

Regular Article

Medicinal plants of district Bijnor (U.P.) India with special reference to their folk medicinal uses

Shalu Chaudhary*

Department of Botany, Meerut College, Meerut- 250001 (U.P.), India

ABSTRACT: Present communication deals with the study of medicinal plant of Bisnor district (U.P.), India special reference to their folk medicinal uses.

Key words: Medicinal Plants, traditional knowledge, District Bijnor

Introduction

The man has dependent on nature, particularly on the plants for its substances and survival since his existence on earth. In ancient times, he knew how to relieve his sufferings by using the plants growing around him. The civilizations records show that a number of drugs used today were already in use during ancient times. Its credit goes to Indian Rishies and Physicians who were acquainted with a large number of medicinal plants compared to other countries in the world. In recent years, efforts to record ethnomedicinal uses of plants from amongst the natives of various countries have received close attention of scientists (Brahman and Saxena, 1989, Jain, 1981, Kathikeyani, 2003, Malkhuri et al., 1998, Pandey et al., 1981, Schultes, 1964, Singh, 1986, Singh et al., 1984, Singh and Khan, 1989, Yadav and Patel, 2001. Yadav et al., 2003). There are numerous medicinal plants in the vegetation of district Bijnor (U.P.) which are used in curing various ailments. The people of this district have deep belief in their native folklore medicine for remedies and they rely on their own herbal cure in contrast to the modern medicine. Since the beginning of civilization, people have used plants as medicine. Perhaps as early as Neanderthal man, plants were believed to have healing powers. A discussion of human on this planet would not be complete without a look at the role of plants. Ethnobotany is the study of how people of a particular culture and region make use of indigenous plants. Ethnobotanists explore how plants are used for such things as food, shelter, medicine, clothing, hunting, and religious ceremonies. Ethnobotany has its roots in botany, the study of plants. Botany, in turn, originated in part from an interest in finding plants to help fight illness. In fact, medicines and botany have always had close ties. Ethnobotanists are usually botanists and/or biologists with additional graduate training in such areas as archeology, chemistry, ecology, anthropology, linguistics, history, pharmacology, sociology, religion and mythology. First of all, researchers collect detailed knowledge about the local and indigenous people and prepare a regional study on the epidemiology, traditional medicine, culture and ecology of the people and their environment. The interviewing process is conducted very carefully. A translator for the local language is usually necessary to conduct this phase. Ethnobotany as a field is on

the rise. Ethnobotany issues are the focus of much public attention. The future looks promising for these dedicated scientists in a fascinating and vital field of research.

This communication documents the traditional knowledge of the medicinal plants that are in use by native people, Hakims, Vaidhyas and Tribes of the district Bijnor.

Materials and Methods

The work was undertaken through field study carried out throughout the seasons of January 2008 to September 2010 in various areas of Bijnor. First hand information about the folk medicinal uses of plants was collected from the traditional healers, Vaidhyas, Hakims, Tribes and older rural people. The age of the respondents ranges between 45 to 80 years and the number of male respondents was higher (70%) as compared to the female respondents (30%). Most of the informants were reluctant to reveal any information but a few consented for collection from the forest and for the interviews. The cultivator of village – Bilai, also revealed many plants used for daily ailments and also agreed for field trips to collect the plant species. The plant samples were collected and processed following the routine method of plant collection and herbarium technique (Jain and Rao, 1977). The specimens have been identified using relevant floras and standard literature (Hooker, 1989, Kanjilal et al., 1982 and Gaur, 1999). The respondents were selected randomly and prior informed consent was obtained from each respondent to get traditional knowledge of the plants.

Results and Discussion

The increasing demand of medicinal plants has resulted in the dwelling of the natural resources mainly for deforestation and other anthropogenic influence. The local uses of plants as a cure are common particularly in those areas, which have little or no access to modern health services. The indigenous traditional knowledge of medicinal plants of various ethnic communities, where it has been transmitted orally for centuries is fast disappearing due to the advent of modern technology and transformation of traditional culture. Therefore, the collection of information about natural flora, classification, management and use of plants by the people holds importance among the ethnobotanists. The present study has resulted in the documentation of 40 medicinal plant species belonging to twenty eight families and thirty seven genera, which have been presented in table 1. Botanical names of medicinal taxa, enumerated alphabetically, followed by families, local names, flowering and fruiting periods and folk medicinal uses.

* Corresponding Author, Email:

PLATE - 1



Fig. 1 *Awarasibus gibbatus* Linn.



Fig. 2 *Galathea gigantea* (Linn.) R. Br. ex. Ait.



Fig. 3 *Coccoloba grandis* (Linn.) Vahl.



Fig. 4 *Cordia dichotoma* Forest.



Fig. 5 *Cuscuta reflexa* Roxb.



