

## ETHNOPHYTOMEDICINES FOR TREATMENT OF VARIOUS DISEASES IN D. I. KHAN DISTRICT

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### ABSTRACT

This paper is based on the results of an ethnomedicinal research work conducted in Dera Ismail Khan (D.I.Khan) district, NWFP, Province (Pakistan) during May 2005 - March 2006. The study was focused for documentation of traditional knowledge of local people about use of native medicinal plants as ethnomedicines. The method followed for documentation of indigenous knowledge was based on questionnaire. The interviews were held in local community, to investigate local people and knowledgeable persons, who are the main user of medicinal plants. The ethnomedicinal data of 35 plant species, belonging to 29 genera of 23 Angiospermic families, were recorded during field trips of the area. Among them the 4 families belong to monocot and 19 families are of dicot. These indigenous plants were used as traditional phytotherapies for the control and treatment of various diseases. About 51 traditional phytotherapies were investigated from the inhabitants of the area. Information regarding their botanical name, vernacular name, family, local distribution, parts used, method of use and used for, are listed in the Table. Plant specimens were collected, identified, preserved, mounted and vouchers were deposited in the Department of Botany, Quaid-i-Azam University, Islamabad for future references.

**Key words:** Ethnophytomedicine, D. I. Khan District (Pakistan).

### INTRODUCTION

Dera Ismail Khan (D.I.Khan) is the southern most district of N.W.F.P. lying between 31.15 and 32.32 north latitude and 70.11 and 71.20 east longitude with an elevation of 600 meters from the sea level. It has a total geographical land of 0.896 million hectares (2214060 acres) out of which 0.300 m.ha (741315 acres) is cultivated (Khan, 2003).

Most of the D. I. Khan district is a dry alluvial plain commonly referred to as "Daman". The only hills, within the district, are those of Khisore Range which lies in the north - eastern part of the district. The Khisore Range is also known as the *Ratta Koh* or *Koh-e- Surkh*, meaning the red mountain. It runs close to Indus river, in north- east to south- west direction. The summer season is dry and hot. June is the hottest month during which the mean maximum and minimum temperature is recorded around 42 °C and 27 °C respectively. December, January and February are the cold months. In January the mean maximum and minimum temperature is around 20 °C and 4 °C respectively. The district is bounded on the north by Tank and Lakki Marwat districts, on the east by Mian Wali and Bhakkar districts of Punjab, on the south Dera Ghazi Khan district of Punjab and on the west by Tribal Area adjoining Dera Ismail Khan district (Anonymous, 1998).

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. Ailments and medicinal plants vary in the world, hence their nature, frequency and method of administration can change in relation to geography, time and knowledge. Indigenous different plants have been used to cure a disease or several diseases at a time (Arshad and Rao, 2001).

Medicinal plants are a valuable natural resource and regarded as potentially safe drugs. They have been playing an important role in alleviating human sufferings by contributing herbal medicines in the primary health care systems of rural and remote hilly areas where more than 70% of population depends on folklore and traditional system of medicines. The reason for their popularity is due to the high cost of allopathic medicines and side effects which encouraged manufacturers of Greco-Arab and Ayurvedic systems of medicines to merge their orthodox medicine with local traditional medicines in order to spread health coverage at a reasonable price (Zaidi, 2001).

It is often believed that remedies of natural origins are harmless and carry no risk to the consumer. But this is not the case when toxic plants are used by mistake or where herbal preparations are marketed with the addition of undeclared potent synthetic substances. The use of manufactured products should be governed by the same standard of safety and efficacy as are required for modern pharmaceutical producers (Ahmad and Sher, 2001).

Keeping in view the importance of flora of D.I.Khan,

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the study confined to collect the indigenous knowledge of local people about the medicinal uses of native plants. As the people of the selected areas have empirical observation of the nature and by communicating the other people of their culture; they get indigenous knowledge of local plants. So in this way the ethnomedicinal knowledge of plants is linked to the local culture and history.

As inhabitants of the area are mainly using traditional means to cure diseases and this asset of indigenous knowledge is transferring from generation to generation only through verbal means of communication. So this research was an effort to document and preserve this folk asset.

The main aims of present research work are:

- i. To explore the ethnomedicinal knowledge of local people of D. I. Khan district.
- ii. To enlist the indigenous medicinal plants used by local people for common day ailments.
- iii. To create the awareness among the local community about the protection of native medicinal flora.
- iv. To collect native medicinal plants of the area for proper identification and future references.

#### **MATERIALS AND METHODS**

The study was conducted during May 2005 - April 2006 in different parts of the area.

