



### Short Communication

## Ethnomedicines for jaundice used in tribal areas of Rajouri district union territory, Jammu and Kashmir-India

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### Abstract

*Ethnomedicinal study was conducted in hilly areas of Rajouri district Union Territory Jammu and Kashmir India. Till today, Gujjar Bakarwal tribes are exclusively dependent on forest. They have own system of herbal medicines. Information on 24 Plants species of 21 angiosperm families which are traditionally used as medicines to cure (Jaundice) were collected. The plants parts used, traditional preparation and does for administration are given in the present paper.*

**Keywords:** Ethnomedicine, medicinal plants, tribal areas, jaundice, Rajouri.

### Introduction

Since few decades pioneer work in documentation and recognition of traditional medicine has been carried out in India. Investigation of traditional medicines is very imperative for the wellbeing of tribal communities for the dealing with conventional health complaint. This may add to the expensive and inadequate health care facilities in rural or tribal areas. Ethnomedicinal documentation of tribal health system will be of great advantage to pharmacologists to develop economical and herbal medicines for the treatment of several disease and disorders. The symptom of liver diseases such as hepatitis-B including Jaundice, characterized by Hippocrates was found to be infectious as early as the eighth century. Hence the viral hepatitis was known to mankind as (Jaundice) for more than 1,200 years. Yellowing of eyes and vomiting yellowish fluid are the initial external symptoms of hepatitis. Many plants and minerals are being used by ethnic communities of tribal as a source of herbal remedy for jaundice and other human ailments since ancient times. Ethno Botany of district Rajouri with special reference to its medicinal use of plants species has been previously published by many researchers<sup>1-11</sup>.

Although being a Biodiversity hotspot, vital taxonomic information is still not available from many regions of the Himalaya. Jammu and Kashmir (JandK) in the northwestern Himalaya is one such least explored region of northwest Himalaya<sup>12</sup>. JandK has a rich heritage of biodiversity and its floral diversity has fascinated the interest of several strange and local botanists, since last two centuries. Many of its plants are cited in the illustrious work of Hooker (1872-97) and Stewart (1972). Rajouri-Poonch region of JandK is however floristically the least surveyed districts of Pir Panjal range, with scarce and scattered manuscripts available on their floras<sup>13-20</sup>.

The aim of the current research is to highlight the key of therapeutic plants which are being used to cure Jaundice in tribal areas of Rajouri district of Jammu and Kashmir. The current study is an effort to collect the ethnomedicinal information on hepatoprotective plants available in demographical area of Rajouri district of Jammu and Kashmir.

**Study Area:** Rajouri district, situated on top of the Southern Foothills of Pir Panjal range of Himalaya region in the Union Territory, of Jammu and Kashmir (32°57' to 33°34'N and 74°48'E). Rajouri district represents an acetone between the sub-tropical Jammu and the temperature Kashmir Province. Rajouri district consists of seven tehsils and 389 villages, with a total area of 2,630km<sup>2</sup>, out of which forest constitute 48.17%. Rajouri district comprises of hilly areas, tough terrain and the topography varies from gentle to moderate, yet some steep slopes does also occur. It consist of numerous hill, and small valley meandering books, with most population (about 96%) living in remote and far flung villages (Anonymous, 2012). Due to this, majority of the people depend on conventional practitioners for the curing various health related problems. (Author contacted the tribal people and discussed with him in local languages (Gojri and Bakarwali) collected the information of medicinal plants. The present study is the base of the detailed field investigations and surveys conducted in Rajouri district during March 2019 to January 2020.

### Methodology

Extensive field tours were conducted during March 2019 to January 2020, for collecting the ethnomedicinal knowledge on hepatoprotective plants which are used to cure Jaundice. Rajouri region is inhabited by Gujjar, Bakarwal, and Phari. The first hand information was gathered during field tours on the basis of group discussion with tribal and rural people.

The information was verified by actual observation in the region and compared with the statements of at least 3 to 4 traditional medicine and then considered it authentic. The collected data was further confirmed with available literature<sup>17,18</sup>. The fresh samples of plants were collected, mounted and identified by using authentic herbarium, floras of Himalaya and standard photographs. Correct identified herbarium data were deposited in (Centre of Biodiversity Studies, BGSB University Rajouri for future reference.

**Enumeration of species:** The present paper provides a list of 24 plant species belonging to 21 families which have been collected and documented by the Author from various tribal areas of Rajouri district through personal interviews with the local people for their local uses peculiarly for curing Jaundice. The data collected for various uses of these species is presented in below.

*Punica granatum* L. Figure-1.

Voucher number: CBS0043. Family: Puniaceae.

Common name: Pomegranate. Local name: Daruna.

Parts used: Fruits, Leaves. Range of Altitude: 470-4750.

Mode of Administration: The local peoples use the juice of the fruit to treat Jaundice. The rind of the fruit is ground in water and drunk every morning by diabetic. The local peoples prepare juice by seeds and used its syphilis.

*Momordica charanita* L. Figure-2.

Voucher number: CBS0040. Family: Cucurbitaceae.

