Journal of Medicinal Plants Studies
Year: **2013**, Volume: **1**, Issue: **4**
First page: (**87**) Last page: (**92**)
ISSN: **2320-3862**
Online Available at **www.plantsjournal.com**

Journal of Medicinal Plants Studies

Biodiversity of Prominent Indigenous Medicinal Plants of Village Khujaki, District Karak, KPK, Pakistan

Saad Ullah Khan [1], Rehman ullah khan [1*], Sultan Mehmood [1], Ihsan ullah [1], Manzoor Ullah [1]

1. Department of Botany UST, Bannu
[E-mail: rehman_g4u@yahoo.com]

The research work was initiated to get information and report the prominent indigenous medicinal plants of village Khujaki District Karak during 2012. The present study deals with the use of medicinal plants by the people of village Khujaki Karak area. As a whole about 35 plants belonging to 19 families were collected. Most of the plants belong to the following families, *Poaceae* (4 spp), *Moraceae* (4 spp), *Brassicaceae* (4 spp) *Mimosaceae* (3 spp), *Zygophyllaceae* (2 spp), *Cucurbitaceae* (2 spp), *Papilionaceae* (2 spp), *Malvaceae* (2 spp), *Alliaceae* (2 spp), *Amaranthaceae* (1 sp), *Solonaceae*, (1 sp), *Liliaceae* (1 sp), *Capparaceae* (1 sp), *Asclepidiaceae* (1 sp), *Apiaceae* (1 sp), *Tamaricaceae* (1 sp), *Cannabiaceae* (1 sp), *Chenopodiaceae* (1 sp) and *Asteraceae* (1 sp). The local inhabitants were ignorant and had little knowledge about the medicinal plant and proper time of collection. Younger generation doesn't know about indigenous knowledge of various medicinal plants, but the old people especially women have some knowledge about the wild resources of medicinal plants. The plants were identified botanically; arranged alphabetically along with their scientific names, family names, local names, habit, part used and medicinal uses. The plants were deposited in the Department of Botany University of Science and Technology Bannu. Most of the plants are wild while few plants are cultivated.

Keyword: Ethnobotanical, *Caricapapaya*, Leaves and Root Aqueous Extracts.

1. Introduction

Karak is situated in Khyber Pakhtoon Khwa province of Pakistan. It is situated to the south of Kohat and on the north side Bannu and Laki Marwat districts on the main Indus Highway between Peshawar and Karachi. It is 123 km away from Peshawar. Karak is said to be the single district which is inhabited by only one tribe of Khattak (Pakhtoons).

Traditional and folklore medicine bequeathed from generation to generation is rich in domestic recopies and communal practice. Ayurvedic and Unani system of medicine that have been widely used to conserve human health in China, India and Pakistan[7]. Medicinal plants are traditionally used in India for curing various diseases[11,12,19]. In our country (Pakistan), some ethno botanical studies of plants have also been carried out[6]. The ethnobotany of some parts of Swat has also been reported[8,16,9,15].

2. Materials and Methods

2.1 Area Exploration

Trips were arranged to 20 different sites of village Khujaki District Karak KPK, Pakistan to explore and collect important flora of the area during 2011. A total of 32 medicinal plants were collected. All the Plants were conserved systematically in the Department of Botany, University of Science and Technology Bannu (UST, Bannu).

2.2 Exploration of Local Flora

Map of the Karak was also obtained from concerned office for proper guidance in the collection of plants. To explore the flora of the study area, a Performa was designed for the characterization of the flora, i.e., plant name, family, local name, habit, part used, medicinal uses.

2.3 Medicinal Flora

During exploratory trips, the Medicinal flora was carefully collected by adopting the recommended procedure used by M. Ahmad and Ali[7], and photographs were clipped of the spots. Local inhabitants were interviewed to know about the importance and uses of the indigenous flora for curing different diseases in human beings. Repeated queries were made to formulate the correct data. Outcome of the results were rechecked and compared with the available literature.

