

Check List of Medicinal Flora of Tehsil Isakhel, District Mianwali-Pakistan

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Issued 15 February 2006

ABSTRACT

The research work was conducted in the selected areas of Isakhel, Mianwali. 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 on 55 plant species belonging to 52 genera of 30 families were recorded during field trips from six remote villages of the area. The check list and ethnomedicinal inventory was developed alphabetically by botanical name, followed by local name, family, part used and ethnomedicinal uses. Plant specimens were collected, identified, preserved, mounted and voucher was deposited in the Department of Botany, University of Arid Agriculture Rawalpindi, for future references.

Key words: Checklist, medicinal flora and Mianwali-Pakistan.

INTRODUCTION

District Mianwali derives its name from a local Saint, Mian Ali who had a small hamlet in the 16th century which came to be called Mianwali after his name (on the eastern bank of Indus). The area was a part of Bannu district. The district lies between the 32-10° to 33-15°, north latitudes and 71-08° to 71-57° east longitudes.

The district is bounded on the north by district of NWFP and Attock district of Punjab, on the east by Kohat districts, on the south by Bhakkar district of Punjab and on the west by Lakki, Karak and Dera Ismail Khan District of NWFP again. The salt range of Kalabagh has a rich flora, peculiar to the ranges east of the Indus. The botanical aspects of the three different parts of the district, the hills the up-lands and the kacha may well be described separately. The hills are rich with common plant species like *Rhazya stricta* (Verin), *Reptonia buxifolia* (Ganger), *Prosopis juliflora* (jand), *ziziphus jujuba* (Beri). *Dalbergia sissoo* (Tali) and *Acacia nilotica* (Kiker) are common trees of the Kacha area. (Anonymous, 1998).

People living in tribal localities and in villages are using indigenous plants as medicines from long ago because this knowledge reaches to them through generation to generation, and is based on

experience. Also the tribes and villages are far away from cities and mostly there are no health facilities. Inhabitants are dominantly poor or middle class and the prices of synthetic drugs are rising day by day and they cannot withstand the sharply rising prices of synthetic drugs, so as a consequence, non-availability of expensive synthetic drugs (Shinwari and Khan, 1998).

Keeping in view the importance of flora of Isakhel, 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 to preserve this folk asset.

The main aims of present research work were:

- To explore the ethnomedicinal knowledge of local people of Isakhel, Mianwali.
- To enlist the indigenous medicinal plants used by local people for common day ailments.
- To create the awareness among the local community about the protection of native medicinal flora.
- To collect native medicinal plants of the area for proper identification and future references.

MATERIALS AND METHODS

Present study was confined to the identification of useful flora of Isakhel (Mianwali). The study was conducted during September 2005- January 2006 in different villages of the area.

Collection of Medicinal Data

Frequent field trips were arranged in order to collect information about the folk/culinary knowledge of medicinal plants used by the local people of Isakhel, Mianwali to cure them from various diseases. In total of six remote selected villages including Sultan Khel, Makerwal, Metha khattak, Qamar Mushani, Tarag Sharif and Allah Khel of the area were extensively surveyed for research work.

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 25 men and 15 women were interviewed during survey. Interviews were conducted with local people in different villages individually following procedure as described by Ahmad *et al.*, (2004). Repeated queries were made to get the data confirmed.

Collection & Preservation of Plants

Frequent field trips of the area were arranged to collect the live specimens. Throughout the field trips a general collection of plants were made. The fully dried specimens were poisoned and then mounted on herbarium sheets. 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 and Flora of Pakistan (Nasir and Rafiq, 1995) did confirmation of plants. After correct identification, the plants were deposited in Department of Botany, University of Arid Agriculture Rawalpindi, for future references.

Check List & Ethnomedicinal Inventory:

Ethnomedicinal inventory was developed consisting of botanical name followed by their local name, family, part used and ethnomedicinal uses.

RESULTS AND DISCUSSION

Check List of Medicinal Flora

The medicinal data on 55 plant species belonging to 52 genera of 30 families, during summer and winter season were collected. Information regarding their botanical name, vernacular name, family, part used and their ethnomedicinal uses are listed in the Check List (Table.1).

Table 1. Check List Of Medicinally Important Flora of Isakhel (Mianwali).