Fig. 6 *Dalbergia sissoo* Roxb.



Fig. 7 *Ficus racemosa* Linn.



Fig. 8 *Mangifera indica* Linn.



Fig. 9 *Oxalis corniculata* Linn.



Fig. 10 *Ricinus communis* Linn.



Fig. 11 *Sesamum indicum* Linn.



Fig. 12 *Solanum surratense* Burn. f.

Some Medicinal Plant Species of District Bijnor

Table 1 List of some Medicinal Plant Species of District Bijnor (U.P.)

S. No.	Botanical Name	Family	Local Name	Flowering & Fruiting	Folk Medicinal Uses
1.	<i>Acacia nilotica</i> Delile	Fabaceae (Papilionaceae)	Kikar, Babul	July- December	Bronchitis: Bark of kikar is boiled in water and made into decoction. It is taken twice a day in the dose of 5-6 ml. for a week to cure bronchitis.
2.	<i>Adhatoda vasica</i> Nees	Acanthaceae	Adua	December- April	Cough and Cold: A decoction of the bark is given in dose of 20 ml twice a day for 2-3 day.
3.	<i>Adiantum capillus-veneris</i> Linn.	Adiantaceae	Hansraj	-	Catarrh: Its fronds are pounded with honey and are beneficially used in catarrhal affections.
4.	<i>Albizia lebeck</i> (Linn.) Benth.	Mimosaceae	Siris	April- September	Sprains: Stem bark paste is applied and bandaged with wet cloth and changed once an hour.
5.	<i>Alstonia scholaris</i> (Linn.) R. Br.	Apocynaceae	Chhativan	October- March	Tuberculosis, cough and gonorrhoea: Aqueous extract of its bark-latex is used in tuberculosis and

6.	<i>Amaranthus spinosus</i> Linn. (Fig 1)	Amaranthaceae	Kateli Chauli	July- December	milky viscous and white sap of the plant mixed with water is taken in cough and gonorrhoea. Scabies: Root paste is used as an external application.
7.	<i>Andrographis paniculata</i> (Burm.f.) Wall. ex. Nees	Acanthaceae	Kiryat	October- December	Stomachache: Leaf paste in the dose of 10-20 gm is taken twice in a day.
8.	<i>Annona squamosa</i> Linn.	Annonaceae	Sharifa	May- June	Jaundice: Leaf paste is rubbed over the head twice in a week.
9.	<i>Bacopa monnieri</i> (Linn.) Penell.	Scrophulariaceae	Brahmi	Winter season	Bronchitis: A poultice of the boiled plant is placed on the chest in acute bronchitis and other coughs of children.
10.	<i>Calotropis gigantea</i> (Linn.) R. Br. ex Ait (Fig 2)	Asclepiadaceae	Aak, Madar	Almost throughout the year	Asthma, colds and coughs: Its flowers in powder form are used in asthma, colds and coughs.
11.	<i>Cardiospermum halicacabum</i> Linn.	Sapindaceae	Kanphuti	December- May	Rheumatic pains, swellings and tumours: The leaves boiled in castor oil are applied in rheumatic pains, swellings and tumours by the native people.
12.	<i>Cassia occidentalis</i> Linn.	Caesalpiniaceae	Kasondi	June- November	Bone Fracture: Leaf paste is applied and bandaged.
13.	<i>Cissampelos pareira</i> Linn.	Menispermaceae	Birbsi	September – October	Diarrhoea: Root powder about 10 gm along with curd is taken twice a day for two days.
14.	<i>Cleome gynandra</i> Linn.	Cleomaceae	Karalia, Hulhul	August- November	Earache (otalgia) and convulsions: The juice of leaves is beneficial in otalgia (earache) and convulsions.
15.	<i>Clitoria ternatea</i> Linn.	Fabaceae (Papilionaceae)	Gokarni	November- February	Chronic Bronchitis: Juice of root in the dose of 5 gm is given in chronic bronchitis.
16.	<i>Coccinia grandis</i> (Linn.) Voigt (Fig 3)	Cucurbitaceae	Kanduri	September- December	Diabetes: The juice of its leaves and roots is given in diabetes.
17.	<i>Cordia dichotoma</i> Forest (Fig 4)	Ehretiaceae	Lassora	March-June	Dyspepsia and fever: A decoction of its bark is useful in dyspepsia and fever.
18.	<i>Cuscuta reflexa</i> Roxb. (Fig 5)	Cuscutaceae	Akashbel	October- February	Belching and Stomachache: Its seeds are boiled and tied over stomach in belching and in pain of stomach due to digestive problem and gastric troubles.
19.	<i>Cymbopogon citratus</i> Stapf.	Gramineae (Poaceae)	Rusaghas	March– May	Ringworm: A paste of the leaves made with butter milk is applied on ringworm.
20.	<i>Cynodon dactylon</i> (Linn.) Pers.	Gramineae (Poaceae)	Doobghas	Major part of the year	Leucorrhoea: The paste of fresh roots of Doobghas and Kans (<i>Saccharum spontaneum</i>) in the dose of 5 gm is given with cow milk and sugar early in the morning for one month, to cure leucorrhoea.
21.	<i>Dalbergia sissoo</i> Roxb. (Fig 6)	Fabaceae (Papilionaceae)	Shisham	March- August	Dysentery with Blood: In acute dysentery 5-6 green leaves of it are mixed with mint (<i>Mentha spicata</i>) and given 2 times a day for three days.
22.	<i>Datura metal</i> Linn.	Solanaceae	Dhatura	April- August	Dandruff: The Juice of the fruits is used in dressing for the scalp to check dandruff.
23.	<i>Ficus bengalensis</i> Linn.	Moraceae	Bar, Bargad	March- September	Spermatorrhoea: A powder of its fruits in shade is prepared, which is taken with honey in the morning and evening for a week in spermatorrhoea.
24.	<i>Ficus racemosa</i> Linn. (Fig 7)	Moraceae	Gular	February- July	Small pox: The small blister- like 'galls' common on the leaves, are soaked in milk and mixed with honey are given to prevent pitting in small pox.
25.	<i>Ficus religiosa</i> Linn.	Moraceae	Pipal	March– September	Abscess: Thick paste of curd and boiled rice is applied over the dorsal surface of leaf of pipal and is tied over the affected part daily till abscess is cured.
26.	<i>Lowsonia inermis</i> Linn.	Lythraceae	Mehndi	June- October	Jaundice: The leaf decoction is given in jaundice.
27.	<i>Mangifera indica</i> Linn. (Fig 8)	Anacardiaceae	Aam	March- July	Diarrhoea: A powder of the tender leaves is given in diarrhoea.
28.	<i>Mentha piperita</i> Linn.	Lamiaceae	Pudina	May- June	Jaundice: The leaves are used in the treatment of jaundice.
29.	<i>Nyctanthes arborescens</i> Linn.	Oleaceae	Harsingar	August- January	Malarial fever: A decoction of its leaves with black pepper (<i>Piper nigrum</i>), salt and ginger is given thrice daily for three days to cure malarial fever.
30.	<i>Ocimum canum</i> Sims.	Lamiaceae	Van Tulsi	November-	Migraine: The leaf juice of it and arni (<i>Clerodendrum inerme</i>) is mixed in equal