3. Results and Discussion

The study revealed that 35 medicinal Plants belonging to 19 families were identified in the research area. The plants were found both wild types as well cultivated. The plants examined included *Abelmoschus esculentu* (L) , *Acaccia nilotica* L , *Acacia modesta* (wall), *Allium cepa* L, *Allium sativum* L, *Albizia lebbeck* (L) Benth, *Alhaji mararum* Medic, *Amaranthus viridus* (L), *Aspodelus tenuifolius* (Caven), *Avena sativa* (L), *Brassica compestris* (L), *Brassica rapa* (L), *Brassica oleracea* (L), *Cappris deciduas* (Forssk) Edgew, *Citrullus colocynths* Linn, *Cannabis sativa* L. *Cymbopogan javarancusa*(Schult), *Cynodon dectylon* (L), *Cuscuta campestris* Yuncker, *Calatropis procera* Forst, *Dalbergia sisso* (Roxb), *Eruca sativa* (Mill), *Fagonia cretica* (L), *Ficus carica* (L), *Foeniculum vulgare* Mill, *Heliotropium europium* Lin, *Morus nigra* L. *Morus alba* L, *Morus leavigata L.*, *Saccharum arundinacium*, *Solanum nigram*, *Tamarix aphylla* Linn, *Tirablus terristrs* Linn, *wathinia coagulans* (stock) and *Xanthium stromarium.* The present study brings some interesting medicinal plants to the screen like *Acacia nilotica*, the whole plant is used for diarrhea. Similarly *Calotropis procera* is exploited in many life saving medicines for human beings as well as animals. Some common plants have common uses like *Allium sativam* for the control of cholesterol in blood. Traditionally many plants are used as veterinary medicines. *Calototropis procera* show very good result in domestic animal. The fruits of Citrullus colocynths are extensively used in curing diabetes, reported from different areas of Tehsil Takht-e- Nausriti, similarly *Ficus bengalensis* is used for jaundice and Hepatitis. The gum of *Accacia nilotica* is used as tonic, stimulant and demulcent. Root of is used in jaundice, leaves are used against typhoid. Leaves of Solunum surrattense are used in toothache and headache. The fruits of Phoenix dectylifera are edible. All members of community in the area use medicinal plants. Some wild medicinal plants like *Solanum surretense* aerial parts are not only used for "Digestive problems" but fruit and aerial parts are also used to cure "Skin diseases". Root extract of *Withania* coagulans is used as tonic for general and sexual debility and juice of aerial parts is used as "Diuretic" and also for "Rheumatism" by different communities of the area.

Various parts of the plants are used in curing different ailments. During the research project it was noted that the wealth of medicinal flora of Village Khujaki District Karak are not fully exploited. Some medicinally important plant species are fast dwindling, which are mainly due to human interference. So, the area needs proper protection for the conservation and survival bio-resources. The medicinal plants can be protected by the conservation program of local people. Regularly chemical screening of medicinal plants and their useful parts collected from the fields in different seasons may be activated. The oil bearing medicinal plants should be fenced for chemical and biological investigation, as well as for preventing overgrazing, cutting and use as a fuel wood.

Table 1: List of selected Plants and their ethonobotanical uses

S.N	Name of Plant	Family	Local Name	Habit	Part Used	Uses
1	*Abelmoschus esculentus* Moench	Malvaceae	Bhindi	Herb	Whole Plant	Laxative, Digestive, Constipation, Fuel
2	*Acacia modesta* Wall	Mimosaceae	Palosa	Tree	Whole Plant	Diarrhea, Dysentery, Astringent, Tooth brush, Fuel, Snuff preparation
3	*Acacia nilotica* L	Mimosaceae	Kikar	Tree	Whole Plant	Diarrhea, Stomatche Dysentery, Astringent, Tooth brush, Fuel,
4	*Albezzia lebbeck* (L) Benth	Mimosaceae	Sreen	Tree	Whole Plant	Timber, Furniture, Ornamental, Honey bee spp
5	*Alhagi maurorum* Medic	Papilionaceae	Tundu	Shrub	Whole Plant	Blood purifier, Expectorant, Fuel
6	*Allium cepa* L	Alliaceae	Pyooz	Herb	Bulb and leaves	Condiment, Flavorius agent, Laxative Blood purifier Vegetables ,Digestive
7	*Allium sativum* L	Alliaceae	Yeza	Herb	Bulb and leaves	Condiment, Flavorius agent, Laxative, Blood purifier, Vegetable
8	*Amaranthus viridus* L	Amaranthaceae	Ranzaka	Herb	Whole Plant	Vegetables, Tonic, Laxative, Fodder
9	*Aspodelus tenuifolius* Caven	Liliaceae	Jungli pyoz	Herb	Whole Plant	seeds are applied to inflamed parts
10	*Avena sativa* L	Poaceae	Karyana	Herb	Whole Plant	Fodder, Harmful to wheat, Fuel
11	*Brassica compestris* L	Brassicaceae	Woeri	Herb	Whole Plant	Fodder, Tonic, Laxative, purgative
12	*Brassica rapa* L	Brassicaceae	Tepr	Herb	Root & leaves	Fodder, Laxative, Constipation, Vegetable, Purgative
13	*Brassica oleracea* L	Brassicaceae	Gopa	Herb	Flowers and leaves	Gas troubles, Fodder, Vegetables
14	*Calotropis procera* Willd.	Asclepidiaceae	Spulmaka	Shrub	Stem,leaves and milky juice	Fuel,used as bandage for rheumatic joints and swellings
15	*Capparis deciduas*(Forsk)Edge	Cappiridaceae	Taph	Tree	Fruit, Bark, Wood	Laxative, Antihelmentic, Honey bee spp
16	*Cannabis sativa* L	Cannabinaceae	Bange	Shrub	Leaves and fruits	cooling agent, stimulant, tonic, cure urinogenital diseases
17	*Citrullus colocynthis* L	Cucurbitaceae	Maragenyue	Herb	Fruits,Leaves	Diabetes, Ear pain, Constipation
18	*Cuscuta reflexa* Roxb	Cucurbitaceae	Chambal	Climber	Whole plant	Hair fall, Dandruff
19	*Cymbopogan javarancusa* Schult	Poaceae	Sargarayah	Grass	Whole plant	Fodder, Insulating agent
20	*Cynodon dectylon* L	Poaceae	Barawa	Herb	Whole Plant	Fresh fodder, Dysentery, Stimulant, Vomiting, Tonic, Ornamental
21	*Dalbergia sisso* Roxb	Papilionaceae	Shawa	Tree	Whole Plant	Tooth brush, Shade tree, Snuff preparation, Timber, Furniture
22	*Eruca sativa* Mill	Brassicaceae	Shershum	Herb	Whole Plant	Fever, Cold, Influenza
23	*Fagonia cretica* L	Zygophyllaceae	Spelagzai	Herb	Whole Plant	Cooling agent, Blood purifier
24	*Ficus carica* L	Moraceae	Tagah	Tree	Whole plant	Vegetables, Laxative, Nutritive, Fuel