##### ***Collection and preservation of Medicinal Data***

Frequent field trips were arranged in order to collect live specimens and information about the folk/culinary knowledge of medicinal plants used by the local people of Dera Ismail Khan District. The area was extensively surveyed for research work. Plants were identified with the help of available literature and comparing with the already identified plant specimens of the herbarium, Quaid-i-Azam University, Islamabad. After correct identification, the plants were deposited in Department of Botany, Quaid-i-Azam University, Islamabad.

During field trips, the questionnaire (Medicinal Plants Datasheet) was used to interview the local inhabitants, older people including men and women both, who were familiar with traditional uses of indigenous plants. In total of 40 informants including 5 hakims were interviewed during survey. Interviews were conducted with local people in different villages individually following procedure as described by Ahmad *et al.*, (2004).

#### **RESULTS AND DISCUSSION**

The medicinal data of 35 plant species belonging to 23 angiosperm families was collected. Among them monocots represented by 3-families and dicots by 20 families. Information regarding their botanical name, vernacular name, family, local distribution, parts used, Method of use and used for, are listed in the Table 1.

Traditional and folklore medicine bequeathed from generation to generation is rich in domestic recipes and communal practice. Encompassing concepts and methods for the protection and restoration of health, traditional medicine has served as a fount of alternative medicine, new pharmaceuticals, and healthcare products. The best known examples of traditional medicine, differing in concept and protocol, are well-developed systems such as acupuncture, Ayurvedic and Unani system of medicine that have been widely used to conserve human health in China, India and Pakistan (Hasan *et al.*, 2007)

Nearly seventy percent of the population of urban and rural areas benefit from the Unani system of medicine in spite of very sophisticated hospitals and allopathic practitioners which work under the Government of Pakistan. In the rural areas, household remedies are being used for generations. Tibb-e-Nabvi provides base for the traditional Unani system of medicine in Pakistan. Medicinal plants used by the practitioners of this system are easily available in the forest, mountains, valleys, gardens and agricultural fields. This system is relatively cheap and quite near to nature. In Indo-Pak subcontinent, these traditional systems are called as "Unani" or "Ayurvedic" system (Haq, 1993).

The present study provides information about some therapeutic uses of 36 plant species belonging to 23 families. The plants are either used singly or in combination with some other plants or plant parts. Some plant species are claimed to be quite effective remedies for cutaneous affection of head, snakebite, diarrhea, and stomach troubles etc. Since the uses are based on empirical knowledge, the scientific study of all these herbal drugs is highly desirable to establish their efficacy for safe use.

Various areas of D. I. Khan region are enriched with useful medicinal plants. However, resource based areas are facing severe biotic interference and require be protecting and conserving by community participation. Community participation can be initiated by giving incentives to local people and

creating awareness about the useful properties of medicinal plants and their commercial values.

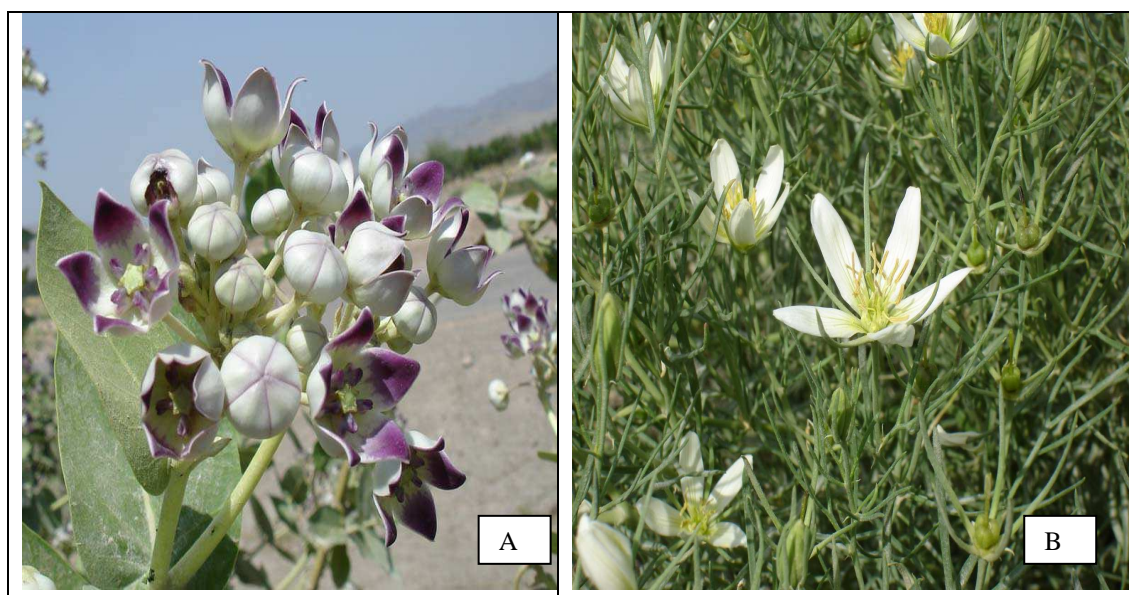
All members of community in the area, use medicinal plants. Various parts of the plant are used in curing different ailments. During the research project it was noted that the medicinal plant wealth of D. I. Khan District are not fully exploited. Some medicinally important plant species are fast dwindling, 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 by help of local people. Regularly chemical screening of medicinal plant and their useful parts collected from the fields in different seasons should be done. 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.

