

## ***Salvadora persica*, *Tamarix aphylla* and *Zizyphus mauritiana*: Three Woody Plant Species Mentioned in Holy Quran and Ahadith, and their Ethnobotanical Uses in North Western Part (D.I. Khan) of Pakistan**

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### **ABSTRACT**

The present research work is based on Three woody plant species: *Salvadora persica*, *L. Tamarix aphylla* (L.) Karst. and *Zizyphus mauritiana* Lam. mentioned in the 16<sup>th</sup> Ayat of Sura Saba in Holy Quran and Ahadith. These plants were collected from Dera Ismail Khan District, NWFP, Pakistan, during 2007. This is a part of check list of medicinal flora and their uses enlisted in Holy Quran, Ahadith and Islamic literature. The main aim of this study is to document the knowledge of ethnobotanical importance of these plants in the light of Islam. In view of the importance of this study related comprehensive and detailed data was collected. Complete macro & microscopic detailed morphological features of these species were discussed. Results were systematically arranged by alphabetic order of botanical names, family followed by Quranic name, Arabic name, English name, Local / Vernicular name, habit and distribution, parts used, medicinal uses and references cited from Holy Quran, Ahadith. It is concluded that herbal medicines are being widely used in the world because of better cultural acceptability, least injurious with none or much reduced side effects.

**Key words:** Ethnobotanical study, Pakistan, Holy Quran and Ahadith.

### **INTRODUCITON**

Life and diseases go together where there is life, diseases are bound to exist. Dependency and sustainability of man and animal life has been revolving around plants through their uses as food, fibers and shelter, but also plants have been used to control and ease diseases, therefore, the use of plants as medicines is an ancient and reliable practice (Arshad and Rao, 2001).

Cure of diseases through medicinal plants is always a salient feature of Islamic teaching and preaching. Islamic medicine started from Hazrat Adam (A.S.) and was completed at Hazrat Muhammad (SAW) but search and compiling of these medicines is still continued through out the world (Nasr, 1976).

The holy Quran is the eternal and everlasting basis of Islam. It contains signs and verses which have been leading people of different ages and of different academics and intellectual background to believe in Islam. The Holy Quran from the very start has a claim that it covers every aspect of life and is full of wisdom. It speaks "We

have neglected nothing in the Book” (Khan, *et al.*, 1994).

The importance of plants in various Surahs of the Holy Quran has been described, as in Al-Momeenoon, Al-Rehman, Al-Bakra and Al-Anaam, Al-A'raf, Ar-Ra'd, Al-Ibrahim, An-Nahl etc. Our Holy Prophet (Sallallahu Alayhi Wassallam) used and recommended medicinal plants for various ailments and food (Nasr, 1976).

Ahadith [the sayings of Holy Prophet Hazrat Muhammad (Sallallahu Alayhi Wassallam)] have also described the importance of many plant species. Farooqi (1998) in his book “*Ahadith Mein Mazkoor Nabatat, Adwiyah Aur Ghizaen*” in English “*Plants, Medicines and Food Mentioned in Ahadith*” has reported about 70 plants and plant products.

Keeping in view the importance of diverse medicinal flora and rich medicinal culture of Islam, research work was conducted to investigate ethnobotanical uses and create awareness about the plant species enlisted in Holy Quran, Ahadith for the welfare of human communities throughout the world.

## **MATERIALS AND METHODS**

The research work was conducted by reviewing the Holy Quran, Ahadith and Islamic books. Comprehensive and detailed information about Three ethnobotanical important plants mentioned in the 16<sup>th</sup> Ayat of Sura Saba and Ahadith were collected from these sources. Plants species were arranged in systematic order of botanical names in alphabetic order followed by family, Quranic name, Arabic name, English name, habit and distribution, part used, medicinal uses and references cited from Holy Quran, Ahadith and Islamic books. Correct botanical names, their families and identification of plants were done by using flora of Pakistan.

## **RESULTS**

Present findings were confined to three plant species belonging to three genera of three families enlisted in Holy Quran, Ahadith and Islamic literature. These plants are *Salvadora persica*, *Tamarix aphylla* and *Zizyphus mauritiana* which are used throughout Pakistan for various aspects such as medicinal, food and industrial products. Data inventory constitutes botanical name, family, Quranic name, English name, local names, Arabic name, habit and distribution; parts used, medicinal uses and references cited from Holy Quran and books of Ahadith.