25	*Foeniculam voulgare* Miller	Apiaceae	Soop	Herb	Whole plant	Flavoring agent, Throat problems Gas trouble, Vermicide, Fuel, Honey bee spp
26	*Heliotropium europiun* L	Chenopodiaceae	Harponayah	Herb	Whole plant	Camel fodder
27	*Saccharum arundinacium*	Poaceae	Kana	Grass	Whole plant	Soil binder,Binder making,Fuel,Fodder
28	*Solanum nigram*	Solonaceae	Khonsibai	Herb	Whole plant	Asthma
29	*Morus nigra* L.	Moraceae	Toor toot	Tree	Whole plant	Fruits are edible. The leaves are used for feeding silkworms. It is used to cure several diseases like diabetes, and to reduce blood sugar level.
30	*Morus leavigata* L	Moraceae	Shah toot	Tree	Whole plant	The fruits are edible. Leaves juice keeps skin smooth, healthy and prevent throat infections. Leaves are also used as fodder for goats and cattle.
31	*Morus alba* L	Moraceae	Speen tooth	Tree	Whole plants	Leaves are used as silk worms feed and cattle feed for milk production. Fruits are used for making wine. Seeds are used for making jam. The fruits are edible and used to cure several diseases like sore throat and dyspepsia
32	*Tamarix aphylla*	Temaricaceae	Ghaz	Tree	Whole plant	Germicide, Soil binder, Agricultural tools, Blood clothing
33	*Triabulus terristris*	Zygophyllaceae	Maklenye	Herb	Whole plant	Fodder
34	*Withnia coagulans*	Malvaceae	Shapianga	Herb	Whole plant	dyspepsia ,flatulence
35	*Xanthium stromarium*	Asteraceae	Shpozoka	Shrub	Whole plant	Hemorrhoides and fuel

