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Ethnomedicinal Flora in District Sialkot, Punjab, Pakistan

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Abstract: This present work is the study of indigenous knowledge of some wild plants being used for medicinal purposes in District Sialkot, Pakistan. The indigenous knowledge of local traditional uses was collected through questionnaire and personal interviews during field trips. A total of 48 plants species were identified by taxonomic description using field guides and locally by ethnomedicinal knowledge of people existing in the region. About 200 informants have been interviewed randomly to document local names and ethnomedicinal uses of different plant species.

Key words: Ethnomedicinal survey · Traditional Use · Indigenous knowledge · Sialkot

INTRODUCTION

Pakistan occupies a unique position among developing countries as it has a good potential with in the variety of medicinal plants due to its varied climatic and edaphic factors, which reflect diversity and valuable medicinal plant heritage. There are large amount of medicinal plants which are found in northern and northwestern parts of Pakistan [1]. About 6,000 species of flowering plants have been reported from Pakistan and Kashmir [2] and nearly 372 plant species are endemic. About 2,000 medicinal plants are found in Pakistan, but only a small proportion of these have so far been commercially exploited. So Plants play a vital role in our lives more than animals mainly due to their extraordinary array of diverse class of biochemical with a variety of biological activities [3]. Most of allopathic drugs also comprise extracts taken from medicinal plants [4]. Our Holy Prophet (Peace Be Upon Him) also used certain herbs to cure various diseases [5].

Sialkot city is situated in the north-east of the Punjab province in Pakistan at the foothills of the snow-covered peaks of Kashmir near the Chenab River. It is lying between 32°30' North latitude and 74°31' East longitude at an altitude of 256 m above sea level, Sialkot is bounded on the north by Jammu North-West by Gujrat on the West by Gujranwala and on the south by Narowal. The Chenab River flows to the north of Sialkot. There are three small seasonal streams flowing through the city viz. Aik, Bher and Palkhu. The city is about 125 km North-West of Lahore and only a few kilometers from Indian-controlled Jammu. The recorded history of Sialkot covers thousands of years. This district has humid subtropical climate. Sialkot is chilly during winters and hot and humid during summers. May and June are the hottest months. The temperature during winter may drop to 0°C. The land is, generally, plain and fertile. The average rainfall of the Sialkot is about 1000 mm with highest rainfall from July to September (Punjab Development Statistics, 2000).

World Health Organization (WHO) estimated that 80% people depend upon the conventional and traditional medicines to fulfill their daily requirements [6]. These herbal medicines are easy to obtain and these are less harmful. The people, who are native to the area in which the plants occur, use around 90% of the medicinal species [5]. Traditional and indigenous medical knowledge of plants, both oral and codified, are undoubtedly eroding [7]. The Greek physician, Hippocrates, was quoted as saying in 377 BC," let medicine be you food and food your medicine" and many of the medicinal plants, that he used in his practice are still popular with medical herbalists today [8]. Keeping in view the importance of medicinal flora, this study was arranged to documentation and collection of ethnomedicinal knowledge about the wild plants of District Sialkot -Pakistan. The present study reports indigenous knowledge (IK) of the uses of medicinal plants of Tehsil Sialkot which is still available among the local people and medicinal healers (Hakims).

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MATERIALS AND METHODS

The area was visited several times for the collection of data during the year 2010. The questionnaires were devised to identify the indigenous knowledge of plant-based remedies from local people. The research work was unique in that the emphasis was on both men and women and also herbal doctors (Hakims). About 200 informers have been interviewed on the random basis and also interviews were carried out from local community to document local name and ethnomedicinal uses of different plant species. Frequent field trips of the area were conducted according to the life form, flowering period and season of utilization of plant products by local people. The plant specimens were collected, dried to mount on herbarium sheets and identified with help of flora of Pakistan and different field guides [9, 10]. Plants with their correct nomenclature were arranged alphabetically by family name, Vernacular name, Ethnomedicinal Tibb and Ethnomedicinal uses. The identification and nomenclature of the listed plants were based on The Flora of Pakistan [11] and considering the study of Hussain *et al*. [12].

