



Ethnobotanical Studies on Karnal District, Haryana, India

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Abstract

Floristic survey of district Karnal, Haryana (India), was conducted from 2011-2012 for an enumeration of ethnobotanical plants. Overall 71 ethnobotanical species belonging to 67 genera and 38 families are documented. Among the families Leguminosae with 8 species is the dominant family followed by Asteraceae with 7 species. For the preparation of medicines major plant parts used are leaves, fruits, seeds and roots. Medicinal plants are listed with botanical name, family, local name, plant part used, diversity status and use value of each ethnomedicinal species.

Keywords: Ethnobotany, Karnal, Haryana, medicinal plants.

Introduction

The use of medicinal plants for the treatment of various ailments is as old as the history of man. Worldwide, about 80% of traditional medicines used for primary healthcare are derived from plants¹. Medicines derived from plants possess a potentially safer and more consistent medicine than synthetically produced drugs². India is a tremendous repository of cultural heritage for varied ethnic groups and it has a rich tradition of folk practices of utilization of wild plants³. The All India coordination project on ethno biology reported the use of more than 10,000 wild plant species to meet chief healthcare, food, and other material requirements of tribal communities in India. Of these about 8,000 wild plant species are used by them for medicinal purposes^{4,5}.

Today, due to high rate of anthropogenic disturbances in the form of cattle grazing, fuel-wood collection and fires, the many medicinal plants are facing threat of extinction and loss of genetic diversity. Identification of plant species and traditional knowledge of their therapeutic uses are important for the adequate utilization of herbal plant resources. Various workers studied the Flora of Haryana⁶⁻¹². However, there are merely a few reports on the ethnobotanical use of plants in Karnal district. Documentation of ethnobotanical information and traditional knowledge plays a vital part in scientific research, chiefly when the literature and field work have been accurately evaluated¹³. Existing documentation on medicinal plants of Karnal district is limited, in terms of taxonomic studies and also in information terms on medicinal plants and their uses by local society. Therefore, survey of Karnal district has been conducted for accurate documentation of species occurring in the area and their use by local people and traditional healers.

Material and Methods

Study Area: The Karnal district falls in the north-eastern part of the Haryana State, India and is bounded by North latitudes

29°25'05" and 29°59'20" and East longitudes 76°27'40" and 77°13'08" (figure 1). The district is bordered by the river Yamuna in the east, district Panipat in the south, district Kaithal in the west and district Kurukshetra in the north. Above sea level height is about 240 meters. Karnal district has an area of 1,967 km². Various types of soil in the District are available i.e., loamy clay, loamy, clay and sandy. Mean annual temperature is 25°C and mean annual rainfall is 696 mm. Summers hot, winters cold and too little rain fall are the main climatic characteristics of Karnal District.

Methodology: Repeated field surveys were carried out in the different areas of Karnal district during different seasons in 2011-2012. The ethnobotanical information was collected through several informal interviews and discussions with the herbal practitioners in and around the study area. Majority of the information was gathered from the aged people, who have a very long association with usage of plants. In addition to the local name, useful parts and medicinal uses were also recorded. Methods of Jain and Rao were followed for the collection of data and voucher specimen during the field study¹⁴. Specimens of all species were collected, photographed and identified with the help of available floras¹⁵⁻¹⁷. The medicinal uses of plant species were cross checked from the available literature¹⁸. Voucher specimens were prepared in the form of herbarium and deposited in the Botany Department, Kurukshetra University, Kurukshetra, Haryana.

Results and Discussion

The ethnobotanical survey revealed that 71 species were being used as medicine (table-1). These species belong to 67 genera and 38 families (figure-2). Habit wise grouping shows herbs (61.97%) were more frequently used for traditional medicine preparations as compared to shrubs (15.49%), trees (16.90) and climbers (5.63%) (figure-3). The family Leguminosae was represented by recorded (8 species) followed by Asteraceae (7

species), Malvaceae, Amaranthaceae, Poaceae (4 species each), Euphorbiaceae, Brassicaceae and Moraceae (3 species each). Five families were represented by 2 species each and 25 families were represented by single species (table - 1) (figure - 4). Most widely used medicinal part are the leaves, accounting 29.12% of the reported medicinal plant uses, followed by whole plant (19.41%) and root (14.56%), seeds (10.67%), fruits (8.73%), stem (9.75%) and flower (4.85%). Some other plant parts such as tuber, rhizome, flower, bud and latex are also used

occasionally which account for only 2.91% of the total uses of the plant parts (figure - 5). With the help of these plants a wide range of common ailments like skin diseases, ulcer, rheumatism, respiratory diseases, indigestion, etc., are treated. Greater part of the preparations in the form of juice extracted from the freshly collected plant parts are taken orally. In the following account these species have been listed with botanical name, family, local name, habit, use of each species and plant part used (table-2).