S.No	Botanical Name	Vernacular Names	Family	Part Used	Ethnomedicinal Uses
1	<i>Achyranthes aspera</i> (Mill.)	Puthkanda	Amaranthaceae	Whole plant	Diuretic, Dropsy, Piles, Skin eruptions
2	<i>Acacia arabica</i> (Lam.) Willd	Kikar	Mimosaceae	Leaves and fruits	Cough, Dysentery
3	<i>Acacia modesta</i> Wall.	Phulai	Mimosaceae	Bark, wood and Gum	Tonic use for back and joints pain
4	<i>Abutilon indicum</i> (Linn.) Sweet	Peeli booti	Malvaceae	Leaves and stem	To treat boils
5	<i>Aloe barbadensis</i> Mill.	Ghee kunvar	Liliaceae	Whole plant	Boils, Piles and fever
6	<i>Amaranthus viridus</i> (L.)	Chulai	Amaranthaceae	leaves	Emollient, snake and scorpion bite
7	<i>Argyrolobium roseum</i> (Camb.)Jaub. And Spach	Makhan booti	Papillonaceae	Whole plant	Aphrodisiac and Tonic
8	<i>Azadirachta indica</i> Linn.	Neem	Meliaceae	Leaves	Skin diseases and blood purification
9	<i>Aerva javanica</i> (Burm. f.) Juss. J.A. Schultes	Booh	Amaranthaceae	Whole plant	Skin infection, inflammation and abdominal worms
10	<i>Brassica nigra</i> L.	Kali sarson	Brassicaceae	Whole plant	Laxative, headache, toothache, cold and rheumatic

					pains
11	<i>Bryophyllum pinnatum</i> Kurz.	Zakham-e-hayat	Crassulaceae	Leaves and juice	Hypertension renal calculus and skin diseases
12	<i>Calotropis procera</i> (Wild) R.Br.	Ak	Asclepiadaceae	Whole plant	Malaria and Cholera
13	<i>Capparis decidua</i> (Forssk.) Edgeuu	Kirrer	Capparidaceae	Whole plant	Ulcers, asthma and rheumatic pain
14	<i>Capparis aphylla</i> L.	Kareen	Capparidaceae	Whole plant	Brain tonic, joints and back pain
15	<i>Carum copticum</i> Benth.	Ajwain desi	Apiaceae	Whole plant	Appetizers, kidney stone, digestion and whooping cough
16	<i>Cassia augustifolia</i> L.	Sena	Caesalpiniaceae	Leaves, branches and fruit	Headache, brain tonic and intestinal diseases
17	<i>Chenopodium album</i> (L.)	Bathu	Chenopodiaceae	Whole plant	Laxative and Anthelmintic
18	<i>Cleome brachycarpa</i> Vahl.	Dhanar khathoori	Capparidaceae	Whole plant	Joints pain and inflammation
19	<i>Cucumis melo</i> var- agrestis Nudin	Chibber	Cucurbitaceae	Fruit	Digestive and stomach problems
20	<i>Citrullus colocynthus</i> L.	Tumba	Cucurbitaceae	Root and fruit	Antidiabetic and stomach problems
21	<i>Cynodon dactylon</i> (L.) Pers	Khuble ghas	Poaceae	Roots	Diuretic and laxative
22	<i>Cyperus rotundus</i> (L.)	Dellia ghas	Cyperaceae	Tuber	Anthelmintic, stimulant, diuretic
23	<i>Cymbopogon jauarancusa</i> (Jones) Schult	Kattan	Poaceae	Whole plant	Fever and phlegmatic pains
24	<i>Dalbergi sissoo</i> Roxb.	Tali	Fabaceae	Leaves, roots and wood	Leprosy, boils, eruptions and stop vomiting
25	<i>Datura innoxia</i> (Linn.) Miller	Datura	Solanaceae	Leaves and seeds	Hydrophobia and earache
26	<i>Digera muriacata</i> (L.) Mart.	Lulur	Amaranthaceae	Whole plant	Use as laxative
27	<i>Eruca sativa</i>	Tara mera	Brassicaceae	Leaves and seeds	Skin diseases and joint's pain
28	<i>Eucalyptus globules</i>	Safaيدا	Myrtaceae	Seeds and leaves	Malaria, Antibacterial and Antiseptic
29	<i>Euphorbia thymifolia</i> (L.)	Dodak	Euphorbiaceae	Whole plant	Bronchial affection, cough and asthma
30	<i>Fagonia indica</i> Brum.f.	Dhumia	Zygophyllaceae	Whole plant	Antibetic, pimples and ear infection
31	<i>Ficus religiosa</i> (L.)	Pipal	Moraceae	Seeds and fruits	Laxative, Cooling and alterative

