



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>

INTERNATIONAL JOURNAL
OF ADVANCED RESEARCH

RESEARCH ARTICLE

ETHNO MEDICINAL SURVEY OF PLANTS FROM KUPWARA, J&K, INDIA

Mudasir Yousuf Mir

Department of Botany, P.M.B. Gujarati science college Indore, (M.P).

Manuscript Info**Manuscript History:**

Received: 15 November 2013

Final Accepted: 19 December 2013

Published Online: January 2014

Key words:

Disease, Ethno botany, Folk knowledge, Medicinal plants, Survey.

Abstract

The present study was carried out around the selected areas of Kupwara District (Chowkibal, Karnah, Keran, Jumagand). The study was aimed to document the traditional folk knowledge of local people about the use of medicinal plants as ethno medicines. A floristic and ethno botanical survey was carried out in selected areas of Kupwara J & K, India during 2011-13. Field surveys were conducted during the different seasons of the area to collect data about the knowledge and practice of using wild plant species by local people. The data collected reveals that about 70 plant species belonging to 41 families find use in day to day life. Plant parts are used to cure cold, cough, piles, blood purifier, toothache, stomach disorders etc.

Copy Right, IJAR, 2014., All rights reserved.

Introduction

Indigenous knowledge is as old as human civilization but the term "ETHNOBOTANY" was first applied by an American Botanist Johan W. Harshberger in 1896, to the study of plants used by primitive and aboriginal people (Harshberger 1986). Later on Volney H. Jones (1941) & Richard Ford (1978) redefined ethno botany using modern ecological terms, from which ethno botany was described as "the study of direct interaction between the human and plant population through its culture each human population classified plants, while human behavior as direct impact on plant communities with which they interact, the plants themselves also impose limitations on humans, these mixtures interaction are the focus of ethno botany."

Ethno botany plays an important role in understanding the dynamic relationships between biological diversity social and cultural systems (Hussain, Z.S et al 2008; Mahmood et al 2011; Schultes RE 1962; Balic MJ, 1996). India has a high diversity of plants that are being used by local communities for medicinal purposes (Dutta BK and Dutta PK 2005). The world health organization 2003 has estimated that 80% of the population of developing countries being unable to afford pharmaceutical Drugs, rely on traditional medicines, mainly based, to sustain their primary health needs (Lone FA et al; Malla FA et al 2012; Pareek SK 1996; Mukhopadhyay S 1996). Kashmir Himalaya harbors a rich diversity of medicinal plants (Dar GH, Bhagat RC, and Khan MA 2001). Chiefly owing to its topographic variations spanning from valley floor through terraced table lands and dense forests up to alpine peaks (Hussain M 2001). The state (J & K) is populated with several ethnic groups (Sullivan K, Shealy CN 1973). With each group having their own knowledge of traditional herbal medicine inherited from their forefathers (Singh JS 2002). Up to now a very few studies have been carried out to document ethno medicinal uses of plant in this particular region because of being remote and difficult terrains (Dar GH et al 1984; Kachroo P et al 1987). The present study has been carried out to explore and document the ethno medicinal uses of plant species growing in the inaccessible areas of Kupwara (Chowkibal, Karnah, Keran, Jumgand,) J & K India.

Study area

The district Kupwara lies in the Northern part of Kashmir valley and located between 34°45' and 75°20' east longitude (figure.1). The district has a total geographical area of 2,379 sq Km comprising of 368 villages. As per 2011

censes ,8755,64 persons with population density of 368 persons per sq Km .the study area (Chowkibal, karnah,keran,jumagand) includes high mountains deep valleys, dissected small terraces to steep slopes and inclined spurs. The languages spoken here are Pahari, Gojree, and Kashmiri.