Figure-1
 Map showing location of the study area

Table-1
 Family wise number of genera and species present in the study area

S.No.	Family	No. of Genera	No. of Species	S.No.	Family	No. of Genera	No. of Species
1.	Ranunculaceae	1	1	20.	Asteraceae	7	7
2.	Menispermaceae	1	1	21.	Plumbaginaceae	1	1
3.	Fumariaceae	1	1	22.	Primulaceae	1	1
4.	Papaveraceae	1	1	23.	Asclepiadaceae	1	2
5.	Brassicaceae	3	3	24.	Convolvulaceae	1	1
6.	Capparidaceae	1	1	25.	Solanaceae	2	2
7.	Caryophyllaceae	1	1	26.	Scrophulariaceae	1	1
8.	Portulacaceae	1	1	27.	Pedaliaceae	1	1
9.	Malvaceae	4	4	28.	Verbenaceae	2	2
10.	Zygophyllaceae	1	1	29.	Lamiaceae	1	1
11.	Oxalidaceae	1	1	30.	Nyctaginaceae	1	1
12.	Rutaceae	1	1	31.	Amaranthaceae	4	4
13.	Meliaceae	2	2	32.	Chenopodiaceae	1	1
14.	Rhamnaceae	1	2	33.	Euphorbiaceae	3	3
15.	Leguminosae	7	8	34.	Moraceae	2	3
16.	Myrtaceae	1	1	35.	Cannabaceae	1	1
17.	Cucurbitaceae	1	1	36.	Commelinaceae	1	1
18.	Cactaceae	1	1	37.	Cyperaceae	1	1
19.	Aizoaceae	1	1	38.	Poaceae	4	4

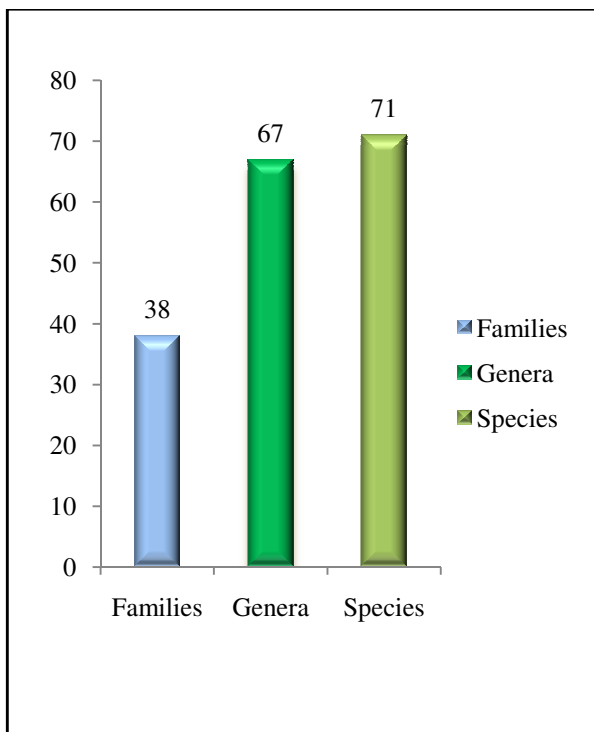


Figure-2
 Proportion of Families, Genera and Species of Ethnobotanical important plants

