WILD EDIBLE PLANTS OF SEWA CATCHMENT AREA IN NORTHWEST HIMALAYA

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Abstract: The food habit of people has developed on the basis of experience and survival through successive generation. Primal man learnt that certain nuts, fruits, berries, leaves, roots, grains, mushrooms etc. could cause many ailments and even death. Presently they are thoroughly acquainted with the methods of excluding the harmful floristic elements growing in the wild. In view of the population in general and remote, hilly and inaccessible terrain in particular, wild edible plants of the Sewa catchment area has been surveyed. Extensive field survey has brought to light more than ninety plant species are used as edible. The paper discusses various categories of wild edible plants used by local inhabitants in different climatic regions of catchment area.

Key words: Edible plants, Northwest Himalaya, Sewa catchment

INTRODUCTION

The food habit of people has developed on the basis of experience and survival through successive generation. Although humans know that certain nuts, fruits, berries, leaves, roots, grains, mushrooms etc. could cause many ailments and even death but by experience they become thoroughly acquainted with the methods of excluding the harmful floristic elements growing in the wild. This process still continues in inaccessible and hilly terrains and particularly during the hostile climatic conditions, it has resulted in the evolution of dietary food habits of people in such terrains. Consequently the wild biodiversity still provides sustenance.

Himalayas are known to provide life support system to human beings, particularly due to the fact that on account of remoteness and inaccessible terrain, the local populace has largely depended on local plants. Ethnobotanical assessment of these have been made by several workers (Clarke,1880; Hope,1899-1904; Steward, 1945,51,1957 and 72; Bir, 1964; Javeid,1965; Bir and Trikha, 1976; Bir et. al.,1979-1980; Kapoor,1985; Khullar, 1984-1988 and 1994; Kaul, et al., 1985,1986,1989, 1990; Gurung, 1988; Khullar, et al.,1988; Kapur,1989; Sharma and Singh,1989; Amatya,1996; Kiran, et al.,1999; Kiran, 2000; Kiran and Kapahi,2001b; Beigh, et al.,2004; Borthakur, et al.,2004; Gupta, et al., 2004; Kant and Dutt,2004).

Himalaya is known as an abode of wild edible plants. Climatic and topographic diversity of the Sewa Catchment area provides a variety of habitats for the luxuriant growth of potential medicinal plant species. Many of these are used by locals in remote and inaccessible areas. This has necessitated the assessment of the wild edible plant species of Sewa catchment area.

MATERIAL AND METHODS

Exploration of the study area was made fortnightly, during 2001-2006. Plant identification was done from floras and subsequently confirmed from B.S.1. Northern circle, Dehradun. Ethnobotanical information was obtained by interacting with the local populace during exploration trips to the area and also from published literature on the plants in habiting the study area.

Study area

The prominent physiographic feature of the area in the rugged, snow covered mountain ranges, cut into precipitous ridges and defiles. Catchment area is spread over 384 Km² located between latitude 32°26'38"N-32°41'00"N and longitude 75°48'46"E-75°55'38"E forming a part of the Northwest Himalaya in district Kathua of Jammu and Kashmir state of India. Altitudinal gradient of the catchment varies from 578m at Mashka to 4300m at Kaplash Peak. The climate varies from sub-tropical to temperate and extremely cold at higher attitudes. Depending upon the altitude, summer temperature varies from 18°-35°C and winter temperature oscillates between 1°15°C.

ENUMERATION OF WILD EDIBLE PLANTS

Extensive field survey has brought to light 97 plant species which are used by local populace. Wild edible plants enumerated here are arranged alphabetically in their botanical names followed by families name, local names, part used & their uses, habits with their period of flowers and fruits are given.
Aconitum heterophyllum Linn. (Ranunculaceae) Atis, Ponkar.
**Uses**: Young leaves are used by the locals for edible purposes.
**Habit**: Herb
**Fl.Fr.**: Aug.-Nov.

Acorus calamus Wall. (Araceae), Bach.
**Uses**: Rhizomes are used for stomach and bronchial troubles. In addition, young leaves are presently flavored and are edible.
**Habit**: Herb
**Fl.Fr.**: Apr.-Aug.

Achyranthes aspera Linn. (Amaranthaceae), Puthkanda
**Uses**: Young leaves are cooked and used as vegetable/ saag.
**Habit**: Herb
**Fl.Fr.**: Apr.-Sept.

Aegle marmelos (L.) Corr. (Rutaceae), Bael
**Uses**: Ripe fruits eaten and used in preparation of sweet drink.
**Habit**: Tree
**Fl.Fr.**: Apr.-Aug.

