



Ethno-Botanical Study of Some Forest Medicinal Plants Used by Gujjar Tribe of District Rajouri (J&K), India

KEYWORDS

Gujjar tribe, traditional knowledge, medicinal plants.

L. R. Dangwal

Herbarium and Plant Systematic Lab., H.N.B. Garhwal Central University, SRT Campus, Badshahithaul, Tehri Garhwal-249199

Tajinder Singh

Herbarium and Plant Systematic Lab., H.N.B. Garhwal Central University, SRT Campus, Badshahithaul, Tehri Garhwal-249199

ABSTRACT *The present communication deals with the indigenous knowledge (IK) on some ethno-medicinal plants used by Gujjar tribe of district Rajouri, J&K, India. Gujjar tribes is a nomadic tribe, lives with their livestock in the forest and migrates from one place to another in different habitat, their economy is totally depends on the livestock by selling their milk and other dairy products. Utilization of plant resources in their day-to-day life has been an old-age practice of the Gujjar tribe. The people living in the remote and tribal area still depend on household or forest remedies for healthcare. The present paper provides information about 29-medicinal plants used by Gujjar tribe belongs to 22 families.*

INTRODUCTION

District Rajouri is one of the important hilly district of Jammu and Kashmir state with an altitude ranging from 470-6000m asl, covering an area of 2630 sq km. It lies between 320 -58/ and 330-35/ North latitude and 700 to 740 -10/ East longitude, located in western part of Jammu division and foot hill of Pir Panjal range. The Gujjar tribes contribute the major segment of the population of the study area and lives neighboring the forests for their own purposes (Schultes 1962; Gaur 2008; Gaur et al. 1992; Abudal et al. 2008). The primary occupation of the Gujjar tribes is rearing of cattle and migrate from one place to another in different altitudinal zones upto 4000m asl. in the study area for better grazing as well as other opportunities.

Live stock population has been an important resource of the Gujjar tribe. Therefore, the cattle and their own healthcare has been a major concern to various societies. Ethno-medicinal as well as medicinal practices are community based indigenous knowledge which has been transferred from generation to generation. About 70% of the world population continues to rely on their own localized medicinal practices for personal and live stock's healthcare (Mc Corkle 1995).

Besides exploring floristic diversity and invention of the plant resources of the western Himalayas and the state J&K, documentation of the traditional knowledge on the medicinal plants and their utilization has been explored by several workers during last two decades (Jain, 1991; Singh & Kumar, 2000; Brij et al. 1996; Anjula et al. 2007; Gupta et al. 1982; Kachroo & Nahvi 1976; Kaul et al. 1987).

The Gujjar tribes are concerned; they rely on their own indigenous (herbal system) practices for the cattle and their own health care using the ambient vegetational resources. It has been observed that the men of Gujjar community have richer knowledge about herbs used in ethno-medicinal practices as compared to women folk. The rich plant diversity of the area is managed and utilized by Gujjar tribes in a variety of ways, like rearing of live stock, ethno-medicinal purposes of the plants parts i.e. roots, tubers, young shoots, twigs, leaves, flowers, fruits, seeds etc., are primary food or secondary condiments to dishes prepared by these tribes. Perusal of literature indicated that the ethno-medicinal system of Gujjar tribes particularly from district Rajouri has not been properly investigated by earlier plant explorers. Therefore, the present study is made to document some of the important plants used in medicinal purposes by the tribe in the study area.

MATERIAL AND METHOD

The present study was carried-out by the authors through extensive and intensive field surveys made during July, 2009 to February, 2011. During the course of the study, 12 different sites were selected by the authors in 8 blocks of district Rajouri, frequent field trips were made in different seasons, months of the period in each site for the collection of plants and their pertinent information in context with ethno-medicinal practices. The interviews were conducted from Gujjar tribe to collect various information of plants were used in ethno-medicinal practices. Questionnaire was prepared for the collection of data such as local name of plants, their uses in different diseases, plant parts used, mode of preparation, treatment, and their application. The collected plants were identified with the help of available literature and monographs by Hooker (1906); Sharma and Kachroo (1983); Swami and Gupta (1998); Gaur (1999); etc. and confirm from the authentic regional Herbaria i.e., Botanical Survey of India, Northern Circle (BSD), Dehradun and Herbarium of GUH, HNB Garhwal Central University, Srinagar Garhwal, Uttarakhand, and deposited them in the Herbarium of Department of Botany, SRT Campus, Badshahithaul, Tehri Garhwal.