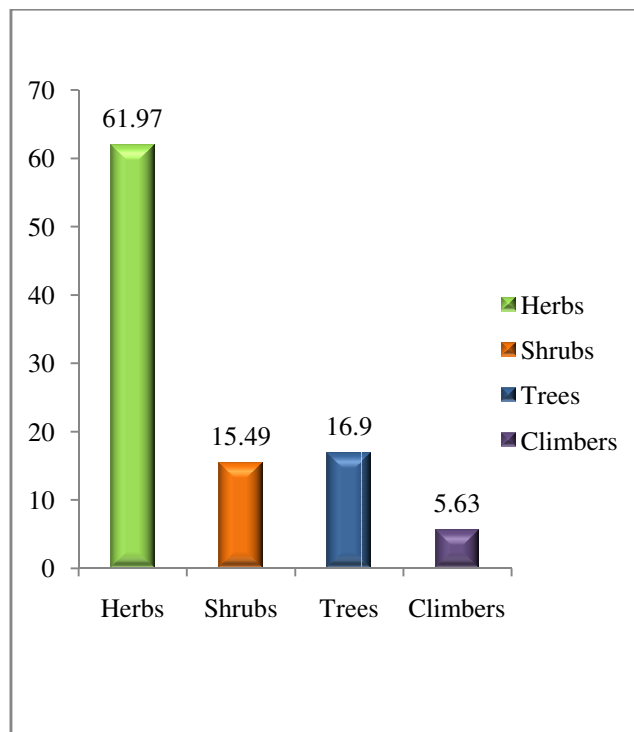


Figure-3
 Showing proportion of percentage of Herbs, Shrubs, Trees and Climbers

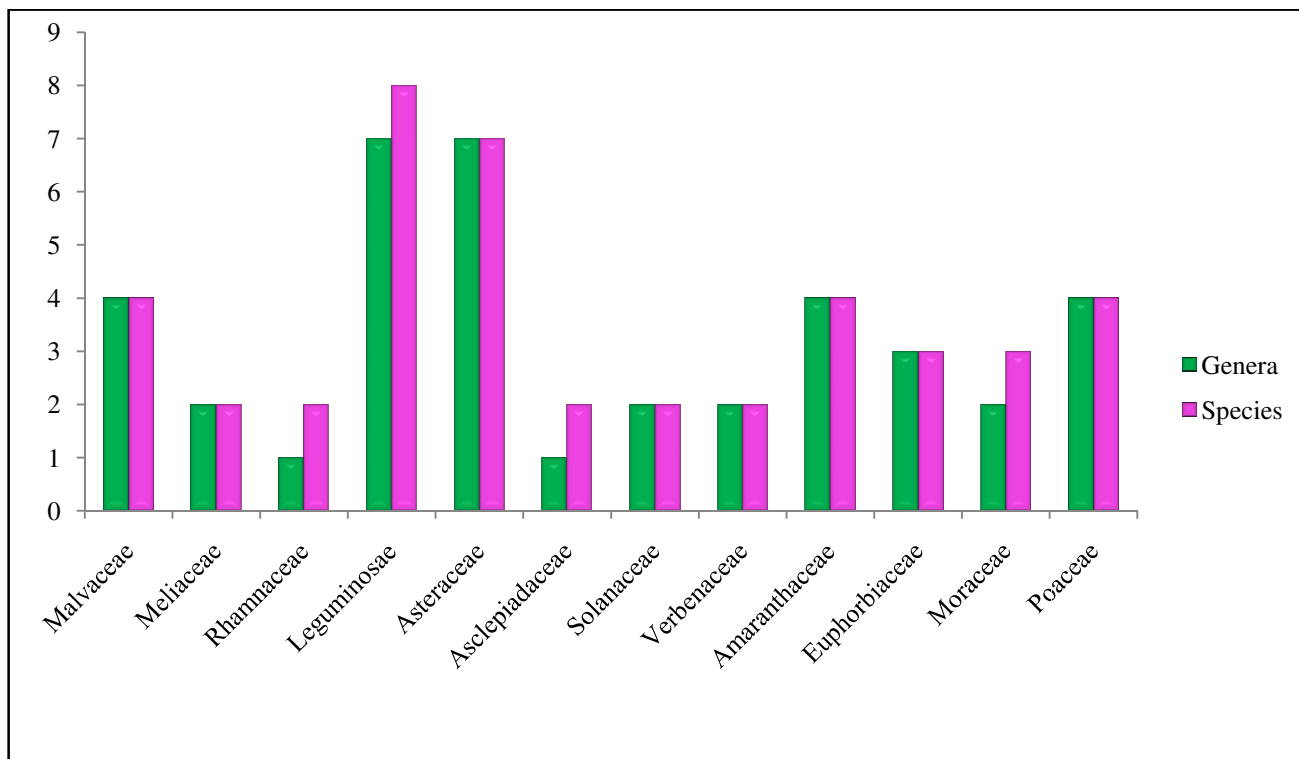


Figure-4
 Number of Genera and Species in leading families of collected plants

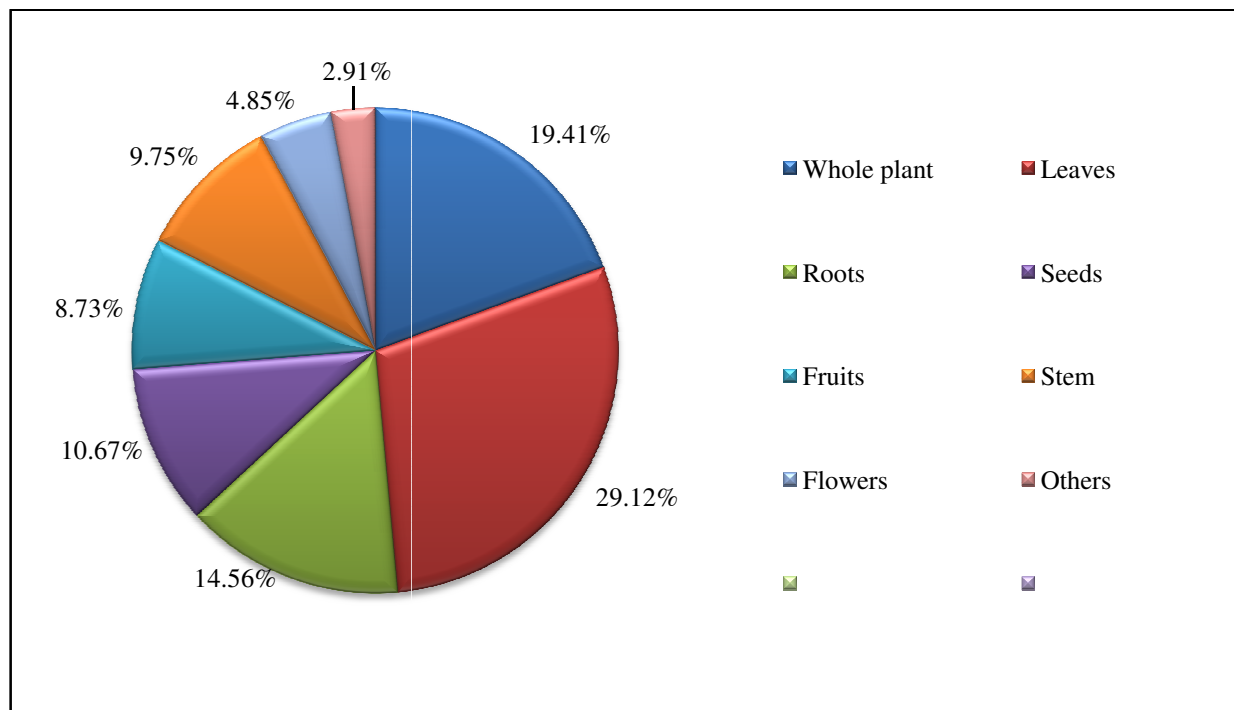


Figure-5
Percentage of different plant parts used in traditional medicine

Table-2
Enumeration of ethnobotanically important species collected from study area

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Ranunculus sceleratus</i> Linn.	Ranunculaceae	Shim, Aglaon, Jaldhaniya	Herb	Whole plant	Juice used in asthma, pneumonia and rheumatism. Seeds used as a tonic and stomachic, also prescribed in kidney troubles and in the treatment of colds.
<i>Cocculus hirsutus</i> (Linn.) Diels	Menispermaceae	Jamtikibel, Hier	Climber	Leaves Roots	Juice of leaves is used for curing skin diseases. Root extract used in analgesic, anti-inflammatory, hypoglycemic and cardio tonic effects, used as refrigerant, laxative, chronic rheumatism and in fevers.
<i>Argemone mexicana</i> Linn.	Papaveraceae	Satyanashi, Bharband	Herb	Flowers	Flowers used in the treatment of coughs. Seed oil used in the treatment of skin problems.
<i>Fumaria indica</i> (Haussk.) Pugsley	Fumariaceae	Pitpapra Papara	Herb	Stem	Shoot are used in fever and mixed with honey to prevent vomiting.
<i>Coronopus didymus</i> (Linn.) J.E. Smith	Brassicaceae	Jangli hala	Herb	Whole plant	Plant extract is used for bone disorders. Used in rheumatism.
<i>Sisymbrium irio</i> Linn.	Brassicaceae	Parjan, Maktrusa	Herb	Seeds, Leaves	Infusion of leaves used in throat and chest infection. Seeds are expectorant, restorative, febrifuge, and tonic.
<i>Eruca sativa</i> Mill.	Brassicaceae	Taramira, Seoha	Herb	Seeds	Seeds yield a pungent fixed oil with characteristic odour, used in pickles. Young plants used in salads and as a vegetables, also used as green fodder.

