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RESEARCH ARTICLE

BOTANY

ETHNO-MEDICINAL SURVEY OF KAJINAAG RANGE OF KASHMIR HIMALAYA,INDIA.

FIRDOUS A. MALA*1, MANSOOR A. LONE2, FAYAZ A. LONE3 AND NEETU ARYA1

¹*Pest Control and Ayurvedic Drug Research laboratory Govt. S.S.L Jain P.G College, Videsha(MP) India 464001.

²Department of Botany Govt.Science and Commarce College Benazeer Bhopal(MP)India.

³Department of Botany University of Kashmir, J&K Srinagar India 190006.



FIRDOUS A. MALA

Pest Control and Ayurvedic Drug Research laboratory Govt. S.S.L Jain P.G College, Videsha(MP) India 464001.

*Corresponding author

ABSTRACT

The research work was carried out around the selected areas of Kajinaag range. The study was aimed to document the traditional folk knowledge of local people about the use of medicinal plants as ethno-medicines. The methodology includes questionnaire survey and personal communications. The ethno- medicinal data on 26 plant species belonging to 23 families were recorded during field expeditions from remote villages around Kajinaag range. The data was arranged alphabetically by family name followed by botanical name, vernacular name, part used, folk use and recipes. The plant species were collected identified, preserved and deposited under proper collection numbers in the Pest Control and Ayurvedic Drug Research laboratory of S.S.L Jain P.G College Videsha.

KEYWORDS

. Folk use, medicinal plants, Kajinaag range, Ethno- medicine, Kashmir Himalaya.

INTRODUCTION

Historically, plants have provided a source of inspiration for novel drug compounds, as, plant derived medicines have made large contributions to human health and well-being. Medicinal importance of plants has long been known for centuries and various therapies are considerably higher in remote areas than in Urban and semi-urban areas. From the very earliest days of civilization, mankind has turned to plants for healing; a tradition that has survived the arrival of modern medicine and found new strength at the end of 20th century¹. Even today, 80% of the world's population relies on traditional plant medicine². The Himalayas is known for its loftiest and longest mountain ranges in the world. The alpine and sub alpine zones of Himalayas host a remarkably rich wealth of medicinal plants. However, it is felt that there is a need for the rapid documentation of the valuable indigenous knowledge in the face of the emerging threats of destructive overharvesting, habitat destruction and bio-piracy³⁻⁵. About 70% of the identified medicinal plants of Indian Himalayas are threatened by destructive harvesting⁶. Kashmir is one of the provinces of Jammu & Kashmir State in the laps of Himalaya decorated with snow covered, silver-headed mountains, magical halcyon lakes and green meadows. Kashmir valley, being the part of Himalayan mountains, reveals a wide diversity of medicinal plants which are being used since ages. The region has been regarded as a veritable emporium of plant genetic resources especially the medicinal and aromatic plants. Many studies have been carried out from time to time to

document ethno-botanical information from different areas of Kashmir valley^{7,14}. Since no such study has been carried out in the present study area till now; an attempt has been made to document the ethno- medical uses of plants.

STUDY AREA

The study was carried out in the Kajinaag, western Himalayas, Baramulla district of Jammu and Kashmir, India (Fig 1). The study area is situated at 34° N latitude and 74° E longitudes. The altitude of study area ranges from 2500 to 3600 masl. The area at higher elevations displays an uneven topography covered with beautiful mountain peaks. It is a temperate system, with cold winters and warm summers, with a temperature range of -15 to +30°C. Precipitation is mainly in the form of snow in winter and rains in March with occasional showers during summer. Four distinct seasons of selected area can be classified during a year, viz. Winter (Dec-Feb) with very low temperatures and snow covering most of the area; Spring (March- May) when temperatures begin to rise and sprouting of plants appears at lower elevations first and gradually moves to upper elevations; Summer (June-August) when temperatures rise further and the area contains abundant foliage and receives some monsoon showers and Autumn (Sept-Nov) when senescence sets in plants.