**Botanical Name:** *Salvadora persica* L.

**Family:** Salvadoraceae

**Quranic Name:** Khamt

**Arabic Name:** Shajar-e-Miswak, Al-arak, Khardal

**English name :** Tooth brush tree, Mustard tree

**Local names:** Jhal (Saraiki) Playman (Pashto), Pilu(Urdu).

**Tibb name(s):** Pilun, Jhal

**Habit and Habitat:** Shrub or small tree found in rocky slopes and sandy area.

**Description:** Usually small evergreen tree; branches numerous drooping, finely striate, shining, white. Leaves opposite, elliptic-lanceolate or ovate, often mucronate at the apex. Flowers in compound lax axillary terminal panicles, numerous, greenish-yellow ; corolla very thin, deeply cleft, lobes much reflexed. Fruit drupe, 3 mm in diam., globose, smooth, red when ripe.

**Distribution in Pakistan :** D.I.Khan District: Paniala, Draban Kalan, Shiekh Maila, Pahar pur. Peshawar District; Waziristan; Kurram Vy.; Quetta District; Makran

District; Lasbella District; Dadu District; frequent in Karachi and Sind. Drier portions of the Punjab including salt range.

**Distribution in World:** Pakistan, India and Arabia.

**Parts used:** Whole plant.

**Flowering period:** March – June.

#### **Folkmedicinal uses**

**Recipe :** 250 g of fruit are placed in an earthen (clayey) pot and its mouth is closed in order to prevent the entrance of water in the pot. The pot is placed in a bucket of water for a night. The fruit is used in the morning on empty stomach. Eating of fruit of ‘water melon’ before or after the eating of *Salvadora* fruit is useful. The treatment is continued for a week. This is very useful phytotherapy for the treatment of the Tuberculosis (T.B).

**Other Etnobotanical Uses:** The dried parts are used as fuel. The wood is also used to make agricultural implements. *Miswak* (tooth brush) is made from its root. Branches and leaves serve as fodder. The ripe fruit is eaten.

**References from Quran:** But they turned away (from the obedience of Allah), so we sent against them *Sail Al-Arim* (flood released from the dam), and we converted their two gardens into gardens producing bitter bad fruit, and tamarisks, and some few lote-trees (Al-Hilali and Khan, 1985).

#### **References from Ahadith:**

- Jabbar Bin Abdullah (R) narrates that Rasulullah (Sallallahu Alayhi Wassallam) said, “The black coloured Kapas (fruit of *Salvadora*) is the best (finest) one” (A’zami, 1985b).
- Hazrat Aaisha narrates that Rasulullah (Sallallahu Alayhi Wassallam) said, “Miswak purifies the mouth and is a cause of Allah’s pleasure” (A’zami, 1985a).
- Abu-Hizat-us-Sabahi (R) narrates that Rasulullah (Sallallahu Alayhi Wassallam) gave him a twig of *Salvadora* (Al-Arak) and said, “Use it as miswak” (Farooqi, 1998).
- Abu-Zaid Al-Ghafqi. Ravi: Abu Zaidu-Ghafqi (R) narrates that Rasulullah (Sallallahu Alayhi Wassallam) said, “Miswak is of three types. If *Salvadora* is not available then (use) Anum and Batum (Farooqi, 1998).

**Botanical Name:** *Tamarix aphylla* (L.) Karst.

**Synonym:** *T. articulata* Vahl

**Family:** Tamaracaceae

**Quranic Name:** Athel

**Arabic Name:** Abal, Tarfaa, Ghaz, Athel

**English name:** Athel tamarisk

**Local Name(s):** Khagal (Urdu), Ghaz (Pashto), Frash (Saraiki).

**Tibb name:** Jhao

**Habit and Habitat:** Often planted in plains, especially as roadside tree.

**Description:** Trees or tall shrub, up to c. 13 m. tall with reddish brown to grey bark, entirely glabrous. Leaves nagnate, abruptly mucronate 1.5-2(-3) mm long. Raceme mostly aestival, simple or compound, 2-6 cm. Long 3-4 mm. Broad, spirally curved. Flowers bisexual, pinkish white, pedice less than 1 mm. Long. Sepals 5, free,

obtuse, broadly ovate to elliptic. Petals 5, free. Stamens 5, filaments filiform, inserted in alternate notches on the 10 lobed disk. Styles half as long as the ovary; stigma ovoid.