Aesculus indica Colebr. ex Camb. (Hippocastanaceae), Khanor, Bunkhori
**Uses**: Seed soaked in water for about 12 hours, washed thoroughly, dried and made into flour which is used for making ‘halwa’.
**Habit**: Tree
**Fl.Fr.**: Apr.-Aug.

Allium roylei Stern. (Liliaceae), Jungli Piyaz.
**Uses**: Bulbs and leaves used as vegetables or spices.
**Habit**: Herb
**Fl.Fr.**: Apr.-Aug.

Alternanthera sessilis Linn. (Amaranthaceae), Kanchuri
**Uses**: Young shoots and leaves are cooked as pot herb.
**Habit**: Shrub
**Fl.Fr.**: Round the year

Amaranthus spinosus Linn. (Amaranthaceae), Kanteli Chauli
**Uses**: Tender shoots and leaves eaten as vegetable.
**Habit**: Herb
**Fl.Fr.**: Round the year

Amaranthus viridis Linn. (Amaranthaceae), Chauli
**Uses**: Tender shoots and leaves eaten as vegetable.
**Habit**: Herb
**Fl.Fr.**: Round the year

Asplenium trichomanes Linn. (Aspleniaceae), Kandai
**Uses**: Tender shoots and leaves eaten as vegetable.
**Habit**: Herb
**Fl.Fr.**: Jul.-Oct.

Phanera vahlii Wt. and Arn. (Caesalpinaceae), Taur
**Uses**: Seeds roasted and eaten.

Bauhenia variegata Linn. (Caesalpinaceae), Kerale, Kachnar
**Uses**: Flower buds eaten as vegetable, petal used in a curd preparation.
**Habit**: Tree
**Fl.Fr.**: Feb.-Jun.

Berberis aristata DC. (Berberidaceae), Kashmal, Simlu
**Uses**: Ripe fruits eaten, roots used in medicine.
**Habit**: Shrub
**Fl.Fr.**: Mar.-Jul.

Berberis lycium Royle (Berberidaceae), Simlu, Kashmal
**Uses**: Ripe fruits eaten, roots used in medicine.
**Habit**: Shrub
**Fl.Fr.**: Mar.-Jul.

Bergenia ciliata Haw. Sternb. (Saxifragaceae) Zakhme hayat.
**Uses**: Rhizomes are boiled to yield a decoction which after addition of sugar and milk is taken as tea substitute.
**Habit**: Herb
**Fl.Fr.**: Mar.-Sept.

Bombax ceiba Linn. (Bombacaceae), Simbal
**Uses**: Young flower buds cooked as vegetable, root used in medicine.
**Habit**: Tree
**Fl.Fr.**: Dec.-Apr.

Capsella bursa pastoris Medik (Brassicaceae), Chamso
**Uses**: Young leaves and shoots used as vegetable.
**Habit**: Herb
**Fl.Fr.**: Dec.- Apr.

Cardamine impatiens Linn. (Brassicaceae),
**Uses**: Young shoots including leaves and flower eaten as salad.
**Habit**: Herb
**Fl.Fr.**: Apr.-Jun.

Carissa opaca Linn. (Apocynaceae), Garna
**Uses**: Ripe fruits eaten.
**Habit**: Shrub
**Fl.Fr.**: Jun.-Dec.

Chenopodium album Linn. (Chenopodiaceae), Bettu
**Uses**: Tender shoot eaten as vegetable.
**Habit**: Herb
**Fl.Fr.**: Mar.-Sept.

Cinnamomum tamala (Lauraceae), Tegpatra
**Uses**: Leaves used as a spice and in medicine.
**Habit**: Tree
**Fl.Fr.**: Mar.-Sept.

Codonopsis ovata Benth. ex Royle (Campanulaceae), Ludut
**Uses**: Roots are large and are used for making vegetables.
Habit: Herb
Fl.Fr.: Jul. –Sept.

Commelina benghalensis Linn. (Commelinaceae), Chhura
Uses: Freshly leaves used as vegetables. Rhizomes are also known to cook for edible purposes.
Habit: Herb
Fl.Fr.: Jul. –Nov.

Cordia dichotoma Forst. (Cordiaceae), Lasooora
Uses: Fruit used as vegetable or pickled, bark and fruits used in medicine.
Habit: Herb

Coriaria nepalensis Wallich. (Coronariaceae), Reekhni
Uses: Fruits are known to be edible.
Habit: Herb
Fl.Fr.: Aug. –Sept.

