INT. J. BIOL. BIOTECH., 9 (4): 405-420, 2012.

SOME IMPORTANT MEDICINAL PLANTS ASSOCIATED WITH THE VEGETATION IN DISTRICT MIRPURKHAS, SINDH

Faisal Hussain[1*], S. Shahid Shaukat[2], Muhammad Abid[1] and Farzana Usman[1]

[1]*Laboratory of Plant Pathology and Aerobiology, Department of Botany,*
Federal Urdu University of Art, Science and Technology, Gulshan e Iqbal Campus Karachi
[2]*Department of Environmental Sciences, University of Karachi*
[*]*Correspondence author E-mail: faisal.botanist2011@gmail.com*

ABSTRACT

The data on medicinal plants in the vegetation of district Mirpurkhas, Sindh was recorded during the month of June 2012. Thirty four families, 51 genera and 53 species were recorded which are used by local inhabitants as a medicine, fodder, fuel and for agricultural purpose. Many of the medicinal plants recorded are used for the treatment of two or more diseases by the local people. The family Fabaceae was dominant with respect to medicinal plants. The precious knowledge of medicinal flora is rapidly vanishing due to the illiteracy among the local people and also due to destruction of the medicinal plants. The present study was designed to convey the knowledge and importance of medicinal flora as well as traditional uses of such plants in daily life.

Key-words: Medicinal plants, Mirpurkhas, Sindh, Pakistan.

INTRODUCTION

The wide variation in geography, altitude, soil, climate and culture have created a rich floristic diversity and it is estimated that there are about 6000 species of higher plants in Pakistan (Nasir and Ali, 1970-1989). In Pakistan, ethnobotany has been introduced recently. Although, the country has about 6,000 species of wild plants of which about 400 to 600 are considered to be medicinally important (Hamayun *et al*., 2003). But this field of plant science is virgin in Pakistan from the point view of scientific study. Hence, the information about valuable plants is meager. A series of papers on medicinal and indigenous uses of plants of Pakistan has been published from various areas of the country (Hocking, 1958-62; Shinwari & Malik, 1989; Malik *et al.*, 1990; Goodman & Ghafoor, 1992; Leporatti & Lattanzi, 1994; Bhatti *et al*., 2001; Qureshi & Bhatti, 2008; Qureshi *et al*., 2002; 2009; 2010; Ahmad *et al.*, 2010; Qureshi *et al*., 2011). District Mirpurkhas of Sindh province is located at 25.31° North latitude and 69.00° East longitude in Pakistan. It is situated at 65 Kilometers to North-West of Hyderabad. It is the fifth largest city of Sindh province with an estimated population of 488,590 (2009). Mirpurkhas is considered as a promising agricultural district of Sindh Province. It has fertile land often covered with dense vegetation. There are several medicinal species recorded from this District. Local people are using commonly available plants for the treatment of many diseases and maintenance of their health. However, introduction of allopathic and homeopathic drugs has decreased human dependency on medicinal plants for their folk uses (Bhanu *et al.*, 1998).

GEOGRAPHY OF THE AREA:

Mirpurkhas is positioned atop a fertile land making conditions suitable for farming and irrigation. Being connected to the Indus via irrigation canal such as Jamarao Wah, Mirpurkhas has gained an advantage in horticulture and farming over the years. The major crops are mangoes (many famous varieties), sugarcane, cotton, wheat, chillies, bananas that are widely cultivated in the region. Mirpurkhas is the biggest producer of bananas in the country. (http://en.wikipedia.org/wiki/Mirpurkhas)

Majority of medicinal plants are available in these districts where they grow naturally but due to lack of knowledge in common man there is devastation and degradation of these valuable medicinal plants. Therefore, this study is undertaken to document folk remedies and uses of some important and commonly available plants to save their destruction and to invite pharmaceutical chemists and pharmacognosists to evaluate the ethnomedicinal and ethno pharmacological aspects of these medicinal plants scientifically (Memon, *et al.* 2008).

MATERIAL AND METHODS

The study was thoroughly conducted in the surrounding areas of Mirpurkhas District (Fig.1.). Thirty four families, 51 genera and 53 species were identified and recorded (Table.1). The collection of medicinal plants was undertaken during June 2012. Family, common name of plants, folk name of plant, habit, parts used, medicinal uses

and traditional uses were documented through the interviews of local 'Hakeems'(doctors) and experienced growers of field crops. All species of medicinal plants were identified in the Department of Botany, Federal Urdu University of Art, Science and Technology, Karachi and the voucher specimens have been deposited in the Botany Herbarium.

All species were identified and confirmed with the help of flora of Pakistan (Nasir & Ali, 1971-1995; Ali & Qaiser, 1993-2009).