32	<i>Fumaria parviflora</i> (Haussk.) pugsley	Shahtra	Fumariaceae	Whole plant	Diuretic, Alterative Anthelmintic and aperient
33	<i>Lathyrus aphaca</i> L.	Jangli phalli	Papillonaceae	Seeds and flowers	Seeds used as Narcotic and flowers as resolvent
34	<i>Launea procumbens</i> (Roxb.) Ramayya and Raja gopal	Bhatter	Asteraceae	Whole plant	Painful urination and gonorrhoea
35	<i>Melia azedarach</i> L.	Dherak	Meliaceae	Seed and Leaves	Diabetes, blood purification and Skin tonic
36	<i>Mentha spicata</i> (L.)Hudson	Pehari podina	Lamiaceae	Whole plant	Nausea, sickness, Vomiting and stomach diseases.
37	<i>Mimordica dioca</i>	Jungli karela	Cucurbitaceae	Fruit, seeds and root	Diabetes, sedative, bleeding piles and urinary complaints
38	<i>Morus nigra</i> L.	Kala shahtoot	Moraceae	Fruits	General tonic for body and cough, throat, and chest infection
39	<i>Ocium sanctum</i> L.	Niazboo	Lamiaceae	Seeds	Stomach and vomiting.
40	<i>Plantago ovata</i> Forsk.	Ispaghul	Plantaginaceae	Seeds fruit and leaves	Antidiarrhoeal, Constipation and Inflammation of mucous membrane
41	<i>Peganum harmala</i> L.	Hermal	Zygophyllaceae	Whole plant	Brain tonic, insecticidal and viral diseases
42	<i>Phoenix sylvestris</i> (L.) Roxb.	Khajoor	Palmae	Fruit, root and juice of tree	Toothache, Tonic, Cooling and Laxative
43	<i>Rhyncosia minima</i> (L.) Dc.	Jungli moath	Fabaceae	Whole plant	Used for bath after delivery for body care
44	<i>Ricinus commumis</i> Linn.	Harnoli	Euphorbiaceae	Seeds, leaves, and Bark	Boils, Swelling, Laxative and to start Labour pain
45	<i>Rhazya stricta</i> Dcne.	Verian	Apocynaceae	Roots, leaves and branches	Tooth diseases, Diabetes, Constipation and Intestinal diseases
46	<i>Spinacea oleracea</i> L.	Palak	Chenopodiaceae	Leaves and stem	Anemia, Bone's Tonic and produce fresh blood
47	<i>Solanum nigrum</i> Miller.	Makoo	Solanaceae	Whole plant	Phthisis, Dropsy, and for enlargement of

					spleen
48	<i>Solanum surretense</i> Burm.	Mohakri	Solanaceae	Fruit	Cough, Asthma and Rheumatic pain
49	<i>Salvadora oleides</i> Dcne.	Pilu	Salvadoraceae	Whole plant	Purgative, Cough and Regulate the menstruation periods
50	<i>Tagetes patala</i> L.	Sudburga	Asteraceae	Fruits	To cure piles
51	<i>Tribulus terrestris</i> Linn.	Bhakra	Zygophyllaceae	Whole plant	Painful urination and Spermatorrhoea
52	<i>Tephrosia uniflora</i> Pers.		Fabaceae	Whole plant	Harmful
53	<i>Trianthema portulacastrum</i> Linn.	Woho	Aizoaceae	Whole plant	Jaundice, Astma, Cough and for Fever
54	<i>Withania somnifera</i> (L.) Dunal.	Asgand	Solanaceae	Whole plant	Leucoderma, Diuretic and Analgestic
55	<i>Zizyphus nummularia</i> (Burm.f.) Wight	Jangli beri	Rhamnaceae	Fruit, leaves and roots	Jaundice

DISCUSSION

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 55 plant species belonging to 30 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, malaria, cough and cold, 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 Isakhel 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. Some wild medicinal plants like *Solanum surretense* Burm f. aerial parts are not only used for “Digestive problems” but fruit and aerial parts are also used to cure “Skin diseases”. *Trianthema portulacastrum* L. is used to cure “Jaundice” and “Asthma”. Root extract of *Withania sominifera* (L.) Dunal, 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 plant are used in curing different ailments. During the research project it was noted that the medicinal plant wealth of Isakhel, district Mianwali 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 programme 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, effects 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 formulized 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 & 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 Isakhel (Mianwali) 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.

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