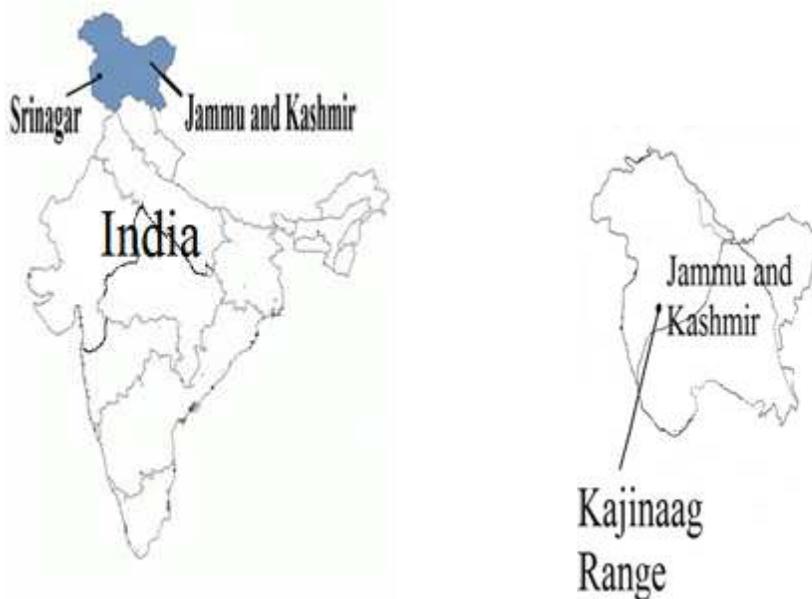


Figure 1
-Map showing the location of Kajinaag range, Jammu and Kashmir.

MATERIALS AND METHODS

During the course of the present study, field trips were carried out to the study area in spring, summer, and autumn seasons of 2009 and 2011. Appropriate methodology was used to obtain the ethno-medicinal knowledge about plants from the local population¹⁷⁻²¹. Mostly local herbalists (Hakims), old and experienced people were taken to the fields to identify the medicinal plants used in folklore. All the entire relevant information, in particular, the method of use, about each medicinal plant species was recorded in field notebooks. To make the survey as accurate as possible, the information was cross-checked with elderly people. Specimens of medicinal plants collected from each locality were provided with a collection number for future reference. Plant specimens collected were processed and identified with the help of available literature²¹⁻²². The herbarium of identified plant species have been deposited under proper collection numbers, in the Pest Control and Ayurvedic Drug Research

Laboratory of S.S.L. Jain P.G. College Videsha(MP). The Medicinal plant species of the area are listed in (table 1) in the alphabetical order. In table 1, each plant species is provided with its scientific name followed by the author citation, local name, family name, collection number, folk uses and recipes.

Table1.
Checklist of medicinal plants found in the(Kajinaag range) study area.