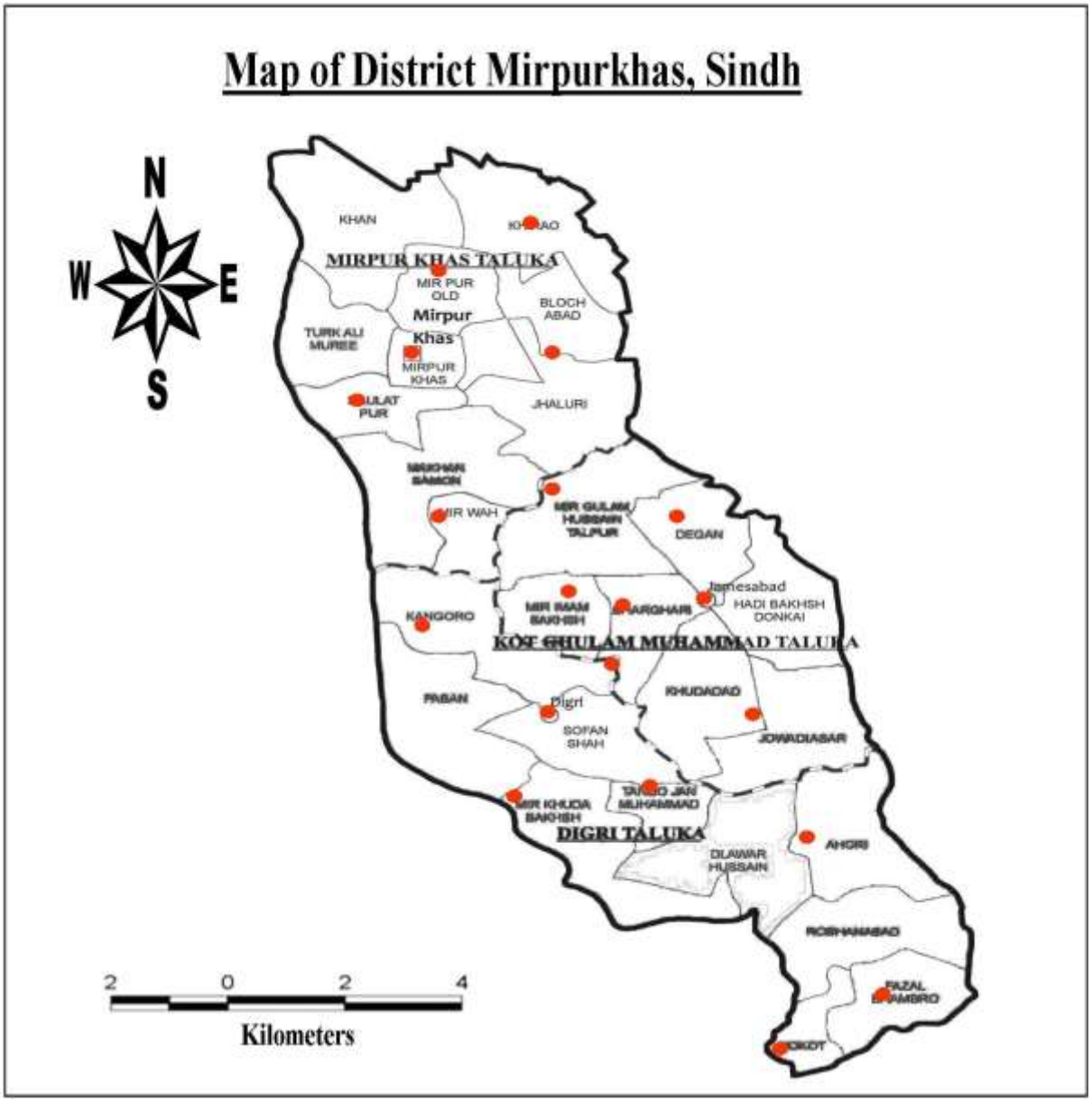

Fig.1. Study area map ● showing the area where sampling were conducted.

RESULTS

During the present study, a total of 54 species belonging to 52 genera and 34 families of angiosperms were documented from Mirpurkhas District (Table.1.). The data for habits and life -forms of plants including herb, shrub, climber and trees were recorded. The highest number of species were recorded from the family Fabaceae (9 spp.), followed by Poaceae (5 spp.), Solanaceae (4 spp.), Moraceae (3 spp.), Myrtaceae (3 spp) and Apiaceae (2 spp.) respectively. While the other families had single species (Fig. 2.).

Table 1. List of medicinal plants of Mirpurkhas District.

Family	Genus	Species	Life-form	Folk name
Alliaceae	*Allium* L.	*Allium sativum* L.	Cryptophyte	Thoam
Anacardiaceae	*Mangifera* L.	*Mangifera indica* L.	Phanerophyte	Amb
Apiaceae	*Coriandrum* L.	*Coriandrum sativum* L.	Therophyte	Dhana
	Foeniculum Mill.	*Foeniculum vulgare* Mill.	Therophyte	Saunf/Wadaf
Apocynaceae	*Nerium* L.	*Nerium oleander* L.	Chamaephyte	Gul Zingi
Asclepiadaceae	*Calotropis* R. Br.	*Calotropis Procera* subsp. *hamiltonii* (Wight)	Chamaephyte	Akk
Brassicaceae	*Eruca* L.	*Eruca sativa* Mill.	Therophyte	Janhabo
Boraginaceae	*Cordia* L.	*Cordia gharaf* (Forssk.) Ehrenb. ex Asch.	Phanerophyte	Gaeduri
Cactaceae	*Opuntia* Mill.	*Opuntia ficus-indica* (L.) Mill.	Chamaephyte	Thohar
Cannabaceae	*Cannabis* L.	*Cannabis sativa* L.	Therophyte	Bhang
Capparidaceae	*Capparis* L.	*Capparis deciduas* (Forssk.) Edgew.	Chamaephyte	Karir
Chenopodiaceae	*Suaeda* Forssk.	*Suaeda fruticosa* Forssk. ex J.F. Gmel.	Chamaephyte	Laani
Cucurbitaceae	*Citrullus* Schrad.	*Citrullus colocynthis* (L.) Schrad.	Hemicryptophyte	Tooh
Cuscutaceae	*Cuscuta* L.	*Cuscuta reflexa* Roxb.	Therophyte	Bay Paari
Euphorbiaceae	*Ricinus* L.	*Ricinus communis* L.	Chamaephyte	Heeran
Fabaceae	*Acacia* Lam.	*Acacia nilotica* Lam. Willd.	Phanerophyte	Bubar
	Albizia Durazz.	*Albizia lebbeck* (Linn.) Benth.	Phanerophyte	Sareehan
	Alhagi Adans	*Alhagi maurorum* Medik.	Chamaephyte	Kandiro
	Dalbergia L. f.	*Dalbergia sissoo* Roxb.	Phanerophyte	Talehi
	Mimosa L.	*Mimosa pudica* L.	Chamaephyte	Sharam Booti
	Prosopis L.	*Prosopis juliflora* (Sw.) DC.	Phanerophyte	Deevi
	Prosopis L.	*Prosopis cineraria* (L.) Druce	Phanerophyte	Kandi
	Tamarindus L.	*Tamarindus indica* (L.) Druce	Phanerophyte	Gidamari
	Trigonella L.	*Trigonella foenum-graecum* L.	Therophyte	Hurbo
Lamiaceae	*Ocimum* L.	*Ocimum basilicum* L.	Chamaephyte	Nazbu
Lythraceae	*Lawsonia* L.	*Lawsonia inermis* L.	Chamaephyte	Mehandi
Malvaceae	*Grewia* L.	*Grewia asiatica* L.	Phanerophyte	Pharva
Meliaceae	*Azadirachta* A. Juss.	*Azadirachta indica* A. Juss.	Phanerophyte	Nim
Moraceae	*Ficus* L.	*Ficus benghalensis* L.	Phanerophyte	Barr
	Ficus L.	*Ficus religiosa* L.	Phanerophyte	Pipal
	Morus L.	*Morus alba* L.	Phanerophyte	Tout
Musaceae	*Musa* L.	*Musa paradisiaca* L.	Therophyte	Keela
Myrtaceae	*Eucalyptus* L'Hér.	*Eucalyptus camaldulensis* Dehnh.	Phanerophyte	Safeedo
	Psidium L.	*Psidium guajava* L.	Phanerophyte	Zaeton
	Syzygium P. Browne ex Gaertn.	*Syzygium cumini* (L.) Skeels	Phanerophyte	Jamuon
Oleaceae	*Jasminum* L.	*Jasminum sambac* (L.) Ait.	Chamaephyte	Motayo
Palmae	*Phoenix* L.	*Phoenix dactylifera* L.	Phanerophyte	Khaji
Pedaliaceae	*Sesamum* L.	*Sesamum indicum* L.	Therophyte	Tir
Poaceae	*Bambusa* Schreb.	*Bambusa glaucescens* (Willd.) Merr.	Phanerophyte	Baans
	Desmostachya Stapf.	*Desmostachya bipinnata* (Linn.) Stapf.	Hemicryptophyte	Drubh
	Pennisetum L.C. Rich.	*Pennisetum glaucum* (L.) R. Br.	Therophyte	Bajhari
	Triticum L.	*Triticum aestivum* L.	Therophyte	Kanik
	Zea L.	*Zea mays* L.	Therophyte	Makai
Rhamnaceae	*Ziziphus* Mill.	*Ziziphus mauritiana* Lam.	Phanerophyte	Beer
Rosaceae	*Rosa* L.	*Rosa indica* L.	Chamaephyte	Gulab
Rutaceae	*Citrus* L.	*Citrus limon* (Linn.) Burm.f.	Chamaephyte	Lemo
Salvadoraceae	*Salvadora* L.	*Salvadora persica* L.	Phanerophyte	Khabar
Sapotaceae	*Manilkara* Adans.	*Manilkara zapota* (L.) P. Royen	Phanerophyte	Chaiko
Solanaceae	*Capsicum* L.	*Capsicum annum* L.	Therophyte	Chilli
	Cestrum L.	*Cestrum nocturnum* L.	Chamaephyte	Raat Je Rani
	Datura L.	*Datura fastuosa* L.	Therophyte	Daturo
	Solanum L.	*Solanum surattense* Burm. f.	Therophyte	Patt Payron
Tamaricaceae	*Tamarix* L.	*Tamarix passerinoides* Delile ex Desv.	Chamaephyte	Layee
Xanthorrhoeaceae	*Aloe* L.	*Aloe vera* (L.) Burm. f.	Cryptophyte	Kunwar Booti

