ETHNOBOTANICAL SURVEY OF THE FLORA OF GOVERNMENT GRADUATE COLLEGE FOR WOMEN, SAMANABAD LAHORE, PUNJAB

ARIFA ZEREEN[1]*, ZAINAB MAQBOOL[1], SARA SHAHBAZ[2] FIZZA UMER[1], NIGHAT SANA[1]

[1]Department of Botany, Government Graduate College for women Samanabad, Lahore
[2]Forman Christian College (A Chartered University) Lahore, Pakistan
[*]Corresponding Author email: arifazereen@gmail.com

Abstract

The present Ethnobotanical study was undertaken to find out the diversity as well as to document the possible traditional uses of the flora of Government Graduate College for Women Samanabad, Lahore. Along with ethnobotanical studies, the role of institution in flora conservation was also analyzed. A total of 56 plant species belonging to 32 families were collected from the study area. These were described along with their botanical names, common name(s), families and ethnobotanical importance. The diversity of these medicinal and aromatic plants revealed that 80% of the families belonged to dicotyledons, 16% to monocotyledons, and 4% to gymnosperms. The ethnobotanical information on the plant species was documented by interviewing elderly people of the area, gardeners, herbalists, and agriculturists. A total of 25 persons were interviewed. Among the respondents majority were men. Much ethnobotanical information was gathered from old-aged people. The plant species documented in the present research work were in use for different purposes viz; edible 22.84% (24 species), fodder 4.75% (5 species), medicinal 33.40% (35 species), woodwork 12.38% (13 species), ornamental 12.38% (13 species), poisonous 2.85% (3 species) and 11.42% for general purposes.

KEY WORDS: Flora, Conservation, Samanabad, Ethnobotany

Introduction

Ethnobotany explores the correlation between plants and environment. It investigates how the folk people make use of plants for various purposes. Ethnobotanical study aids ecologists, pharmacologists, taxonomists, watershed and wild life managers in their attempt in making the area of their concern prosperous. Medicinal plants are the source of income for poor communities around the globe. All over the globe, plants are being used as a substitute to allopathic medicines to treat ailments especially in rural communities (Hayta et al., 2014). Plants shape the human heritage (Farnsworth, 1993). Ethnobotany equates the men's relation with plants and includes studies on food, fiber, dyes, tannins, useful and harmful plants, taboos and medico religious beliefs. The use of plant-based products is expanding day by day. Plants are used worldwide by the indigenous people to fulfill their basic needs (Chowdhury, 2005).

Pakistan is categorized among those developing countries which has a good potential within the variety of medicinal plants. It has varied climatic and edaphic factors, which articulate diversity and valuable medicinal plant endowment. Pakistan is enriched with medicinal plants. More than 600 plants being used as medicine (Ali & Qaiser, 2005). Native people of Paliyar tribe India are dependent on plants for food, medicines, forage, construction, making mats, and for fire and shade (Gupta et al., 2005).

The plants are used to treat common ailments by the native people, farmers and rural communities of emerging countries (Rojas et al., 2006). Forest products are used by the people due to lack of resources and poor economic condition (Shukla & Chakravarty, 2012). The use of plants as food and medicine is common among Bengali women in Sylhet, Bangladesh (Jennings et al., 2015). Tribal communities of Thakht-e-Sulaiman hills, Pakistan were reported to use 51 species of wild edible plants (Ahmad & Pieroni, 2016). The exploration and utilization of ethnobotanical resources, its identification, documentation and conservation is need of the time which is essential for restoration and preservation of traditional and tribal knowledge (Sardar & Khan 2009).

