

Ethnobotanical uses of Plants of Family Solanaceae Muzaffarabad Division Azad Jammu and Kashmir, Pakistan-13100.

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ABSTRACT: 15 plant species belonging to family Solanaceae were investigated for the study of ethnobotanical uses. The present research work was designed together indigenous knowledge of medicinal plant species, which are being utilized by the local inhabitants of the area of Muzaffarabad Division. The Plant specimens were collected from various sites of District Neelum, Muzaffarabad and Hattian Balla. Medicinal claims were also collected from the people at various survey sites for the treatment of a number of diseases. The medicinal properties of plant species have made an outstanding contribution in the origin and evolution of many traditional herbal therapies. These destructions of natural habitats by overgrazing, new habitations, indiscriminate, deforestation and over exploitation of various economically important medicinal plants has resulted in the environmental stirrs in the mountainous areas consequently some of the common plants have become endangered and rare plants are on the verge of extinction. During the investigation it was found that the person practicing this art does not easily reveal knowledge to others present investigation carried out during the month of July-August (2012).

KEY WORDS: Muzaffarabad division, ethnobotanical, solanaceae, indigenous

I. INTRODUCTION

Muzaffarabad is the capital of the Azad Kashmir. It is situated between 34.24° latitude and 73.22° longitude in North-East of Pakistan. It is spread over an area of 2496 sq. The climate of the area falls under sub tropical highland type. The temperature ranges between 42°C to -3°C, with average annual rainfall varying between 1000 to 1300 mm (GOP, 2004). The topography of Muzaffarabad is mountainous and hilly. The forest types of the Muzaffarabad include Dry Sub Tropical Scrub Forests and Sub Tropical Pine Forests (Termizi, 2001). In Muzaffarabad District on the banks of the Jhelum and Neelum rivers. The district is bounded by North-West Frontier Province in the west, by the Kupwara and Baramulla districts of on the Indian side of the Line of Control in the east, and the Neelum District of Azad Kashmir in the north. Cradled by lofty mountains, Muzaffarabad reflects a blend of various cultures and languages. The main language is a form of Hindko. The tribal people of the Neelum and Jehlum Valley are commonly known as Timrii, Shenaz, Gujjar, Gakhar, Kashmiries, Syed and Awan. The languages they speak are Sheena, Pahari, Gojree and Kashmiri. Many people have simple life knowing nothing about the knowledge of Botany, Chemistry and Pharmacy but have ears better tune to catch remedies against the diseases. Rustic lower often hides for year, the treasured and nature secret in the flowers, fruits, seeds, stem, leaves and bark of the trees. The Neelum river plays a dominant role in the microclimate of Muzaffarabad.

Shinawari and Malik 1989 concluded a field study of plant utilization of Northern Balochistan (Shinwari, 1989). (Shehzad and Qureshi 2001) discussed common ethnobotanical uses of plants in Jatlan area district Mirpur .

The history of medicinal plants can be traced back to Vedic Periods about 4500-1600 BC. Rigveda, the oldest of Vedas is said to be first written attempt of treasure of knowledge, it describes about 99 plants. The Charaka Samhita, is an old written document on herbal therapy, which reports on the production of 340 herbal drugs for curing various diseases (Parajapati *et al.*, 2003). Various plants possessing medicinal potentiality, are vastly utilized in the form of medicine which are employed in clinical medical system as therapeutics in various pharmaceutical form covering single drug. The requirement of crude drugs is a basic need of raw medicinal for pharmacy for preparation of large number of single or compound drug formulations. These pharmaceutical products or the formulations prepared from the botanical drugs with varying proportion of ingredients belong to both the categories prescribed group and patent group. In Pakistan, ethnobotany is introduced recently. Although country has 6000 species of wild plants of which about 600 species are considered to be medicinally important (Hamayun *et al.*, 2003). Series of paper on medicinal plants and their indigenous uses has been published from various areas of the country (Shinwari and Malik. 1989, Bhatti *et al.*, 2001: Qureshi and Bhatti 2008; Qureshi *et*

al., 2002:2009:2010. Ahmed *et al.*, 2009). India and China are two of the largest countries in Asia, which have the richest arrays of registered and relatively well-known medicinal plants (Raven, 1998).