RESULT AND DISCUSSION

Gujjar tribe constitutes the major segment of the population of study area. The rich biological diversity is managed and utilized by Gujjar in variety of ways. The traditional knowledge about the various uses of plants i.e. medicines, food, fodder, etc. is preserved from generation to generation and they are mainly depending on the forest resources for their survival. These traditional medicines are obtained from the root, shoot, leaf, bark, flower, fruits, seeds etc. for the cure of different diseases. It has been observed that the traditional cultures of Gujjar including their knowledge and uses of forest plants for various purposes are rapidly changing through contact with other cultures. Also documentation and conservation of indigenous traditional knowledge about the plants is of great significance in light of ethno-medicinal importance likely to be faced in the near future for ever growing population.

During this period 29 ethno-medicinal plants belonging to 22 families have been reported from the study sites. Of which 21 were herbs, 3 were shrubs and 5 were trees. Among all, herbs are more used as ethno-medicines as compared to shrubs and trees. The medicinal plants are used by Gujjar tribe of the study area are arranged in alphabetically family wise, with their botanical names, available vernacular names, part used and its implications are shown in Table-1 and some plates of medicinal plants and living style of Gujjar tribes shown in Plates-1 & 2

Table-1 Medicinal uses of forest plants used by Gujjar tribe

	Family	Botanical Name	Local Name	Parts used and its importance
1	Acanthaceae	Strobilanthes atropurpureus Nees	Bakre	Leaves and stem paste are applied externally for the treatment of abscess and allergies.
2	Asteraceae	Artemisia roxburghiana Wallich	Chuo	Paste of plant applied on joint pain, muscular stress (mooch) and powder of the plant is drink with water in the stomachache, stomach swelling and also given to women for lactation.
		Sonchus asper (L.) Hill.	Dodli	Powder of plant taken with water for sugar patient. Green parts of plant are slightly fried with oil and applied on swelling and joints for immediate relief.
		Tanacetum macrophyllum L.	Mathrogass, Madra or Sapan	Whole plant is used as medicine. Its extract as well as powder is taken with water or honey for the treatment of gastric problems, saliva secretion, mouth ulcers, intestinal problems etc. Its decoction used in cold and fever.
3	Brassicaceae	Coronopus didymus (L.) J. Smith	Puth Ajvan	Whole plant is used as medicine for stomachache, vomiting etc.
		Capsella bursa-pastoris (L.) Medileus	Methyia gass	Syrup of leaves is a good source for liver and bile secretion.
4	Buxaceae	Sarcococca saligna Muell-Aug.	Ranthali	One teaspoonful root juice of the plant is taken with water early morning for the heart patients, sugar patient, anxiety, jaundice, stomach worms etc.
5	Caprifoliaceae	Viburnum cylindricum Buc.-Ham.	Salali	Extract of fresh leaves is mixed with crystal salt and it helps in controlling the sweatiness and heat from our body especially from hands and feet after washing.
6	Cuscutaceae	Cuscuta europaea (Unis.) L.	Nellodhari	Whole plant is used as medicine. Its powders as well as juice taken with water for cleaning of intestine, control blood sugar, and also used for killing of lice.
7	Cupressaceae	Juniperus communis L.	Mithro	Root power is used on stomachache and intestinal swelling.
8	Daphniphyllaceae	Daphniphyllum himalense (Benth.) Muell-Aug.	Chandre	Powder or Syrup from fresh leaves with ajwan (Trachyspermum ammi L.) is used for the treatment of leucorrhea.
9	Ericaceae	Rhododendron arboreum (L.) Smith	Harduli	Flower petals are used for lungs refreshment, giddiness. Flower and bark is used in digestive and respiratory disorder.