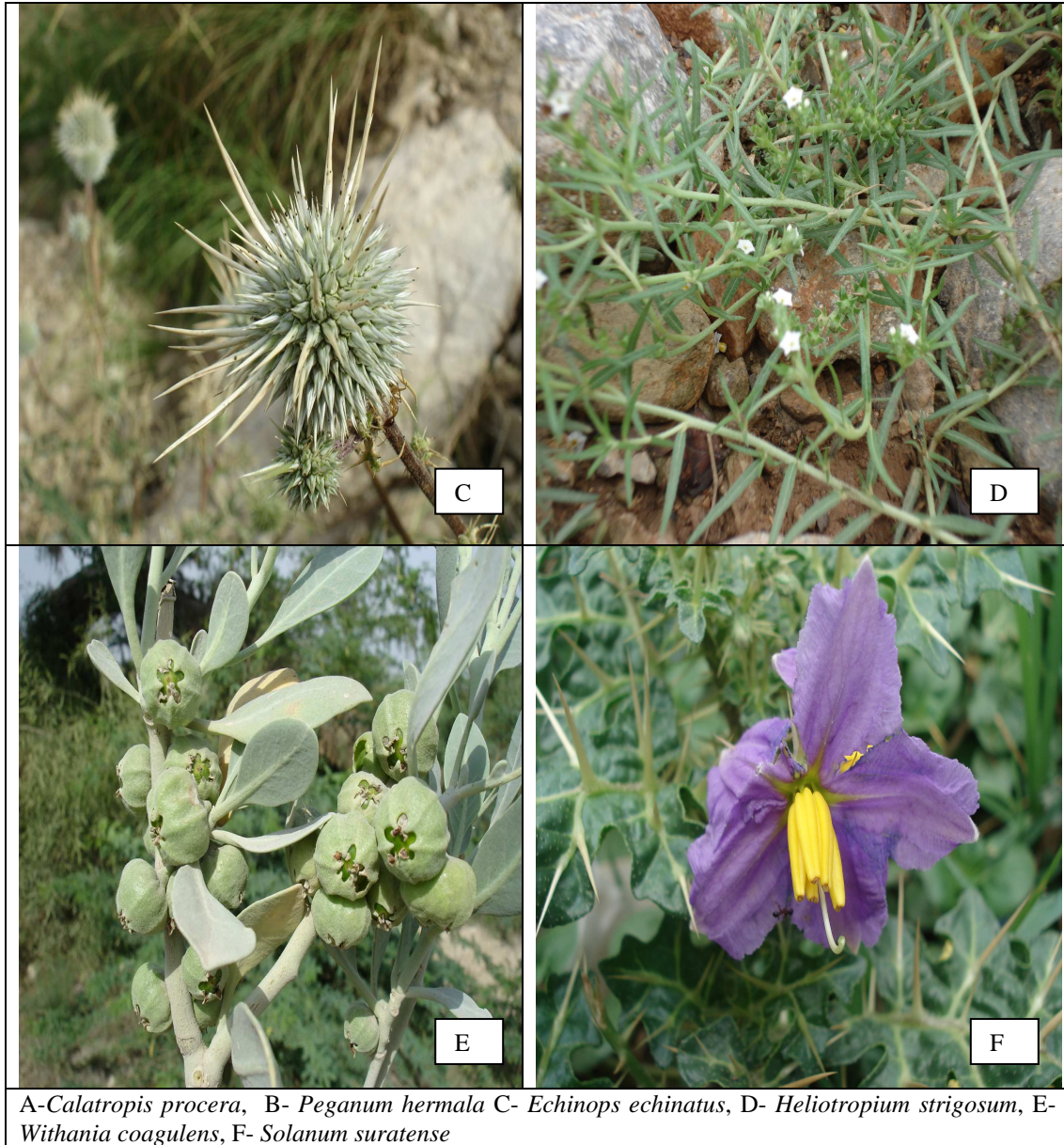
Moreover to prevent the extinction of medicinal species, efforts may be made to grow the sensitive species by acclimatizing them and if required them in situ as many species can be considered as an asset for human beings (Hamayun *et al.*, 2003). Further research works should be undertaken on base line of indigenous studies because there are still some diseases like "Cancer" and "AIDS", for which there are no identified cures. So ethnodirected studies can help in these research works (Ahmad and Ali, 1998). It was concluded from this study that a nationwide