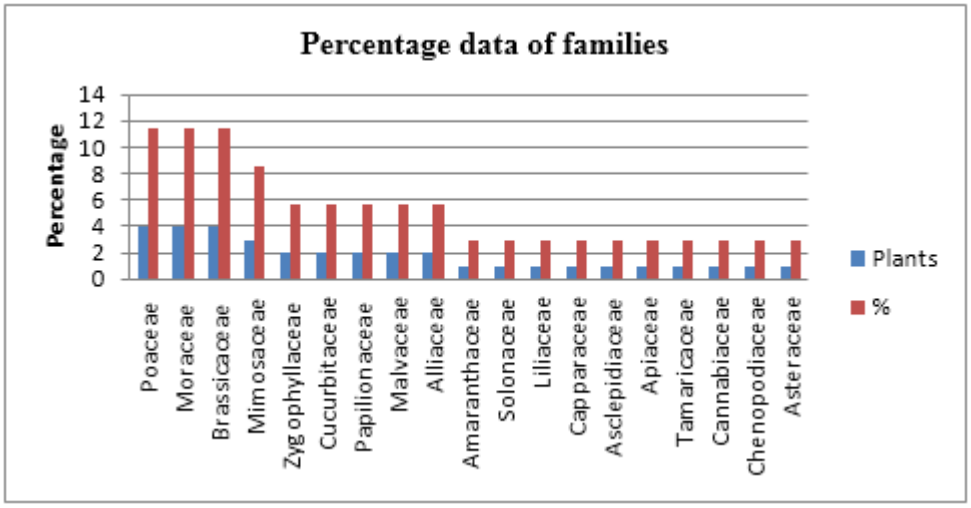

Fig 1: Graphic representation Percentage of Families

Table 2: Percentage of Families and spp distribution among the families

Family	Plants	%
Poaceae	4	11.43
Moraceae	4	11.43
Brassicaceae	4	11.43
Mimosaceae	3	8.57
Zygophyllaceae	2	5.71
Cucurbitaceae	2	5.71
Papilionaceae	2	5.71
Malvaceae	2	5.71
Alliaceae	2	5.71
Amaranthaceae	1	2.86
Solonaceae	1	2.86
Liliaceae	1	2.86
Capparaceae	1	2.86
Asclepidiaceae	1	2.86
Apiaceae	1	2.86
Tamaricaceae	1	2.86
Cannabiaceae	1	2.86
Chenopodiaceae	1	2.86
Asteraceae	1	2.86
Totle 19 family	**35 plants**	

4. References

1. Ahmad Z. Conservation of wildlife and its habitat in Soan Valley. Tiger Paper Jan-March, 2002; 29(1):12-16.
2. Arshad M, Rao AR. Medicinal Plants of Cholistan Desert Medicinal Plants of Pakistan. 2001.
3. Balick M, Cox P. Plants, People and Culture. The Science of Ethnobotany. Scientific American Library, USA 1996, 228.
4. Choudhary K, Singh M, Pillai U. Ethnobotanical surveyof Rajasthan- An Update. Am-Eurasian J Bot 2008; 1(2):38-45.
5. Dang region in Rajasthan, India. Ethnobotanical Leaflets, 14:218-224.
6. Durrani MJ, Malik AM, Hussain F. Folk medicinal plants of Nushki, District Chaghi, Pakistan. Jour Sci & Technol 2003; 27(1&2):45-52.
7. Hasan A, Khan MA, Ahmad M. Authenticityof folk medicinal plants of Pakistan. Taxonomic and Chemical Methods 2007; 1:3-4.
8. Hussain F, Sher H, Ibrar M. Ethnobotanical profile of some plants of District Swat, Pakistan. Pak J Pl Sci 2004; 10:85-104.
9. Hussain F, Sher H, Ibrar M, Durrani MJ. Ethnobotanical uses of plants of District Swat, Pakistan. Pak J Pl Sci 2005; 11(2):137-158.
10. Hussain M. Exploration of legume diversity Endemic to salt rang in Punjab, annual technical report submitted to PARC Islamabad, Pakistan, 2002.
11. Khan AA. Some common ethnomedicinal uses of plants among the Gond of Chhindwaradistrict, (M.P.) India. Hamdard Medicus 1999; 42:80-83.
12. Mustafa NM, Ali RM, Shaari K. Evaluation of anti-inflammatory activity of some Malaysianplants using the mouse ear oedema assay. Journal Tropical Forest Products 2000; 6:106-112.

13. Pei I. Conservation of biological diversity in Templeyard and Holly hills by the Daui Ethnic Monorities of china. Ethnobiology 1991; 3:27-35.
14. Sharma L, Khandelwal S. Traditional uses of plants ascooling agents by the Tribal and Traditional communities 2010.
15. Sher H, Hussain F, Mulk S, Ibrar M. Ethnoveternary plants of Shawar Valley DistrictSwat, Pakistan. Pak J Pl Sci 2004; 10(1):35-40.
16. Sher H, Midrarullah AU, Khan F, Hussain, Ahmad S. Medicinal plants of Udigram,District Swat, Pakistan. Pak. J. Forest. 2003; 53(1):65-74.
17. Singh VK, Ali ZA, Siddiqui MK. Folk medicinal plants of Garhwal and Kumaon forest of Uttar Pradesh, India. Hamdard Medicus 1997; 40:35-47.
18. Shinwari MI, Khan MA. Indigenous use of medicinal trees and shrubs of Margalla Hills National Park, Islamabad. Pak J Forest 1998; 48(1-4):63-90.
19. Siddiqui TO, Javed K, Aslam MM. Folk medicinal claims of western Uttar Pradesh,India. Hamdard Medicus 2000; 43:59-60.
20. Zaidi SH. Existing Indigenous Medicinal Plant Resources of Pakistan and their Prospects for Utilization. Medicinal Plants of Pakistan 2001; 53.