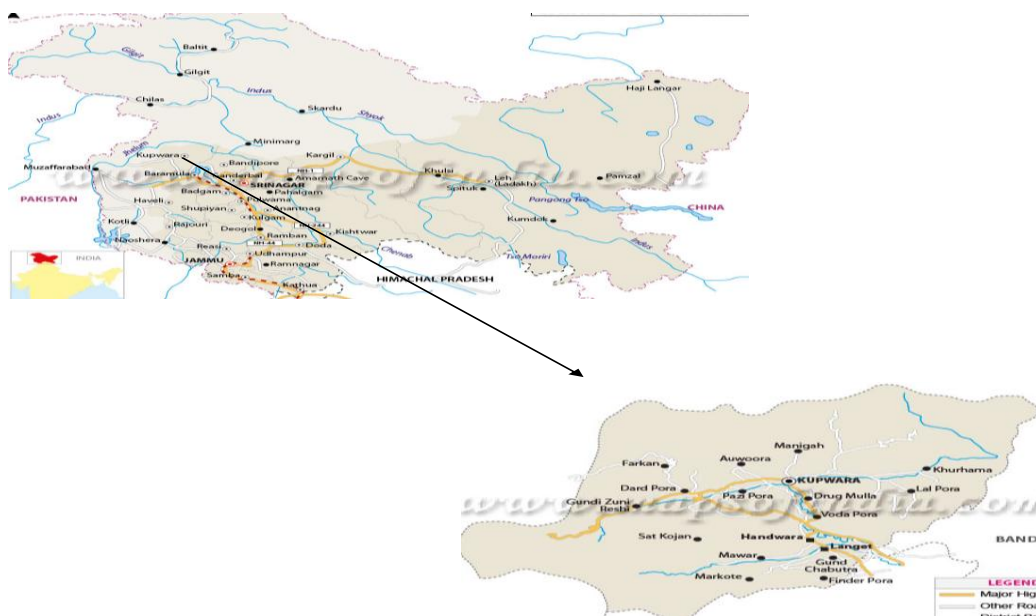


Fig (1):-Map showing study area

Data collection

Ethnobotanical surveys were conducted periodically in different flowering/fruiting seasons. the survey was conducted during 2011-13. Appropriate methodology was followed during the present study (Navchoo IA, Buth GM 1994; Kaul MK, Gaur RD 1995; Kaul MK 1997; Harisharan GN et al 2002; Utkarsh G 2001), usually the survey in each locality started with the interview of elderly and experienced members, locally known ‘HAKEEMS’ often they were accompanied to the field for identification of the plant species used as authentications of the plant specimens collected from wild habitats. Besides this, common people of the surveyed localities who have used these plants have been interviewed (a local namely Mohd Subhan Lone 75 years old said that the people of the area are wholly and solly depend on the plants from ancient times, because of non availability of medicinal facilities, According to the Mohd Subhan Lone he is using plants from his child hood .the information about plants was given to him by his grandfather.) All the gathered information in particular, the parts used, method of preparation, method of dosage was recorded in detail. To bring the element of accuracy, the information, obtained from the locality was crosschecked with the literature available (BSI ,Flora of India 1996).

Results

The present study revealed that 70 plant species are used as medicine in the studied area each plant species is provided with the scientific names, vernacular name, family, parts used, flowering period, and method of preparation (Table 1)

Table. (1)
Medicinal plant species and parts used to cure ailments based on the information gathered from the locals.

