TRADITIONAL USES OF SOME USEFUL MEDICINAL PLANTS OF ZIARAT DISTRICT BALOCHISTAN, PAKISTAN

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Abstract

The study area is located in the northeastern region of Ziarat District Baluchistan at altitude ranging from 2000-3000m, which geographically extend between latitude 30^o 18`N to $30^o$ 30`N and longitude 67^o 54` E to $67^o$ 57` E. The highest peak in the study area is Koh-Khalifat (3,475 m).This paper reports the survey conducted to elaborate the floristic composition & some folk uses of medicinal herbs in Ziarat District. During the survey and plant collection, 90 species of different taxa belonging to 35 families are used medicinally by the local people for various ailments. This diversity was due to the difference in climate, altitude, microclimate and other topographic conditions. The locals use medicinal herbs for the treatment of various diseases, since ages. It was noted that over grazing of the vegetation, ruthless collection of medicinal plants have threatened their existence and more plants are becoming vulnerable due to destruction of their natural habitat. Hopefully this research paper will generate wide interest in protecting and preserving plant diversity of economically important species. It was also recorded that majority of plants are being utilized in indigenous medicine for remedy of various diseases. The area has great potential for fodder and medicinal plant exploitation economically.

Introduction

Ziarat District is situated in the north region of Balochistan. It constitutes the northeastern corner of this province. It is a District of valley with high mountains and narrow side valleys. The whole area is very much rugged and broken consisting of deep valleys with precipitous slopes containing swift streams. Ziarat is endowed with a wide variety of medicinal Plants. Many of which are used in indigenous medicine. It seems the need of the time that we orient ourselves to the local sources and converted efforts by all the sections involved in this process should be made to use these natural plants in the mast benefiting manner in the service of ailing humanity. The area is composed of irregular rugged ridges with steep terrain on comprising several narrow valleys, running from east to west. The climate of the area over the greater part is dry temperate type (Champion, 1965). The area is also characterized by extreme cold during winter and refreshingly cool and pleasant in summer (Holdridge, 1947). Snow fall between December to March and frosts are frequent (Khatak, 1963). Mean annual precipitation of is about 282 millimeter/yr is mainly received during winter in from of snow (Ali,1966; Ahmed *et al.*, 1990) the highest snowfall of 82 centimeter reported in February 1977-1988. Some showers also occur in July and August.

Temperature extremes are characteristics feature of the climate with mean maximum temperature of 28C ^{o} in July and August and man minimum temperature of -9C ^{o} in January. The highest average relative humidity of 67% occurs December, While the lowest of 23% in October. The average wind speed is 132 km/hr. Wind are strong and quite common in September and October. Geological substrate includes sedimentary rocks, ranging from cretaceous to recent in the (Shah, 1977).

Although this area is blessed with extensive natural wealth of resources yet the humans in the mountainous area suffer the most from scarcity of sustainable livelihood prospects. The area has great many numbers of plants having willed defined traditional uses by the locals over generations. This area is unquestionably a centre of paramount importance for diversity of plant species. Over the centuries plants have been traditionally utilized for various purposes. It is amazing that modern botanists/naturalists are learning about useful plants from primitive peoples. Ethnic groups in Ziarat are Chautair, Sasnamana and Chasnak, Zindra Baba kharwari etc. These groups have their distinct ways of life, beliefs, traditions and cultural heritage, unfortunately not a single regional population has been subjected to a complete ethno botanical analysis and the need to do so become more apparent with each passing day. Conservationists often talk about the problems of disappearing species but the knowledge of how to use these species is disappearing more rapidly than the species themselves. As we struggle to protect our forests, find new and useful plant species for the benefit of humanity, the people who best understand these valuable species are dying out and the new generation unfortunately is not interested in the domestic herbs. Majority of the population has been relying upon for generations with considerable success, should not be over looked as indigenous practice.

The use of plants forms the basis of traditional systems of medicine all over the world. There is evidence that plant-based medicine goes back at least 1000,000 years, and probably even longer. The development of

systematic pharmacopoeias dates back as for as 3000 BC, when the Chinese were already using over 350 herbal remedies.

The long history of medicinal plants resulted in the development of formal systems of medicine, particularly in china and India, and also in Arabia, Egypt and Europe.