Coronopus didymus Linn. (Brassicaceae), Gangly Hallian
Uses: Young shoots are used as pot herb. The vegetables are cooked like a spinach after boiling to remove the bitter content.
Habit: Herb
Fl.Fr.: Jan. –May.

Crotolaria medicaginea Lamk. (Fabaceae), Guglali
Uses: Young leaves are sometime used as pot herbs.
Habit: Herb

Dendrocalamus strictus Bl. (Poaceae) , Bans
Uses: Mature stem is used for making pickle.
Habit: Shrub
Fl.Fr.: Mar. –Aug.

Diplazium acrostichoides Bir. (Athriaceae),
Uses: The young fronds are cooked and relished as vegetable.
Habit: Herb
Fl.Fr.: Apr.-Sept.

Diplazium frondosum (Clarke) Christ (Athriaceae), Khandhor, Kasror
Uses: Young circinate leaves are rubbered with a piece of cloth to remove scales and hairs before eating as vegetable, also used as pickled.
Habit: Herb
Fl.Fr.: Feb.-Apr.

Dipsacus inermis Wall. (Dipsacaceae), Wupal hak
Uses: Shoots of young plants are cooked as spinach for consumption.
Habit: Herb
Fl.Fr.: Aug.- Nov.

Dodonea viscosa Linn. (Sapindaceae), Senth
Uses: Seeds are known to be edible.
Habit: Shrub
Fl.Fr.: Jan.-May

Elaeagnus umbellata Thunb. (Elaeagnaceae), Kunkholi
Uses: Ripe fruits eaten.
Habit: Tree
Fl.Fr.: Mar. –Aug.

Euphorbia royleana Boiss. (Euphorbiaceae), Thor
Uses: Pith of young shoots cut into small pieces, washed thoroughly, boiled and cooked as a vegetable and used for preparing rayata .
Habit: Tree

Ficus auriculata Lour. (Moraceae), Triambal
Uses: Ripe figs eaten, young figs and tender leaves cooked as vegetable.
Habit: Tree
Fl.Fr.: Mar. –Sept.

Ficus palmata Forssk. (Moraceae), Phagra
Uses: Ripe fruits eaten, young figs and tender leaves cooked as vegetable.
Habit: Tree

Flacourtia indica Merr. (Flacourtieae), Kangu
Uses: Ripe fruits eaten.
Habit: Tree
Fl.Fr.: Apr.-Jun.

Foeniculum vulgare Gaertn. (Apiaceae), Saunf
Uses: Dried fruits are used as spice and carminative.
Habit: Herb
Fl.Fr.: Mar.-Apr.

Fragaria indica Andr. (Rosaceae), Punjakha
Uses: Ripe fruits eaten.
Habit: Herb
Fl.Fr.: Apr.-Jun.

Fragaria nubicola indl. (Rosaceae), Jal bunonoo
Uses: Rhizome used as a substitute for tea.
Habit: Herb

Gagea elegans Wall. Ex Royle (Liliaceae), Jardu
Uses: Young fleshy leaves of this species are cooked are pot herb.
Habit: Herb
Fl.Fr.: Feb.-Apr.

Galinsago parviflora Cav. (Asteraceae) Peeplo
Uses: The plant is reported to be used as a vegetable.
Habit: Herb
Fl.Fr.: Apr.- Aug.

Galium aparine Linn. (Rubiaceae), Khorti
Uses: Shoots and leaves are cooked as pot herb.
Habit: Herb
Fl.Fr.: Mar.- Sept.

Gnaphalium leutoalbum Linn. (Compositae), Sukhree
Uses: Leaves and young shoots are cooked as vegetable.
**Habit:** Herb  
**Fl.Fr.:** Apr.- Jun.

*Grewia optiva* J. R. Drumm. (Tiliaceae), Dhaman  
*Uses:* Ripe fruit eaten.

**Habit:** Tree  
**Fl.Fr.:** May – Jan.

*Gymnosporia royleana* Lawson (Celastraceae), Patrau  
*Uses:* Ripe fruits are edible at the time of scarcity.

**Habit:** Shrub  
**Fl.Fr.:** Dec. – Jul.

*Infigofera heterantha* Wall ex Brandi (Fabaceae), Kathi  
*Uses:* Flowers are boiled in milk and are used for curing ulcers.

**Habit:** Shrub  
**Fl.Fr.:** May – Jul.

*Juglans regia* Linn. (Juglandaceae), Akhrot  
*Uses:* Fruit kernels edible.

**Habit:** Tree  
**Fl.Fr.:** Apr. – Aug.

*Lamium album* Linn. (Lamiaceae), Nealuhak  
*Uses:* Young leaves used as pot herb.

