



**AN ETHNOBOTANICAL STUDY IN BUDGAM DISTRICT OF KASHMIR VALLEY:
AN ATTEMPT TO EXPLORE AND DOCUMENT TRADITIONAL KNOWLEDGE OF THE AREA**

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ABSTRACT

Man has used plants to alleviate suffering and disease since times immemorial. The present study attempts to explore and document the traditional knowledge of medicinal plants used to cure different diseases. Present study revealed that either whole plant or different plant parts are used to treat various diseases. During the present investigation it was also observed that some plant species are used to treat more than one disease; likewise more than one plant species is used to treat a particular disease. These plant species are used to treat 35 types of different diseases. The paper also discusses the ethno medicinal use of 24 plant species, their vernacular name and part/parts used to cure various diseases.

Key words: Medicinal plants, Traditional knowledge, Disease, Ethno medicine

INTRODUCTION

Plants have been used in the traditional healthcare system from ancient times, particularly among the tribal communities. Numerous wild and cultivated plants play a vital role in their culture, customs, traditional healthcare system, rituals etc, and this interrelationship has evolved over generations of experience and practice. Herbal medicines are becoming popular worldwide due to its growing recognition of natural products being cheaper and without any side effects. Demands for medicinal plants are increasing in both developing and developed countries. As per WHO estimate, about 80% of the population in the developing countries depends directly on plants for its medicine^{1, 2}. Kashmir Himalaya harbours a rich diversity of medicinal plants³, chiefly owing to its topographic variations spanning from valley floor through terraced tablelands (Karewas) and dense forests up to alpine peaks^{3, 4}. The state (J&K) is populated with several ethnic groups⁵, with each group having their own knowledge of traditional herbal medicine⁶ inherited from their fore-fathers. This valuable ancient knowledge has been disseminated through the word of mouth, requires to be documented immediately. Up to now a very few studies have been carried out to document ethno-medicinal uses of plant species in this particular region because of being remote and difficult terrains^{7, 8, 9}. It is in this backdrop that the present study has been carried out to explore and document the ethno medicinal uses of plant species growing in the inaccessible areas of Kashmir valley.

MATERIAL AND METHODS

The valley of Kashmir is situated in northern fringe of the Indian sub-continent between 33°22' and 34°50' N latitudes and 73°55' and 73°33' E longitudes covering an area of about 16,000 sq. km. Field surveys and structured interviews were carried to elicit secret knowledge from locals inhabiting inaccessible areas of the region. Field surveys were conducted in various localities (Fig. 1) during 2011-2012. Appropriate methodology was followed during the present study; usually the survey in each locality started with the interview of elderly and experienced members, locally known as "Hakeems". Often they were accompanied to the field for the identification of the plant species used and authentication of the plant specimens collected from wild habitats. Besides

this, common people of the surveyed localities who have used these plants have been interviewed. All the gathered information, in particular the part(s) used, method of preparation, method of use and dosage was recorded in detail. To bring element of accuracy, the information obtained from one locality was cross checked with that of others. The plant specimens collected were properly processed and identified with the help of relevant literature^{10, 11}. The properly processed herbarium specimen of each species were deposited at Kashmir University Herbarium (KASH)

RESULTS

The present study revealed that 24 plant species are used as medicine in the studied area. Each plant species is provided with the scientific name, vernacular name, family, part used, method of preparation and dosage (Table 1)

DISCUSSION

The 24 plant species belongs to different plant groups, of which 21 species are dicotyledons, 2 monocotyledons and 1 pteridophyte (Fig. 2). These species are distributed in 15 families and 24 genera. The maximum number of species (5 species) belongs to family Lamiaceae followed by family Asteraceae with 4 species. Present study revealed that either whole plant or different plant parts are used to treat various diseases, in majority of the species (6 species) whole plant is used to treat different diseases followed by leaves and seeds with 5 species in each. These plant species are used to treat 35 types of different diseases. During the present investigation it was also observed that some plant species are used to treat more than one disease; likewise more than one plant species is used to treat a particular disease. The maximum number of species (3 each) is used to treat rheumatism and skin infection followed by back pain, chest infection and frost bite with 2 species in each case.