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Capparis decidua</i> (Forsk.) Edgew.	Capparidaceae	Dela, Karil, Karir	Shrub	Flower, Buds, Fruits	Flower, buds and fruits used in pickles preparation, used as tonic strengthen and used to cure gastric trouble.
<i>Stellaria media</i> (Linn.) Vill.	Caryophyllaceae	Buchbucha, Pani	Herb	Whole plant	Poultice used to cure cuts, burns and bruises. Used to treat rheumatic pains, asthma, constipation, arthritis, obesity and blood disorders.
<i>Portulaca oleracea</i> Linn.	Portulacaceae	Kulfa, Lunak, Khursa	Herb	Seeds	Seeds powder used to cure night emission. Used in the treatment of scurvy, liver, spleen, kidney, bladder, cardio-vascular diseases and ulceration of the mouth.
<i>Urena lobata</i> Linn.	Malvaceae	Bachita, Unga	Shrub	Leaves,	Plant leaf paste is used to reduce blood pressure, rheumatic pain and body ache.
<i>Abutilon indicum</i> (Linn.) Sweet	Malvaceae	Kanghi	Shrub	Leaves, Roots	Leaf juice used to cure kidney stones and roots are useful in dental problems.
<i>Malva parviflora</i> Linn.	Malvaceae	Panirak, Sonchal	Herb	Leaves, Seeds	Leaves infusion used as nerve tonic, decoction used as a taenicide. Seeds demulcent, yield fatty oil, used to cure cough and ulcers in the bladder.
<i>Sida rhombifolia</i> Linn.	Malvaceae	Swetbala, Sahadevi	Shrub	Stem	Stem abounds in mucilage and used as a demulcent, diuretic and febrifuge. Used in skin troubles, rheumatism and tuberculosis.
<i>Tribulus terrestris</i> Linn.	Zygophyllaceae	Gokharu	Herb	Fruits, Roots	Mixture of fruits, roots and boiled rice is used to treat white discharge and urinary troubles especially in womens.
<i>Oxalis corniculata</i> Linn.	Oxalidaceae	Amrul sak, Khattamitha	Herb	Whole plant	Fresh plant juice used in anaemia, dyspepsia, piles, and tympanitis. Leaf juice used to counteract <i>Datura</i> poisoning.
<i>Aegle marmelos</i> (Linn.) Correa.	Rutaceae	Bel, Bael pattar	Tree	Leaves, Roots, Fruits	Leaves extract used for chronic dysentery, intermittent fever and gastric troubles. Ripe fruit juice used in diarrhoea. Dried leaf powder used to cure bed sores.
<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Tree	Leaves, Stem	Leaf paste is applied superficially on the body to treat small pox, skin diseases and rheumatism. Young twigs are used as toothbrush to clean teeth mainly in pyorrhea. Young leaf juice used as a blood purifier.
<i>Melia azedarach</i> Linn.	Meliaceae	Bakain, Dek, Dhrek	Tree	Leaves, Fruits, Gum, Seeds	Decoction from leaves and fruit taken early in the morning as blood purifier and to cure acne. Gum collected from tree used in spleen enlargement. Seeds yield a drying oil, used for soap making and hair-oils.
<i>Zizyphus jujuba</i> Mill.	Rhamnaceae	Ber, Barari	Tree	Fruits, Leaves	Fruits edible and recommended in nausea, vomiting and also used for abdominal pain in pregnancy. Leaves paste used to prevent hairfall.