Multifarious use of plant species as edible as well as medicinal and other purposes has also been documented from different parts of India and the world (Jain, 1963). The phytoresources are used by different communities for many purposes such as medicine, fuel, fodder, timber for house construction, agricultural equipment, religious and other purposes. In general, the communities living in the near vicinity of a forest closely interact with the forest; obtain their economic livelihood and often their cultural spiritual identity. Due to lack of availability of resources and poor socio-

economic condition, forest originated products are mostly used by these communities for their survival (Shukla & Chakravarty, 2012). Moreover, in developing countries now, the trend is to incorporate traditional medicines in to local health care system and interest has increased among the researchers to explore the huge potential of ethnobotanical knowledge for treating various diseases (Dutta & Dutta, 2005). The aim of the current study is to prepare an ethnobotanical data-base of flora of Government Graduate College for Women, Samanabad, Lahore.

Materials and Methods

Study site: Lahore is the second biggest city of Pakistan. It is also known as "City of Gardens". The coordinates of Lahore are 31015'- 31042'N and 74001- 74039' E. The coordinates of the study area are 31031'40" N 74018'11" E, as measured by GPS system and map of the college is represented in Fig 1. The climate of the area is arid and semi-arid. Soil is well-drained and derived from alluvial plain. The texture of the soil is silty loam. The irrigation system of study area is tap water and open flooded. The ethnobotanical data was collected from gardeners, herbalist and available literature.

Fig. 1. Map of Government Graduate College for Women Samanabad, Lahore

Collection of Data: The present work entitled "Ethnobotanical survey of the flora of Government Graduate College for Women, Samanabad Lahore Punjab" was based on direct communication with the inhabitants of the area, gardeners and local hakims. Ethnobotanical data was collected from February to April 2019. Plants were collected pressed, dried and labelled. The dried plants were mounted on herbarium sheets. The specimens were identified using standard floras (Strid,1986; Ali & Qaiser, 1992-2007). The information was gathered through direct interview. Questionnaire method was adapted for this purpose. Then this information was compared with the available literature.

Results

Diversity of the Families: The diversity of ethnobotanically important plant species of the study area revealed that 80% families belonged to dicotyledons, 16% families to monocotyledons and 4% were gymnosperms (Fig 2).

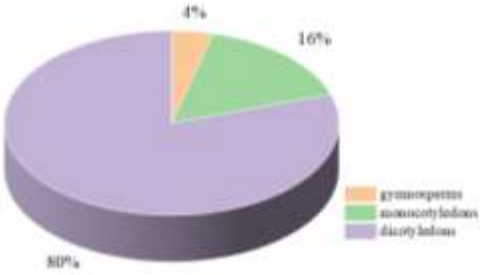

Fig. 2. Percentage Distribution of Families

The ethnobotanical information on 56 plant species was documented with the help of elderly people of the area, gardeners, herbalists and agriculturists. A total of 25 people were interviewed. Among respondents mostly were elderly men. These plant species were being used as a food, fodder medicine, poison, construction purposes, dye, flavoring agent, coloring agent, fuel, charcoal, paper pulp, resins, gums, tannin, etc. in the area.

The plant species documented in the present research work were in use by people for different purposes viz; edible 22.84% (24 species), fodder 4.75% (5 species), medicinal 33.40% (35 species), woodwork 12.38% (13 species), ornamental 12.38% (13 species), poisonous 2.85% (3 species) and 11.42% for general purpose. The percentage usage of plants for different purposes is given in fig 3.

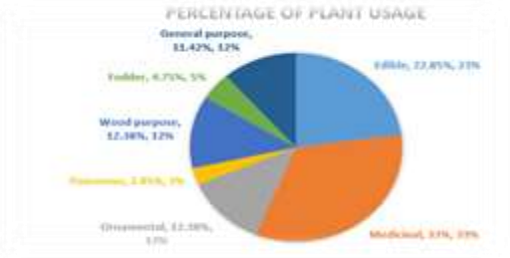

Fig. 3. Percentage of Plant Usage for Different Purpose

During ethnobotanical survey the following plant species along with their uses were reported from the study area. The data collected were arranged in

alphabetical order and given as family name following members of each family, with their botanical name, local name and ethnobotanical uses.

Family Amaranthaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Amaranthus viridis L. (Syn: Blitum viride (L.)