survey of medicinal flora should be conducted to investigate and update the inventory of existing natural plants' resources of the area specially and generally throughout the Pakistan. In view of plentiful occurrence of number of plant species in D. I. Khan and its surroundings, it is suggested that industrial Development Corporation of Pakistan may be persuaded to prepare a comprehensive report for the establishment of small scale processing units for the valued drugs.

#### CONCLUSION AND RECOMMENDATIONS

The vast area and varied agro-climatic conditions of the area make it possible for almost all different kinds of medicinal plants in particular and other useful plants in general to grow. Plantation of medicinal plants and other useful plants can play an important role in D. I. Khan area, in particular and our country's economy in general, by earning valuable foreign exchange and fulfilling our domestic requirements. Because every year a considerable amount of foreign exchange is involved in the import of the drugs and other products of foreign origin. The utilization of indigenous drug resources (Medicinal Plants) will increase the importance of the drugs and other products of foreign origin. The utilization of indigenous drug resources (Medicinal Plants) will increase the importance of the local industry on the one hand and will minimize the expenditure incurred on the purchase of foreign drugs on the other.





**Table I** List of collected plants of D. I. Khan District and their medicinal uses

S.# and (V.#)	Plant names and family	Local Distribution	Parts used	Metod of use	Used for
1 (141)	Botanical name: <i>Acacia modesta</i> Wall. Family: Mimosaceae Local names: Phulai (urdu.) Palosa (pushto)	Khisor range, Sheikh buddin.	Bark	Bark boiled in water, and water is used as needed.	Abdominal pain
2 (349)	<i>Acacia nilotica</i> (L.) Delile Family: Mimosaceae	Commonly found throughout the area especially along the road side.	i. Bark	i. Bark is crushed in water, and the water is given to birds, also rubbed on their face	i. To make them hard and prepare for fighting.

	<p>English name: Pakistani gum-arabic tree, Babul tree.</p> <p>Local names: Babul, kihar(urdu) Kiker(saraiki) Kiker (pushto)</p> <p>Tibbi name: Babul</p>		<p>ii. Bark</p> <p>iii. Flowers</p> <p>iv. Flowers</p>	<p>and sole.</p> <p>ii. It is boiled in water and the decoction is gargled twice a day for 10 days.</p> <p>iii. Flowers are tied on affected area.</p> <p>iv. Flowers are boiled in mustard oil; the oil is applied to head.</p>	<p>ii. Tooth and gum aches.</p> <p>iii. Treatment of blisters (abscesses).</p> <p>iv. Removal of Dandruff</p>
3 (42)	<p><i>Aerva javanica</i>(Bur.f.) A.L. Juss. Ex Schultes</p> <p>Family: Amaranthaceae</p> <p>Local name: Bui booti( Saraiki) Sparai (Pashto)</p>	<p>Daman area, Paniala, Pahar pur</p>	<p>Young shoot</p>	<p>Young plants are crushed to form paste; the paste is spread over affected area daily, for 10 days.</p>	<p>Wounds and Abscesses</p>
4 (70)	<p><i>Alhagi maurorum</i> Medic. Family: <i>Papilionaceae</i> Syn: <i>Alhagi camelorum</i> Fisch. Ex DC.) English name: Camel Thorn, Local name: Jawan Janasa Tibbi name: Jawansa</p>	<p>Commonly found throughout the area.</p>	<p>Leaves</p>	<p>The leaves are boiled in water and the decoction is taken daily according to the need.</p>	<p>Abdominal troubles, De-worming And cooling effects</p>
5 (233)	<p><i>Calotropis procera</i> (Willd.)R.Br.</p> <p>Family: <i>Asclepiadaceae</i> Syn: <i>Asclepias procera</i> Willd.</p> <p>English Name: Swallow wart</p> <p>Local Name: Ak or akra (saraiki) Ak (urdu) Spulmaka (pashto)</p> <p>Tibbi Name: Ushar, Aak. Madar</p>	<p>Commonly found in the waste places of the area.</p>	<p>Latex (milk)</p> <p>Flowers</p>	<p>i. The milk (latex) is applied to the area, in which spine of the date palm has pricked in, to make it soft, for easy drawing or expulsion.</p> <p>ii. Latex (Milk) is also applied to the region of snake bite.</p> <p>iii. The latex is applied to affected area, where blood has coagulated, 3 times daily for 5 days.</p> <p>iv. 5-8 flowers are taken in, at a time, with water.</p>	<p>i. To soften the affected area for easy drawing date spine from the body.</p> <p>ii. Snake bite</p> <p>iii. Treatment of blood coagulation.</p> <p>iv. Abdominal pain.</p>
6 (108)	<p><i>Capparis desidua</i> (Forsk.) Edgew. Family: <i>Capparidaceae</i></p>	<p>Khisor range, Paniala, Bilot sharif, Hathala, Kulachi, Zandani, Draban, Dara zinda,</p>	<p>i. Fruit</p>	<p>i. Equal amounts of dried fruit and sugar are ground to make powder (Safoof). One</p>	<p>i. Rheumatism and general pain.</p>