Capsule trigonous.

**Distribution in Pakistan:** This is the largest and commonest species, often planted as roadside tree throughout Pakistan.

**Distribution in World:** Africa (Morocco, Algeria, Tunisia, Libya, Egypt, Senegal, Sudan, Abyssinia, Eritrea, Somalia and Kenya), Middle East (Israel, Jordan, Saudi Arabia, Yemen, Iraq, Kuwait, Iran), Pakistan, India and Afghanistan.

**Parts used:** Bark, leaves and twigs.

**Flowering period:** June - October

**Folkmedicinal uses:** Jaundice, bad evils, rheumatism, wound and abscesses

**Recipes:**

- Ash of the leaves is mixed with water; after half an hour the water is strained (filtered) and boiled. After boiling the water is evaporated and the salt is left behind. Then ½ -1g salt is taken with Shurbat-e-Bazoori twice a day for a period as needed. Useful traditional phytotherapy for jaundice.
- Harmal seeds are put on the burnt ash of the wood of the *Tamarix*. The inhaling of the smoke is used for bad evils.
- Leaves are boiled in water. The water is strained and the hot leaves are tied on the affected area daily. The treatment is continued for a week. This phytotherapy is used for the treatment of Rheumatism, wound and abscesses.

**Other Ethnobotanical uses:** It makes a good shelter hedge in coastal gardens the wood has been used for fuel and timber. The wood is also used for making of agricultural tools. Leaves are browsed by camels.

**References from Quran:** The Noble Quran (Al-Hilali and Khan, 1998).

**References from Ahadith:**

- Hazrat Khalid bin Umair Advi (R) narrates that once during a journey with Holy Prophet (Sallallahu Alayhi Wassallam) we had nothing to eat except leaves of tamarisk (Farooqi, 1998).
- Hazrat Anas (R) said (pointing towards a cup) that he took drinking substances (e.g. honey, water, milk etc.) in that cup and gave them to Rasulullah (Sallallahu Alayhi Wassallam).

In some books it has been mentioned that the cup was made up of tamarisk's wood (Chughtai, 2000).

**Botanical Name:** *Zizyphus mauritiana* Lam.

**Synonym:** *Z. jujuba* Lam. not of Mill.; *Z. spina-christi* Willd.

**Family:** Rhamnaceae

**Quranic Name:** Sidar

**Arabic Name:** Nabaq, Sidar

**English Name:** Indian jujube

**Local Name:** Ber (S, U), Bera (P).

**Habit and Habitat:** Wild and cultivated found in dry area and rocky places.

**Description:** Tree, 9-15 m. or large shrub, branches spreading and drooping, stipular spine, c. 5-7 mm. long. Leaves elliptic oblong or sub-orbicular, 6-9 cm. long with 1-1.5 cm long petiole. Inflorescence axillary

cymes, tomentose. Flowers 2-3 mm across, greenish yellow. Calyx 5, hairy outside. Petals 5, spoon like or clawed, reflexed. Stamens 5, smaller than the petals. Ovary 2-celled, styles bifid. Disk 10-lobed or grooved. Fruit 1.5-3.5 x 1.5-2.5 cm, globose to ovoid, generally yellowish green in colour, fleshy and juicy.

**Distribution in Pakistan:** Cultivated and self sown throughout Pakistan.

**Distribution in World:** India, Pakistan, Afghanistan, China, Ceylon, Australia, Trop. Africa.

**Parts used:** Fruit, leaves, wood.

**Flowering Period:** July – September

**Folkmedicinal uses:**

**Recipes:**

- The paste of crushed fresh leaves is mixed with small amount of soap and ground loaf sugar (gur) and is tied with a cloth as bandage on the abscesses. The bandage is changed after every 24 hours and treatment is continued for 3-4 days. As a result the new abscesses will disappear and the older ones will burst. This is an effective traditional phytotherapy.
- The poultice of crushed fresh leaves is wrapped around the abscesses and wound. This is recommended by local inhabitants.