Local name: Chulai, Puiao, Ganar

Ethnobotanical uses: Leaves and seeds are edible whereas whole plant is utilized for treating dysentery, inflammations and purifying the blood. Additionally, it also serves as a source of yellow and green dye.

- **Botanical name:** Chenopodium album L. (Syn: Atriplex alba (L.) Crantz)

Local name: Bathu

Ethnobotanical uses: Leaves and seeds are edible. Leaves are often used to treat rheumatism while the seeds are effective in addressing urinary problems.

- **Botanical name:**

Celosia argentea var. cristata (L.) Voss (Syn: Celosia plumosa (Voss) Burv.)

Local name Cockscomb

Ethnobotanical uses: Whole plant is edible and used to treat bloody stool, hemorrhoid bleeding, uterine bleeding, leucorrhea, and diarrhea. It is also cultivated as ornamental plant.

- **Botanical name:** Iresine herbstii Hook. ex Lindl.

Local/ common name: Blood leaf

Ethnobotanical uses: Used for general purpose.

2. Family Anacardiaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Mangifera indica L. (Syn: Mangifera amba Forssk.)

Local name: Aam

Ethnobotanical uses: The fruit is edible and the kernel is utilized for medicinal purposes like treating diarrhea, hemorrhages and bleeding hemorrhoids.

3. Family Annonaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Monoon longifolium Sonn. B.Xue & R.M.K.Saunders

(Syn:Polyalthia longifolia Sonn.)

Local name Ulta ashok

Ethnobotanical uses:

The inner bark yields good bast fiber and the wood is used in barrel-making.

Family Apocynaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Alstonia scholaris (L.) R.Br. (Syn: Echites scholaris L.)

Local name: Shaitan tree

Ethnobotanical uses: Whole plant is used in treatment of fevers, chronic diarrhea, dysentery, ulcers, rheumatic pains, cancer and malaria. The bark is utilized to treat fever, malaria, digestive problems, tumors, ulcers and asthma. The leaves and latex are employed in tumor treatment. The wood is used in making packing boxes, blackboards, and paper.

- **Botanical name:** Cascabela thevetia (L.) Lippold (Syn: Thevetia peruviana)

Local name: Pilli kaner

Ethnobotanical uses: It is poisonous and is commonly grown as an ornamental plant.

- **Botanical name:** Nerium oleander L. (Syn: Nerium carneum hort. ex Dum. Cours.)

Local name: kaner

Ethnobotanical uses: The plant is poisonous and commonly grown for ornamental purposes.

- **Botanical name:** Tabernaemontana divaricata R.Br. ex Roem. and Schult (Syn:
Nerium divaricatum L.)

Local name: chandni

Ethnobotanical uses: The roots, leaves and flowers of this plant are utilized in the treatment of snake and scorpion bites. Additionally, it is also grown for ornamental purpose.

4. Family Araliaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Hedera helix L. (Syn: Hedera nepalensis K. Koch)

Local name: Common ivy

Ethnobotanical uses: The whole plant is used to treat respiratory tract diseases with intense mucous formation, respiratory tract infections and irritating cough.

5. Family Araucariaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Araucaria heterophylla (Salisb.) Franco (Syn: Araucaria excelsa
(Lamb.) W.T. Aiton)

Local name: Monkey tree

Ethnobotanical uses: The seeds of the tree are edible, and the wood is commonly used for construction purposes. It is primarily cultivated for ornamental purposes.

6. Family Arecaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Bismarckia nobilis Hildebr. & H.Wendl (Syn: Medemia nobilis (Hildebrandt & H.Wendl.)) Gall.)

Local name: Satra palm/ Bismarck palm

Ethnobotanical uses: It is primarily cultivated as an ornamental plant.

- **Botanical name:** Roystonea regia (Kunth) O.F.Cook (Syn: Medemia nobilis (Hildebrandt & H.Wendl.)) Gall.)

Local name: Royal palm

Ethnobotanical uses: It is mostly cultivated as an ornamental plant.

7. Family Asparagaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Cordyline fruticosa (L.) A. Chey. (Syn: Asparagus terminalis L., nom. superfl.)