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Zizyphus oenoplia</i> Mill.	Rhamnaceae	Makoh, Bamolan	Shrub	Fruits, Roots	Fruit juice used as a uterine tonic. Roots used in hyperacidity and Ascaris infection.
<i>Abrus precatorius</i> Linn.	Leguminosae	Ratti, Chirmathi	Climber	Seeds, Roots	Root extracts used to eject intestinal worms. Seeds administered in treatment of nervous disorders and applied as a paste on stiffening of shoulder joints and paralysis.
<i>Butea monosperma</i> (Lamk.) Taub.	Leguminosae	Dhak, Palash, Tesu	Tree	Leaves, Flowers	Leaves paste applied externally to treat rheumatic pain. Leaves used for making plates and lopped for fodder. Flowers succumb a dye known as 'kesu', used for dyeing clothes.
<i>Dalbergia sissoo</i> Roxb.	Leguminosae	Shisham, Tali	Tree	Stem, Leaves	Leaf decoction is useful in gonorrhoea. Root used as astringent. Wood is useful in leprosy, boils, and eruptions and to allay vomiting.
<i>Melilotus indica</i> (Linn.) All.	Leguminosae	Ban methi, Senji, metha	Herb	Seeds, Leaves	Seeds used in bowel complaints and infantile diarrhoea. Used as discutient and emollient. Used as a fodder for animals.
<i>Cassia occidentalis</i> Linn.	Leguminosae	Kasunda, Bari kasondi	Herb	Leaves, Seeds	Leaf paste is applied topically to heal bone fractures and to treat scabies. Seeds used as a hepato-tonic and has purgative properties.
<i>Cassia tora</i> Linn.	Leguminosae	Panewar, Chakunda, Chakvad	Herb	Leaves	Leaves paste is used to cure skin diseases like ring worm, itches and psoriasis. Used in dyspepsia, constipation, cough and in cardiac disorders. Leaves are purgative in nature.
<i>Albizia lebeck</i> (Linn.) Willd.	Leguminosae	Siris, Sireen	Tree	Stem bark	Stem bark extract used to cure eye irritation, leprosy, bronchitis, piles and treat paralysis
<i>Acacia nilotica</i> (Linn.) Willd.	Leguminosae	Kikar, Babool	Tree	Stem bark	Bark decoction used as a gargle and pods used in urino-genital diseases. Young twig are chew as toothbrushes to clean teeth.
<i>Eucalyptus camaldulensis</i> Dehnh.	Myrtaceae	Safeda	Tree	Leaves, Gum	Vapours from boiled leaves are used in curing congestions of the throat. Source of Red Gum, used in diarrhoea and relaxed throats
<i>Coccinia indica</i> Wight and Arn.	Cucurbitaceae	Kundru, Ram kachri	Climber	Leaves, Fruits	Raw fruits used as vegetable, ripe ones eaten. Leaves juice are taken orally to cure ulcers.
<i>Opuntia elatior</i> Mill.	Cactaceae	Nagphani	Shrub	Fruits	Baked fruit used in whooping cough, their syrup increases the flow of bile and control spasmodic cough and expectoration.
<i>Trianthema portulacastrum</i> Linn.	Aizoaceae	Santhi, Bishkapra	Herb	Roots	Roots decoction is taken to treat constipation and asthma. Decoction used as an antidote to alcohol poisoning.

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Parthenium hysterophorus</i> Linn.	Asteraceae	Gajar ghas	Herb	Roots	Decoction of roots is used in dysentery and helpful in skin disorders. Plant used as tonic, febrifuge, emmenagogue and analgesic.
<i>Eclipta prostrata</i> (Linn.) Linn.	Asteraceae	Bhringaraj, Bhangra	Herb	Whole plant	Plant juice used for skin diseases, hair fall problems and urinary tract infections. Leaf powder with coconut oil used as hair remedy for healthy and black hair. Used in post-delivery uterine pain and prevent habitual abortion and miscarriage.
<i>Xanthium strumarium</i> Linn.	Asteraceae	Chotadhatura, Gokhuru, Bhangra	Herb	Whole plant	Decoction used in chronic malaria, leucorrhoea and urinary diseases. Seeds used for resolving inflammatory swellings. Roots extract used to treat ulcers.
<i>Ageratum conyzoides</i> Linn.	Asteraceae	Jangli pudina, Sahadevi, Khoobi	Herb	Leaves	Leaves extract used as an antidote for snake bite and prevent hair fall. Decoction or infusion used in diarrhoea, dysentery, rheumatism and fever.
<i>Erigeron linifolius</i> Willd.	Asteraceae	Phulni	Herb	Leaves	Leaves used for lumbago and rheumatism.
<i>Sonchus arvensis</i> Linn.	Asteraceae	Sahadevi bari, Pili dudhi	Herb	Leaves, Roots	Fresh crused leaves applied directly on wounds. Used to cure poisoning, swelling, diarrhoea, dysentery, leucorrhea, white spots of the skin and in dissolving kidney stones. Roots used in cough, bronchitis and in asthma.
<i>Gnaphalium indicum</i> Linn.	Asteraceae	Godi, Bal raksha	Herb	Whole plant	Fresh crushed plant applied to heal fractured bones. Leaves eaten as a pot-herb.
<i>Plumbago zeylanica</i> Linn.	Plumbaginaceae	Chitrak, Chita	Herb	Roots	Root extract and decoction is astringent, antidote, treating indigestion and externally applied for all skin patches.
<i>Anagallis arvensis</i> Linn.	Primulaceae	Jonkmari, Dhabbar	Herb	Whole plant	Plant extract used in leprosy, dropsy, hydrophobia and cerebral affections. Used to intoxicate fish and to expel leeches from the nostrils of cattle.
<i>Calotropis procera</i> (Ait.) R.Br.	Asclepiadaceae	Akada	Shrub	Roots, Leaves, Flowers	Powder of flowers and roots used to cure rheumatoid arthritis and paste used to cure leucoderma. Leaves used to cure dysentery.
<i>Calotropis gigantea</i> (Linn.) R. Br. ex Ait.	Asclepiadaceae	Aak	Shrub	Leaves	Leaves used in the treatment of paralysis, arthralgia, swellings, and intermittent fevers. Crushed leaves are rubbed on the skin of elephants for treatment of kesarayer disease.
<i>Ipomoea cairica</i> (Linn.) Sweet	Convolvulaceae	Neeli bel	Climber	Whole plant	Plant extract used in the treatment of tuberculosis, cough, asthma, acute and chronic viral hepatitis type B and jaundice.