Healthcare utilization depends on health-seeking behavior which in turn is a product of various factors. Physical, socio-economic, cultural and political. (Fatimi and Avan, 2002). The healthcare system in Pakistan has two main divisions. The public domain composed of an allopathic system of healthcare as compared to private sector depends on homeopathy; hakeems, traditional and spiritual healers, Unani healers, herbalists, bone-setters and quacks. (Karim and Mahmood 1999). Pakistan has very rich traditions in the use of medicinal plants for the treatment of various ailments, based predominantly on the Unani system of medicine which dates back to the Indus Valley Civilization (WHO, 2001).

II. MATERIALS AND METHODS

Plant material was collected during season (2012) in the region under study. Ethnobotanical data along with the specimens were collected and recorded in the field diary. Collected specimens were properly pressed as per the herbarium methodology. The specimens were identified according to the available literature (Nasir and Ali, 1995, Qasir and Ali, 1995-2009) and were confirmed from National Agriculture Research Center Islamabad, Quaid-e-Azam University Islamabad. Collected material was deposited in Herbarium of Botany Department Azad Jammu and Kashmir University, Muzaffarabad. The information regarding traditional uses of plants was collected by means of personal interviews of aged tribal people, Hakims and Herbalists.

III. RESULT AND DISCUSSION

Ethnobotanical enumeration of the species of family Solanaceae involves in this paper, there botanical names, local names, localities, family names, altitudes, parts used and medicinal importance. However during the survey ethnobotanical information of the species included in the table have also been explored and recorded.

Table 1: Ethnobotanical uses and the local names of the specie of family Solanaceae.

Sr. No	Family Name	Botanical Name	Local Name	Localities	Altitude	Parts used	Uses
1	Solanaceae	<i>Withania somnifera</i> (Linn). Dunal	Maukurie	Pattika, Nouser, Joora, Chanjhat, Malsi, Hattian Dopatta, Dollai, Reeshian, Lamnian, Sharian, Chinari, Sawan Gucha, Khattai, Gujjer bandi, lasdaar and Naulechi	830-1020 m	Root, leaves & fruit	Powder of root is mix with goat milk and used for the curing of arthritis and rheumatism especially during early stage. During the treatment use of potato, pulses, meet and rice should be avoided. Leaves are used for tumors. Fruit is diuretic. Root and seed are hypotonic. Several preparations of these drugs are used for all types of nervous disorder and as seductive in the treatment of hypertension. The plant is aphrodisiac
2		<i>Solanum surratense</i> Brum. f	Kundiyara	Naulechi, Kahoree, Bshash, Battal, Makri, Chehla Bandi, Neela Dandi, Joora, Salkhalla, Majhooe,	870-960 m	Berries, root, fruit	Berries are applied as demulcent and expectorant extract of roots are used in cough, asthma and

				Domail Sydain, Langerpura, Sawan Gucha, Chinari, Awan Patti, Dhanni Baqalan, Reshian, Kamnian and Kullian			catarrab powder of whole plant is used for toothache, rheumatism and gonorrhoea. Fruit given in leucorrhoea, eczema, scabies and scorpion bite
3		<i>Nicotiana tabacum</i> L.	Tambaku	Brarkot and Srar	850-1040 m	Seeds, fruit and leaf	Seeds mix with Nariyl, than crushed to form powder added little sugar or glucose for making mixture with water and then filtered. Two spoon taken daily for the removal of worms. (Anthelmintic). Fruit of chilies mixed with powdered leaf of <i>Nicotiana tabecum</i> a make a paste on the portion of dog bite to avoid rabies.
4		<i>Capsicum annum</i> L.	Mirchee	Domail, Gojra, Chehla Bandi, Kahoree, Panjkot, Parsacha, Kacheeli, Kontal Nar, Majhooe, Kullian, Chatter Kalas, Pattika, Chinari, Khataee, Gurmanda, Nardajjian, Reshian, Lamnian, Leepa and Nouser	870-1690 m	Leaf, fruit	Leave and fruits of chilies used for the remedy of pain of dog bite, skin diseases and also utilized for eye complaints fruits are used as a condiment and in pickles.
5		<i>Datura stramonium</i> Linn.	Datoora	Malsi, Machiara, Peer chanas, Danna, Kacheeli, Kot terhala, Neelum, Arangkel, Surgen, Kundal Shahi, Jagaran, Peer Cheela, Laiswa bipas, Sharda, Kel seri, Shunter, Phullawai, Gurez, Daokan, Leepa, Batchiree, Nerimela and Peer hansimar	1800-2680 m	Seeds, flowers, leaf, fruit	Extracts of seeds are used for the purpose of Sokra and for the remedy of eczema and boils. Flower and leaves juice used in wound and sore. Powder and fruit mix with water form a paste and useful in the pain of rheumatism. A small doze is given for the remedy of whooping cough and fatigue of muscles relaxation. Extract of seeds and flower given to women in disease