Local name: Good luck plant

Ethnobotanical uses: It is mostly cultivated as an ornamental plant.

8. Family Asphodelaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Aloe vera (L.) Burm.f. (Syn: Aloe barbadensis Mill.)

Local name: Kanwar/gandal

Ethnobotanical uses: The plant is used for various purposes including cooking, treating skin infections, wounds, parasitic infections, arthritis and more. It is also used in cosmetics.

9. Family Asteraceae

The following members of this family were recorded in the study area.

- **Botanical name:** Eclipta alba (L.) Hassk.. (Syn: Eclipta erecta L.)

Local name: False daisy

Ethnobotanical uses: Plant is used for treating gastrointestinal, liver, skin and respiratory tract disorders. Also helpful in treating fever, hair loss, cuts and wounds.

- **Botanical name:** Sonchus asper (L.) Hill (Syn: Sonchus oleraceus L.)

Local name: Snow thistle

Ethnobotanical uses: Plant is edible and is used to treat wounds.

10.Family Bignoniaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Jacaranda mimosifolia D.Don (Syn: Jacaranda ovalifolia R. Br.)

Local name: Gul-e- neelum

Ethnobotanical uses: The wood of plant is utilized for carpentry, as it is light brown and soft, suitable for poles, tool handles and carvings. It also serves as a useful firewood.

11. Family Boraginaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Cordia myxa L. (Syn: Bourreria glabra G.Don)

Local name: Lasura

Ethnobotanical uses: The fruit is edible. It is used for treating cold, cough, coryza, fever, and skin diseases. The wood has been used as fire-sticks. It is used for furniture making.

12.Family Combretaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Combretum indicum (L.) Defilipps (Syn: Quisqualis indica L.)

Local name: Rangoon creeper

Ethnobotanical uses: The leaves can be used to alleviate pain, while the roots are utilized for treating rheumatism. It is commonly grown as ornamental plant.

13.Family Convulvulaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Convolvulus arvensis L. (Syn: Calystegia arvensis L.)

Local name: Field blind weed

Ethnobotanical uses: The plant is used in traditional medicine for treating fever, wounds and excessive menstrual flow. A green dye can also be extracted from the plant.

14.Family Cuperessaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Thuja occidentalis L. (Syn: Juniperus ericoides Mast.)

Local name: Mor punkh

Ethnobotanical uses: It is widely grown as an ornamental plant.

15.Family Ebenaceae

The following members of this family were recorded in the study area.

Botanical name: Diospyros malabarica (Desr.) Kostel (Syn: Diospyros embryopteris Pers.)

Local name: Gab

Ethnobotanical uses: The fruit is poisonous. Plant is used for a variety of diseases including diarrhea, cholera, dysentery, intermittent fevers, bleeding gums, bronchitis, carbuncles, cough, cramps, pneumonia, syphilis, tumors, etc. The wood is used for making certain implements.

16.Family Fabaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Bauhinia variegata (L.) Benth (Syn: Bauhinia candida Aiton)

Local name: kachnar

Ethnobotanical uses: Leaves are used as food. Root bark is used to treat large intestine problems, inflamed glands, abscesses and skin disorders. Stem bark is astringent, used to rinse mouth. Flowers are used to treat dysentery and diarrhea.

- **Botanical name:** Cassia fistula L. (Syn: Cassia excelsa Kunth.)

Local name: Amaltas

Ethnobotanical uses: The wood of the plant is soft, light, and fairly durable, commonly used for making packing cases, sieve frames, flooring, and water troughs. The plant is cultivated as an ornamental species.

- **Botanical name:** Erythrina suberosa Roxb. (Syn: Erythrina alba Wight & Arn.)

Local name: Gul-e-nishtar

Ethnobotanical uses: The wood of the plant is soft, light and fairly durable. It is used for various purposes. The plant is also used for ornamental purpose.