Ayurveda, a system of herbal medicine in India, Sri Lanka and Southeast Asia, has more than 8000 plant remedies and is still the main kind of medicine used in these areas. In Pakistan, the Unani system is also largely plant based. About 5000 out of china's total flora of 30,000 species are used in traditional Chinese medicine.

Around 35,000-70,000 of the 250,000 species of higher plant has been used for medicinal purposes. In developing countries, 80% of people continue to rely chiefly on traditional, predominantly herbal, medicine for their primary health care. Traditional medicines have been developed over long periods of time through a close relationship between local people and the natural world. Thus we see today the products of a natural screening process, resulting in thousands of plants used in medicine all over the world. These medicines have presumably evolved through trail and error and are passed on largely through word of mouth and tradition. Many are undoubtedly effective.

The use of plants in traditional medicine will undoubtedly continue to rise, as population grows. Modern western medicine is too expensive for many poor people in developing countries and, in any case traditional medicine is often more trusted, at least for certain medical conditions. The gathering and trading of wild plants for herbal medicines will place huge demands on the resources, necessitating urgent conservation measures.

Many countries are actively seeking ways of developing traditional medicine and of incorporating it fully into governmental medical services. Generally, even in countries where traditional medicine forms the largest sector, modern western medicine is the sole beneficiary of government support. Apart from financial consideration promoting traditional medicine affirms the value of local cultures recommended research includes tests on effectiveness and toxicity, and guidelines for ensuring standard levels of active ingredients.

The aim of the manuscript is to present the recent list of medicinally important plants their local names and traditional uses in the area.

Materials and Methods

Plants collection and data regarding their traditional uses in various areas or localities of Ziarat district have been done periodically in various flowering seasons (Fig 1). A number of local of old ages belonging to various ethnic groups have been personally interviewed and asked questions regarding traditional uses of plants their local names. Identification of collected Plant material was done with the help of flora of Pakistan by Ali and Nasir (1990) and studying more specimens of Ziarat, lying a various existing herbaria of Pakistan.

The photopography was also taken in this area for was Identification and documentation. The botanical names of medicinal plants are listed in alphabetical order and listed their families and vernacular name.

Fig. Map of Ziarat District Highlighted with the study area.

Traditional uses of some medicinal plants

- *Achillea wilhemsii* L. (ver Name: Zawal)

Traditional uses: Decoction is given to children's for stomachaches the flowers encourage circulation, lower blood pressure. Mixture with peppermint used in fever, treating cold, measles. Mixing in whey used for body heat.

- *Achillea santolina* L. (ver. Name: Zawal)

Traditional Uses: Given to children, cure stomachache, and cooling

- *Alhagi mourorum.*Medic (ver. Name: Zoz)

Traditional Uses: Commonly grazed by camel and goat flower are edible.

- *Arnebia griffithii*. (ver. Name: Zar Gulai)

Traditional Uses: The pretty spotted flowers are fragrant and give an additional beauty to the area.

- *Allium ascalonicum* L. (ver. Name: Khukhai)

Traditional Uses: Bulb is used for indigestion and useful in earache leaves; used as salad, vegetable and appetizer.

- *Asparagus palaestinus* Willd. (ver. Name: Khardigii)

Traditional Uses: Used as antidy senteric.

- *Berberis balochistanica* Ahrendt. (ver. Name: Zaralg)

Traditional Uses: Root used in diarrhea, piles and chest infection, also used in human and animals cough. The branches are used as fuel wood and fencing.

- *Bunium persicum* B. Fedtsch (ver. Name: Tora Zera)

Traditional Uses: it is used as a condiment and a spice, carminative, stomach and stimulant.

- *Chenopodium album* L. (ver. Name: Sarma)

Traditional Uses: Its boiled leaves are eaten as a vegetable.

- *Coriandrum sativum* L. (ver. Name: Dhanya)

Traditional Uses: It is a common cultivated herb in Ziarat. The leaves and the fruit are used as a spice, the fruit also used in digestive ailments.

- *Cannabis sativa* (ver. Name: Bhang)

Traditional Uses: To relive urinary tract problems.

- *Centurea picris* Pall (ver. Name: Kurakh)

Traditional Uses: A cure for wounds of sheep, used if wolves tear them.

- *Centurea intybus* L. (ver. Name: Shingul)

Traditional Uses: Plants used as a cure for diarrhoea. Root extracts use for Malria Fever.

- *Citrullus colocythis* L. (ver. Name: Mashanga)

Traditional Uses: It is used as perfume.