**Other Ethnobotanical Uses:** The wood is reddish, fine-textured, hard, tough, durable, planing and polishing well. It has been used to make legs for bedsteads, agricultural implements, house poles, tool handles, yokes, gunstocks saddle trees, sandals, household utensils, toys and general turnery. It is also valued as firewood; is a good source of charcoal. The branches used for fencing and hedges. The leaves are readily eaten by camels, cattle and goats and are considered nutritious. Fruit is edible and rich source of vitamin C and sugars.

**References in Quran:**

- The Noble Quran (Al-Hilali and Khan, 1985).
- And indeed he (Muhammad SAW) saw him [Jibril (Gabriel)] at a second descent (i.e. another time). Near *Sidrat-ul-Muntaha* (a lote-tree of the outmost boundary over the seventh heaven beyond which none can pass). Near it is the Paradise of Abode. When that covered the lote-tree which did cover it. (Al-Hilali and Khan, 1985).
- And those on the Right hand-how (fortunate) will be those on the Right Hand? (They will be) among thornless lote-tree. (Al-Hilali and Khan, 1985)

**References from Ahadith:**

- Hazrat Ahmad Zahbi (Rahmatullah Alayhi) narrates the following hadith:  
The first fruit eaten by Hazrat Adam (Alayhi Sallam) after His descent on the earth, was the fruit of the *Zizyphus* (Chughtai, 2000).
- Hazrat Abdullah bin Abbas narrates that Rasulullah (Sallallahu Alayhi Wassallam) said, Wash (pointing towards a person who died at Arafat) him with water and leaves of sidar (Farooqi, 1998).

Ibn Al-Qaeem considers its fruit very useful for the treatment of diarrhea and weakness of the stomach (Ghaznavi, 2000).

**Note:** There is confusion about the plant (Cidar) mentioned in the Holy Quran. According Farooqi (1992, 1998) and Chughtai (2000) the word 'Sidar' does not mean *Zizyphus* sp. (ber in urdu) but it is used for another plant *Cedrus* sp. (Labnani deodar in hindi and urdu). While the commentators of the Quran and Ahadith consider it *Zizyphus mauritiana* (ber or beri). We also consider it to be *Zizyphus mauritiana* (ber).

As there exists confusion, therefore, it needs further investigation.

## DISCUSSION

Plants are an essential component of the universe. Human beings have used plants as medicines from the very beginning of time. After various observations and experimentations many medicinal plants were identified as a source important medicine, therefore treatment through these medicinal plants, began in the early stage of human civilization (Malik, 2001).

In Islam diseases are cured in two ways, first the cure of soul through prayers and second the cure of ailments through medicines (Waize, 2000).

Cure of diseases through medicinal plants always a salient feature of Islamic teaching and preaching. Islamic medicine started from Hazrat Adam (A.S.) and was completed at Hazrat Muhammad (Sallallahu Alayhi Wassallam) but search and compiling of these medicines is still continued through out the world. Al-Quran describes the importance of plants in different Surahs as in Al-Momeenoon, Al-Rehman, Al-Bakra and Al-Inaam. Our Holy Prophet (Sallallahu Alayhi Wassallam) used and recommended medicinal plants for various ailments and food (Nasr, 1976).

Miswak (tooth brush) is one of the products of *Salvadora persica* as mentioned in its ethnobotanical uses. The use of Miswak is one of the sunnah of the Holy Prophet (Sallallahu Alayhi Wasallam). The Prophet (Sallallahu Alayhi Wasallam) himself used it frequently at various occasions such as when entering and leaving the home, reciting the Holy Qur'an, before and after sleeping, on Fridays, when Fasting and before every prayer.

Abu Hurairah (R) narrates that Rasulullah (Sallallahu Alayhi Wasallam) said: 'Was it not for my fear of imposing a difficulty on my Ummah I would have ordered that the Miswaak be used for every Salaat (A'zami, 1985a).

The dentists and gastro-entriologists agree that oral hygiene helps in the prevention of most of the diseases of oral cavity and gastro-intestinal tract (GIT). According to the report of the research done in Cape Town S. Africa Miswak contains large amount of tannic acid (Tannins). The tannins prevent the adherence of the bacteria to the teeth. It is an established fact that *Streptococcus viridans* attacking the heart valves and damaging them come from the mouth. So the use of Miswak is a preventive measure against many diseases of the teeth, G.I.T. and heart (Khan *et al.*, 1994).