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Solanum nigrum</i> Linn.	Solanaceae	Makoh, Chirmothi	Herb	Leaves, Fruits	Decoction of fruit is used against gastric problems, palliative for toothaches and constipation. Leaf decoction is used to cure swelling of hands and feet.
<i>Withania somnifera</i> (Linn.) Dunal	Solanaceae	Asgand, Ashwagandha	Shrub	Roots, Leaves	Leaves decoction is applied to joints for relief in swellings. Root paste superficially used in rheumatism, inflammatory conditions, ulcers and scabies. Roots used to cure intermittent fevers, cough and dropsy.
<i>Verbascum Thapsus</i> Linn.	Scrophulariaceae	Ban tamku, Gidar tamaku	Herb	Leaves, Roots	Leaves decoction used as a heart stimulant. Leaves used in piles and sun burns. Root decoction used in cramps and migraine.
<i>Sesamum indicum</i> Linn.	Pedaliaceae	Til, Tili	Herb	Seeds, Leaves	Seeds used to extract benne oil, used for making soap and as cooking oil. Seed oil used to cure eye pain, ear pain, scabies, all ulcers and strengthen body. Fresh leaves used in affections of bladder and kidneys.
<i>Lantana camara</i> Linn.	Verbenaceae	Raimuniya Panchphuli	Shrub	Whole plant	Decoction used in tetanus, rheumatism, malaria, wound healing and as antidote to snakebite. Used for making agarbattis.
<i>Phyla nodiflora</i> (Linn.) Greene.	Verbenaceae	Jal buti, Jalpapli	Herb	Whole plant	Paste of fresh plant applied to boils, swollen cervical glands, and chronic indolent ulcers. Fresh juice is applied to bleeding gums.
<i>Ocimum sanctum</i> Linn.	Lamiaceae	Tulsi	Herb	Leaves	Leaves extract used to cure stomachache and headache. Root decoction used in malarial fevers.
<i>Boerhavia diffusa</i> Linn.	Nyctaginaceae	Punarnava, Satha, Santhi	Herb	Roots	Root considered expectorant, diuretic, and laxative, used in asthma and for healing wounds.. Root paste used to cure boils, dropsy and fistula.
<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Chirchita, Latjira	Herb	Whole plant	Plant decoction is diuretic and used in renal dropsy. Whole plant used in asthma, dysentery, diarrhea, cholera and scabies.
<i>Digera muricata</i> (Linn.) Mart.	Amaranthaceae	Tandla , Lesua	Herb	Flower, Seeds	Seeds and flowers prescribed for urinary discharges.
<i>Amaranthus viridis</i> Linn.	Amaranthaceae	Chaulayi	Herb	Leaves	Leaf paste is helpful for snake bite and scorpion sting. Leaves are used as vegetables.
<i>Alternanthera sessilis</i> (Linn.) DC.	Amaranthaceae	Garundi	Herb	Whole plant	Decoction is taken with little salt drunk to check vomiting of blood. Poultice used for boils.
<i>Chenopodium album</i> Linn.	Chenopodiaceae	Kala bhangra	Herb	Whole plant	Plant used as laxative and anthelmintic. Eaten as a vegetable. Seeds are very nutritious, high in protein and Vitamin A. Seeds made into gruel.
<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Dudhi, Nayeti	Herb	Whole plant	Plant decoction used in bronchial infections, laryngeal spasm, asthma and in diseases of genito-urinary tract. Latex used to treat wounds and lip cracks.