- *Caragana ambigua* Stocks (ver. Name: Makhi)

Traditional Uses: Use as fodder and fuel wood, best source of fencing increasing the fertility of area.

- *Cotoneaster afghanica* Klotz (ver. Name: Sharugi)

Traditional Uses: Fruit used as tonic and edible, used as fodder and fuel wood.

- *Daphne mucronata* Scherb (ver. Name: walaghuni)

Traditional Uses: It is used skin diseases. Leaves are sued as mosquito repellent.

- *Datura stramonium* L. (ver. Name: Shinah Azghi)

Traditional Uses: The leaves and seeds are narcotic and sometimes used for criminal poisoning.

- *Descurainea sophia* L (ver. Name: Khashir, Rush)

Traditional Uses: It is used old fever, stomach, diabetes especially for the treatment of diarrhea.

- *Ephedra intremedia* (ver. Name: Oman)

Traditional Uses: It is a source of fuel wood and ephedrine nasal drops. It is mixed with tobacco for preparation of good quality Niswar and it also used for the treatment of asthma.

- *Ephedra procera* Fisch & Mey (ver. Name: Oman)

Traditional Uses: It is a source of fuel wood and plant extract is used for cough and asthma.

- *Elaeagnus hortensis* (ver. Name: Sanzali)

Traditional Uses: Its fruit is edible.

- *Eremurs persicus* (Jamb & Spach) Boiss (Ver.Name: Shaizgi)

Traditional Uses: Leaves are used as vegetable. The paste leave used for eye ache.

- *Eremurus sterophyllus*. (ver. Name Shazegi)

Traditional Uses: Leaves are used as vegetable.

- *Euphorbia osyridea* (ver. Name: Zarboti)

Traditional Uses: smoke of leaves, insect repellent. It is also used for livestock allergies.

- *Fraxinus xanthoxyloides* Dc (ver. Name: ash / Shang)

Traditional Uses: The wood is hard, white and close-grained; used for tool handles and walking sticks the foliage is used as fodder.

- *Ferula ovina* (ver. Name: Kumlala)

Traditional Uses: Dried leaves used for adulteration. Gum dried spread on landi (tradition dried meat) from fungal and bacterial attack.

- *Ferula oopoda*. (ver. Name: Kumala (Gutai)

Traditional Uses: Dried leaves used for adulteration. Gum dried spread on land if (tradition dried meat) from fungal and bacterial attack.

- *Foeniculum vulgare*. (ver. Name: Sounf /Fenul)

Traditional Uses: It is used as stomach diseases. Fruit are used as spicy.

- *Fumaria indica* (ver. Name: Shatara)

Traditional Uses: The plant is diuretic.

- *Hertia intermedia*, Boiss. (ver. Name: Gonga)

Traditional Uses: Used as cooling and acne. Also use fuel wood.

- *Hymenocrater sessilifolius* Benth (ver. Name: Soursanda)

Traditional Uses: Plant extract used as a cooling medicine. Also used Perfume.

- *Hyssopus officinalis* L. (ver. Name: Zufa, Zupa)

Traditional Uses: Used as asthma and nervous affection.

- *Haloxylon griffithii* Moq. (ver. Name : Shorae)

Traditional Uses: it is used as detergent.

- *Iris stockii*, Hemssley (ver. Name: Ghurghashi)

Traditional Uses: Fruit is edible. Decoction of seeds used in diarrhea and dysentery.

- *Juniperous excelsa* M.Bieb. (ver. Name: Obusta)

Traditional Uses: It is a source of fuel wood and soil binder.

- *Malcolmia africana*. (Ver. Name: Khatol)

Traditional Uses: It is ornamental plant, tuber is edible.

- *Malva neglecta*. (Ver. Name: Takli)

Traditional Uses: Root used as a cooling medicine.

- *Morus nigra*. (ver. Name: Shahtooth)

Traditional Uses: Fruit is used as food. Dry fruit is mixed Ghee. Leaves are used for sheep and goats. Wood is used as furniture.

- *Morus alba* L. (ver. Name: tooth)

Traditional Uses: Fresh & dried fruit is edible and sold in the market and dried one is best source of income for locals. Wood is used as furniture.

- *Nicotiana tobacum*. (ver. Nme: Naswar/Tumbaku)

Traditional Uses: Leaves are used for smoking and also used as insecticides. Plants dried one is best source of income for locals.