	<p>Syn: <i>C. aphylla</i> Roth.</p> <p>English Name: Caper tree, leafless caper bush.</p> <p>Local Name: Kareeta ( saraiki), Kira ( pushto), Karir (urdu)</p> <p>Tibbi name: Karir</p>	Paroa, Ramak, Kho-i- Bara and graveyards of the area.	<p>ii. Upper tender and soft branches.</p> <p>iii. Bark</p>	<p>teaspoon of powder is taken with a glass of water twice a day for a week.</p> <p>ii. Young shoot( Tender branches) crushed, mixed with flour and given to animals.</p> <p>iii. Bark is crushed and applied to the affected area.</p>	<p>ii. To relieve pain in their bodies.</p> <p>iii. Wounds</p>
7 (48)	<p><i>Cichorium intybus</i> L.</p> <p>Family: <i>Asteraceae</i></p> <p>English name: Cichory, Blue daisy,</p> <p>Local name: Kasni (saraiki) Kasni (urdu)</p> <p>Tibbi name: Kasni Bastani, Kasni, Thukham-e-kasni.</p>	Paniala, D.I.Khan, Paroa, Draban Kalan, Pahar Pur, Dhakih, Mandra Kalan	Aerial parts	<p>1. Washed Fresh plants are crushed and pure extract is boiled until ppt. is formed. The upper clear liquid is removed by filtration and is used 25 gm twice a day for a period as needed.</p> <p>ii. Fresh plants are boiled in three times more water. Sugar is added to decoction to form syrup and the syrup is used twice a day for a period as needed.</p>	<p>Diseases of liver particularly hepatitis;</p> <p>Inflammations of stomach and spleen.</p>
8 (91)	<p><i>Citrullus colocythis</i> (L.) Schrad.</p> <p>Family: <i>Cucurbitaceae</i> Syn: <i>Cucumis colocynthis</i> L.</p> <p>English name: Bitter Apple, Bitter cucumber, Colocynth</p> <p>Local name: Karthuma (saraiki), Indryan, Thuma (urdu), Maraghoona (pashto).</p> <p>Tibbi name: Hanzal.</p>	Mer Dil Wanda, Shah Hassan Khel, Paniala, Ramak	Fruit	About 10 kg. fruit crushed daily, under feet until bitterness is felt , for 3-4 days. If proved ineffective, 1 kg common salt is mixed and continued the practice for 3 days more.	Jaundice
9 (127)	<p><i>Cleome brachycarpa</i> Vahl ex DC.</p> <p>Family: <i>Capparidaceae</i> Syn: <i>C. vahliana</i> Fresen.</p> <p>English name: Local names: Gandi booti (Saraiki) / Ponwar, Noli, Kasturi</p>	Zandani, Dara Zinda, Kho-i-Bara, Khisor range, Bilot sharif	Whole plant	Plants dried under shade are ground to make powder. The pure powder (or mixed powder with equal amount of sugar) is used with water as needed.	Abdominal Pain and scabies