				February	quantities with 1 gm kapoor (Camphor). This is applied on the nostrils and inhaled during the migraine attacks.
31.	<i>Ocimum sanctum</i> Linn	Lamiaceae	Tulsi	November-February	Malarial fever: A decoction of the root is given in malarial fever.
32.	<i>Oxalis corniculata</i> Linn. (Fig 9)	Oxalidaceae	Khatti- Meethi, Changeri	Almost throughout the year	Skin eruptions, alopecia and wounds: Whole plant mixed with black pepper (<i>Piper nigrum</i>) is used in treating these diseases.
33.	<i>Picrorhiza kurrooa</i> Benth	Scrophulariaceae	Karu	May- August	Asthma, Leucoderma and Jaundice: Roots of the plant are used in asthma, leucoderma and jaundice.
34.	<i>Portulaca oleracea</i> Linn.	Portulacaceae	Launi, Kulfa	Major part of the year	Dysentery with Blood: Its leaf is ground and mixed with crystalline sugar and black pepper. This is given only once and stated to be quite effective medicine.
35.	<i>Ricinus communis</i> Linn. (Fig 10)	Euphorbiaceae	Arandi	May- July	Cuts and Malaria: Its leaf is tied over the injured part and its 2-3 leaves are applied with castor oil and tied over the head before shivering starts. This is claimed to cure malaria.
36.	<i>Saraca asoca</i> (Roxb.) De Wilde	Fabaceae (Papilionaceae)	Ashok	March-September	Menorrhagia: A decoction of its bark in milk is given during the course of the days in menorrhagia from the fourth day of the menstrual cycle.
37.	<i>Sesamum indicum</i> Linn. (Fig 11)	Pedaliaceae	Til	August- November	Bruises (without any cuts): First til oil is applied over the bruises and this is followed by spray of dry powder of ginger (<i>Zingiber officinale</i>) and ash of young leaves of Aak or madar (<i>Calotropis procera</i>). Usually bandage is applied till bruises are cured.
38.	<i>Solanum surattense</i> Burm. f. (Fig 12)	Solanaceae	Neeli Kateli	March – June	To prevent Recurrent Abortions: The roots of kateli about 5 gm is ground and given once a day for 3-4 days to women after menstruation. It is repeated during next 4 months.
39.	<i>Syzygium cumini</i> (Linn.) Skeets	Myrtaceae	Jamun	April-July	Diabetes: The seeds are eaten by local folks to control diabetes.
40.	<i>Tephrosia purpurea</i> (Linn.) Pers.	Fabaceae (Papilionaceae)	Sarphonka	September-October	Earache (otalgia) and Spermatorrhoea: Gently warmed root paste is applied on the back of ear. The root extract, one teaspoonful once a day along with seed paste is given for 15 days in spermatorrhoea.