- *Nicotiana rustica* L. (ver. Name: Niswari Tumbaku)

Traditional Uses: Leaves are used for smoking and also used as insecticides. Plants dried one is best source of income for locals.

- *Nepeta preatervisa*. (ver. Name: Chambotae)

Traditional Uses: leaves are used as green tea.

- *Olea ferruginea* Royle. (ver. Name: Olive)

Traditional Uses: The wood is very hard and heavy, used for making ploughs, sticks etc.

- *Peganum harmala* L. (ver. Name: spanda)

Traditional Uses: The plant is used as a diuretic, demulcent, tonic aphrodisiac and aperients. Seeds used for indigestion.

- *Plantago lanceolata* L. (ver. Name: Isbaghool)

Traditional Uses: Leaves are used as wounds

- *Plantago major* L. (ver. Name: Barthung)

Traditional Uses: Seeds used as stomach & dysentery.

- *Punica granatum* L. (ver. Name: Anar)

Traditional Uses: Fruit is delicious to eat. The juice is used as a tonic in fever. Dried seeds “Anardana” are used for adding taste certain food like “Chatni”. It is also used diarrhea & dysentery.

- *Prunus eburana*. (ver. Name: zarga)

Traditional Uses: It is source of fuel wood. Used as fodder, gum obtained from the plant used for cure of spinal card and bones weakness.

- *Prunus microcarpa*. (Ver. Name: Nangah)

Traditional Uses: Fruit is appetizer, branches used as fencing.

- *Prunus domestica*. (ver. Name: Alucha)

Traditional Uses: fruit is used as eat.

- *Perovskia abrotanoides*, Karel. (ver. Name: Shinshobi(Broad Leaves)

Traditional Uses: Local are used as cooling.

- *Perovskia atriplicifolia* Bth. (ver. Name: Shinshobi(Narrow Leaves)

Traditional Uses: it is also used cooling and skin allergies.

- *Pistacia atlantica* Roch .F. (Ver. Name: Sharwan)

Traditional Uses: Leaves extracts are used for digestion.

- *Robinia pseudoaacacia* L. (ver. Name: Kiker)

Traditional Uses: It is used as furniture and cultivated as a road side tree for shade and prevent soil erosion.

- *Riccinus communis*. (ver. Name: Arund)

Traditional Uses: The oil from the seed has many uses such as an illuminant purgative, a leather-preservative and a lubricant especially used in delicate machinery; the oil cake is used as fertilizer and fuel.

- *Rosa beggeriana*, Schrenk. (ver. Name: Soori)

Traditional Uses: Fruit boil and use as tonic, source of fuel wood, branches used for fencing.

- *Rosa spp*. (ver. Name: Gulab)

Traditional Uses: Used as Perfume and cosmetic.

- *Saliva cabulica* Bth. (ver. Name: Karpola)

Traditional Uses: Used as cure for cold fever.

- Salvia hydrangia, Wallex Sweet. (Ver Name: sursanda)

Traditional Uses: Used as cooling medicine.

- *Sisymbrium irio* L. (ver. Name: Khaksheer)

Traditional Uses: Seed is used as for stomach and dysentery.

- *Serriphedium quettensis*. (ver. Name: Zarhi Tarkha)

Traditional Uses: used to relieve stomach pain and for fever.

- *Serriphedium maritime*. (ver. Name: Tarkaha)

Traditional Uses: May be used in improving the quality Niswar and for stomach disease of children. It is also used best source of fuel

- *Solanum tubersoum* L. (ver. Name: Potato)

Traditional Uses: the potato is widely cultivated for it edible tubers in zairat. The green part is used for sheep and goats. A part from starch, the potato is also a rich source of protein and vitamin C.

- *Sphora mollis*. (ver. Name: Ghoraza)

Traditional Uses: Source of fuel wood and best soil binder.

- *Tribulus terrestris* L. (ver. Name: Kroundki)

Traditional Uses: The plant is used as a diuretic, demulcent, tonic, aphrodisiac and aperients. The fruit is used in painful, urinary diseases, impotence, cough and heart diseases.

- *Tamarix indica* (ver. Nasme: Ghaz)

Traditional Uses: Source fuel and best soil bender. Branches are used as furniture.

- *Teucrium stocksianum* Hedgeand almond (ver. Name: karpolah)

Traditional Uses: Plant used as a cure for malaria fever.