							of pachawan locally. Decoction of the seeds reduce the mucous secretion.
6		<i>Solanum tuberosum</i> Linn.	Alu	Gojra, Battal, Bashash, Talgran, Mi, ani bandi, Rubani, Muslim abad, Danna kacheeli, Bugna kher abad, Mohra mashtinmba, Jhandgran, Rahim kot, Komi kot, Sawan, Dullai, Batchiree, Nardajjian, Khatai, Sarai, Reshian, Leepa and Sehoter	870-2250 m	Leaf, Flower & tuber	This is one of the most important food plants of the world. The tubers are consumed as a vegetable rather than a staple food. Small tubers are utilized for the production of starch. The potatoes are also fed to livestock, tubers are antis carbutic, diuetic, nervine sedative and used as a tonic. The extract of the leaf is used for cough. A paste of the leaf, flower is used as a plaster for burns.
7		<i>Solanum pseudocapsicum</i> Linn.	Mirchola	Muzaffarabad, Chehlabandi, Chatter Kalas, Dullai, Rubani, Muslim abad, Pattika, Kahoree, Battal, Chikar, Pandu, Qazi Nag, Reshian, Chakothei, Chinari, and Talgran	870-1880 m	Whole plant	All parts of the plant contain poisonous which can cause disorganizing the action of heart due to the presence of an alkaloid Solanocapsine. All parts contain different steroids/alkaloids, systemic action is wholly intra-cardiac.
8		<i>Solanum nigrum</i> L.	Kachmach	Muzaffarabad, Nalouchi, Domail, Saran, Rubani, Ambore, Tandali, Garhi Dopatta, Hattian Balla, Dhanni, Lower plate, Chehla Bandi, Dub galli, Shaheed galli, Brar kot, Gojra, Chatter klas, Bugna kher abad, Neelum, Athmuqam, Joor, Nouser, Panhgran, Talgran, Baheri, Charakpura, Chanchjat, Kundelshai, Kacheeli, Chikar, Katai. Gujjar Bandi, Gurmanda, Lamnian,	870-1840 m	Leaf, berries, flowers, root & stem	Extract of the leaves are used as poultice for rheumatic and gout joints and skin diseases. A decoction of the berries and flowers is useful in cough, rat bite, bronchitis, fever, diarrhea and hydrophobia. Seeds are useful for inflammation and skin diseases. Extract and powder of the root is used in hepatitis. Decoction of leaves, stem and seeds are of useful

				Sharian and Dullai			for the remedy of pinworms mostly in children. The plant is bitter, antiseptic, expectorant, laxative and diuretic.
9		<i>Solanum melongena</i> Linn.	Bangun	Muzaffarabad, Rubani, Dullai, Ali abad, Chiinari and Kahoree	870-1480 m	Fruit, leaf, root	The unripe fruit is bitter in taste, ripe fruit is used for making curry which is cardiogenic. Extract of the leaves are narcotic are useful in cholera, asthma, bronchitis and fever. Root extract/decoction is given in inflammation, neuralgia and for ulcer. Root are laxative and analgesic.
10		<i>Lycopersicon esculentum</i> L. Mill.	Tamater	Danna Kacheeli, Muzaffarabad, Rubani, Kahoree, Athmuqam, Joor, Panjgran, Baheeri, Rajpiyan, Dullai, Jhandgran, Mera saroo, Kotterhala, Chinari, Lamnian, Awan Patti, Dahani Baqalain and Sehoter	870-1680 m	Pulp & fruit	The pulp is used cosmetically in face packs. It is used as a tincture in homoeopathy to treat rheumatism and severe headaches. Powder of the whole plant is an excellent insecticide. Fruit are sweet, carminative, digestive, liver and kidney stimulant and tonic. They are useful in anorexia, constipation, dermatopathy and ulcerative stomatitis. Mostly used in curries, and chicken karyie.
11		<i>Atropa acuminata</i> Royle	Challa Lubber	Surgan, Kelsari, Sharda, Janawai, Daokhan, Neribela, Pandu and Shounter	3000-4200 m	Leaf & Root	Extract of the leaves are used externally to relieve pain and internally for the remedy of cough. Roots are leaves are narcotic, sedative, diuretic and mydriatic. They may serve as a source of atropine used for