- **Botanical name:** Millettia pinnata (L.) Panigrahi (Syn: Cytisus pinnatus L.)

common name: Suckh-chain

Ethnobotanical uses: Plant is used for the treatment of tumors, piles, skin diseases, and ulcers. The root is effective for treating gonorrhea, cleaning gums, teeth and skin diseases. Wood is a source of pulp for paper making.

- **Botanical name:** Vachellia nilotica (L.) P.J.H.Hurter & Mabb.(Syn: Mimosa nilotica L.)

Local name: Kikar/babul

Ethnobotanical uses: Seeds are edible. Leaves are used in treatment of skin diseases of livestock. Whole plant is used in treatment of malaria. Plant also serves ornamental purpose.

17.Family Lythraceae

The following members of this family were recorded in the study area.

- **Botanical name:** Punica granatum L. (Syn: Punica multiflora Hort.)

Local name: Anar

Ethnobotanical uses: Fruits is edible. Dried seeds are used in various food items. The flowers are used in the treatment of dysentery, stomach ache, nose bleeds and cough. The fruit is used to treat fever, jaundice, diarrhea, amoebic dysentery, tapeworm infestation and diabetes. Dried peel, bark and root bark is a source of tannin.

18.Family Malvaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Alcea rosea L. (Syn: Alcea ficifolia L.)

Local name: Holy lock

Ethnobotanical uses: The flowers are used to improve blood circulation, for the treatment of constipation, hemorrhage etc. The shoots are used to ease difficult labor. The root is astringent and demulcent. The plant is also grown for ornamental purpose.

- **Botanical name:** Bombax ceiba L. (Syn: Bombax heptaphyllum L.)

Local name: Simal

Ethnobotanical uses: Whole plant is edible. Flowers are used to treat cutaneous troubles. Roots are used in the treatment of cholera, tubercular fistula, coughs, urinary complaints, nocturnal pollution, abdominal pain due to dysentery, and impotency.

- **Botanical name:** Hibiscus rosa-sinensis L. (Syn: Hibiscus festalis Salisb.)

Local name: Rose mallow

Ethnobotanical uses: The plant is also grown as ornamental plant.

- **Botanical name:** Jatropha integerrima Jacq. (Syn: Jatropha hastata Griseb.)

Local name: Jatropha

Ethnobotanical uses: The plant is poisonous. It is a source of biogas.

19.Family Meliaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Azadirachta indica A.Juss. (Syn: Melia azadirachta L.)

Local name: Neem

Ethnobotanical uses: Entire plant is edible. Leaves are used to treat malaria, peptic ulcers and intestinal worms. Twigs are used as tooth brushes. Seed oil is used to treat leprosy. Bark is used to treat hemorrhoids. The wood is used to make furniture.

- **Botanical name:** Melia azedarach L. (Syn: Melia orientalis M. Roem.)

Local name: Bakain

Ethnobotanical uses: It is used to treat various ailments such as piles, mouth ulcer, skin problems, dandruff, gout, inflammation etc. The root and the bark are used as an anthelmintic, vermifuge, cathartic, emetic and for intermittent fevers and dysentery. The wood is used to manufacture agricultural implements, furniture etc.

20.Family Moraceae

The following members of this family were recorded in the study area.

- **Botanical name:** Ficus carica L. (Syn: Ficus kopetdagensis Pachom.)

Local name: Anjeer

Ethnobotanical uses: Fruit is edible. Root, leaves and fruit are used in traditional medicine to treat various ailments such as gastrointestinal, respiratory and cardiovascular disorders.

- **Botanical name:** Ficus religiosa L. Forssk. (Syn: Urostigma religiosum (L.) Gasp.)

Local name: Peepal

Ethnobotanical uses: The leaves are used as famine food. The leaves and twigs are alterative, antidote, aphrodisiac, astringent and laxative.

- **Botanical name:** Morus alba L. (Syn: Morus atropurpurea Roxb.)

Local name: Shahtoot

Ethnobotanical uses: Fruit is edible. The fruit and roots have been used traditionally for vitality and immune support. The twigs are used as binding material and for making baskets. Wood is also used for construction, furniture etc.

