopodium foliosum</i>	Chenopodiaceae	Chee	Herb	Leaves
14.	<i>Debregeasia saeneb</i>	Urticaceae	Pincho	Shrub	Fruits
15.	<i>Dioscorea deltoidea</i>	Dioscoreaceae	Singli-Mingli	Climber	Tubers
16.	<i>Diplazium esculentum</i>	Dryopteridaceae	Lingad	Herb	Curled fronds
17.	<i>Duchesnia indica</i>	Rosaceae	Strawberry	Herb	Fruits
18.	<i>Elaeagnus parvifolia</i>	Elaeagnaceae	Ral, Ralla	Shrub	Fruits
19.	<i>Fragaria vesca</i>	Rosaceae	Alpine Strawberry, Babashoch	Herb	Fruits
20.	<i>Gaultheria trichophylla</i>	Ericaceae	--	Shrub	Succulent calyx
21.	<i>Hippophae rhamnoides</i>	Elaeagnaceae	Seabuck thorn, Sutz	Shrub	Fruits
22.	<i>Juglans regia</i>	Juglandaceae	Walnut, Akhrot, Ka	Tree	Nuts
23.	<i>Impatiens glandulifera</i>	Balsaminaceae	Ticktoc	Herb	Seeds
24.	<i>Lonicera asperifolia</i>	Caprifoliaceae	--	Shrub	Fruits
25.	<i>Mentha arvensis</i>	Lamiaceae	Mint, Pudina, chatni	Herb	Leaves
26.	<i>Mentha longifolia</i>	Lamiaceae	Horsemint	Herb	Leaves
27.	<i>Nicandra physaloides</i>	Solanaceae	Apple of Peru	Herb	Fruits and Leaves
28.	<i>Nusturtium officinale</i>	Brassicaceae	Watercress, Bolku, Can	Herb	Leaves
29.	<i>Oxalis corniculata</i>	Oxalidaceae	Indian sorrel, Khatti-mithi	Herb	Leaves
30.	<i>Phytolacca acinosa</i>	Phytolaccaceae	Sweet Belladonna, Zorbo	Herb	Leaves
31.	<i>Pinus gerardiana</i>	Pinaceae	Neoz, Ree	Tree	Fruits
32.	<i>Ribes orientale</i>	Grossulariaceae	Gooseberry, Sho	Shrub	Fruits
33.	<i>Ribes rubrum</i>	Grossulariaceae	Red Currant, Ralashoo	Shrub	Fruits
34.	<i>Rosa webbiana</i>	Rosaceae	Rose, Lama uh.	Shrub	Fruits
35.	<i>Rheum australe</i>	Polygonaceae	Aarch, Archa, Chuchi	Herb	Leaves and Flowers
36.	<i>Rheum spiciforme</i>	Polygonaceae	Chukri	Herb	Petiole
37.	<i>Rubus ellipticus</i>	Rosaceae	Himalayan Raspberry, Chosho	Shrub	Fruits
38.	<i>Rubus fruticosus</i>	Rosaceae	Blackberry, Chosho	Shrub	Fruits
39.	<i>Rubus niveus</i>	Rosaceae	Kala hinsalu	Shrub	Fruits
40.	<i>Rumex dentatus</i>	Polygonaceae	Jungli Palak	Herb	Leaves
41.	<i>Solanum nigrum</i>	Solanaceae	Black Night Shade, Makoi	Herb	Fruits
42.	<i>Taraxacum officinale</i>	Asteraceae	Bitterwort, Kan	Herb	Leaves
43.	<i>Urtica dioica</i>	Urticaceae	Common Nettle, Bichu-buti, Choya	Herb	Leaves
44.	<i>Viburnum cotinifolium</i>	Caprifoliaceae	Sussu, Tustus	Shrub	Fruits

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