Common name: Bitter gourd. Local name: Kerala.

Parts used: Fruits. Range of Altitude: 1700-1615m.

Mode of Administration: The tribal peoples use the juice of the fruit to treat Jaundice. The peoples use the leaves and fruit in vegetable to treat Jaundice.

*Raphanus Sativus* L. Figure-3.

Voucher number: CBS0046. Family: Brassicaceae.

Common name: Radish. Local name: Mulli.

Parts used: Whole plants. Range of Altitude: 915m.

Mode of Administration: The tribal peoples used as Salad and sap to treat jaundice.

*Phyllanthus emblica* L. Figure-4.

Voucher number: CBS0045. Family: Phyllanthaceae.

Common name: Emblica. Local name: Aamla.

Parts used: Fruits. Range of Altitude: 1000-1800m.

Mode of Administration: Tribal People of district Rajouri used aamla (karee) with launch and dinner to treat Jaundice. Peoples used the fruit powdered to control the cough and Jaundice.

*Solanum nigrum* L. Figure-5.

Voucher number: CBS0048. Family: Solanaceae.

Common name: Black nightshade. Local name: Kaach maach.

Parts used: leaves, Seeds. Range of Altitude: 3500m.

Mode of Administration: Leaves and Seeds are boiled and given internally to treat Jaundice.

*Vitis Jacquemontii* L. Figure-6.

Voucher number: CBS0051. Family: Vitaceae.

Common name: Wild grape. Local name: Daakh.

Parts used: Sap. Range of Altitude: 2400-4400m.

Mode of Administration: The tribal peoples used the sap of young branches as remedy for Jaundice.

*Zanthoxylum armatum* Dc. Figure-7.

Voucher number: CBS0052. Family: Rutaceae.

Common name: Winged prickly ash. Local name: Timber.

Parts used: Stem, Bark, Fruit, Seeds. Range of Altitude, 1000-1800m,

Mode of Administration: One kg powder of seeds fruit, fresh, mature air-dried leaves is boiled in water and 5 ml extract is taken once daily 15-20 days. The local peoples used the fruit for Chutney.

*Ziziphus mauritiana* Lam. Figure-8.

Voucher number: CBS0053. Family: Rhamnaceae.

Common name: Indian plum. Local name: Beri.

Parts used: Leaves, Fruits, Seeds. Range of Altitude: 3000m.

Mode of Administration: Aeromatic water extracted from powder of fruits is taken twice daily for 15-20 days to treat Jaundice.

*Rumex patertia* L. Figure-9.

Voucher number: CBS0047. Family: Polygonaceae.

Common name: Patience dock. Local name: Hulla.

Parts used: Roots, Leaves. Range of Altitude: 1100-2000m.

Mode of Administration: The tribal peoples use the leaves in vegetable to treat Jaundice.

*Tinospora cordifolia* Thumb. Figure-10.

Voucher number: CBS0050. Family: Menispermaceae.

Common name: Gilo, gulch. Local name: Gilo, gulch.

Parts used: Stems. Range of Altitude: 3500m.

Mode of Administration: Stems twigs are soaked in water and the water is taken orally in the morning daily to treat jaundice.

*Mentha spicata* Linn. Figure-11.

Voucher number: CBS0044. Family: Lamiaceae.

Common name: Emblica. Local name: Pudina.

Parts used: Leaves. Range of Altitude: 1000-1800m.

Mode of Administration: Powdered dried leaves mixed with chilli powder is taken orally for 10-18 days.

*Centella asiatica* L. Figure-12.

Voucher number: CBS0039. Family: Apiaceae.

Common name: Brahmini buti. Local name: Brahmini buti.

Range of Altitude: 1600-1700m. Parts used: Leaf.

Mode of Administration: Leaf extract is mixed with carrot juice and 5-10 ml is taken orally for 2-3 weeks to cure Jaundice.

*Adiantum Cappilus-Veneris* L. Figure-13.

Voucher number: CBS0030. Family: Adiantaceae.

Common name: Maidenhair fern. Local name: Gauthier.

Range of Altitude: 1100-2000m. Part used: Whole plant.  
Mode of Administration: Decoction of the plant is used.

*Taraxacum officinale* F.H. Wigg. Figure-14.

Voucher number: CBS0049. Family: Asteraceae.  
Common name: Dandelion. Local name: Aandh.  
Parts used: Leaves, Roots. Range of Altitude: 3500m.  
Mode of Administration: Leaves and roots are boiled and given internally to treat Jaundice.

*Aloe vera* L. Figure-15.

Voucher number: CBS0032. Family: Xanthorrhoeaceae.  
Common name: Aloe perfoliata. Local name: *Aloe vera*.  
Range of Altitude: 1600-1700m. Parts used: Leaf.  
Mode of Administration: Paste of rhizome mixed in cow's milk is taken daily for 2-3 weeks, twice a day to treat the Jaundice.

*Achryanthes aspera* L.