- **Botanical name:** Morus nigra L. (Syn: Morus laciniata Mill.)

Local name: Kala shahtoot

Ethnobotanical uses: Fruit is edible. Leaves treat diabetes. Bark is used to relieve toothache. Root is used to treatment of asthma, coughs, bronchitis etc. The wood is used for fuel.

21.Family Moringaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Moringa oleifera Lam. (Syn Moringa pterygosperma Gaertn.)

Local name: Sohanjna

Ethnobotanical uses: Flowers are used as vegetable. Plant is also used as a fodder. Plant is used in treatment of diseases like respiratory, gastrointestinal, inflammatory, cardiac, nutritional and skin ailments.

22.Family Myrtaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Eucalyptus globulus Labill. (Syn: Eucalyptus gigantea Dehnh.)

Local name: sufaida

Ethnobotanical uses: It is used as a flavoring agent in sweets, baked goods, ice cream etc. Plant is used in treatment of asthma, bronchitis and gingivitis, head lice and toe nail fungus.

- **Botanical name:** Melaleuca viminalis (Sol. ex Gaertn.) Byrnes (Syn: Callistemon viminalis (Sol. ex Gaertn.) G. Don)

Local name: Bottle brush

Ethnobotanical uses: This plant is ornamental

- **Botanical name:** Psidium guajava L. (Syn: Guajava pyrifera (L.))

Local name: amrud

Ethnobotanical uses: The fruit, high in vitamins is commonly eaten fresh or made into beverages, jams, and other foods. The fruit, leaf, and fruit juice are used as medicine.

23.Family Nyctaginaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Bougainvillea glabra Choisy. (Syn: Bougainvillea brasiliensis Lund ex Choisy.)

Local name: Paper plant

Ethnobotanical uses: The plant is ornamental.

24.Family Oxalidaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Oxalis corniculata L. (Syn: Oxalis foliosa Blatt.)

Local name: Yellow sorrel

Ethnobotanical uses: Leaves of the plant are edible. It is a source of vitamin C. Whole plant is used in the treatment of influenza, fever, urinary tract infections, diarrhea, traumatic injuries, sprains and snake bites. Yellow, orange and red to brown dyes are obtained from the flowers.

25.Family Phyllanthaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Phyllanthus emblica L. (Syn: Emblica officinalis Gaertn.)

Local name: Amla

Ethnobotanical uses: Whole plant is used in treatment of high cholesterol, atherosclerosis, diabetes, pain and swelling of the pancreas, cancer, upset stomach, eye problems etc.

26. Family Pittosporaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Pittosporum tobira (Thunb.) W.T. Aiton (Syn: Euonymus tobira Thunb.)

Local name: Pittosporum

Ethnobotanical uses: It is used to treat malaria. It is also an ornamental plant.

27. Family Poaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Bambusa bambos (L.) Voss (Syn: Arundo bambos L.)

Local name: Bans

Ethnobotanical uses: Leaves are utilized as fodder and in herbal medicines for treating measles, sexually transmitted diseases, and as an

abortifacient. Stems are commonly used for fencing, construction and as fuel.

- **Botanical name:** Alopecurus pratensis L. (Syn: Alopecurus arundinaceus Poir.)

Local name: Foxtail grass

Ethnobotanical uses: It is used as a fodder

- **Botanical name:** Cymbopogon schoenanthus (L.) Spreng. (Syn: Cymbopogon iwarancusa subsp. olivieri (Boiss.) Soenarko)

Local name: Lemon grass

Ethnobotanical uses: The plant is utilized as a flavoring agent. It is used to treat colds, coughs, heart disease, urinary tract inflammations and allergies.

- **Botanical name:** Cynodon dactylon (L.) Pers. (Syn: Capriola dactylon (L.) Kuntze)

Local name: ghass

Ethnobotanical uses: The entire plant is utilized for its laxative, cooling, expectorant, carminative and tonic properties for the brain and heart.

Botanical name: Dactyloctenium aegyptium (L.) Willd. (Syn: Cynosurus aegyptius L.)

