

EXPLOITATION OF FOLK ETHNOMEDICINAL KNOWLEDGE OF KOTLI AZAD JAMMU AND KASHMIR-Pakistan

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ABSTRACT

For the documentation of folk Ethnomedicinal knowledge from District Kotli, Azad Jammu and Kashmir-Pakistan, we have surveyed various areas of Kotli and gathered information from the habitants by personal interviews, discussion and also by questionnaires. Plant specimens were also collected from the fields of different selected areas in different seasons of the year. Their medicinal uses and taxonomically confirmed with the help of available literature. The duration of this research work was one year, from December 2019 to January 2020. During the research period, we reported 59 plant species which belongs 54 genera and 29 families, among the reported families Lamiaceae and Fabaceae were dominant families having six species each, followed by Asteraceae with five species. These plants are utilized by habitants from centuries as Ethnomedicine against various diseases like cough, cold, malaria, fever, stomach disorders, mouth and throat sour etc. This research provides a lot of Ethnomedicinal knowledge which depicts men's interaction with plants.

Key Words: Ethnomedicinal, Folk Knowledge, Medicine, Kotli

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INTRODUCTION

Plants are rich source of raw material. They provide us variety of products such as food, wood, fibers, fuel, timber, waxes, latex, micro and macro nutrients and medicines as well. (Ajaib *et al.* 2010; Harshberger, 1896; Martin, 1995) Ethnobotany is the science of investigating men's cultural interaction with plant. (Choudhary *et al.* 2008) As, plants are vital for the functioning of all social societies and for the operation of all ecosystems. (Smita *et al.* 2012) The interaction of man with plants is as old as man on earth. Plants are indispensable for salubrious life style as they gives us medicines, which are very effective, safe and have least adverse effects on health. (Buckingham, 1999) Plants are more important than animals due to presence of variety of valuable bio-chemicals. (Cotton, 1996)

The use of medicinal plants in folk medicine is an ancient and reliable practice. Medicinal plants remain the primary source of lead compounds for medicine throughout the world. Ethnomedicinal information is not only useful for the conservation of traditional indigenous knowledge and biodiversity, but also for community health, care and drug development (Farnsworth, 1993). This indigenous knowledge can be used as guide lines for drug development, as these plants are utilized by peoples over a long period of time (Farnsworth, 1993). Inhabitants of the area, mostly uses traditional means to cure diseases and this asset of indigenous knowledge is transferring from generation to generation only through verbal means of communication. And our young generations have not much more knowledge about the medicinally important plants. The purpose of our study was to document the valuable information so that it wouldn't lost. This research is an

attempt to exploit folk ethnomedicine knowledge about the flora of Kotli AJK.

MATERIAL AND METHOD

The study was carried out from December 2018 to January 2020, a period of more than one year. During the period, we have visited various areas of District Kotli, viz Sarhota No.2, Dhanna, Panag-Sharif, Panag-gali, Chalyar, Sarri, Goi, Dabsi, Sehnsa, Kala, Dandali, Gulpur, Naar, Sanya-banya, Nedi-sohana, Nagall, and khad-gujran, Lanjoot, Bala-kot, Dana, Choki, Sar-mandi and Phagvari to collect the samples and gather information from the habitants by personal interviews, discussion and by questionnaires. In our study, we observed our young generation is unaware about such a precious knowledge.

STUDY PERIOD

We designed one-year research program for the collection of plant samples directly from the fields of different selected areas in different season of the year. Our study period was from December 2019 to January 2020.

STUDY AREA

Our study areas were various villages of District Kotli, Azad Kashmir, (shown in above Fig. 1). Kotli is very renowned district of Azad Kashmir. It covers the area of about 1862 sq. Km and geographically it lies between longitudes 73.6° to 74.7° East and latitude 33.20° to 33.40° North. Its average altitude is about 1,000 feet above the sea level. The annual rainfall is 1227.91 mm, maximum during July and August, i.e. 306.93 mm and 256.53 mm, respectively, while low during winter. Thus average monthly rainfall is 102.32 mm (Ajaib & Zaheer, 2014). Its population is 774,194 according to census 2017.