RESULTS

During the present study, ethnomedicinal data on 48 plant species was collected. Information regarding their botanical name, vernacular name, family, part used and their ethnomedicinal uses are listed below starting with family name and binomial (Table 1). The photographs of the important plants are also given in Figures 1, 2 & 3.

Table 1:

Sr. No.	Family	Botanical Name	Common Name	Part Use	Ethnomedicinal Use
1	Amaranthaceae	*Digera arvensis* L.	Tandla	Leaves	It is used cure weak bones, Infections etc
2	Amaranthaceae	*Amaranthus graecizans subsp. sylvestris*	Phulari	Leaves	Inflammations, Piles, Gonorrhea
3	Amaranthaceae	*Althernanthera punjens*	Haglon/waglon	Leaves, Fruits	Itching
4	Amaranthaceae	*Alternanthera sessilis*	Sessile joyweed, noxious weed	Whole plant	Relieve headaches and dizziness, snakebites and to stop the vomiting of blood
5	Apocynaceae	*Catharanthus roseus*	Sada Bahar	Leaves	Diabetes mellitus
6	Arecaceae	*Phoenix dactylifera* L.	Khajur, Date	Fruit	General body weakness
7	Asclepiadaceae	*Calotropis procera* (Aiton) W.T. Aiton	Ak, Sodom's Apple	Leaf	In the treatment of asthma.
8	Asphodelaceae	*Aloe vera* (L.) Burm. f.	Kwargandal, Aloe	Leaf	Rheumatism, body weakness and in the treatment of pimples or acne
9	Asteraceae	*Eclipta alba* (L.) Hassk	Sofed Banghra	Leaf	leaf paste applied to treat allergy, athlete's foot & ringworm
10	Asteraceae	*Conyza canadenisis* Lin.	Horse weed	Whole plant	Inflammations, asthma & diseases.
11	Asteraceae	*Xanthium strumarium* Linn.	Chhota Dhatura, Cocklebur	Roots, fruit and Seeds	Stomach diseases, demulcent, smallpox and dysentery.
12	Brassicaceae	*Cleome viscosa*		Leaves, seeds, root	Wounds, earaches & ulcers. The seeds are anthelmintic, carminative, stimulant & vesicant
13	Cannabaceae	*Cannabis sativa* L	Bhang, Indian Hemp	Whole Plant	Used to reduce general body inflammation, intoxication, loss of appetite
14	Convolvulaceae	*Ipomoea eriocarpa*	Lagaco cozinho	Leaves, Roots	Relief menstrual pain, oral extract of plant is used against headache, ulcers, fevers, leprosy and to cure wound of cattle.
15	Convolvulaceae	*Ipomea pes tigridis*	Tiger foot morning glory	Leaves	Leaves used for poulticing sores and the juice extracted and for the treatment of rabies.