**Habit:** Herb  
**Fl.Fr.:** Apr.- Oct.

*Lamium amplexicaule* Linn. (Lamiaceae), Henbit  
*Uses:* Leaves are boiled after that cooked like spinach.

**Habit:** Herb  
**Fl.Fr.:** Mar.- Jun.

*Lathyrus aphaca* Linn. (Fabaceae), Gangli mattor  
*Uses:* Seeds are known to be eaten during scarcity.

**Habit:** Herb  
**Fl.Fr.:** Jan.

*Lathyrus sativus* Linn. (Fabaceae), Khesri  
*Uses:* It is eaten as Dal and Chapatti

**Habit:** Herb  
**Fl.Fr.:** Jan.- Jun.

*Malva parviflora* Linn. (Malvaceae), Sonchal  
*Uses:* Eaten as vegetable.

**Habit:** Herb  
**Fl.Fr.:** Dec.- Apr.

*Medicago lupulina* Linn. (Fabaceae) Ardkhkhd booti  
*Uses:* Young shoots and leaves are cooked as vegetable.

**Habit:** Herb  
**Fl.Fr.:** Jun.- Apr.

*Mentha arvensis* (Lamiaceae), Pudina  
*Uses:* Leaves are used as a spices and carminative.

**Habit:** Herb  
**Fl.Fr.:** Jun.- Sept.

*Mentha longifolia* (Linn.) Muds. (Lamiaceae), Pudina  
*Uses:* Leaves are used for making chutney.

**Habit:** Herb  
**Fl.Fr.:** Jun.- Sept.

*Momordica dioica* Wall. (Cucurbitaceae), Kakora  
*Uses:* Fruits eaten as vegetable.

**Habit:** Herbaceous climber  
**Fl.Fr.:** Jul.- Sept.

*Morchella esculenta* Pers. (Helvellaceae), Gugchi  
*Uses:* Fruitification is used as vegetable.

**Habit:** Fungus  
**Fl.Fr.:** Apr.- Aug.

*Moringa oleifera* Lam. (Moringaceae), Sahjan  
*Uses:* Pods cooked as vegetable and pickled.

**Habit:** Tree  
**Fl.Fr.:** Apr.- Jun.

*Morus alba* Linn. (Moraceae), Toot  
*Uses:* Ripe fruits eaten.

**Habit:** Tree  
**Fl.Fr.:** Apr.- Jun.

*Morus nigra* Linn. (Moraceae), Shahtute  
*Uses:* Dark red fruits are sour and eaten fresh.

**Habit:** Tree  
**Fl.Fr.:** Apr.- Jun.

*Murraya koenigii* Linn. (Rutaceae), Curry patta  
*Uses:* Ripe fruits eaten leaves used as spices in preparation of curries.

**Habit:** Shrub  
**Fl.Fr.:** Dec.- Apr.

*Myrica esculenta* Ham. (Myricaceae), Kaphal  
*Uses:* Ripen fruits eaten, used in preparation of refreshing drink, bark and fruits used in medicine.

**Habit:** Tree  
**Fl.Fr.:** Jul.- Oct.

*Oxalis corniculata* Linn. (Oxalidaceae), Peeli Khatti booti  
*Uses:* Its sour leaves are cooked or made into chutney.

**Habit:** Herb  
**Fl.Fr.:** Nov.- Jun.

*Origanum vulgare* Linn. (Lamiaceae), Sathra  
*Uses:* Leaves of the young plants are cooked as vegetable.

**Habit:** Herb  
**Fl.Fr.:** Mar.- Sept.

*Oxyria digyna* Hill. Simthan (Polygonaceae), Kalashi  
*Uses:* Leaves are sour, first boiled and then cooked as vegetable.

**Habit:** Herb  
**Fl.Fr.:** Jun.- Aug.

*Portulaca oleracea* Linn. (Portulacaceae), Nailyara  
*Uses:* Shoots used as vegetable.

**Habit:** Herb  
**Fl.Fr.:** Apr.- Nov.

*Phoenix sylvestris* (Roxb.) Linn. (Arecaceae), Khajur  
*Uses:* Ripe fruits eaten.

**Habit:** Tree  
**Fl.Fr.:** Dec.- Jun..
Phyllanthus emblica Linn. (Euphorbiaceae), Amla
Uses: Fruit eaten raw, pickled and used for making preserve and medicine.
Habit: Tree
FlFr.: Mar.- May

Phytolacca acinosa Roxb. (Phytolacaceae), Jharka
Uses: Leaves eaten as vegetable.
Habit: Shrub
FlFr.: Apr.- Sept.