Family name	Botanical name	Collecti-on no.	Local name	Parts used	Folk Uses	Recipes
Alliaceae	<i>Allium sativum</i> Linn.	FA 22	Ruhan	Bulb	Enhance conception, weight reduction, dysentery, heart diseases and earache.	The paste of bulb is used in the uterus to enhance the conception and fertility. One crushed clove, taken along a glass of water reduces weight and cholesterol level. A clove is fried in Brassica compestris oil and dropped in the ear for the relief of pain.
Apiaceae	<i>Foeniculum vulgare</i> Mill.	FA 31	Badian	seeds.	Digestive, weight reduction and growth stimulant.	Usually the seeds are eaten up orally and sometimes boiled in water and the syrup is taken in. The syrup is help full for weight loss and digestion. The syrup is especially recommended for the babies and kids for stimulation of growth.
Araceae	<i>Acorus calamus</i> Linn.	FA 24	Vai	Roots	Diarrhea, cough, swellings and joint pains.	The extract of roots is used for the treatment of Diarrhea and cough. The powder of roots is used along with ghee for the treatment of swellings and joint pains.
	<i>Arisaema jacquemontiana</i> Blume.	FA 37	Hapat makei	Rhizome	Muscular strength and Skin infections.	Rhizomes mixed with edible oil form a paste, which is used for massage in order to regain muscular strength and to treat skin problems such as blisters and pimples.
Asteraceae	<i>Saussurea lappa</i> C.B Clarke.	FA 43	Kuth	Roots	Joint pains, Wound healing, digestion and scabies.	Roots made into a paste in oil are applied over joints and also to minor wounds. Root paste in milk is help full for treatment of scabies.
	<i>Cichorium intybus</i> Linn.	FA 49	Jugli-hand	Roots	Typhoid, wounds and scabies.	Root extract combined with sugary water is given two spoons daily at bed time for two weeks for curing typhoid. Root extract along with milk is also used for curing wounds and scabies.
Cannabinnaceae	<i>Cannabis sativa</i> Linn.	FA 28	Bhang	Leaves, seeds and sstem	ear-ache, blood purifier, scabies and piles.	Small drops of its essence are used to reduce ear-ache. The seed of Cassia fistula and one gram leaves of Cannabis sativa are taken along a cup of milk purifies blood and prevent scabies. Decoction of leaves is mixed with the excreta of pigeon and then smoked over coal is very effective for piles.
Cuscutaceae	<i>Cascuta reflexa</i> Roxb.	FA 52	Kukliporte	Whole Plant	Joint pains, wound healing and falling of hairs.	It is boiled in edible oil and then used for joint pains , healing of wounds. And for the treatment of damaged hairs. The crushed herb is also mixed in water and is taken for curing asthma.



Euphorbiaceae	<i>Euphorbia helioscopia</i> Linn.	FA 40	Gurisochoh/ Gandi booti	Seeds, roots and latex	abdominal cramps, cholera and eruptions	Powdered plant material is taken with water to treat abdominal cramps. Latex is applied over eruptions and the seeds are taken along pepper during cholera.
	<i>Euphorbia wallichia</i> Hook.	FA 48	Guri-dud/ Harbi	Latex	Skin diseases ,and asthma	The stem latex is applied over skin to treat skin infections and the dried rhizome is crushed to produce an extract, which is taken along with milk to get relief from asthma.
Geraniaceae	<i>Geranium wallichium</i> D.Don ex Sweet.	FA 57	Ratanjog	Leaves and roots	Relieves post- delivery pains, and Muscular strength.	Dried root powder is taken along milk and sugar for the relief of delivery pains. Decoction of leaves is taken for muscle strength.
Iridaceae	<i>Iris kashmiriana</i> Baker.	FA 41	Mazarmund	Whole plant	Joint pains.	Powder of plant material is mixed with oil and is used over infected area
Labiatae/ Lamiaceae	<i>Mentha Longifolia</i> (L.) Hunds	FA 32	Jungli pudina/Safaidpudin a	Whole Plant	Stomach problems, weight reduction, digestion and tonsillitis.	It is mostly taken in as dry powder for stomachic or leaves are boiled in water, cooled and drunk frequently for weight reduction and digestion problems. It is used along the boiled eggs in tonsillitis
Loranthaceae	<i>Viscum album</i> Linn.	FA 59	Aal	Whole plant	Laxative and Fractures.	A decoction made by grinding the whole plant with small quantity of common salt is taken orally as an efficient laxative. Poultice made from the dried parts of the plant is rubbed to heal up the fracture.
Malvaceae	<i>Malva neglecta</i> Linn.	FA 45	Soachal	Leaves	Laxative, aphrodisiacs, demulcent and wound healing.	The leaves are cooked as food and eaten up. The paste of leaves is used for healing of wounds.
Moraceae	<i>Ficus carica</i> Linn.	FA 50	Anjeer	Stem, milky latex, fruit pulp.	Birthrate control, insect bite and warts.	Decoction of stem is used to check the spermatogenesis and oogenesis of few weeks to control the birth rate. Milky latex of leaves and stem is used for treating warts and insect stings and bites. Fruit pulp is applied in face for glow and nourishment.
Papaveraceae	<i>Papaver somniferum</i> Linn.	FA 55	Posht	Flowers	Chest infection and Diarrhea.	The petals of the flower are removed and the rest of it is boiled in water. This syrup is give to the kids for the cure of bronchitis and diarrhea.
Polygonaceae	<i>Rheum emodi</i> Wall.	FA 34	Pumbechalan	Roots	Abdominal disorders and Cough.	Extract obtained from crushed roots is taken orally along with milk for curing abdominal pain and prolonged cough.
Pinaceae	<i>Pinus roxburghii</i> Sargent.	FA 67	Chad	Seeds and gums	General weakness after child birth.	The gums are mixed with dry fruits and desi ghee (butter) and used by women as a tonic after child birth to relieve the weakness.