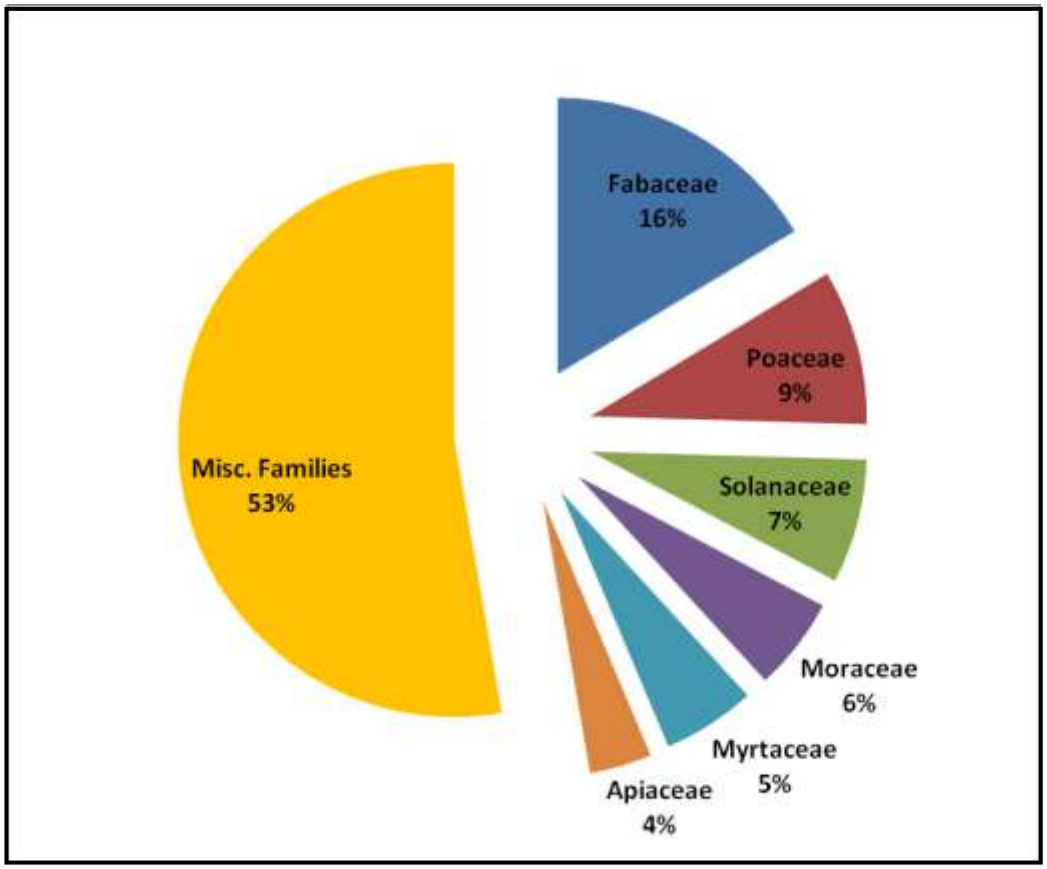

Fig.2. Families are recorded form Mirprukhas District.

These species with their respective families, common name, folk name, parts used, medicinal and traditional uses are listed below and placed into crops, shrubs, herbs and trees.