- *Thymus serphyllum* L. (ver. Name: Moverri)

Traditional Uses: Leaves used as a green tea. Infusion is used in skin diseases.

- *Taraxacum officinale* Wigg(ver. Name: Mezhogul)

Traditional Uses: Used as remedy for chronic disorder of kidney and liver.

- *Vitis vinifera* L. (ver Name: Angur)

Traditional Uses: Fruit is edible and is for preparation of wine.

- *Ziziphora tenuior*, L. (ver. Name: Malungi Booti)

Traditional Uses: It is used as perfume and also used for fever.

- *Ziziphora clinopodioides* Lank (ver. Name: Malungan)

Traditional Uses: It is used as perfume and also used cold.

Results and Discussion

Medicinal plants are extensively used as source of drugs for treatment of many ailments and their procurement, cultivation and propagation is of great importance. The American consumer paid 3 million dollars during 1559-74 for drugs derived solely from higher plants. About sixty varieties of drugs are being exported by Nepal, which include *Swertia, Gentiana, Rawulfia, Lycopodium, morchela,* (Ghuchi), *Ephedra, Hyoscymus, Artemisia* and *valleriana.* A number of countries are engaged in research on the investigation of medicinal

plants and their cultivation, Propagation and manufacture of pure drug. China is extensively using the herbs in medicine and is known to be leading country in the utilization of herbs in the medicinal preparations South China is the leading medicinal plant producing region where more than 200 species are being grown.

As a result recorded 90 species belonging to 35 families having well defined medicinal user over generations. This diversity was due to the difference in climate, altitude, microclimate and other topographic conditions

Maximum number of species used for medicinal purposes belonging to families like: limiaceae (12 species) compositae (9 species) Rosaceae (7 Species) Solanaceae (6 Species) Apiaceae (5 Species) Moraceae (4 Species) Liliaceae (3 Species) Papilionaceae (3 Species) Ephedraceae (3 Species) Euphoribiaceae (3 Species) Chenopodiaceae (2 Species) Fabaceae (2 Species) Berberidaceae (2 Species) Brassicaceae (2 Species) Zygophylaceae (2 Species) Oleaceae (2 Species) Apocynaceae (2 Species) Plantaginaceae (2 Species) Anacardiaceae (2 Species) Polygonaceae (2 Species) Cucurbitaceae, Allliaceae, Asclepiadaceae, Capparaceae, Thymeleaceae, Fumariaceae, Poaceae, Iridiaceae, Cupressaceae, Malvaceae, Punicaceae, Vitaceae, Elaeagnaceae, Gentianaceae, Convolvulaceae, represented by only one Species each and these plants are represented by their vernacular names in data.

The present studies in Ziarat district revealed that the older inhabitants have more knowledge and information about the use of medicinal plants in comparison to younger generation and some in case of illiterate people.

The Plants we have reported been affected gradually are eliminated because of construction and land leveling for different purpose. Human beings every where all the times at all places had to deal with the threat of disease and illnesses. Health and diseases are parameters of effectiveness with which ethnic groups adapt to their environment and utilized their resources to develop such condition and factors by which they can fight against health hazards arising from a wide range of causative agents.

Medicinal plants are used in the crude from locally and transported to the market and other part of country. It was observed that most of the inhabitants of Ziarat district had little knowledge about the conservation and use of medicinal plants. The younger generation and educated society is forgetting about indigenous knowledge of various medicinal plants and their uses become it was also observed that uneducated people has more knowledge about medicinal plants and their uses then educated ones. These are large number of plants whose medicinal evolution is yet to be done. Most of medicinal plants are reported in this survey still need detail chemical investigation for confirmation of active ingredients which are used for the treatment of various diseases by local people.

Other finding agree with worker gathered information in other areas like Tareen *et al*, (2002) Ziarat, Durrani *et al*., (2005) Horboi hills Kalat . But the recipes are different various ethnic groups even similar plants are using to cure different diseases

A total 90 species of different taxa belonging to 35 families are used medicinally by the local people for various ailments. This diversity might be due to the difference in climate, altitude, microclimates and other topographic conditions. The local use of medicinal herbs for the treatment of various diseases, since ages.

]It was noted that over grazing, ruthless collection of medicinal plants have threatened their existence and more plants are becoming vulnerable due to destruction of their natural habitat. Hopefully this research paper will generate wide interest in protecting and preserving plant diversity of economically important species in the study area.

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