10 (34)	<p><i>Convolvulus arvensis</i> L. Family: <i>Convolvulaceae</i></p> <p>English Name: Field bindweed, Green-vine</p> <p>Local Names: Wanvehri (saraiki),</p> <p>Lehli, Heran Kari, Heran-paddi (urdu),</p> <p>Pairvathai, pairkhatoonai (pushto) Tibbi name: Heran khuri</p>	<p>Commonly found in the cultivated field, hedgerows,</p> <p>Waste places, fences.</p>	Whole Plant	<p>5kg plants, dried under shade, are mixed with 12 liters water at night. In the morning one cup water (decoction) is used on empty stomach and one cup after 3hours thrice a day for a period as needed (or continuously in case of cancer).</p>	<p>Blood purification,  blood cancer  and skin diseases.</p>
11 (250)	<p><i>Cuscuta reflexa</i> Family: <i>Cuscutaceae</i></p> <p>English name: Dodder</p> <p>Local name: Loot booti (saraiki) Zer gulay (pashto) Akash or Amar-bail (urdu)</p> <p>Tibbi name: Aftimoon, Tukhm-e-kasoos.</p>	<p>Mandhra Kalan, Paniala, Hathala, Ramak.</p>	Whole plant	<p>Plants are dried and burnt. The ash is applied to the affected area.</p>	Scabies
12 (84)	<p><i>Cymbopogon jawarancusa</i> (Jones)Schult. Family: Poaceae Syn: <i>Andropogon jawarancusa</i> Jones.</p> <p>English name: Wild lemon grass, Iwarancusa grass</p> <p>Local name: <i>Khawi</i>, (saraiki) Sargarai (pashto)</p>	<p>Very common in Khisor range, Also found in Daman area.</p>	<p>Root,</p> <p>Pleasant smell</p>	<p>i. Upper parts of the roots are boiled in water. The water is strained and is given to the children along with sugar 2-3 times daily.</p> <p>ii. Its pleasant smell is inhaled.</p>	<p>Purification of blood,  Dyspepsia and flatulence</p> <p>ii. Treatment of blisters and Typhoid</p>
13 (128)	<p><i>Echinops echinatus</i>DC. Family: <i>Asteraceae</i></p> <p>English name: Globe Thistle</p> <p>Local name: Kundiari (saraiki), Oont katara( urdu), Kharkhor (pashto).</p> <p>Tibbi name: Oont katara</p>	<p>Kho-i-Bara, Dara Zinda, Hathala, Mer Dil Wanda.</p>	Root	<p>i. Half cup distilled essence (Arq) of the root is taken with 2 gm seed powder of <i>Tribulus terrestris</i> 4 times daily for1-11/ 2 months.</p> <p>ii. Above recipe is used at least for 3 months.</p>	<p>Urinary bladder diseases</p> <p>Prostates troubles</p>
14	<i>Eruca sativa</i> Mill.	Cultivated in Daman	Aerial parts	5 kg young branches	Scabies of

(128)	Family: <i>Brassicaceae</i> English name: Rocket salad, Salad rocket Local name: Usoo (saraiki) Jamau Tharkhae sag (pashto) Tara meera (urdu) Tibbi name: JarJir / Tara Mira	Area and Paniala area.		along with leaves are boiled in 15 kg water and decoction is obtained. Then 5 kg millet flour is mixed with the decoction and is given to the horses according to the need.	horses
15 (98)	<i>Fagonia cretica</i> L. Family: <i>Zygophyllaceae</i> Syn: <i>F. bruguieri</i> D.C; <i>F. arabica</i> L. English name: <i>Fagonia</i> Local name: Dhaman (saraiki) Thand (pashto) Tibbi name: Dhamasa	Commonly found in the area, very common in Sheikh Maila and Bilot sharif.	Whole plant	i. Plant is crushed and decoction is taken with water. ii. Plants dried under shade are ground to make powder (safoof). 1 teaspoon powder is taken with bread thrice a day.	I. Production of cooling effects ii. Piles and urinary disorders
16 (173)	<i>Farsetia jackquemontii</i> Hook.f. Family: <i>Brassicaceae</i> Syn: <i>F. incana</i> (L.) R.Br. Local Name: Jangli mooli (urdu) Jangli Moolai (pushto)	Paniala, Abdul Khel, Katta Khel, Shah Hassan Khel, Lavano Thala, Hathala.	Root	The bark of the root is chewed and the juice is swallowed.	Indigestion
17 (183)	<i>Grewia tenax</i> (Forsk.) Fiori Family: <i>Tiliaceae</i> Syn: <i>G. populifolia</i> Vahl English Name: Local Name: Anjirai (Pushto) Gunghi (saraiki)	Khisor Range, Bilot Sharif, Skiekh Budin, Shiekh Maila	Leaves	The ash of the leaves is mixed with butter to make poultice. The poultice is applied on wounds and blisters (in children).	
18 (36)	<i>Heliotropium europium</i> L. Family: <i>Boraginaceae</i> Syn: <i>H. eichwaldi</i> Steud. Local name: Peepat Booti (saraiki)	Paniala circle, D.I,Khan, Paharpur and Daman area	Whole plant	The plant is crushed to make paste. The paste is applied as poultice to the affected area daily for 3 - 4 days.	Snake bite
19 (193)	<i>Nannorrhops ritchiana</i> (Griff.) Aitchison Family : <i>Palmae</i> Syn: <i>Chamaerops ritchiana</i> Griff. English name: Local name: Mazri (saraiki) Mazarai (pashto) Mazri(urdu)	Paniala, Abdul Khel, Shah hassan Khel, Katta Khel, Rehmani Khel, Khisor range, Sheikh budin.	Leaves	Stalks of the leaves are crushed and boiled in water; the water is strained and given to the animals particularly camels as needed.	Treatment of 'Urine retention'