Pinus roxburghii Roxb. (Pinaceae), Chirpine
Uses: Seeds are known to be edible by the locals during the scarcity of food.
Habit: Tree
FlFr.: Apr.- Aug.

Plantago major Linn. (Plantaginaceae), Isabgol
Uses: Soft fleshy leaves cooked as vegetable.
Habit: Herb
FlFr.: Jul.- Sept.

Plantago media

Podophyllum hexandrum Royle. (Podophyllaceae), Bunkakri
Uses: Mature fruits are pear like and sweet in taste.
Habit: Herb
FlFr.: Apr.- Jun.

Polygonum amplexicaule D. Don. (Polygonaceae), Aamy, Malori
Uses: Woody root stocks are boiled in water to yield decoction to which milk and sugar are added for consumption as a tea substitute by the hilly people.
Habit: Herb

Pteridium aquilibrium Linn. (Pteridaceae), Kakaie
Uses: Boiled and roasted rhizome and young leaves eaten as vegetable and also for pickle preparation.
Habit: Fren
FlFr.: May-Oct.

Punica granatum Linn. (Punicaceae), Daaru
Uses: Dried seeds (anardana) used as souring agent, spice and in medicine.
Habit: Tree
FlFr.: Apr.- Sept.

Pyrus pashia Buch. Ham. (Rosaceae), Kainth
Uses: Ripe fruits eaten.
Habit: Tree
FlFr.: Apr.- Dec.

Rubus ellipticus Sm. (Rosaceae), Akhre
Uses: Ripe fruits eaten.
Habit: Shrub
FlFr.: Dec.- May.

Ricinus communis Linn. (Euphorbiaceae), Arind
Uses: Caster oil is produced which is edible.
Habit: Shrub
FlFr.: Sept.-Apr.

Rosa brunonii Lindl. (Rosaceae), Panjali gulab
Uses: Flowers used for preparation of rose water and taken internal as laxative.
Habit: Shrub
FlFr.: Apr.- Jul.

Rubus hoffmeisterianus (Rosaceae), Akhre
Uses: Ripe fruits are edible.
Habit: Shrub
FlFr.: Feb.- Aug.

Rumex hastatus D.Don. (Polygonaceae), Aamy, Malori
Uses: Leaves used as salad and making chutney.
Habit: Herb
FlFr.: Feb.- Apr.

Rumex nepalensis Spring. (Polygonaceae), Malora
Uses: Leaves as vegetable.
Habit: Herb
FlFr.: Apr.-Aug.

Rumex xanthocarpum Schrad $ Wend.(Polygonaceae), Neeli Kandhiari
Uses: Boiled seeds and bark is given to the woman after the delivery.
Habit: Herb

Sapindus mukorossi Gaertn.(Sapindaceae), Ritha
Uses: Kernels put under running water for about a week, dried and made into flour used for making halwa or bread.
Habit: Tree
FlFr.: Apr.- Aug.

Solanum nigrum Linn. (Solanaceae), Makoy
Uses: Ripe fruits eaten.
Habit: Herb

Syzzygium cumini Linn. (Myrtaceae), Jaman
Uses: Ripe fruits eaten.
Habit: Tree
FlFr.: Apr.- Jul.

Taxus baccata Linn. (Taxaceae), Barmi
Uses: Bark is used as a substitute for tea by the local.
Habit: Tree
FlFr.: May-Nov.

Thymus serculum Linn. (Lamiaceae), Merchari
Uses: Seeds used in pickle.
Habit: Herb

**Ziziphus mauritiana** Lamk. (Rhamnaceae), Be
Uses: Ripe fruit eaten
Habit: Tree
Fl.Fr.: Sept.-Feb.

**Ziziphus oxyphylla** Edgrew (Rhamnaceae), Berry
Uses: Ripe fruits edible.
Habit: Shrub
Fl.Fr.: Jun.-Sept.

**Xanthoxylum alatum** Roxb. (Rutaceae), Timbru, Timber
Uses: Young leaves and fruits used for making chutney, for flavoring the food.
Habit: Tree
Fl.Fr.: Apr.- Sept.

**Vitis jacquemontii** Parker (Vitaceae), Dhak
Uses: Ripe fruits edible.
Habit: Woody climber
Fl.Fr.: Jun.-Aug.

**Viola odorata** Linn. (Violaceae), Banaksha
Uses: Petals are dried and are used for making syrups.
Habit: Herb

**Viburnum** Fl.Fr.
Habit
Uses


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