A. Crops

***1. Allium sativum* L.**
Family: Alliaceae
Common Name: Garlic
Folk Name: Thoam
Habit: Bulb
Parts used: Seeds, leaves (bulbs)
Medicinal Uses: Garlic is very important medicinal plant due to the presence of compound ajoene which is used as antibacterial, antiviral and antifungal agent. It also helps to prevent certain heart diseases and cancer.
Traditional Uses: The boiling extract of garlic is useful for the pain of skin and ear. The young leaves and powder of garlic is used in recipe of some dishes.

***2. Capsicum annum* L.**
Family: Solanaceae
Common Name: Capsicum
Folk Name: Mirch
Habit: Shrub
Parts used: Fruit/pod and leaves
Medicinal Uses: Capsicum has nutritional as well as medicinal value. Chilli is excellent source of Vitamin A, Vitamin B and Vitamin C (Hussain and Abid, 2011). It is used for the treatment of circulatory systm. It has also antimicrobial, antifungal and antiflammatory activity.

Traditional Uses: The extract of leaves used to relieve pain and swelling. *Capsicum* is also used for the treatment of headache, cold, fever, stomach and digestive problems as well as skin and sore throat problems.

***3. Coriandrum sativum* L.**
Family: Apiaceae
Common Name: Coriander
Folk Name: Dhana
Habit: Annual herb
Parts used: Whole plant
Medicinal Uses: The leaves and seeds of coriander are both considered as antioxidants because it prevents the food form spoilage or bad smell.
Traditional Uses: The fresh leaves of coriander with meal are used for digestion and carminative aid. It is also considered a good treatment for diabetes.

***4. Eruca sativa* Mill.**
Family: Brassicaceae
Common Name: Taramira (Rocket Seed)
Folk Name: Janbho
Habit: Annual plant
Parts used: Laeves and Seeds
Medicinal Uses: It is also considered as a leaf vegetable and salad. It is a rich source of vitamin C and potassium.
Traditional Uses: Leaves and Flowers are used as potherb for treating constipation. The oil of the seed is utilized as a painkiller and antilice agent. The fresh leaves are useful for digestion.

***5. Foeniculum vulgare* Mill.**
Family: Apiaceae
Common Name: Fennel
Folk Name: Saunf/wadaf
Habit: Herb
Parts used: Seeds, fruit
Medicinal Uses: The seeds of fennel are used in antiviral and antimicrobial drugs. The fruit is rich in essential oil. It is also documented that fennel plant possesses antimicrobial, anti-inflammatory and antioxidant activity. It is helpful in reducing blood fat, regulating blood sugar and preventing and treating diabetes.
Traditional Uses: The seeds or powder of seed is considered to be the treatment of obstruction of the liver and gall bladder and for digestive complaints including colic pain and indigestion.

***6. Grewia asiatica* L.**
Family: Malvaceae
Common Name: Grewia, falsa
Folk Name: Pharva
Habit: Shrub or small tree
Parts used: Fruit
Medicinal Uses: Grewia is known for its fruit in summer months. The taste of fruit is sweet and acidic. It is helpful for fever, diarrhea and certain heart and blood disorders.
Traditional Uses: The extract (juice) of Grewia's fruit is utilized for the pain of throat.

***7. Musa paradisiaca* L.**
Family: Musaceae
Common Name: Banana
Folk Name: Keela
Habit: Herbaceous plant
Parts used: Fruit
Medicinal Uses: Banana is the source of vitamin B_6, vitamin C and potassium. It is also considered as the source of reduction in cancer of certain kinds and breast cancer in women.
Traditional Uses: The young fruit of banana is used as a vegetable. In some areas of Mirpurkhas District, the powder of dry grinded bananas is used as flour and custard. Banana also reduces blood pressure.

***8. Pennisetum glaucum* (L.) R. Br.**
Family: Poaceae
Common Name: Pearl Millet
Folk Name: Bajhari
Habit: Annual plant
Parts used: Seeds
Medicinal Uses: The extract of pearl millet's seeds is used for the remedies of flu and cough.
Traditional Uses: The seeds of pearl millet is commonly used for the pain of stomach and also recommended for the treatment of digestive system.

***9. Ricinus communis* L.**
Family: Euphorbiaceae
Common Name: Castor
Folk Name: Heeran
Habit: Shrub or small tree
Parts used: Leave, seeds
Medicinal Uses: The plant of castor has anti-inflammatory activity.
Traditional Uses: The extract of leaves and roots of castor is used as a pain killer of bones. The oil of castor is also considered suitable for the strength of bones and body. The oil is also used against constipation.

***10. Sesamum indicum* L.**
Family: Pedaliaceae
Common Name: Sesame
Folk Name: Tir
Habit: Annual plant
Parts used: Leaves and seeds
Medicinal Uses: The oil sesame is considered precious. It is used in the preparation of margarine and Brominol. The oil is also used as a food and puddings.
Traditional Uses: The leaves of sesame are gummy with mucilage which is used for the remedies of injuries.

***11. Trigonella foenum-graecum* L.**
Family: Fabaceae
Common Name: Fenu greek
Folk Name: Hurbo
Habit: Annual plant
Parts used: Seeds and leaves
Medicinal Uses: The leaves of fenugreek are used as vegetable and as well as salads. Whenever seeds of fenugreek are considered to warm the kidneys, disperse cold and alleviate pain.
Traditional Uses: The seeds of fenugreek are swallowed early in the morning with hot water and used before brushing the teeth and eating something. It considered effective against therapeutic and healing joint pain.

***12. Triticum aestivum* L.**
Family: Poaceae
Common Name: Wheat
Folk Name: Kanik
Habit: Annual plant
Parts used: Seeds
Medicinal Uses: Thee seeds of wheat are used to prevent cancers, corns, tumors and warts. They are also effective against pimple on face and fungal diseases of skin.
Traditional Uses: The extract of grinded seeds used as a shampoo and vulnerary use in rural areas of Mirpurkhas for antilice.

***13. Zea mays* L.**
Family: Poaceae
Common Name: Maize
Folk Name: Makai

Habit: Annual plant
Parts used: Bushes and Seeds
Medicinal Uses: The hairs at the end of cobs of maize are used to prevent the kidney pain and it is also helped for the removal of kidney stone. It is great source of oil and starch.
Traditional Uses: The oil of corn is used as remedy for the skin due to the sting of bee.