							ophthalmic purposes.
12		Datura metel	Tatoora	Muzaffarabad, Naulechi, Chatter klas, Lower plate, Makri, Danna kacheeli, Rubani, Langer pura, Malsi, Nouser, Panjgran, Muslim abad, Bugna kher abad, Dullai, Neelum, Batsheeri, Gujjar bandi, Lamnian, Chikar, Sharian, Chakothee and Sawan	870-1760 m	Whole plant	Extract of whole plant mix with Gurr given to the cattle for the disease of takoon locally and also use in manical conditions. Leaves are diuretic.
13		<i>Petuna axillaris</i> Linn.	Chunraya	Muzaffarabad, Domail, Naulechi, Chatter klas, Garhi Dopatta, Nouser and Kahoree	870-1320 m	Flowers	The plants are mostly cultivated in the garden for the ornamental purposes. Flowers extract given to the horses for the remedy of skin problem mostly.
14		<i>Cestrum nocturnum</i> Linn.	Raat ki rani	Muzaffarabad, Naulechi, Makri, Kahoree, Pattika Dullai, Sarar, Rubani and Langerpura	870-1050 m	Flowers	Flowers are used during celebration programs and plant is cultivated for ornamental purposes.
15		<i>Capsicum frutescense</i> Linn.	Motti mirch	Muzaffarabad, Garhi Dopatta and Pattikka	870-1230 m	Fruit, seeds	Leaves and stems are used for fodder. Fruits are used as salad.

IV. DISCUSSION

Ethnobotany is a multidisciplinary natural science which deal with human plant relationship. Ethnobotany has been increasingly recognized as valid discipline that can play a very important role in the advancement of many aspects of scientific, sociological and historical studies. Herbal medicines are the world most ancient form of the medicine. Every civilization used plants for healing and in many cultures. Drugs obtaining plants collected in nature. However, unregulated collection of the medicinal plants by untrained persons and destruction of their natural homes through indiscriminate forest felling have resulted in depletion of our natural resources of several important drug plants. Therefore, increasing demand of medicinal plants there is a need for their cultivation on commercial scale.

The plant parts used widely to treat diseases. Some plant parts are edible include roots, stem, leaves seed and fruits. The most commonly used plant parts for herbal preparation in the area were seeds, whole plant. These are various methods of preparation for different types of ailments like decoction, powdering crushing and homogenized mixture in water. It was found to be different and is only some selected number of the family *Solanaceae* a total of 15 species were used of traditional medicine among urban and rural population. Most of the traditional medicinal plants were used as dried form. In the study area the inhabitants also used medicinal plants for various purposes such as medicine ad food. Earthquake severe drought, fire, overgrazing, agricultural expansion, root and house construction and grazing has been affected by a drastic, decrease in the area of native vegetation. (Kebu *et al.* 2004). Due to loss of cultural diversity and illegal cutting/collection of plant for fuel wood purposes reduce the property of useful medicinal plants Hamilton. (2003). And Fnserma *et al.*,1992). Amam of Mosque, younger generation and local people should also involved to provide knowledge about the medicinal plants to conserve the vegetation because the local indigenous knowledge is being lost at a faster rate with the increase of modernism.

The knowledge of medicinal plants is controlled and generated by different people in society observe certain categories of the people, institution and environments with in which their knowledge is produced (Agrawal 2001).

V. PROBLEMS AND REMEDIES FOR MEDICINAL PLANTS

1. Illegal collection from the wild habitat has led to depletion of many important species viz. *Atropaacuminata*, *Withania sominifera* and *Datura stromonium*.
2. Indigenous knowledge about the medicinal plants from the different localities (Sharda, Kel, Surgan, Peer Chanasi, Laiswa bypass, Rahim kot, Sheesha mhli, Noon bagla and Charakpura) has decreases rapidly.
3. Encroachment, illegal collection, building construction and agricultural expansion from the wild habitat stopped.

VI. SUGGESTIONS

1. Forest Act and wildlife protection Act must be taken on spot.
2. Endanger species must be preserved in the Herbarium and documentation of the important medicinal plant species should be made and deposited in method adopted in concerned departments.
3. Local people, Imam of mosques, teachers, students and councilors should be involved for the conservation of plants.

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