Altogether, 36 types of ailments have been reported to be cured by using these 40 medicinal plant species among the populace of this district. Most common diseases observed among the populace are diarrhoea, dysentery, malarial fever, bronchitis, and jaundice. The phenology of the medicinal plants especially flowering and fruiting time are of great importance as it will either assist a layman to identify the medicinal plants in field in their specific month or forest wild life manager in their efforts for the conservation of the plant wealth in the area.

Conclusion

The study indicates that traditional health care system is an age old practice in this area. This system of ethnic communities is conservation oriented and has great potential. This system needs to be thoroughly studied and documented. Traditional knowledge is transmitted from one generation to another. Study suggests an effective coordination for strengthening medicinal plant sector in Bijnor. This could only be achieved by pooling conservation, biodiversity and health care system together by involving the government, NGO's and research organizations. Collaborative research and integrated efforts are required to preserve the knowledge of indigenous people of traditional healthcare.

Acknowledgement

The author is thankful to her supervisor, Dr. A.K. Gupta and Dr. P.C. Pande, head of the Department of Botany, Meerut College, Meerut (U.P.) for his extensive Cooperation. The Common rural people,

Vaidhyas and Tribes are acknowledged for their cooperation for bringing all these informations regarding uses of plants and respective ailments with remedies.

References

- Brahman, M. and Saxena, H.O. (1989). Ethnobotany of Gandhamaradan Hills – some noteworthy, medicinal uses. Int. conf. Rec. Adv. Med. Arom. and Spice, Crops, New Delhi (Abst.).
- Gaur, R.D. (1999). Flora of the district Garhwal, N.W. Himalaya (With ethnobotanical notes). Transmedia, Srinagar, Garhwal.
- Hooker, J.D. (1989). The Flora of British India. Vol. 1-7. London, L Reeve and Co.
- Jain, S.K. and Rao, R.R. (1977). A handbook of field and herbarium methods. New Delhi. Today's and tomorrow printers and publishers.
- Jain, S.K. (1981). Glimpses of Indian Ethnobotany (Ed.) Oxford and IBH. Publishing Co. New Delhi.
- Kanjilal, U.N., Kanjilal, P.C. and Das, A. (1982). Flora of Assam Vol. 1-V. Taj Offset Press, Delhi, India.
- Kathikeyani, T.P. (2003). Ethnobotanical studies among Yanandis of Sathyavedu Mandal, Chittoor District, Andhra Pradesh. Plant Archive. 3 (1): 21-27.
- Malkhuri, R.K., Nautiyal, S., Rao, K.S. and Saxena, K.G. (1998). Role of medicinal plants in the traditional health care system. A case of study from Nanda Devi biosphere reserve. Curr. Sci.72 (2): 152-157.

- Pandey, G., Singh, V.K. and Bhatnagar, I.S.(1981). New records to medical efficacy claims of certain plants records from Gwalior forest circle, Madhya Pradesh – a preliminary contribution. *Bull. med. Ethno. Bot. Res.* 2 (3): 303-314.
- Schultes, R.E. (1964). The role of ethno-botanist in the search of new medicinal plants. *Lloydia.* 25: 257-266.
- Singh, V.K., Mohd, A. and Abrar M. Khan, (1984). Folk medicinal claims of Chakrata forests, Uttar Pradesh. India. *J. P. I. Nature.* 1 (2): 16-21.
- Singh, V.K.(1986). Selected Indian folk Claims for the cure of bronchial asthma. *J. Res. Ed. Ind. Med.*384: 37-43.
- Singh, V.K. and Abrar M. Khan (1989). Use of Folk medicines in the context of primary health care programme in North India: Liver disorders. *Int. Conf. Rec. Adv. Med. Aroma and Spice Crops.* New Delhi (Abst. 68).
- Yadav, S.S. and Patel, H.S. (2001). Traditional medicines and health care system of tribals of Satpuda Region, Maharastra State. *Plant Archives.* 1: 111-118.
- Yadav, J.P. and Suresh Kumar, (2003). Folk medicinal uses of some indigenous plants among the people of Mahender garh district, Haryana, India. *Plant Archives.* 3: 37-42.