20 (113)	<i>Peganum harmala</i> L. Family: Zygophyllaceae Syn: <i>P. diauricum</i> Pall. English Name: Wild rue, Syrian rue Local Name: Harmal (saraiki), Spalani ( pashto) Tibbi name: Harmal, Ispand	Found throughout the area.	Seeds	i. A small quantity of harmal seeds along with small quantity of table salt is taken with water for a few days.  ii. The smoke of the fumigated seeds is passed over the wounds and inflamed regions. This practice is done for a few days.	Diarrhoea And Indigestion  Wounds And inflammation
21 (319)	<i>Phoenix dactylifera</i> L. Family: Palmae English name: Date palm Local name: Khaji, pind (saraiki), Khajoor (pashto), Khajoor ( urdu) Tibbi name: Khajoor	Paniala , Kiri khisor, Dhaki, Pahar Pur, D.I.Khan, Draban Kalan	Spines (Leaflets)	The lowest leaflets (spines) of compound leaf are crushed and boiled. The strained water is drunk as needed.	General pain
22 (61)	<i>Plantago ovata</i> Forsk. Family: Plantaginaceae Syn: <i>P. trichophylla</i> Nab. English name: Indian plantain Local name: Ispighol Tibbi name: Ispaghol musallam	Hathala, Kho-i-Bara, Kohsar range	Seeds	i. 12 gm seeds are taken with milk at night.  ii. 12 gm seeds, sugar and 1 glass of water are mixed and shake well and is used twice a day.	Constipation  Jaundice, Spermatorrhoea
23 (72)	<i>Polygonum barbatum</i> L. Polygonaceae Local name: Kara veera		Whole plant.	Plants are crushed to form paste; the paste is used as poultice on the affected area daily for 3 days.	Joints problems
24 (192)	<i>Potamogeton nodosus</i> Poiret. Family: Potamogetanaceae Syn: <i>P. indicus</i> Aut.non.Roth. English name: Indian Pondweed Local name: Badari Pairkhatai (pashto)	Badari dam (Khisor range),  Canal, near Awan pump, 30 km from D.i.Khan on way to Mian Wali.	Leaves	Plant is boiled in water and its poultice is applied on improperly adjusted joint to make it soft and then properly adjust in original position easily.	Adjustment of improperly adjusted joint.
25 (92)	<i>Ricinus communis</i> L. Family: Euphorbiaceae Syn: <i>R. africanus</i> Willd.)		Leaves Fruit		

	English name: Castor oil plant, Local name: Hernoli (saraiki) Randa (pashto) Arand (urdu) Tibbi name: Arind				
26 (243)	<i>Saccharum benghalensis</i> Retz.  Family: Poaceae Syn: <i>S. munja</i> Roxb.  English name: Munj sweet cane, Bengal cane  Local name: Kana (saraiki), Kana (pashto) Sarkanda (urdu)	Found throughout the area.	Leaves	Ash of the leaves is mixed with water, after an hour it will settle down in the bottom. The strained water is given to the animals suffering from 'urine retention' disease.	Treatment of 'urine retention' disease.
27 (172)	<i>Salvadora oloides</i> Dcne.  Family: <i>Salvadoraceae</i>  Local names: Jal (saraiki) Plaman (pashto) Pilu(urdu) Tibbi name:	Dara zinda, Sheikh maila, Bilot sharif, Khisor range  Also present in the graveyards of the area.	Fruit	250 gm of fruits are placed in a 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 <i>Salvadora</i> fruit is useful. The treatment is continued for a week.	Tuberculosis (T.B.)
28 (302)	<i>Sisymbrium irio</i> L. Family: Brassicaceae English Name: London Rocket Local name: Khub Kalan (urdu) Tibbi name: Khub Kalan	Common throughout the area.	Seeds	The powder of the seeds is mixed with equal amount of sugar and is used twice a day for a week.	Fever And To produce sweat.
29 (166)	<i>Solanum incanum</i> L.  Family: Solanaceae  Syn: <i>S. xanthocarpum</i>  English name:  Local name: Kundari (saraiki) Tibbi name: Khata-i-khurd	Khisor range, Bilot sharif, Paniala.	Whole plant including fruit	i. The powder of dried fruits is taken with water for a period as needed.  ii. Distilled essence (Arq) is used. iii. Fresh plants are boiled in 3 times more water. The water is filtered and mixed with sugar to form syrup which is used twice a day as needed for a period of 1or 2 months.	Piles  Eczema,  Purification of blood.

