

An Ethnobotanical Study of District Kurukshetra, Haryana

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1. INTRODUCTION

The existence of human beings is dependent on plants as they provide food, clothes fuel, timber for shelter in addition to important life supporting ecological services (Gaur, 1999). WHO reported that 80% of world population rely chiefly on indigenous medicine and that the majority of traditional therapies involve the use of plant extracts or their active constituent (Rahman *et al.*, 2013; Parul & Vashistha, 2015). Ethnobotany is a biological, economic and cultural interrelationship study between people and plants of local area. The term derived from two Greek words "*Ethnos*" and "*Botane*" means local inhabitant and plants respectively. Plant represents an enormous pool of natural resources that can produce various products and chemicals for advantages of all other life forms (Parul & Vashistha, 2015). According a National Medicinal Plant Board, Govt. of India, a number of 17000 to 18000 species of flowering plants are estimated of which 6000 to 7000 species are found to have medicinal usage in folk and documented systems of medicine like Ayurveda, Unani, Siddha and Homoeopathy (Swargiary *et al.*, 2013; Parul & Vashistha, 2015).

Anthropogenic impact caused the great loss of plant resources due to continuous exploitation. Many of species have become extinct and some others are facing threat of extinction (Singh & Vashistha, 2014). So, it becomes very important to survey and document the floristic diversity and ethnobotany of important medicinal plant on earth. In Haryana little work has been done in this regard (Singh & Vashistha, 2014; Yadav & Bhandoria, 2013; Sharma *et al.*, 2012). Keeping in the view the above aspects the survey of ethnobotany of has been conducted to assess and documentation of natural wealth of Kurukshetra district, Haryana, India. The present study reveals the ethnobotany and traditional medicinal uses of medicinal plants of Kurukshetra district, Haryana, India during different season from the month of July, 2014 to July, 2016.

2. MATERIAL AND METHODOLOGY

Extensive surveys of the area in different seasons were carried out during the period starting from the month of July, 2014 to the end of July, 2016. Attempts were made to cover all the sites for collection of plants in flowering and/or fruiting stages. Field visits were conducted to cover maximum area mostly during rainy, winter and summer seasons. The plant specimen in flowering and/or fruiting stages were so collected that as far as possible all morphological details including flower/fruit are retained in the specimen. Specimens were placed in the newspaper folds. A field note on each of the specimen was recorded at the time of collection with some plant characters like Habit, Habitat, Leaf shape/ Form/ texture etc. and ethno botanical information from locals.

The identification of the specimens collected was done with the help of available literature (Duthie, 1903-1922; Haston *et al.*, 2009; Jain *et al.*, 2000; Jain & Rao, 1977; Maheshwari, 1963; Kumar, 2001; Kaur & Vashistha, 2013; Kaur & Vashistha, 2014). The field notes regarding the particular specimens were also consulted for this purpose. Standard methods of ethno botanical studies were followed (Jain & Mudgal, 1999).

3. RESULT AND DISCUSSION

The present study reveals the ethnobotanical knowledge of local inhabitant of district Kurukshetra, Haryana. A total 22 plant species belonging to 20 genera and 17 families have been documented. Plant mainly belongs to different families viz. Malvaceae, Leguminosae, Amaranthaceae, Chenopodiaceae, Rutaceae etc.

Present ethno botanical survey reveals that people utilise local flora for their day to day problems and cure themselves. Mostly used part of plant is leaves and roots. The local inhabitant uses the plants to cure various health issues like diarrhoea, dysentery, fever, cold, cough, body ache etc.