Table 1: Continued

Sr. No.	Family	Botanical Name	Common Name	Part Use	Ethnomedicinal Use
16	Convolvulaceae	*Ipomea carnea*	Bush Morning Glory' Pink Morning Glory	Leaves, Stem	Anti-cenogenic and oxytoxic properties, remedy for asthma, bug bites, burns, catarrh, ciguatera
17	Convulvulaceae	*Convulvulus arvense*	Leli / weli	Leaves and seeds	Inflammations and stomach disorders
18	Cucurbitaceae	*Cucumis melo* var. *agrestis* Naudin	Chibbar, Wild Water Melon	Fruit and seed	Dried powdered plant used to treat skin infections, stomach problems
19	Cuscutaceae	*Cuscuta reflexa* Roxb.	Akash Bail, Dodder	Stem	Paralysis, Hair treatment
20	Cyperaceae	*Cyperus rotundus* L.	Deela	Rhizomes	Fever, diarrhea, dysentery and blood disorders. Tuberous, indigestion, diarrhea, dysentery, cholera, stomachic and diuretic
21	Euphorbiaceae	*Euphorbia hirta* Linn.	Aam dodak, Doddak	Whole plant	Expectorant, bronchitis, cough and asthma
22	Euphorbiaceae	*Euphorbia hypericifolia*	Pui Booti.	Whole plant	Fresh milky juice which is acrid irritant is applied externally to relieve warts
23	Euphorbiaceae	*Ricinus communis* L.	Hernoli, Castor oil	Seed	Constipation, Stomach and bowels problems
24	Euphorbiaceae	*Euphorbia prostrata* L	Hazar daani	All plant	Skin diseases, itching and for ringworms
25	Fabaceae	*Rhyncosia minima*	Jungli moath	Whole plant	Used for bath after delivery for body care
26	Fabaceae	*Tephrosia lupinifolia* DC	Fish Poison	Roots, Leaf, Stem, bark	Stomach ache, diarrhea, rheumatism, asthma & urinary disorders
27	Lamiaceae	*Mentha longifolia* L.	Vanalai/ Mint	whole plant	Plants are dried, powdered and used for diarrhea
28	Lamiaceae	*Leucas aspera* (Jacq.) Ait.	Jhumka booti	Leaves	Gastritis
29	Malvaceae	*Melia azedarach* L.	Dherk, Chinaberry	Leaf and fruit	Skin infection, skin diseases.
30	Malvaceae	*Hibiscus rosa sinensis* L.	Gurhal, Shoe Flower	Flower	Apply paste to reduce burning sensation
31	Mimosaceae	*Acacia nilotica* (L.) Delile	Kekar, Gum Arabic	Pod	Gonorrhea
32	Mimosaceae	*Cassia fistula* L.	Amaltas, Golden Shower	Seed	Gastric problems
33	Moraceae	*Morus nigra* L.	Kala Toot, Mulberry	Root, leaf and fruit	Bad thorax, stomach worms
34	Moraceae	*Ficus benghalensis* L.	Boher, Banyan	Latex	Gonorrhea
35	Moraceae	*Ficus benjamina*	Weeping fig	Whole Plant	Blood purifications
36	Myrtaceae	*Syzygium jambos* (L.)	Jaman, Jambolana	Seed	Diabetes
37	Nyctaginaceae	*Boerhavia procumbens* Banks ex Roxb	Itsit	Root	Jaundice
38	Portulacaceae	*Portulaca oleracea* L.	Kulfa, Purslane	Whole plant	Jaundice, typhoid, iron deficiency and skin allergy
39	Portulacaceae	*Portulaca quadrifida*	Pigweed, Little Hogweed	Leaves and seeds	To treat infections or bleeding of the genito-urinary tract as well as dysentery. To relieve sores & insect or snake bites on the skin.
40	Rhamnaceae	*Ziziphus jujuba* Mill.	Baer, Jujube	Leaf & fruit	Skin infections where pus is present & iron deficiency
41	Rosaceae	*Rosa indica*	Gulab, Rose	Flower & seed	Eye disorders and heart disease
42	Rutaceae	*Citrus limon* (L.) Burm. f.	Nimboo, Lemon	Fruit	Toothpowder for teeth diseases and in infections

Table 1: Continued

Sr. No.	Family	Botanical Name	Common Name	Part Use	Ethnomedicinal Use
43	Rutaceae	*Murraya exotica*	Jasmine orange,	Leaves and twig	Antifertility, analgesic
44	Solanaceae	*Solanum nigrum* L	Kainch Mainch, Nightshade	Leaf	Abnormal and painful secretions from ears.
45	Solanaceae	*Datura inoxia* Mill.	Datura, Thorn Apple	Seed	Gonorrhea
46	Solanaceae	*Withania somnifera* (L.)	Ak San, Winter Cherry	Whole Plant	Asthma, Rheumatic disorders, insomnia, fever, constipation and eye diseases, swellings and ulcer
47	Tamaricaceae	*Tamarix aphylla* (L.) H. Karst	Rokh, Tamarisk	Leaf	Skin worms and internal worms of nose & ear, Toothache
48	Zygophyllaceae	*Tribulus terrestris* L.	Puncture Vine, Bhakra	Seed	Back pain, Gonorrhea, Urinogenital diseases