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Croton bonplandianum</i> Baill.	Euphorbiaceae	Ban tulsi	Herb	Stem, Leaves	Juice from young shoot is used as eye drop in contract. Leaf decoction is used to take out dandruff from hairs.
<i>Ricinus communis</i> Linn.	Euphorbiaceae	Aarandi	Shrub	Seeds, Leaves	Leaves are tied on the breast of women to increase milk secretion or leaf juice is taken for the same purpose. Seed oil is applied to get relief from stomachache and cure dryness.
<i>Ficus religiosa</i> Linn.	Moraceae	Peepal	Tree	Stem, Leaves	Bark powder used to treat scabies, ulcers, urinary tract infections, skin infections and throat infections. Used to cure diarrhoea, dysentery and gonorrhoea. Leaf powder mixed with water and taken orally to get relief from body-ache.
<i>Ficus benghalensis</i> Linn.	Moraceae	Bargad, Bar	Tree	Stem, Latex	Stem bark decoction is used for relieve repeated painful piles and exudation of puss. Bark infusion used as a tonic and astringent, also used in diarrhea, dysentery and diabetes. Stem latex is used in rheumatism, lumbago and topically on heel cracks.
<i>Morus alba</i> Linn.	Moraceae	Tut ,Tutri	Tree	Fruits, Leaves	Fruits are refrigerant, eaten, also used for sore throat, dyspepsia and melancholia. Leaves used for rearing silk-worms. Shoots are woven into baskets which are durable.
<i>Cannabis sativa</i> Linn.	Cannabinaceae	Bhang Charas	Herb	Stems, Leaves, Flowers.	Dried flowering tops of female plants used as a sedative, analgesic and narcotic, contain cannabin and an essential oil. The intoxicating drugs, Bhang and Charas are prepared from the stems, leaves and flowers.
<i>Commelina benghalensis</i> Linn.	Commelinaceae	Kanchara	Herb	Whole plant	Used as laxative, refrigerant, emollient and demulcent, used in leprosy. Plant juice used in dysentery.
<i>Cyperus rotundus</i> Linn.	Cyperaceae	Bara-nagar-motha, Motha	Herb	Roots	Roots used in treatment of insect bites, food poisoning, indigestion, nausea, bronchitis, and menstrual disorders. Dried tuberous roots are aromatic, used in perfumes and incense.
<i>Setaria glauca</i> (Linn.) Beauv.	Poaceae	Bandra, Bandari ghas	Herb	Whole plant	Grains consumed as food either boiled and eaten or made into flour, also used for making alcohol. Sometimes grains are employed as an adulterant of anise (<i>Pimpinella anisum</i> Linn.). A green fodder.
<i>Dichanthium annulatum</i> (Forsk.) Stapf	Poaceae	Palvan, Minyar	Herb	Whole plant	Used as a fodder readily both when young and in flower.
<i>Saccharum munja</i> Roxb.	Poaceae	Sarkanda, Moonj, Sara	Herb	Whole plant	Used for making baskets, ropes, mats, ornamental sitter and toys. A good source of furfural and young leaves provide fodder.

Botanical name	Family	Local name	Habit	Part used	Ethnobotanical uses
<i>Cynodon dactylon</i> (Linn.) Pers.	Poaceae	Doob, Dobri	Herb	Whole plant	Plant decoction is used to keep the body cool. Plant juice diuretic, ant allergic, cures piles and regulates menstrual cycle. Rhizomes used in genito-urinary troubles.

Conclusion

The Floristic and Ethnobotanical survey of different parts of Karnal district of Haryana state, India revealed that this area is rich in plant diversity and seventy one of these species are utilized in the treatment of various human diseases. Most of these medicines are prepared from herbs (61.97%) and use of whole plant or leaves is most common for preparing medicine. However, an increased human activity due to urbanization and industrialization is posing a threat not only to flora of this region but also to the species which are used as medicines by the local people. Therefore, there is an urgent need to spread awareness among local people by promoting measures such as controlled grazing, reforestation, proper land management to promote the sustainable use of medicinal plants.

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