Rosaceae	<i>Rosa webbiana</i> Wall ex Royle.	FA 49	Gulab	Flowers	Cough and colds.	Dried flowers are fermented to form Khambeer, which is used for cough and colds.
Ranunculaceae	<i>Aconitum heterophyllum</i> Wall.exRoyal.	FA 62	Patris	Roots	Headache, Joint pains, Urinary and skin problems.	Dried roots are crushed and mixed with oil and used for headache, Joint pains, and skin problems also used for urinary infection.
Solanaceae	<i>Atropa acumiata</i> Royle.	FA 53	Chella lubbar	Roots and leaves	Cough. And antispasmodic.	Decoction of roots is very effectively used in cough and abdominal problems..
Saxifraceae	<i>Berginia ligulata</i> (Wall)Engl	FA 56	Zakhmi hayat	Leaves and roots	Intestine complaints and stomach ulcers.	Powder of roots and leaves are taken orally with water to reduce intestinal complaints. The leaves are boiled in water and the syrup is taken for stomach ulcers.
.Urticaceae	<i>Urtica dioica</i> Linn.	FA 59	Soi	Roots	Rheumatoid pains and wounds.	Roots made into a paste in oil are applied to cure rheumatoid pains and also to heal up minor wounds.
Violaceae	<i>Viola odorata</i> Wall.Roxb.	FA 38	Bunufsha	Leaves, seeds and flowers	Respiratory problems.	Dried flowers are ground with sugar to form a mixture, 2 to 5 gm of such a mixture is taken orally at bed time for a week to cure respiratory infections.

RESULTS AND DISCUSSION

In the present paper 26 plant species belonging to 23 families with ethno medical value that are currently practiced are listed in (the table 1). Some plant species are claimed to be quite effectual remedies for coetaneous affection of head, snakebite, fever, jaundice, backache, stomach ache, cancer, diarrhea, malaria, cough and cold, stomach troubles, asthma, joints pains and diabetes etc. Mostly the drugs are prepared in the form of paste, powder, latex, decoction, extracts, and even as herbal tea .Both fresh and dried parts of plants are used for making drugs in crude form. The method of use, the dosage and the duration, differ from one herbalist to another, and also from one locality to another. Since the uses are based on observed knowledge of tribes, the scientific study of all these herbal drugs is highly desirable to establish their efficacy for safe use. Different areas of Kajinaag region are supplemented with useful medicinal plants. However, these areas are facing severe problems of biotic interference and need to be protected and conserved through community participation. Community participation can be set off by giving motivation and creating awareness among the native people about the useful properties of medicinal plants and their commercial values. During the present research paper it was noted that the medicinal plant wealth of Kajinaag range were not fully exploited. Some important medicinal plant species are

rapidly decreasing, mainly due to anthropogenic activities. So, the area needs proper safeguard for the conservation and survival of bio-resources. Chemical screening of medicinal plant and their useful parts collected from the fields in different seasons should be done on regular basis. This study provided a large number of medicinal plants used in different medicines which could be a considerable interest to the developers of modern drugs. Advance research works should be conducted on base line of indigenous studies because there are still some diseases like “Cancer” and “AIDS”, for which there are no acknowledged cures. Ethno directed studies can help in these research works ¹⁶. It was concluded from this study that on national scale, a survey of medicinal flora should be conducted to investigate and modernize the catalog of existing natural plant resources of the area specially and generally throughout Kashmir Himalayas.

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