30 (52)	<i>Solanum surattense</i> Burm.f. Family: Solanaceae Syn: <i>S. xanthocarpum</i> English name: Local name: Kandari (saraiki) Tibbi name: Khata-i-khurd	Commonly found throughout the area.	Whole plant including fruit	i. The powder of dried fruits is taken with water for a period as needed. ii. Distilled essence (Arq) is used. iii. Fresh plants are boiled in 3 times more water. The water is filtered and mixed with sugar to form syrup which is used twice a day as needed for a period of 1 or 2 months.	Piles  Eczema,  Purification of blood.
31 (109)	<i>Sueda fruticosa</i> Forssk. Ex J.F.Gmelin  Family: Chenopodiaceae  Syn: <i>Salsola lana</i> Edgew. Local name: Lana, Lani	Commonly found in Daman area.	Leaves	The leaves are chewed in the mouth and the extract is swallowed.	Abdominal pain
32 (73)	<i>Tribulus terrestris</i> L.  Family: Zygophyllaceae  Syn: <i>T. bicornutus</i> Fisch.)  English name: Caltrop, Puncture vine ,  Local name: Bhakra, Gokhru  Tibbi name: Gokhru, Khar-e-khashak, Bhakra	Common in sandy soils of waste places and cultivated fields as a weed.	Seeds          Fruit	i. The seeds are ground to make powder; 2 gm powder is taken with Half cup distilled essence (Arq) of the root of <i>Echinops echinatus</i> 4 times daily for 1-11/ 2 months. ii. Above recipe is used at least for 3 months. iii. The fruit is crushed and dried. Sugar, as needed, is mixed with the dried powder and is used.	Urinary bladder diseases     Prostate troubles  Nocturnal emission.
33 (143)	<i>Viola stocksii</i> Boiss.  Family: Violaceae  Syn: <i>V. cinerea</i> Hook.f. and Thomas.)  English Name: Blue violet. Local Name: Makhanr booti  Tibbi name: Makhni Booti	Khisor range, Bilot sharif, Darazinda and Sheikh Maila.	Whole plant	The whole plant, along with seeds, is ground to make powder. 2 gm powder is used with 1 teaspoon butter early in the morning on empty stomach as needed.	Virility (masculine sexual power)
34 (138)	<i>Withania coagulans</i> (Stocks) Dunal	Paniala, Khaisore range, Koh-i-Bara,	Fruit	5-6 dried fruits are	Cooling effect

	Family: Solanaceae Syn: <i>Puneeria coagulens</i> Stocks) English name: White Winter Cherry Local name: Akri (saraiki), Panir (urdu) Khamazoor (pashto) Tibbi name: Thukham-e-hayat	Sheikhbudin.		soaked in 2-3 cups of water at night; in the morning the soaked fruits are squeezed and the water is strained. 1 cup of water is used on empty stomach.	And Purification of blood.
35 (78)	<i>Withania somnifera</i> (L.) Dunal. Family: Solanaceae Syn: <i>Physalis somnifera</i> L. English name: Winter cherry Local name: Rutkan, Isgand Tibbi name: Asgand Nagaori,	usually found in graveyards, waste and stony places.	Root	Dried roots are ground to make powder; 1 gm powder is taken with water twice a day.	Rheumatism And General body pain
36 (105)	<i>Zizyphus mauritiana</i> Lam. Family: Rhamnaceae Syn: <i>Z. jujuba</i> Lam. not of Mill.) English Name: Local Name: Ber	Common throughout the area particularly in Paniala region.	Leaves	Leaves are crushed with loaf sugar (gur) and soap to make paste. The paste is applied on the abscesses.	Abscesses

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