10	Fabaceae	Trifolium repens L.	Biken Boti	One teaspoonful powder of the whole plant is taken with water after meals is given to mentally retarded persons and also improves the memory when used daily.
11	Lamiaceae	Prunella vulgaris L.	Cerseri or Harnoi	Leaves are used for abscess, hair sore, hair growth, wound etc. Powder of the whole plant is used for blood sugar, gastric, breathing problems, blood purification, and its syrup is used in the treatment of muscular problems.
12	Oxalidaceae	Oxalis corniculata L.	Khat emli	Extract of the plant in the form of drops are given for the improvement of eye vision, its paste is applied on headache, migraine and giddiness.
13	Papaveraceae	Meconopsis aculeata Royle	Neel kukri	Whole plant is used as medicine. It remove the color of veins when turn blue. It can also be given to pregnant women for the substitute of tetanus of their infants or child in any disease.
14	Plantaginaceae	Plantago erosa Wallich	Neli Boti	Powder of the plant is given with water is a good source of liver tonic and also used in dysentery, uric acid, etc. Decoction of the plant is also given child with milk tea on cold. Paste of leaves and seeds applied on cuts, wounds and piles.
15	Primulaceae	Primula denticulata Smith	Chandi Chama	Paste of plant applied on face with white fitkari (Potash alum) for pimples and fairness. Powder is used for the treatment of bleeding piles and bowl complaints. Aqueous paste of flower is used in the treatment of diabetes and urinary ailments.
16	Ranunculaceae	Ranunculus sceleratus L.	Dail	Juice of the root is used for the treatment of nausea (commonly- nakseer) in a drop form put in the nasal chamber daily. On chewing it remove the foul smell of mouth.
		Clematis montana L.	Tri Bale	Leaves of the plants are used for the treatment of poisonous sting. Its powder is given in viral fever. Leaf extract given to cure diabetes and urinary disorder.
17	Rosaceae	Fragaria nubicola (L.) Lindley	Mava	Extract of plant is given to children for strengthening their bones, internal energy, improvement of memory etc. Sometimes leaf juice drops are used for relieving earache.
		Prinsepia utilis Royle	Burkhui	Juice as well as powder of root is given to children for stomachache with water. Leaf and fruits are given for the treatment of tonsil, stone and allergies.
18	Rubiaceae	Galium aparine L.	Kanchari	Shoot is used for the treatment of tetanus. Paste of the whole plant is applied on the skin for removing of redness and allergies.
19	Salicaceae	Salix disperma Roxb.	Kankori	Bark juice is used for eyesight in drop form. Fruits are used on heart problems.
20	Saxifragaceae	Bergenia ciliata (Haworth) Stemb.	Kanpar, Badbayo or Badmava	Powder of the root with water is given to women to control menstrual cycle, over bleeding, it also increase the secretion of pancreatic juice. Paste from the leaves or whole plants provide relief from joint pain, wound, wrinkles etc. Dried leaves adulterated with tea provide relief on fever. Rhizomatous parts are also used as tonic & febrifuge, digestive and cutaneous disorder.

21	Urticaceae	Debregeasia salicifolia Rendle	Kurkuna	Fresh stem and bark juice/ powder of the plant are used for the treatment of Tuberculosis.
		Urtica dioica L.	Panayali , Kinji	Syrup from whole plant is given on hyper acidity and gastric problems. Leaf syrup of the plant is taken daily for blood purification, it also given to infant drop wise for the proper development of bone of head or skull. Paste of the plant applied on joint pain or rheumatism and sometimes paste of the plant applied on bone fracture.
		Girardinia diversifolia (Link.) Friis.	Cell kinji	Roots are heated and immediately applied on the swelling places. It provides great relief and also used in udder & neck swelling of cattle. Leaf juice given in gonorrhoea.
22	Violaceae	Viola pilosa Blume	Banaksha	Syrup of whole plant and chewing of fresh leaves in case of throat soar controls the extra growth of thyroid gland and tonsillitis.