Table 1: Ethnobotanical uses of plants

	Scientific name of the species	Part used	Traditional importance	Vernacular name
1	<i>Abutilon indicum</i> (L.) Sweet	Root and leaves	Decoction of root as well as powder is used to cure chest infection and fever and Leaf juice in early morning used to cure kidney stone and dry leaf powder used to treat cattle diarrhea.	Kanghi
2	<i>Abrus precatorius</i> L.	Seed and root	Seed helpful to boost nervous system and many nervous disorder also paste of seed applied to cure joints pain, while root decoction used to treat cough cold and also to remove the intestinal worm.	Ratti/ Chirmati
3	<i>Achyranthes aspera</i> L.	Root, tender stem, and fresh leaf, flowers	Decoction of whole plant in utilised in pneumonia, cold cough also it is diuretic so help to cure renal dropsies. Flowers and seed have anti-venom properties so help in snakebite if applied in paste form externally. Tender leaf substitute spinach.	Ultakanta/ kutri
4	<i>Aegle marmelos</i> (L.) Corre'a.	Chiefly fruit and leaf also	Ripe fruit juices have cooling effect so used coolant also have properties to cure chronic dysentery and other stomach disorder. Leaf juices also cure diarrhea and gastric problems.	Belpatra
5	<i>Amaranthus viridis</i> L.	Fresh leaves	Leaves are good sources of iron, so used as vegetable, also have some ant venom properties to treat scorpion and snake bite.	Chaulai
6	<i>Anagalis arvensis</i> L.	Whole plant	Plant have properties to treat Leprosy, hydrophobia, dropsy, nervous disorders, gout and used as cattle feed to expel out leeches from nostrills.	Jonkmari
7	<i>Argemone mexicana</i> L.	Whole plant chiefly flowers and Latex	Decoction of whole pant can treat jaundice and other liver disorders, flowers used to cure cough and latex is directly applied to skin for skin problems and healing wound.	Satynasi/Pilibutti
8	<i>Barleria prionites</i> L.	Leaves, roots	Leaf and root ash mixed with honey useful in treatment of cough. Also leaf prevent skin eczema, tooth problems and cracking and maceration of feet.	Pilabansa
9	<i>Bauhinia purpurea</i> L.	Pods, root, Flower bud, and bark	Barks have fiber content and also used in diarrhea, root have carminative effect, flower bud have laxative and antihelmenthic properties.	Khairwal
10	<i>Boerhaavia diffusa</i> L.	Whole plant	Plant have vitalising effect so known as punarnava for energetic effect to body. Decoction have diuretic, laxative and expectorant properties and known to cure eye disease, kidney stone, blood purifier, anemia and liver disorders.	Santi/ Punarnava
11	<i>Calotropis procera</i> (Aiton) Dryand.	Root, flower, leaf and latex	Dry leaf and flower powder is used to treat rhuematism, and paste applied to cure leucoderma, Ash of root used to remove pus and ash of leaf helpful to cure cough and cold, latex applied for skin problem, toothache, ear pain etc.	Aak
12	<i>Cannabis sativa</i> L.	Leaf and seed and female inflorescence	Decoction of plant used to cure asthma, dysentery. it has sedative, narcotic, hypnotic and hypotensive effect.	Baang
13	<i>Cassia tora</i> L.	Leaves and seed	Leaf paste have soothing effect so applied on skin, also they have purgative effect. Seed used to treat inflammation and other fungal infection.	Panwad
14	<i>Cassia fistula</i> L.	Fruit and seed	Decoction of ripe fruit used to treat asthma, cough, cold and bronchitis. Seed known to cure constipation and good for blood purification.	Amaltas
15	<i>Chenopodium album</i> L.	Whole plant	A good source of iron and vitamin a. Laxative and antihelmenthic. Root used for liver infection and jaundice.	Bathua
16	<i>Chenopodium murale</i> L.	Whole Plant	Pain reliever if paste of leaf and stem is applied on joint and back. Used as vegetable. Used to prevent cold and cough during winter if leaf taken with gur.	Kharthua
17	<i>Coccinia grandis</i> (L.) J.Voigt	leaf, fruit and Root	Leaf juice used to cure ulcer. Raw fruit consumed as vegetable and root decoction known to cure sore throat and useful in Diabetes.	Ram kachri / Chibaad
18	<i>Cocculus hirsutus</i> (L.)W. Theob.	Root and leaf	Root known as good pain killer for body. Leaf paste used for skin problem and scorpion sting. Decoction of leaf used to cure leukemia and Eczema.	Jaljamanti
19	<i>Commelina benghalensis</i> L.	Whole plant	Decoction of whole plant known to cure dysentery. Having laxative, emollient and demulcent effect. Paste is applied for aches and swelling.	Kana

20	<i>Croton bonplandianum</i> Baill.	Leaf and Stem	Dry Leaf powder with reetha and Amla is used to wash hair for healthy and dandruff free hair. Leaf Juice directly can also utilised for the same. Tender stem juice is known to cure cataract if daily 2-3 drop is put in eye.	Ban Tulsi
21	<i>Datura stramonium</i> L.	Leaf, Fruit and seed	Have narcotic effect so used as drug. Hallucinogenic so used for nervous disorders. Leaf juice known to cure urinogenital problem. Seed are used for Abortion if consumed in limited amount. seed paste in mustard oil treat skin itching and wound.	Dhatura
22	<i>Dalbergia sissoo</i> DC	Heart wood, flowers and Leaf	Heart wood is good for making door, household and furniture. Leaf pastes have cooling effect if applied on sunburn. Also "Thandai" of leaf and flower is used in summer. Leaf known to treat urinogenital problem specially gonorrhoea.	Shisham

4. CONCLUSION

The local people have vast traditional information regarding local flora. It may be concluded from the above mentioned survey and study that the Kurukshetra district has valuable wealth of flowering plant as well as a rich traditional and folk knowledge of medicinal uses of plant. There is important space of this traditional knowledge in their routine life. The inhabitant cures themselves by utilising local plant. District Kurukshetra have a wide range of biodiversity. But this richness in biodiversity and ethnobotany is going to declining now a day due unawareness and proper documentation. Therefore, it becomes necessary today to document these and to spread awareness among people to preserve. *In-situ* and *ex-situ* conservation are required to conserve this plant wealth.

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