TABLE 1: ETHNO-MEDICINAL USE OF SOME PLANT SPECIES IN BUDGAM DISTRICT

Plant Species	Vernacular Name	Family	Part Used	Disease/ Ailment cured	Use / Uses	Dosage
<i>Acorus calamus</i> Linn.	Via-gander	Acoraceae	Rhizome	Stomachic	Paste of the rhizome mixed with small quantity of sugar is used to cure stomach ailments	10gms early in the morning
<i>Foeniculum vulgare</i> L.	Badiyan	Apiaceae	Seeds	Abdominal pain	Tea prepared from the seeds is used to cure abdominal pain in children	100 ml twice a day
<i>Coriandrum sativum</i> L.	Danival	Apiaceae	Seeds	Hair fall	Water extract of herb mixed with honey is used to cure the hair fall	Hairs are washed once a day
<i>Achillea millifolium</i> Linn.	Pahal- gassch	Asteraceae	Leaves	Tooth ache	Fresh leaves are chewed o cure the tooth ache	2-3 leaves
<i>Artemisia absinthium</i> Linn.	Tethwan	Asteraceae	Whole herb	Obesity/ diabetes/ liver infection	a. Liquid extract of the herb in combination with leaves of <i>Fumaria indica</i> is used to cure obesity. b. Paste of whole herb is used to decrease the sugar level in blood. c. Extract of whole herb is used to cure the liver infection in cattle.	a.30-50 ml once a day b. 10-20 gms of the paste per day c. 1-2 liters twice a day
<i>Cotula anthemoides</i> L.	Bobul	Asteraceae	Roots	Constipation	Root decoction in combination with whole herb of <i>Fumaria indica</i> is used to cure the constipation	50 ml of decoction is given at bed time
<i>Taraxacum officinale</i> Webber ex Wiggers	Hand	Asteraceae	Roots	Back pain/ common cold/ chest infection	a. Paste of leaves mixed with ghee is given to milk feeding mothers to cure the back pain and also cold of feeding children. b. Extract of roots mixed with aerial portion of <i>cynodon dactylon</i> is used to cure the chest infection.	a. 30 gms of paste is given to feeding mothers twice a day and 5-10 gms to the children once a day b.50 ml of the extract once a day
<i>Equisetum arvense</i> Linn.	Bandak/ Gandumgund	Equisetaceae	Whole herb	Urine infection	Powder of whole herb(10 gms) mixed with water (2 liters) is given to cure urine infection	1-1.5 liters per day
<i>Trigonella foenum-graecum</i> L.	Meth	Fabaceae	Seeds	Back pain	Extract of seeds is given to woman to cure back pain	30-50ml per day
<i>Fumaria indica</i> (Hauskn.) Pugsley	Shahtar	Fumariaceae	Whole herb	Skin infection	Extract of whole herb(200 gm in 2 liters of water) is used in skin infection	The extract is used externally per day
<i>Aesculus indica</i> (Colebr.ex Cambess.) Hook	Handoon	Hippocastanaceae	Seeds	Frostbite	Decoction of seeds(250 gms in 4 liters of water) is used to cure the frostbite	Extract is used to wash affected body parts once a day
<i>Ajuga bracteosa</i> Wallich ex Benth	Jan-e-adam	Lamiaceae	Whole herb	Lice killer	The whole herb (100 gms) is boiled in 2.5 liters of water. The decoction is used to wash the hairs.	Once a day
<i>Mentha arvensis</i> L.	Pudina	Lamaiceae	Leaves	Weak memory	Infusion of leaves in combination with seeds of <i>Coriandrum sativum</i> is given to increase memory power	100 ml once a day
<i>Prunella vulgaris</i> L.	Kulvaeth	Lamiaceae	Leaves, Whole herb	Rheumatism/ Body pain	a. Leaf decoction in combination with leaves of <i>Cotula anthemoides</i> and <i>Salix alba</i> is used to cure rheumatism and body pain. b. The paste of whole herb is used externally to cure the body pain	a. 50-80 ml once a day b. Once a day usually at bed time
<i>Thymus linearis</i> Benth ex Benth	Javind	Lamiaceae	Whole herb	Increase milk production	Whole herb is given to cattle to increase milk production	2-3 Kgs per day
<i>Salvia moorcraftiana</i> Wallich ex Benth	Sholar	Lamiaceae	Leaves	Cuts and wounds	Fresh leaves are directly applied on the cuts and wounds	Once a day
<i>Allium sativum</i> L.	Rohan	Liliaceae	Bulb	Baldness	Bulb powder mixed with mustard oil is used to cure baldness	1-2 gms per day
<i>Lavatera cashmeriana</i> Cambess.	Sazposh	Malvaceae	Flower	Skin irritation in pregnant woman	Decoction of flowers mixed with the leaves of <i>Salix alba</i> is given to cure the skin irritation in pregnant woman	40-60 ml per day
<i>Malva sylvestris</i> Linn.	Sotsal	Malvaceae	Aerial portion	Weak eye sight	Recipy of herb is given to increase the eye sight	Twice a day with meals
<i>Papaver somniferum</i> L.	Kashkhash	Papaveraceae	Fruit cover	Dry cough	Tea prepared from the fruit cover(1-2 gms) is used to cure the dry cough	50-100 ml once a day
<i>Anemone</i> sp.	Batkul	Ranunculaceae	Tuber	Skin diseases	Bulb powder mixed with ghee is used to cure skin infection, burned skin and cuts and wounds	Once a day usually at bed time
<i>Rosa</i> sp.	Gulab	Rosaceae	Petals	Common cold in cattle	Petals of the herb are given to cure cold in cattle	300-350 gms per day
<i>Datura stramonium</i> Linn.	Datur	Solanaceae	Seeds	Rheumatism/ frostbite/ toothache/tonic	a. Seed powder mixed with mustard oil is used externally to cure rheumatism. b. Seed decoction is used externally to cure the frostbite. c. Smoke of seeds is given to cure the toothache. d. Seed infusion is given to the horses as a tonic.	a. Once a day b. Once a day usually at bed time c. Once a day d. 400-500 ml per day
<i>Utrica dioca</i> L.	Soi	Utricaceae	Leaves	Rheumatism	Leaf powder mixed with mustard oil is used externally to cure rheumatism	Once a day