Voucher number: CBS0031. Family: Amaranthaceae.  
Common name: Barbed chaff flower. Local name- Chit-Chita.  
Range of Altitude: 1600-1700m. Parts used: Roots.  
Mode of Administration: Crushed and powdered root is boiled in water and the decoction is taken orally in the morning daily for a month to treat Jaundice.

*Andrographis paniculata* Burn. F Ex. Nees.

Voucher number: CBS0033. Family: Acanthaceae.  
Common name: Green chireta. Local name: Gulaa.  
Range of Altitude: 1600-1700m. Parts used: Leaf.  
Mode of Administration: 20-30gms paste of young leaves and twigs is taken daily after meals for a month.

*Ajuga bracteosa* L.

Voucher number: CBS0034. Family: Lamiaceae.  
Common name: Nilkanthi. Local name: Kauri booti.  
Range of Altitude: 1600-1700m. Parts used: Leaves.  
Mode of Administration: Leaves are boiled in water and the extract is taken only to treat the Jaundice.

*Artemisia maritima* Linn.

Voucher number: CBS0035. Family: Asteraceae.  
Common name: Wormseed (Santonin). Local name: Kirmala.  
Range of Altitude: 1600-1700m. Parts used: Roots.  
Mode of Administration: Decoction of plants is used.

*Bergenia ciliata* Haw.

Voucher number: CBS0036. Family: Saxifragaceae.  
Common name: Hairy *Bergenia*. Local name: Zakhm-e aeyath  
Range of Altitude: 2000- 2500m. Parts used: Leaves-Roots.  
Mode of Administration: The root of the plants has a high reputation in indigenous system of medicines. Roots are crushed and taken only.

*Brassica nigra* Linn.

Voucher number: CBS0037. Family: Brassicaceae.  
Common name: Mustard. Local name: Sarson.

Range of Altitude: 1600-1700m. Parts used: Seeds.  
Mode of Administration: Oil obtained from the seeds is used to massage hands and feet three times a day for 2-3 weeks to treat the Jaundice.

*Daucus carota* L.

Voucher number: CBS0038. Family: Apiaceae.  
Common name: Carrot. Local name: Gaajer.  
Range of Altitude: 1600-1700m. Parts used: Fruits.  
Mode of Administration: Juice of roots (5-10ml) is taken every day for 2-3 weeks to treat Jaundice.

*Ocimum tenuiflorum* L.

Voucher number: CBS0041. Family: Lamiaceae.  
Common name: Creeping wood sorrel. Local name: Tulsi.  
Range of Altitude: 1600-1700m. Parts used: Whole plants.  
Mode of Administration: Extract of the plant is consumed orally for 3-4 weeks with cow's milk to cure Jaundice.

*Oxalis corniculata* L.

Voucher number: CBS0042. Family: Oxalidaceae.  
Common name: Creeping wood sorrel. Local name: Desi Shutal.  
Range of Altitude: 1600-1700m. Parts used: whole plants.  
Mode of Administration: Plant is compacted and the receive out is taken only to treat the Jaundice.



Figure-1: *Punica granatum* L.



Figure-2: *Momordica charanita* L.



**Figure-3:** *Raphanus Sativus* L.



**Figure-6:** *Vitis Jacquemontii* L.



**Figure-4:** *Phyllanthus emblica* L.



**Figure-7:** *Zanthoxylum armatum* DC.



**Figure-5:** *Solanum-Nigrum* L



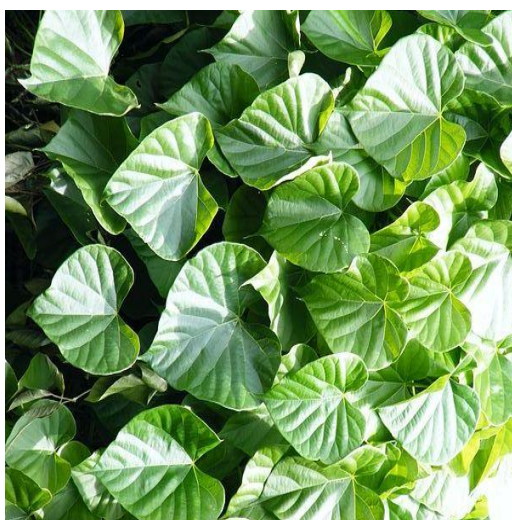
**Figure-8:** *Ziziphus mauritiana* Lam.



**Figure-9:** *Rumex patentia* L.



**Figure-12:** *Centella asiatica* L.



**Figure-10:** *Tinospora cordifolia* Thunb.



**Figure-13:** *Adiantum Cappilus-Veneris*.



**Figure-11:** *Mentha spicata* Linn.



**Figure-14:** *Taraxacum officinale* F.H.



Figure-15: Aloe vera L.

## Conclusion

The ethnobotanical study of the area revealed that the tribal have high-quality information of herbal drugs. Since, the tribal societies are progressing towards modernization; their information of traditional uses of plants may be lost. So it is important to study and record their heritage. Such studies may provide some valuable information to Phytochemists and pharmacologist for screening of individual plant species and in assessing potential hepatoprotective agents for liver disorders. Thus, such type of study may also bring to light some new source of drugs for Jaundice.

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