B. Shrubs:

***1. Alhagi maurorum* Medik.**
Family: Fabaceae
Common Name: Camelthorn-bush
Folk Name: Kandiro
Habit: Shrub
Parts used: Whole Plant
Medicinal Uses: The plant of camel-thron acts as a blood purifier used in skin allergy and possesses antioxidant activity. It is also considered as a treatment for glandular tumors and has antiseptic properties.
Traditional Uses: The extract of plants is used as a pain killer of bones.

***2. Capparis deciduas* (Forssk.) Edgew.**
Family: Capparidaceae
Common Name: Caper
Folk Name: Karir
Habit: Shrub
Parts used: Whole plant
Medicinal Uses: The whole plant of caper has great economics importance. It is used against diabetes, toothache, pain and asthma.
Traditional Uses: The piece of stem is used as a tooth stick to prevent the toothache. In some areas of Mirpurkhas, the powder of flowers is utilized for the removal of skin infection such as pimples etc. The fruit is used as pickle.

***3. Cestrum nocturnum* L.**
Family: Solanaceae
Common Name: Queen of night
Folk Name: Raat Je Rani
Habit: Shrub
Parts used: Flower
Medicinal Uses: The flower of cestrum is a source of easy breathing for those peoples which are affected from nausea. It also contains chlorogenic acid.
Traditional Uses: The smell of cestrum is source of getting rid of irritation of the nose and throat and relieving of headache.

***4. Citrullus colocynthis* (L.) Schrad.**
Family: Cucurbitaceae
Common Name: Colocynth/ Bitter apple
Folk Name: Tooh
Habit: Shrub
Parts used: Root, fruit and seed
Medicinal Uses: Seed and fruit of Colocynth are recommended for the patients of diabetes, wound healing and hepatitis. Extract of fruit also provides strength to abdominal activities and eyesight.
Traditional Uses: The young pieces of roots are used as a tooth sticks to prevent the toothache. The extract of fruit is commonly given to the patients of gas and liver diseases.

***5. Citrus limon* (Linn.) Burm.f.**
Family: Rutaceae
Common Name: Lemon
Folk Name: Lemo

Habit: Shrub
Parts used: Fruit, Leaves
Medicinal Uses: Lemon is an excellent source of vitamin C which prevents the scurvy (deficiency of Vitamin C). Lemon is commonly considered the source of citric acid. It is often given in colds and running nose along with tea (without milk).
Traditional Uses: The extract of leaves is considered active against the fever and abdominal worms. The juice of lemon fruit is considered effective against the bee sting.

***6. Desmostachya bipinnata* (Linn.) Stapf.**
Family: Poaceae
Common Name: Halfa grass
Folk Name: Drubah
Habit: Shrub
Parts used: Whole Plant
Medicinal Uses: The flower and roots are effective for the treatment of fever and dysentery
Traditional Uses: The extract of flower and root of halfa grass is used for the treatment of motion and abdominal pain.
Note: This grass is extensively grazed in Sindh.

***7. Jasminum sambac* (L.) Ait.**
Family: Oleaceae
Common Name: Arabian Jasmine
Folk Name: Motayo
Habit: Shrub
Parts used: Root, leaves and flowers
Medicinal Uses: It is used against the diseases of eyes, itching and epilepsy.
Traditional Uses: It is traditionally used as a remedy of headache, injury and wounds.

***8. Lawsonia inermis* L.**
Family: Lythraceae
Common Name: Myrtle
Folk Name: Mehandi
Habit: Shrub
Parts used: Leaves
Medicinal Uses: The myrtle commonly acts as an antifungal agent and used for the preservation of leather and cloth.
Traditional Uses: The powder of myrtle provides the strength to hairs and prevents the falling of hair. It is also used as fragrances for hair.

***9. Nerium oleander* L.**
Family: Apocynaceae
Common Name: Oleander
Folk Name: Gul Zangi
Habit: Shrub
Parts used: Leaves and seeds
Medicinal Uses: The leaves and seeds of Oleander are used to make medicines such as that for asthma, cancer, ringworm and malaria.
Note: It is also considered as poisonous.
Traditional Uses: The extract of Oleander leaves are used for skin diseases and warts.

***10. Ocimum basilicum* L.**
Family: Lamiaceae
Common Name: Basil
Folk Name: Nazbu
Habit: Shrub
Parts used: Leaves and flowers

Medicinal Uses: Basil is the main source of vitamin A, vitamin C, calcium and phosphorus. It provides strength to cardiovascular system through its smell (i.e. compounds involved in smell). The basil possesses high concentration of carotenoids.
Traditional Uses: The extract of leaves is used to strengthen eyesight.

***11. Opuntia ficus-indica* (L.) Mill.**
Family: Cactaceae
Common Name: Cactus/ Opuntia
Folk Name: Thohar
Habit: Shrub
Parts used: Leaves and sap
Medicinal Uses: *Opuntia* commonly has toxic effect. But it is used for cuts and wounds.
Traditional Uses: The sap of cactus is useful for hairs. The sap of cactus is also used as anti-inflammatory for digestive system.

***12. Rosa indica* L.**
Family: Rosaceae
Common Name: Rose
Folk Name: Gulab
Habit: Shrub
Parts used: Flowers and buds
Medicinal Uses: The petals of rose are considered as a treatment for removal of kidney stone. It is a minor source of Vitamin C. It is also used to prevent asthma.
Traditional Uses: The buds and petals of rose are used for the treatment of stomach problem.

***13. Suaeda fruticosa* Forssk. ex J.F. Gmel.**
Family: Chenopodiaceae
Common Name: Saltwort
Folk Name: Laani
Habit: Shrub
Parts used: Whole Plant
Medicinal Uses: The plant of salt wort possesses phytotoxic, insectidical and antifungal activities. It is an excellent source of potassium.
Traditional Uses: The extract of leaves and stem is utilized for the treatment of stomach problems and retention of urine.