Table 1, List of plants and their traditional Medicinal Applications at Kotli, AJ&K

Species	Family	Local name	Medicinal Applications
<i>Acacia modesta</i> Wall.	Fabaceae	Phali	Used against tooth and gums problems. Fine powder of leaves used against eyesight problems.
<i>Achyranthesaspera</i> Linn.	Amaranthaceae	Puthkanda	Used against stomach disorders i.e dyspepsia, dysentery, ulcer. Also used against piles.
<i>Ajugabracteosa</i> Wall.	Lamiaceae	Kori buti	Used against mouth and throat problems.
<i>Albizialebeck</i> (L.) Benth.	Fabaceae	Sreeia	Used against kidney problems.
<i>Amaranthusviridis</i> Linn.	Amaranthaceae	Ganar	Used against dysentery and constipation.
<i>Anagallisarvensis</i> Linn.	Primulaceae	Bilibuti	Used against stomach disorders.
<i>Aloe barbadensis</i> Mill.	Asphodelaceae	Kamal-gandal	Used as anti skin problems, hair fall and somatic problems.
<i>Berberislycium</i> Royle.	Berberidaceae	Sumbal	Used to heal wounds.
<i>Bauhinia variegata</i> Linn.	Fabaceae	Kachnar	Used against Piles and urinary problems.
<i>Calotropisprocera</i> Aiton.	Apocynaceae	Aak	Used against skin diseases, snake bite and arthritis.
<i>Cannabis sativa</i> Linn.	Cannabaceae	Bhang	Used as pain reliever.
<i>Carissa opaca</i> Stapfex Haines	Apocynaceae	Garanda	Used against stomach problems, diarrhea.
<i>Cassia occidentalis</i> Hort. ex Steud.	Fabaceae	Kasondi	Used against fever, typhoid and malaria.
<i>Colebrookeaoppositifolia</i> Lodd.	Lamiaceae	Bansa	Used for curing wounds.
<i>Cissuscarnosa</i> Lam.	Vitaceae	Dakh	Used as blood purifier.
<i>Croton bonplandianus</i> Bail.	Euphorbiaceae	Janglitulsi	Used against skin diseases.
<i>Cuscutareflexa</i> Roxb.	Convolvulaceae	Akas bail	Used to treat fever.
<i>Cyperusrotundus</i> Linn.	Cyperaceae	Muthar	Used against stomach diseases.
<i>Daturainnoxia</i> Mill.	Solanaceae	Datura	Used to reduce labor pains.
<i>Euphorbia helioscopia</i> Linn.	Euphorbiaceae	Dhodhal	Used against skin irritation and constipation.
<i>Euphorbia heterophylla</i> Linn.	Euphorbiaceae	Dodhal	Used against skin irritation and constipation.
<i>Ficus palmate</i> Forssk.	Moraceae	Phugwara	Used as laxative.
<i>Fumariaindica</i> Pugsley.	Papaveracea	Papra	Used for blood purification sometimes for food digestion.
<i>Geranium radiatum</i> Andr.	Geraniaceae	Jandoru	It is used against Urinary disorders.
<i>Ipomoea cairica</i> (L.) Sweet	Convolvulaceae	Budhi bail	Used as anti inflammatory agents.