Local name: Crow foot grass

Ethnobotanical uses: Whole plant is used to treat lumbago and dysentry.

31. Family Rutaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Murraya paniculata (L.) Jack. (Syn: Chalcas paniculata L.)

Local name: Murva

Ethnobotanical uses: The flowers of murva are used to flavor tea, while the leaves are utilized in treating various ailments such as dropsy, diarrhea, dysentery, wounds etc. Plant also serves ornamental purpose.

32. Family Verbenaceae

The following members of this family were recorded in the study area.

- **Botanical name:** Lantana camara L. (Syn: Camara vulgaris Benth.)

Local name: Lantana

Ethnobotanical uses: The leaves of lantana are used to make tea, while the roots are used to treat various ailments such as influenza, cough, mumps, high fever, malaria, tuberculosis, asthma, toothache, headache, inflammation, gonorrhea and leucorrhoea. The leaves and flowering tops are used to treat fevers, constipation, tuberculosis, catarrh and bronchitis. Plant is ornamental.

Discussion

Ethnobotany specifically deals with the direct relationship of plants with man and includes studies on food, fiber, dyes, tannins, useful plants, harmful plants, taboos and medico-religious beliefs. Ethnobotanical studies provide helpful clues for crop domestication and folk selection for better exploitation of resources to meet local needs, but only limited surveys have been conducted. Such studies are also expected to provide new material for ever expanding pharmaceutical industry.

Ethnobotanical results of following trees species viz, Alstonia scholaris (L.) R.Br., Araucaria heterophylla (Salisb.) Franco, Azadirachta indica A.Juss., Bambusa bambos (L.) Voss, Bauhinia variegata (L.) Benth, Bismarckia nobilis Hildebr. & H.Wendl, Bombax ceiba L., Cassia fistula L., Cordia myxa L, Diospyros malabarica (Desr.) Kostel, Erythrina suberosa Roxb., Eucalyptus globulus Labill., Ficus carica L., Ficus religiosa L. Forssk., Jacaranda mimosifolia D.Don, Mangifera indica L., Melaleuca viminalis (Sol. ex Gaertn.) Byrnes, Melia azedarach L., Millettia pinnata (L.) Panigrahi, Moringa oleifera lam., Morus alba L.,Morus nigra L., Phyllanthus emblica L., Polyalthia longifolia Sonn. Psidium guajava L., Roystonea regia (Kunth) O.F.Cook and Vachellia nilotica (L.) P.J.H.Hurter & Mabb. in the following research were confirmed in studies conducted by Siddique et al. (2015) in their research on ethnobotanical studies of some shrubs and trees of tehsil Ahmad Pur East, district Bahawalpur, Pakistan and Ajaib & Khan, (2014) in a study conducted by ethnobotanical studies of useful trees of District Kotli, Azad Jammu and Kashmir.

In the present study following shrubs species Alcea rosea L., Aloe vera (L.) Burm.f., Cascabela thevetia (L.) Lippold, Cordyline fruticosa (L.) A. Chey., Hibiscus rosa-sinensis L., Jatropha integerrima Jacq., Lantana camara L., Murraya paniculata (L.) Jack., Nerium oleander L., Pittosporum tobira (Thunb.) W.T. Aiton, Punica granatum L., Tabernaemontana divaricate R.Br. ex Roem. and Schult. and Thuja occidentalis L. were documented important as edible, medicinally, ornamental, poisonous and for general purpose. The results were favored by a previous study conducted by Zereen et al. (2013) on ethnobotanical evaluation of the shrubs of Central Punjab, Pakistan.

Ethnobotanical uses of graases Alopecurus pratensis L.,Cymbopogon schoenanthus (L.) Spreng., Cynodon dactylon (L.) Pers. and Dactyloctenium aegyptium (L.) Willd. printed in the present study were in line with the work done by Zereen et al, (2013) on ethnobotanical usages of grasses in central Punjab-Pakistan. Hedera helix in the following study documented as medicinally important and the results were favored in a study by Lutsenko et al. (2010) in

work Hedera helix as a medicinal plant. Following herbs species were documented as ethnobotanically important Amaranthus viridis L., Chenopodium album L., Celosia argentena var. cristata (L.) Kuntze, Convolvulus arvensis L., Eclipta alba (L.) Hassk., Iresine herbstii Hook. ex Lindl., Oxalis corniculata L. and Sonchus asper (L.) Hill.