***14. Tamarix passerinoides* Delile ex Desv.**
Family: Tamaricaceae
Common Name: Tamarisk
Folk Name: Layee
Habit: Shrub
Parts used: Flower, leaves, bark
Medicinal Uses: The leaves and flowers are used to relieve the typhoid fever.
Traditional Uses: The whole plant is used for the treatment of injuries or cuts.

C. <u>Herbs:</u>

***1. Aloe vera* (L.) Burm. f.**
Family: Xanthorrhoeaceae
Common Name: Aloe
Folk Name: Kunwar booti
Habit: Herb
Parts used: Whole plant
Medicinal Uses: It is effective against diabetes, urine problem of male and female, toothache and also used for the treatment of hepatitis.
Traditional Uses: Aloe is commonly used for hair and dandruff. It is also used as remedies of healing and burn wounds. Its juice is considered to provide the strength to digestive system.

2. *Calotropis procera* subsp. *hamiltonii* (Wight)
Family: Asclepiadaceae
Common Name: Madar
Folk Name: Akk
Habit: Herb
Parts used: Whole plant
Medicinal Uses: The plant of *Calotropis* is used for the treatment of chest congestion, hepatitis, malaria fever, pneumonia and latex (milk) of plant is also used against the male sexual weakness.
Traditional Uses: The leaves of *Calotropis* are traditionally used and applied to the external surface as remedy of pain, swelling and inflammations. The leaves are also used against fever, cold and cough.

***3. Cannabis sativa* L.**
Family: Cannabaceae
Common Name: Hemp
Folk Name: Bhang
Habit: Herb
Parts used: Leaves
Medicinal Uses: The plant of hemp is a valuable source of protein. It contains psychoactive elements. It is also utilized to prevent blood poisoning, burns, childbirth, cough, malaria, fever and tumors.
Traditional Uses: The fresh leaves of hemp are used as anti-lice. The leaves of hemp are used as beverage in hot season.
.

***4. Cuscuta reflexa* Roxb.**
Family: Cuscutaceae
Common Name: Dodder
Folk Name: Bay paari
Habit: Herb
Parts used: Whole plant
Medicinal Uses: The plant of *Cucuta* is effective for the treatment of hepatitis, diabetes and retention of urine.
Traditional Uses: The paste of fresh plant is applied to hairs for the control of hair falling and dandruff.

***5. Datura fastuosa* L.**
Family: Solanaceae
Common Name: Thorn apple
Folk Name: Datura
Habit: Herb
Parts used: Fruit, leaves
Medicinal Uses: The plant of thorn apple is considered a poisonous plant. The fruit is used for the treatment of asthma.
Traditional Uses: The extract of leaves is recommended as antilice for hairs. In some crops it is used as insecticide. The juice of leaves is utilized in insect bite.

6. *Mimosa pudica* L.
Family: Fabaceae
Common Name: Touch me not
Folk Name: Sharam booti
Habit: Herb
Parts used: Roots, leaves and flowers
Medicinal Uses: The roots of *M. pudica* are commonly used for the treatment of vaginal and uterine problems, fatigue, asthma and blood diseases.
Traditional Uses: The leaves and flowers are traditionally recommended for the prevention of fever, ulcer and piles.

***7. Solanum surattense* Burm. f.**
Family: Solanaceae
Common Name: Yellow-berried nightshade

Folk Name: Patt payron
Habit: Herb
Parts used: Fruit, root
Medicinal Uses: The root of S. *surattense* is medicinally used in cough, asthma and chest pain. Whereas fruit is used as cure of indigestion.
Traditional Uses: The fruit of S. *surattense* is traditionally used for the treatment of toothache, sore throat and provides relieve from pain.

D. Trees:

***1. Acacia nilotica* (Lamk.) Willd.**
Family: Fabaceae
Common Name: Acacia
Folk Name: Bubar, babul
Habit: Tree
Parts used: Bark, Flower, Leaves, Gum and Fruit
Medicinal Uses: The leaves and flowers are used against hepatitis, ulcer and infertility of women. The leaves and fruits provide control of diarrhea and dysentery.
Traditional Uses: The young stem of acacia is used as a tooth stick for the remedies of toothache. Its bark is used for the control of cough.

***2. Albizia lebbeck* (Linn.) Benth.**
Family: Fabaceae
Common Name: Siris/rain tree
Folk Name: Sareehan
Habit: Tree
Parts used: Leaves and seeds
Medicinal Uses: The siris is used as anti-asthmatic in tuberculosis and trauma.
Traditional Uses: The leaves of siris are used for the treatment of eye infection. Whereas, seeds are effective against boils or pimples.

***3. Azadirachta indica* A. Juss.**
Family: Meliaceae
Common Name: Neem
Folk Name: Nim
Habit: Tree
Parts used: Whole plant
Medicinal Uses: Most parts of the tree are medicinal. The extract of leaf is recommended for the purification of blood. It is also used for the treatment of bronchial asthma, mouth blister, toothache, bone pain, hair dandruff, as a control of nematodes in plants while flowers are used against the eye infection and diabetes.
Traditional Uses: The paste of leaves is used as remedy of skin allergy, anti-lice and itching. The extract of fruit and leaves is applied for the pain of liver and stomach.

***4. Bambusa glaucescens* (Willd.) Merr.**
Family: Poaceae
Common Name: Bamboo
Folk Name: Baans
Habit: Tree
Parts used: Roots, leaves and fruit
Medicinal Uses: The bamboo tree has excellent source of lactones, flavones and phenolic acids. It is used to prevent fungal and bacterial diseases of skin.
Traditional Uses: The young stems of bamboo tree are used as a tooth stick for shiny and silky teeth. The powder of roots is a treatment for scabies. The ash of burnt root is directly applied over painful joints and ringworm infections.

***5. Cordia gharaf* (Frossk.) Ehrenb. ex Asch.**
Family: Boraginaceae
Common Name: Indian cherry
Folk Name: Gaeduri
Habit: Tree
Parts used: Leaves and fruit
Medicinal Uses: Fresh and young leaves of Indian cherry is utilized for asthma problems of children and hepatitis.
Traditional Uses: The paste of leaves and fruit is effective for the treatment of skin and wrinkle problems.