<i>Ipomoea carnea</i> Jack.	Convolvulaceae	Janglibhai kar	Used against inflammation.
<i>Juglans regia</i> Linn.	Juglandaceae	Khor	Used for the beauty and health of tooth and gums.
<i>Justicia adhatoda</i> Linn.	Acanthaceae	Desibhaiker	Leaves are used for ripening of bananas and to remove bad odor from feet. Ash of plant is used for asthma.
<i>Lantana camara</i> Linn.	Verbenaceae	Panjphuli	Used in wound healings.
<i>Malva parviflora</i> Linn.	Malvaceae	Sonchal	Used against fever, cough and flu.
<i>Mentha royleana</i> Benth.	Lamiaceae	Janglipodina	Used against stomach disorders.
<i>Moringa oleifera</i> Lam.	Moringaceae	Sohanjana	Used against snake bite.
<i>Morus alba</i> Linn.	Moraceae	Safid-toot	Used against throat irritation and constipation.
<i>Morus nigra</i> Linn.	Moraceae	Safid-toot	Use against throat irritation and constipation.
<i>Nerium oleander</i> Linn.	Apocynaceae	Gandeera	Used to keep tooth and gums healthy.
<i>Ocimum tenuiflorum</i> Burm.f.	Lamiaceae	Tulsi	Used as anti inflammatory agent.
<i>Olea ferruginea</i> Wall.	Oleaceae	Kahoow	Used against tooth and gums problems.
<i>Opuntia monacantha</i> Haw.	Cactaceae	Chitharthor	Used against stomachic disorders i.e. ulcers.
<i>Oxalis caesariata</i> Lourteig	Oxalidaceae	Khatibooti	Used against skin diseases, snake bite, stomach disorders, fever.
<i>Parthenium hysterophorus</i> Linn.	Asteraceae	Gajarbuti	Used against diarrhea, urinary problems and malaria.
<i>Peristrophe paniculata</i> Forssk.	Acanthaceae	Kalu	Used against stomach disorders i.e. indigestion, vomiting
<i>Phyllanthus emblica</i> Linn.	Phyllanthaceae	Amla	Used against hair-fall, pile and digestive disorders.
<i>Pupalia lappacea</i> Linn.	Amaranthaceae	Lehdara	Used against constipation.
<i>Ricinus communis</i> Linn.	Euphorbiaceae	Har-noli	Used as used laxative, also used to stimulate milk production.
<i>Rosa chinensis</i> Jacq.	Rosaceae	Gulab	Used against constipation, eye irritation, skin complications.
<i>Rosa indica</i> Linn.	Rosaceae	Gulab	Used against constipation, eye irritation, skin complications.
<i>Salvia plebeian</i> R.M.	Lamiaceae	Samandrosokh	Used against diarrhea.
<i>Senegalia modesta</i> Wall.	Fabaceae	Phulai	Twigs used against tooth and gums problems.
<i>Silybum marianum</i> Gaertn.	Asteraceae	Kandyara	Used against liver diseases.
<i>Solanum nigrum</i> Linn.	Solanaceae	Katch match	Used against kidney diseases. Also used as tonic.
<i>Solanum surattense</i> Burm.	Solanaceae	Mokhri	Used against intestinal diseases and abdomen pain.

<i>Sonchus asper</i> Linn.	Asteraceae	Dodhal	Used against warts, wounds and boils.
<i>Taraxacum officinale</i> Hill.	Asteraceae	Methihund	Used against jaundice.
<i>Tribulus terrestris</i> Linn.	Zygophyllaceae	Pakhra	Used against delivery complications.
<i>Vachellia nilotica</i> (L.) P.J.H. Hurter & Mabb	Fabaceae	Kikar	Used as tonic.
<i>Vitex negundo</i> Linn.	Lamiaceae	Banna	Used against tooth and gums problems.
<i>Xanthium strumarium</i> Linn.	Asteraceae	Bakhra	Used against fever, mouth, throat and stomach problems. Also used as blood purifier.
<i>Zanthoxylum armatum</i> DC.	Rutaceae	Timbur	Used against tooth and gums diseases. Also against Pile and for food digestion.
<i>Ziziphus nummularia</i> Wight & Arn.	Rhamnaceae	Bair	Used against constipation.

From the present study, we documented 59 plant species belonging to 54 genera and 29 families. We found Fabaceae and Lamiaceae are leading families with six species (10 %) each followed by Asteraceae with five species (8 %), Euphorbiaceae and Moraceae with four species (7 %) each, Amaranthaceae, Apocynaceae, Convolvulaceae and Solanaceae with three species (5 %) each, Acanthaceae and Rosaceae two species (3 %) each. While Asphodelaceae, Berberidaceae, Cactaceae, Cannabaceae, Cyperaceae,

Geraniaceae, Juglandaceae, Moringaceae, Oleaceae, Oxalidaceae, Papaveraceae, Phyllanthaceae, Primulaceae, Rhamnaceae, Rutaceae, Verbenaceae, Vitaceae and Zygophyllaceae families shares only one species (2 %) each. The Fig.2 and 3, depicts the clear representation of various reported plant families with number of species they contain. While Fig. 4 represents the percentage occurrence of different Plant families.