CONCLUSION

In the district Rajouri the Gujjar tribe is totally depends on forest and forest products for their own indigenous herbal practices and cattle health care. It has been observed that male community of the Gujjar tribes have richer knowledge about herbal medicine as compared to women folk. The Gujjar tribes are mainly depend on the herbal medicines to prevent and cure a wide range of diseases because they re-

ceive very little facilities from modern hospitals, on account of their mobility and remoteness of different forest localities. The result also shows that the traditional knowledge used by younger in the preservation of their culture and traditional knowledge from generation to generation and it also requires the great attention for phyto-chemical and pharmaceutical analysis.



Girardinia diversifolia



Ranunculus sceleratus



Coronopus didymus



Rhododendron arboreum



Primula vulgaris



Plantago erosa



Artemisia roxburghiana



Meconopsis aculeata



Juniperus communis



Urtica dioica



Tanacetum macrophyllum



Cuscuta europa

PLATES-1, SHOWING SOME MEDICINAL PLANTS USED BY GUJJAR TRIBES.



PLATES-2, SHOWING STUDY SITE OF GUJJAR TRIBES USING FOREST RESOURCES FOR THEIR LIVELIHOOD.

- REFERENCE** Abdul, R., Anand, V.K., Jawaid, S. 2008. Less known wild edible plants used by Gujjar tribes of district Rajouri, J&K, India. *International Journal of Botany* 4(2): 219-224. | Anjula, P., Tomer, A. K., Bhandari, D. C., and Pareek, S. K. 2007. Towards collection of wild relative of crop plants in India. *J. Gen. Resour. Crop Evol.*,doi. 10.007/s10722-007-9227-4. | Gaur, R. D. 1999. Flora of district Garhwal: North-West Himalaya (with ethnobotanical Notes). Transmedia, Srinagar Garhwal. | Gaur, R. D. 2008. Traditional dye yielding plants of Uttarakhand, India, *Nat Prod Rad*, 7, 154-165. | Gupta, O. P., Srivastava, T. N., Gupta, S. C., and Badola, D. P. 1982. An ethnobotany and phytochemical screening of higher altitude plants of Ladakh. Part II *Bull. Medico-Ethnobot. Res.*, 1: 301-317. | Hooker, J. D. 1906. A sketch of the Flora of British India, Oxford Publication. | Jain, S. K. 1991. Dictionary of Indian folk medicine and ethnobotany. (Deep Publication, New Delhi). | Kachroo, P., and Navi, I. M. 1976. Ethnobotany of Kashmiris Forest Flora of Srinagar and plants of Neighborhood. Bishen Singh Mahendra Pal Singh, Dehra Dun, India, pp. 239-263. | Kaul, M. K., Sharma, P. K., and Singh, V. 1987. Ethnobotanical studies in North-West and trans-Himalaya Iv. Some traditionally tea substitutes from J&K state. *Himalayan Plant J.*, 4: 23-28. | Lal, B., Vats, S. K., Singh, R. D., and Gupta, A. K. 1996. Plants used as ethnomedicine and supplement food by Gaddis of Himachal Pradesh, India, in: Jain S. K. (ed.) *Ethnobiology in Human welfare*, New Delhi. | McCorkle, C. M. 1995. Back to future: Lesson from ethnoveterinary research, development and extension for studying and applying local knowledge, *Agric Human Values*, 12(2): 52-80. | Schultes, R.E. 1962. The role of ethnobotanists in search for new medicinal plants, *Llyodia*, 25: 257-261. | Sharma, B. M., and Kachroo, P. 1983. Flora of Jammu and Plants of neighborhood. Bishen Singh Mahendra Pal Singh, Dehra Dun. | Singh, K. K., and Kumar, K. 2000. Ethnobotanical wisdom of Gaddi tribes in western Himalaya (Bishen Singh MAhendra Pal Singh, Dehra Dun). | Swami, A., and Gupta, B. K. 1998. Flora of Udhampur, Bishan Singh Mahendra Pal Singh, Dehra Dun. |