***6. Dalbergia sissoo* Roxb.**
Family: Fabaceae
Common Name: Rose wood, shesham
Folk Name: Talehi
Habit: Tree
Parts used: Leaves
Medicinal Uses: The leaves of rosewood are considered effective for the hotness of body.
Traditional Uses: The fresh twigs of rosewood are traditionally applied to relieve the ringworm and foot pain.

***7. Eucalyptus camaldulensis* Dehnh.**
Family: Myrtaceae
Common Name: Eucalyptus
Folk Name: Safeedo/ Bead mushak
Habit: Tree
Parts used: Leaves
Medicinal Uses: The leaves of eucalyptus are medicinally very important. It is used as an antiseptic, anesthetic and used for the remedies of colds, diarrhea, sore throat, cough and toothache.
Traditional Uses: The extract of leaves in boiling water is considered suitable treatment for flu and cough.

***8. Ficus benghalensis* L.**
Family: Moraceae
Common Name: Banyan
Folk Name: Barr
Habit: Tree
Parts used: Milk of leaves, bark, roots
Medicinal Uses: Banyan is useful for the treatment of ulcers, vaginal problems, fever and inflammation. Bark of banyan is used as a treatment for asthma and male sexual weakness.
Traditional Uses: The extract of leaves is effective against vomiting, piles and nose-diseases. The powder of aerial roots is used in inflammation of liver.

***9. Ficus religiosa* L.**
Family: Moraceae
Common Name: Sacred fig
Folk Name: Pipal
Habit: Tree
Parts used: Leaves and fruit
Medicinal Uses: Sacred fig is medicinally used for the treatment of diabetes, asthma, epilepsy, gastric problems and sexual disorders.
Traditional Uses: The powders of leaves and fruit are used for the hotness of body and to promote the male sex hormone.

***10. Mangifera indica* L.**
Family: Anacardiaceae
Common Name: Mango
Folk Name: Amb
Habit: Tree
Parts used: Leaves and Seeds

Medicinal Uses: The mango is medicinally very important. It is used against the infection of injuries and abdominal problems.
Traditional Uses: The paste of young leaves is recommended for the relieve of cuts or injuries. Whereas, seeds are used against loose motion.

***11. Manilkara zapota* (L.) P. Royen**
Family: Sapotaceae
Common Name: Nest berry
Folk Name: Cheiko
Habit: Tree
Parts used: Seed, fruit, bark
Medicinal Uses: Bark of nest berry is effective for the treatment of diarrhea and fever.
Traditional Uses: The soaked fruit is used for the control of fever. The seed oil is used for skin ointment and used to stop the hair falling.

***12. Morus alba* L.**
Family: Moraceae
Common Name: Mulberry
Folk Name: Tout
Habit: Tree
Parts used: Leave, fruit
Medicinal Uses: The leaves of mulberry are commonly used for the treatment of cough and flu. Whereas, bark is used as anti-abdominal worms (Qureshi *et al*., 2011).
Traditional Uses: The powder of dry fruit is traditionally used for sore throat and also a remedy for cough and flu.

***13. Phoenix dactylifera* L.**
Family: Palmae
Common Name: Date Palm
Folk Name: Khaji
Habit: Tree
Parts used: Leaves and Fruit
Medicinal Uses: *Phoenix* tree is excellent source of proteins. The young leaves are used for the treatment of toothache.
Traditional Uses: The dry fruit of date palm with boiled milk is effective for hotness of body and beneficial for male sex hormones. Seed is used for certain heart diseases.

***14. Prosopis cineraria* (L.) Druce**
Family: Fabaceae
Common Name: Khejri, jandi, ghaf
Folk Name: Kandi
Habit: Tree
Parts used: Fruits and leaves
Medicinal Uses: *Prosopis* is medicinally used as an anthelmintic, tonic, leprosy and asthma.
Traditional Uses: The paste of leaves is externally applied over the injuries or cuts. The smoking of dry leaves is fruitful for eyes pain.

***15. Prosopis juliflora* (Sw.) DC.**
Family: Fabaceae
Common Name: Velvet Mesquite
Folk Name: Deevi
Habit: Tree
Parts used: Fruits and leaves
Medicinal Uses: The velvet mesquite is used as antibacterial agent in alcoholic extracts. It is used in the treatment of colds, diarrhea, flu and headcold.

Traditional Uses: The fruit is used for the treatment of measles, eye infection, sore throat and wounds.

***16. Psidium guajava* L.**
Family: Myrtaceae
Common Name: Guava
Folk Name: Zaeton
Habit: Tree
Parts used: Fruit, leaves
Medicinal Uses: The leaves of guava are used as appetizer.
Traditional Uses: The powder of dry fruit is effective against the abdominal worm in children. Leaves are also used against toothache.

***17. Salvadora persica* L.**
Family: Salvadoraceae
Common Name: Tooth brush tree
Folk Name: Khabar
Habit: Tree
Parts used: Laeves, fruits, seeds and roots
Medicinal Uses: The plant *Salvadora* has antibacterial and antimicrobial activities in its stem. Whereas, leaves are useful for the treatment of fever and pain of bones.
Traditional Uses: The unripened fruit is used for the treatment of gas problems and constipation. The roots of *Salvadora* are used for the purpose of tooth brush. The seed oil is applied for the skin diseases and ringworms.

***18. Syzygium cumini* (L.) Skeels**
Family: Myrtaceae
Common Name: Rose Apple
Folk Name: Jamoun
Habit: Tree
Parts used: Leaves, fruit, bark and seed
Medicinal Uses: Tree rose apple is a significant source of Vitamin A and Vitamin C. The bark and leaves are considered for the controlling of blood pressure.
Traditional Uses: The seed of rose apple is traditionally used in healing system and also for digestive system. The artificial wine is also made out from its fruit. Seeds are used as cure for diabetes.

***19. Tamarindus indica* (L.) Druce**
Family: Fabaceae
Common Name: Tamarind
Folk Name: Gidamari
Habit: Tree
Parts used: Fruit and Leaves
Medicinal Uses: It is used against the treatment of spermarrhea and hepatitis. It is also used as a natural coagulant.
Traditional Uses: The fruit of tamarind is considered as a promoter to sex hormones in females.