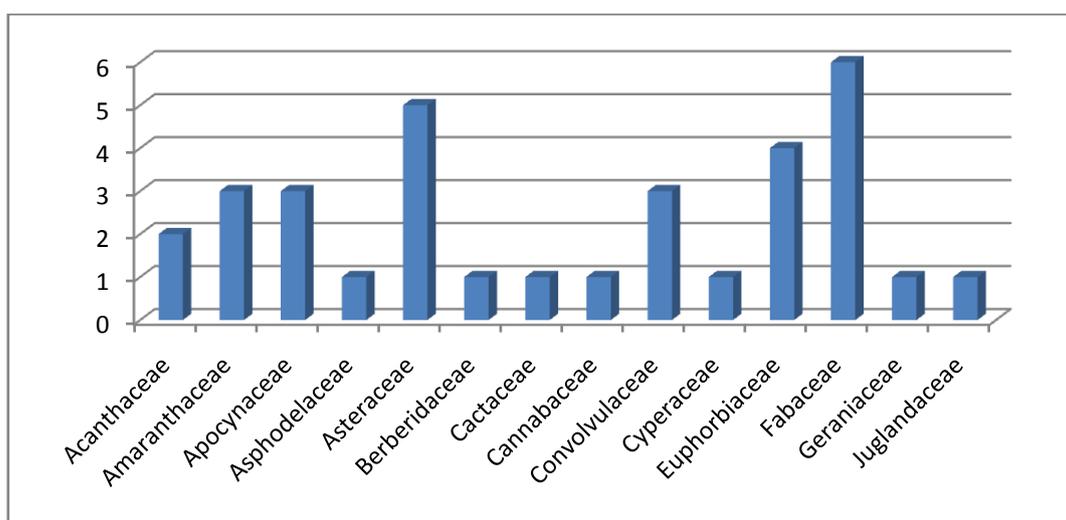


Figure-2, Plant species occurs in different plant families

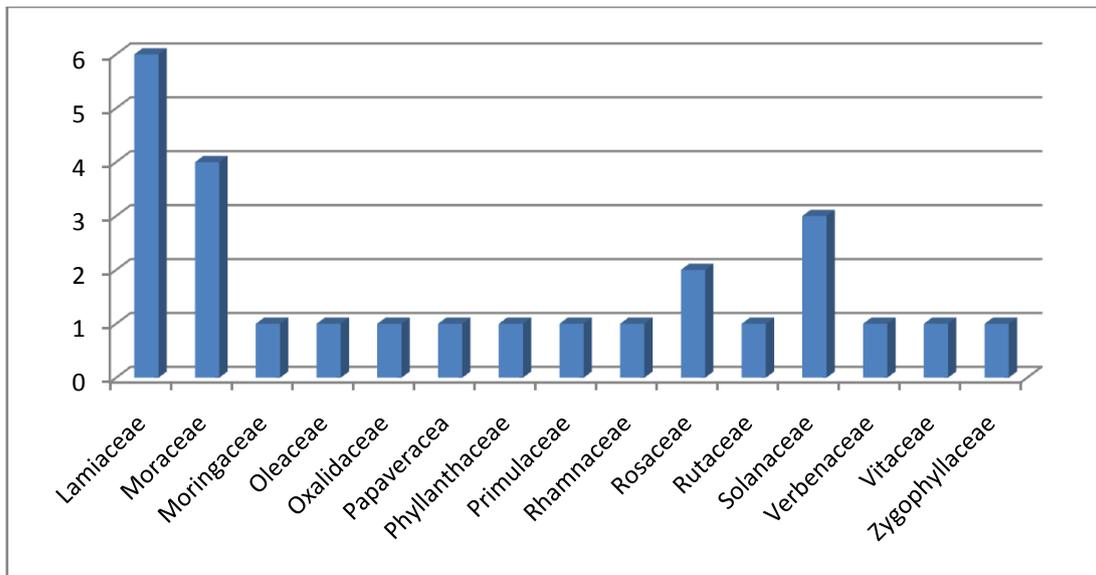


Figure-3, Plant species occurs in different plant families

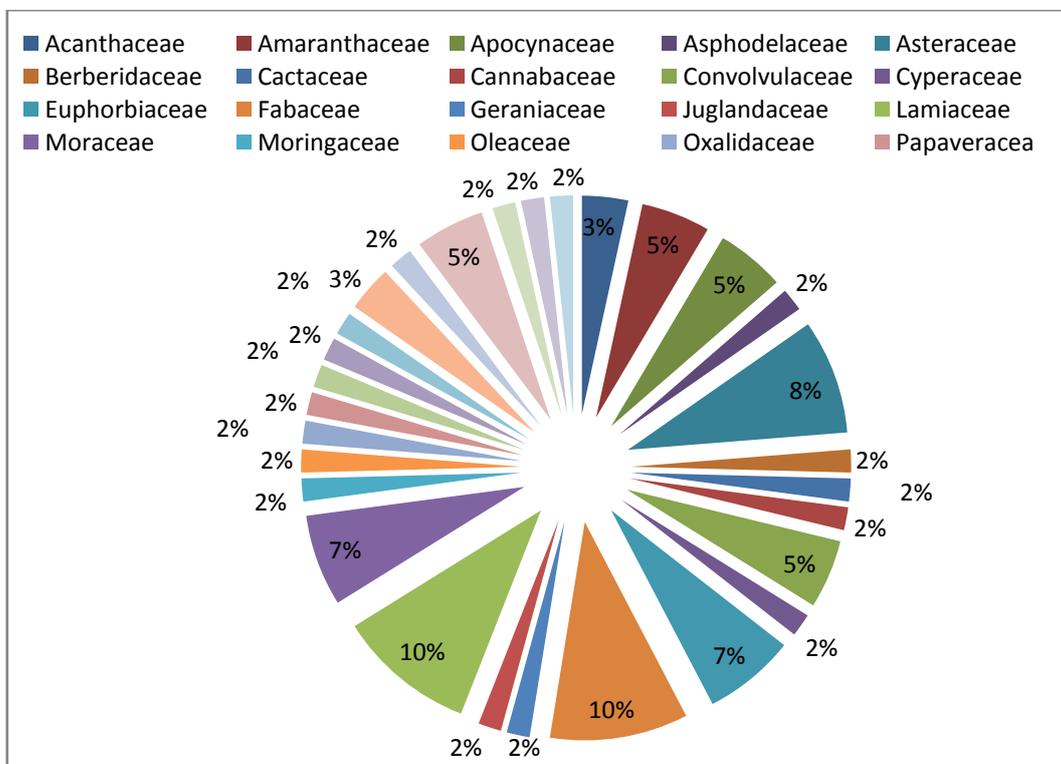


Figure-4, Percentage occurrence of different Plant families

Inhabitants of the locality uses various parts of these plants such as root, stem, leaves, flashy stem, sticks, bark and flower etc to treat various diseases such as dysentery, diarrhea, constipation, ulcer, cough, flue, urinal problems, kidney, tooth, gums, mouth, throat, skin, fever, malaria etc. These information could help in creating wakefulness concerning their preservation of folk Ethnobotanical

knowledge. However, a more detailed phyto-chemical, biochemical and clinical acumen is required to assess the potential and effectively of these plants in further work. These plant species have been in use for several generations. Their management is not on sustainable basis. Here's a need of immediate attention for their proper protection and conservation. Few conservation strategies that we can

adopt immediately include: establishing and flourishing of Botanical gardens, Parks, Small Scale Farming at town and village level and kitchen gardening.

CONCLUSION

From the present study it was concluded that, the area is rich with folk Ethnomedicinal knowledge. It's the need of time that the knowledge should be documented and steps should be taken for the care and survival of plants. The younger generation is often adopting the allopathic medicine, thus the traditional knowledge about medicinal plants and preparation of medicine from them is only confined to old people.

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