The research conducted recently by dentist Almas K. proved that Chlorhexidine gluconate CHX 0.2% and miswak extract 50 % had a similar effect on dentin in the control group. The abstract of their research is presented here:

“Bacterial plaque is solely responsible for the initiation and progression of periodontal diseases. There different mechanical and chemical methods available for the maintenance of oral health through plaque control. Tooth brushes and miswak (chewing sticks) are widely used for the mechanical removal of plaque. Chlorhexidine gluconate (CHX) is one the best-proven anti plaque agents.

The aim of this study was to evaluate the effect CHX and miswak extract on healthy and periodontally involved human dentin. Sixteen human premolars recently extracted for orthodontic and periodontal reasons were used in the study. Teeth were free from caries, cervical restorations, or erosions. The dentin disc specimens were prepared and half of them were etched with 6% citric acid for 120 seconds. Both etched and unetched were further treated with CHX and 50% miswak extract and prepared for Scanning Electron Microscopic (SEM) examination. It

was concluded that CHX 0.2% and miswak extract 50% had similar effect on dentin in the control group. Miswak extract removed more smear layer as compared to CHX. Further research is needed in vivo to compare the effects of CHX and miswak extract on periodontally involved teeth and teeth with dentinal hypersensitivity”(Almas, 2000).

Chemically the air dried stem bark of *Salvadora persica* is extracted with 80% alcohol and then extracted with ether and run through exhaustive chemical procedures. This showed that it is composed of:

- Trim ethyl amine
- An alkaloid which may be salvadorine
- Chlorides
- High amount of fluoride and silica
- Sulphur
- Vitamin C
- Small amount of Tannins, saponins, flavenoids &
- Sterols (El-Mostehy et al., ND)

*Tamarix aphylla* is another plant species mentioned in the Holy Quran and Ahadith. Our holy prophet and his companions used to eat its leaves in the absence of any other food materials and also used cup made up of tamarisk wood for drinking purposes.

Hazrat Khalid bin Umair Advi (R) narrates that once during a journey with Holy Prophet (Sallallahu Alayhi Wasallam) we had nothing to eat except leaves of tamarisk (Farooqi, 1998).

Hazrat Annus (R) Said (pointing towards a cup) that he took drinking substances(e.g honey, water, milk etc.) in that cup and gave to Rasulullah (Sallallahu Alayhi Wasallam). In some books it has been mentioned that the cup was made up of tamarisk's wood (Chughtai, 2000).

The traditional medicinal uses of *Tamarix aphylla* indicates that the bark and gall of the plant are astringent, aphrodisiac and tonic. They are used for the treatment of hepatitis, eczema and other skin diseases, syphilis and scaly skin conditions (Arshad and Rao, 2001).

Fumigation of the leaves having germicidal effect and used in cold and flue. Decoction of the leaves is used in tetanus. Ground bark is used as poultice on wounds (Shahidullah, 2000).

The result indicates that *Tamarix aphylla* is traditionally used in Dera Ismail Khan District (research area) for the treatment of Jaundice, bad evils, rheumatism, wound and abscesses.

The fruit of *Zizyphus mauriiana* is very useful for human beings. It is eaten in fresh and dried form in Pakistan.

- Muhammad Ahmad Zahbi (Rahmat ullah Alayhi) narrates the following hadith:

The first fruit eaten by Hazrat Adam (Alayhi Sallam) after His descent on the earth, was the fruit of the *Zizyphus* ( Chughtai, 2000).

- Hazrat Abdullah bin Abbas narrates that Rasulullah (Sallallahu Alayhi Wassallam) said, Wash (pointing towards a person who died at Arafat) him with water and leaves of sidar (Farooqi, 1998).

Ibn Al-Qaeem considers its fruit very useful for the treatment of diarrhea and weakness of the stomach (Ghaznavi, 2000).

The folkmedicinal uses of *Zizyphus mauritiana* in Pakistan are: the leaves are useful to treat scabies and other skin diseases. Smoke from leaves is useful in cold and cough. The decoction of roots is used in fever and as powder applied to old wounds and ulcers. The bark is considered as a remedy in diarrhea. Fruits are mucilaginous, pectoral

stypic, considered to purify blood and improve digestion. These are cooling, astringent and useful in bilious affections ( Arshad and Rao, 2001).

It is concluded that herbal medicines are being widely used in the world because of better cultural acceptability, least injurious with none or much reduced side effects.

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