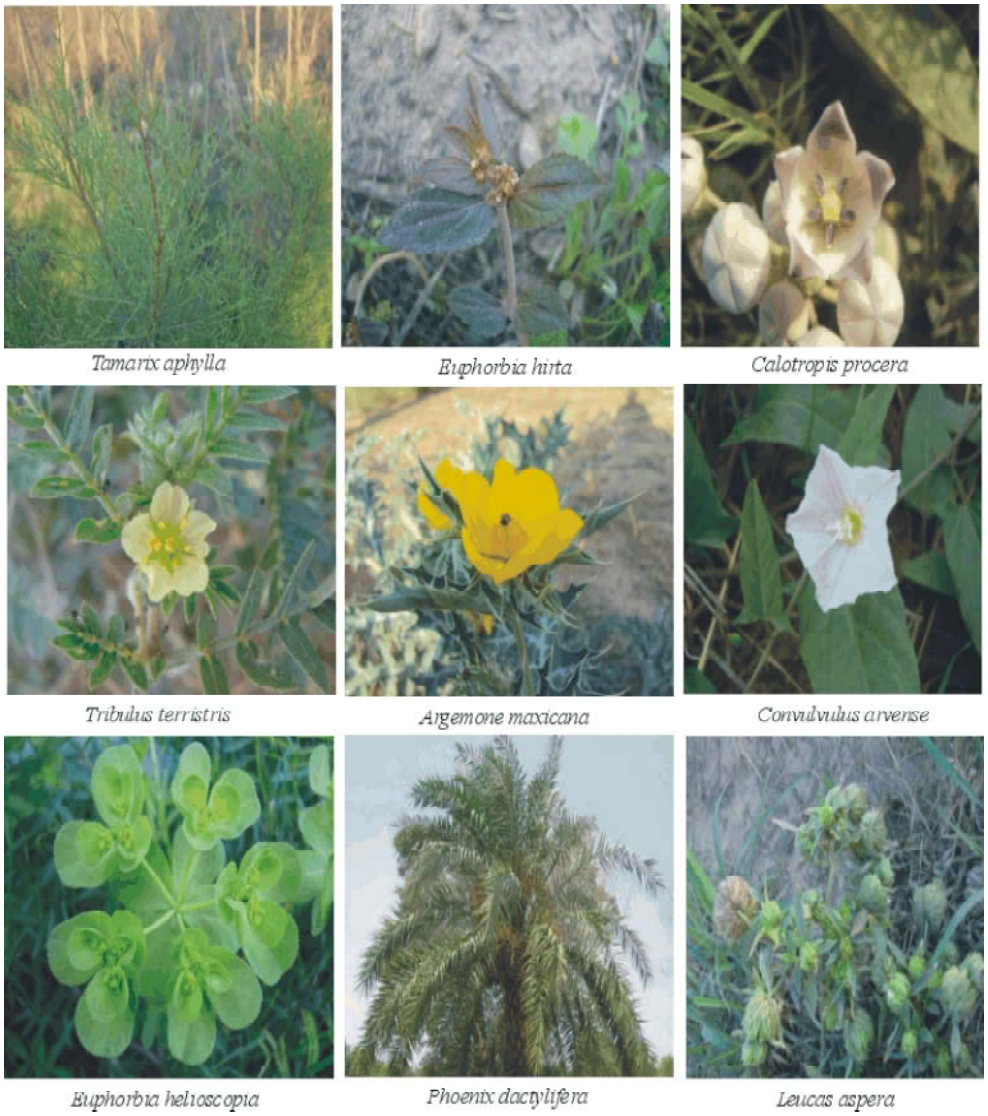

Fig. 1: Plants of District Sialkot

Fig. 2: Wild Plants pictures

Fig. 3: View of the plants growing in Sialkot District

DISCUSSION

The area of Sialkot is very fertile and rich with flora. There are many medicinal plants which are growing naturally in different seasons of year in this area. Annual global sales of products derived from the manipulation of genetic resources lie between $500 and $800 billion annually [13]. Due to the lack of modern communications, as well as poverty, ignorance and unavailability of modern health facilities most people are still forced to practice traditional medicines for their common day ailments [14]. Most of these people form the poorest link in the trade of medicinal plants [15]. A vast knowledge of how to use the plants against different illnesses may be expected to have accumulated in areas where the use of plants is still of great importance [16].

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