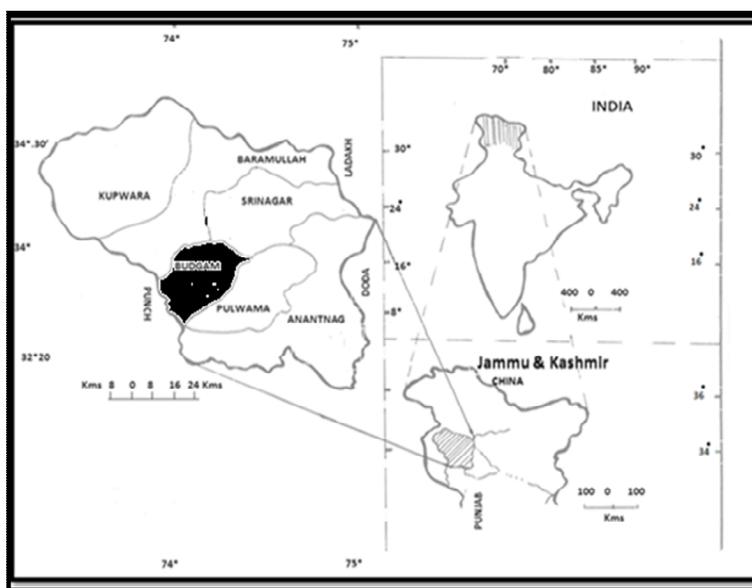


Fig. 1: Map showing study area

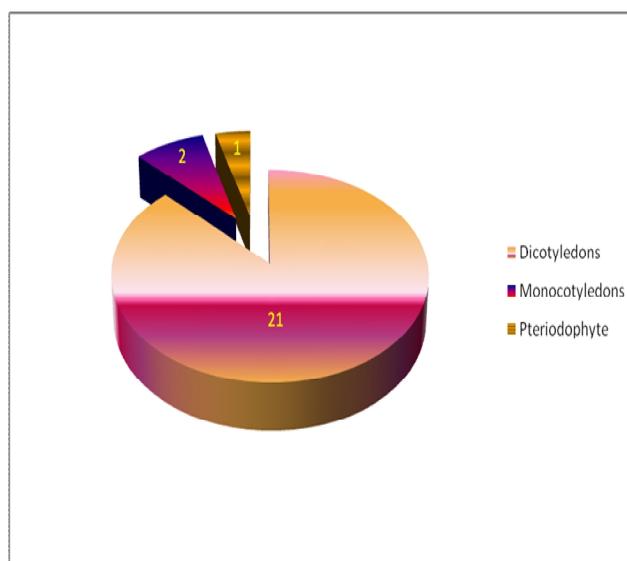


Fig.2: Distribution of various medicinal plants into different plant groups

Ethno botanical knowledge is very important as it reflects the practices and problems solved by the indigenous communities by their long experience. It also provides valuable baseline information for the commercial exploitation of bioresources. This information could be useful for the industry, pharmacologists, physicians, phytochemists, botanists and alike interested in the development of alternative therapies^{12, 13}. This secret treasure of knowledge could prove beneficial in phyto-pharmacological research for the discovery of new therapeutic drugs^{14, 15}. Also the growing concern among the developing countries about the emerging threats of biopiracy and intensities of IPR controversies are increasing day by day¹⁶. Thus the need of the hour is to speedily document this valuable information of ethno botany.

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