References:

Ahmad, K. and Pieroni, A. 2016. Folk knowledge of wild food plants among the tribal communities of Thakht-e-Sulaiman Hills, North-West Pakistan. J. Ethnobiol. Ethnomedicine., 12: 17-31.

Ajaib, M. and Khan, Z. 2014. Ethnobotanical studies of useful trees of District Kotli, Azad Jammu and Kashmir. Biol. (Pakistan), 60 (1): 63-71

Ali, S. I., and Qaiser, M. 1986. A phytogeographical analysis of the phanerogames of Pakistan and Kashmir. P. Roy. Soc. Edinb. A., 89B: 89–101.

Ali, S.I. and Qaiser, M. 2007-1992. Flora of Pakistan Nos 194-208. Department of Botany university of Karachi and National Herbarium, PARC, Islamabad.

Chowdhury, A. 2005. Medicinal and aromatic plants – Present development, status and prospect followed by technology backup, quality standardization, processing, value edition and market feasibility under West Bengal conditions. National conference on Medicinal Plants, Resources, Applications and Conservation in India, Jadavpur University, Kolkata.

Farnsworth, N.R. 1993. Ethnopharmacology and future drug development: the North American experience. J. Ethnopharmacol., 38: 145-152.

Gupta, M.P., Solis, P.N., Calderon, A.I., Guinneau-Sinclair, F., Correa, M., Galdames, C., Guerraa, C., Espinosa, A., Alvenda, G.I., Robles, G. and Ocampo, R. 2005. Medical Ethnobotany of the Teribes of Bocas del Toro, Panama. J. Ethnopharmacol., 96: 389–401.

Hayta, S., Polat, R. and Selvi, S. 2014. Traditional uses of medicinal plants in Elazığ (Turkey). J. Ethnopharmacol., 155: 171–184.

Jain, S. K. 1963. Observations on ethnobotany of tribals of Madhya Pradesh, India. Vanyajati, 11: 177-183.

Jennings, H. M., Merrell, J., Thompson, J. L. and Heinrich, M. 2015. Food or medicine? The food–medicine interface in households in Sylhet. J. Ethnopharmacol., 167: 97-104.

Rojas, J., Ochoa, V., Ocampo, S., and Munoz, J. 2006. Screening for antimicrobial activity of ten medicinal plants used in Colombian folkloric medicine: A possible alternative in the treatment of non-nosocomial infections. BMC Complement. Altern. Med., 6(1).

Sardar, A.A. and Khan, Z. 2009. Ethnomedicinal studies on plants resources of tehsil Shakargarh, district Narowal, Pakistan. Pak. J. Bot., 41(1): 11-18.

Shukla, G. and Chakravarty, S. 2012. Ethnobotanical plant use of Chilapatta Reserved Forest in West Bengal. Indian Forester, 138: 1116-1124.

Siddiqui, M.F., Ajaib, M. Bakhsh, H. 2015. Ethnobotanical studies of some shrubs & Trees of Tehsil Ahmad pur East, District Bahawalpur, Pakistan. FUUAST J. boil., 5(1):145-152.

Zereen, A., Khan, Z. and Ajaib, M. 2013. Ethnobotanical evaluation of the shrubs of Central Punjab, Pakistan. Biol. (Pakistan), 59 (1): 139-147.

Zereen, A., Khan, Z. and Sardar, A.A. 2013. Ethnobotanical studies of wild herbs of central Punjab, Pakistan. Bangladesh J. Plant Taxon., 20(1): 67-76.

Submission: March 20, 2024, Revised: May 10, 2025

Accepted: May 30, 2025

Published Online: December 22, 2025