***20. Ziziphus mauritiana* Lam.**
Family: Rhamnaceae
Common Name: Jujube
Folk Name: Beer
Habit: Tree
Parts used: Leaves, root, fruit, bark and gum
Medicinal Uses: The roots of jujube are used to relieve the chronic fever and diabetes. The bark is used and acts as anti-inflammatory agent. The leaves are also useful for the treatment of pimples and scabies**.**
Traditional Uses: The paste of young leaves is externally applied over the pain, swelling or injuries. Extract of leaves in boiled water is also utilized for the healthy and shining hair.

DISCUSSION

The mostly species including herbs, shrubs or trees are medicinally important and used in the ingredient of medicines. It expected that mostly plants have active ingredients against diseases and pathogens. It is documented that local or traditional medicines are cheaper and easily available for common use. But allopathic medicines are not affordable to everyone particularly poor people who cannot afford them. The traditional medicines and knowledge of herbal medicines are under threat due to various impacts. A number of species are vanishing due to the grazing of domestic animals, salinity or floods. Due to the illiteracy and poverty, people also cause of destruction of the medicinal vegetation for the purpose of fuel, thatching and other uses.

CONCLUSION

Rapid of population growth is also a principal cause of diminishing the medicinal plant vegetation. Certain species such as *Prosopis cineraria, Calotropis procera* and *Grewia asiatica* are disappearing day by day in Mirpurkhas District. The documentation and survey indicates that District Mirpurkhas Sindh has very high potential flora for medicinal purpose. Therefore it is an urgent need for our local communities and educated peoples that they should be directly involved in creating the awareness about medicinal plant vegetation and their significance.

ACKNOWLEDGEMENTS

We are highly thankful to Dr. Sahar Zaidi, Department of Botany, Federal Urdu University of Art, Science and Technology, Karachi. Dr. Sahar Zaidi helped in the identification and nomenclature of many species. We are also grateful to Mr. Dilber Ali, Scientific Officer at AZRI, PARC Umerkot, who helped in the communication with local communities. He also assisted in the completion of survey in District Mirpurkhas, Sindh. We are also thankful to Mr. Toqeer Ahmed Rao, Department of Botany, FUUAST, Karachi and other colleagues who assisted in the completion of this work.

REFERENCES

Ahmad, M., R. Qureshi, M. Arshad, M.A. Khan and M. Zafar (2009). Traditional herbal remedies used for the treatment of diabetes from district Attock (Pakistan). *Pak. J. Bot*., 41: 2777-2782.

Ali, S.I and M. Qaiser. (Eds.) (1993-2009). *Flora of Pakistan.* No. 194-216. Karachi

Bhanu, K.U., S. Rajadurai, and Y. Nayudamma (1998) Studies on the tannins of babul, *Acacia arabica,* bark. *Aust. J. Chem.* 17: 803-809.

Bhatti, G.R., R. Qureshi and M. Shah (2001). Ethnobotany of Qadanwari of Nara Desert, *Pak. J. Bot.*, 33(special issue): 801-812.

Hussain, F. and M. Abid (2011). Pest and diseases of chilli crop in Pakistan: A review. *Int. J. Biol. Biotech*., 8(2): 325-332.

Goodman, S.M. and A. Ghafoor (1992). The Ethnobotany of Southern Balochistan, Pakistan with particular reference to Medicinal plants. *Fieldiana*., 31: 1-84.

Hamayun, M., Khan, A. and M.A. Khan (2003). Common medicinal folk recipes of District Buner, NWFP, Pakistan. *J. Ethnobot*., 31: 56-64.

Hocking, G.M. (1958). *Pakistan Medicinal Plants I*, Qualitas Plantarum Et. Material Vegetabiles, 5: 145-153.

Hocking, G.M. (1961). *Pakistan Medicinal Plants III,* Qualitas Plantarum Et. Material Vegetabiles., 8: 81-95.

Hocking, G.M. (1962). *Pakistan Medicinal Plants-IV*. Qualitas Plantarum et Material Vegetabiles, 9: 103-119.

Leporatti, M.L. and E. Lattanzi (1994). Traditional Phytotherapy on Coastal Area of Makran (Southern Pakistan). *Fitoterapia*, 65(2): 158-161.

Malik, S.M., M. Shan and Q. Marwat (1990). *Ecotaxonomical evaluation of valuable plants of Balochistan, Pakistan*. Project Rep. No. 123. Pakistan Science Foundation, Islamabad.

Memon, A.H., F.M.A. Rind, M.G.H. Laghari, U.R. Mughal, N.Memon, R.A. Gilal, M.Y. Khuhawar and F. Almani (2008). Common folk medicinal and ethnomedicinal uses of thirty medicinal plants of Districts Dadu and Jamshoro, Sindh, Pakistan. *Sindh Univ. Res. Jour. (Sci. Ser.)* 40: 89-108.

Nasir, E. and S.I. Ali. (eds). (1971-1995). *Flora of Pakistan*. NARC, Islamabad.

Nasir, E., and S.I, Ali (Eds.) (1970-1989). *Flora of Pakistan* (*Fascicle series*), Department of Botany, University of Karachi, Pakistan.

Qureshi, R. and G.R. Bhatti (2008). Ethnobotany of plants used by the Thari people of Nara Desert, Pakistan. *Fitoterapia*, 79: 468-473.

Qureshi, R., A. Waheed, M. Arshad and Tallat Umbreen (2009). Medico-Ethnobotany of Tehsil Chakwal. *Pak. J. Bot.*, 41(2): 529-538.

Qureshi, R., Bhatti, G.R. and A. Saeed (2002). Obnoxious-Mankinds Need. *Hamdard Medicus*. XLV(2): 82-87.

Qureshi, R., G.R. Bhatti and R.A. Memon (2010). Ethnomedicinal uses of herbs from Nara Desert, Pakistan. *Pak. J. Bot.*, 42: 839-851.

Qureshi, R., M. Maqsood, M. Arshad and A. K. Chaudhry (2011). Ethnomedicinal uses of plants by the people of Kadhi areas of Khushab, Punjab, Pakistan. *Pak. J. Bot*., 43(1): 121-133.

Shinwari, Z.K. and S. Malik (1989). Plant wealth of Dera Bughti area. *Progressive Farming*, 9: 39- 42.

(*Accepted for publication October 2012*)