S, no	Botanical name.	Vernacular name.	Family.	Parts used.	Ailment cured.	Uses.	Habitat.	Flowering periods.
01.	<i>Aconitum chasmodon</i> Stapf.	Mohund	Ranunculaceae	Whole plant	Back pain, throat infection, chest pain.	The flowers of herb are used for the treatment of back pain along roots.	Wild herb	June-Sept
02.	<i>Aconitum heterophyllum</i> Wall.	Patris	Ranunculaceae	Root & rhizome	Abdominal pain, throat infection, diarrhea, cough.	Roots are used for curing abdominal disorders. Extracts of roots are blended with milk .2 spoons of the decoction made are sipped at the bed time daily for 2 weeks.	Wild herb	July -Sept
03.	<i>Acorus calamus</i>	Nagruss	Acoraceae	Whole plant	Bronchitis ,Fever	It is useful in the treatment of remittent fever. it also produces scent	Wild herb	June-Sept
04.	<i>Ajuga bracteosa</i> Wallich ex.Benth	Jainadam	Lamiaceae	Whole herb	Lice killer, Fever, Blood purifier.	The whole herb (100gm) is boiled in 2.5 lit of water. The decoction is used to wash hairs.	Wild herb	April-Sept
05.	<i>Amaranthus caudatus</i> L.	Leesa	Amaranthaceae	Whole plant	Expectorant, high fever	The extract of leaves and inflorescence is used. The herb is used as vegetable.	Cultivated annual herb	June-Aug
06.	<i>Amaranthus viridis</i> L.	Gunhar	Amaranthaceae	Whole plant	Intestinal parasites, Rheumatism as a tonic given to cow.	Yields as an essential oil, used as anthelmintic against many forms of intestinal parasites including roundworms and intestinal amoeba.	Cultivated annual herb	July-Oct
07.	<i>Amaranthus</i> sp.	Wasthalkh	Amaranthaceae	Leaves	Back pain, joint pain	The leaves are crushed in a mortar and are applied externally on the joints, used as the vegetable in juvenile stage in study area.	Cultivated herb	April-Sept
08.	<i>Anemone obtusiloba</i> D.Don	Rattan jog	Ranunculaceae	Rhizome	Acidity, joint pain	The dried rhizome is ground into fine pieces and mixed with boiling water followed by sieving .the sieved liquid extract is taken for the treatment of acidity and joint pains.	Wild herb	May-Aug
09.	<i>Anaphalis nubigena</i>	Daderi-Dawa	Asteraceae	Whole plant	Wounds , skin eruption	The herb is dried and crushed into powder mixed with ghee or oil to make paste .paste is applied on effected portions externally.	Wild herb	July-Sept
10.	<i>Aquilegia vulgaris</i>	Dadue- jaid	Ranunculaceae	Whole plant	Milk yield increases (Live-stock)	The extract of the herb is used. The extract of 5-15ml with 1lt of water once a day for 2 days.	Wild herb	June-Sept

11.	<i>Artemisia absinthium</i> L.	Teethwen	Asteraceae	Leaves & Flowers	Diabetes, Anthelmintic, Liver infection.	The leaves and flowers are boiled in water & the decoction made is used as a anthelmintic & is effective for the treatment of diabetes.	Wild herb	June-Sept
12.	<i>Arnebia benthamii</i>	Kahazaban	Boraginaceae	Whole plant	Diseases of Tongue, Urinary tract infections, liver problems.	The roots are crushed and boiled in water. The decoction is taken as medicine for urinary tract infection .decoction of leaves & flowers is used for liver problem.	Wild herb	May-July
13.	<i>Artemisia moorcroftiana</i>	Jangle Teethwen	Asteraceae	Whole plant	Abdominal pain, High fever Wormicide.	The extract is prepared out of the herb. The extract of 2-7ml twice a day.	Wild herb	June-Sept
14.	<i>Arisaema jacquemontii</i> Blume	Hapat makei/Hapetc heor	Araceae	Rhizome	Skin problem (Pimples, Blisters).	Used as vegetable in juvenile stage. Rhizome ground with edible oil forms a paste, which is used for massage purposes in order to regain muscular strength & in skin problems.	Wild herb	May-Sept
15.	<i>Asplenium falcatum</i>	Dade	Filicinae	Leaves ,stem	Sterility in women.	The fern is used as a vegetable (especially for women).	Fern	
16.	<i>Atropa acuminata</i>	Brand	Solanaceae	Rootstock, leaves	Asthma, cough, Rheumatic pain, eye disease.	The root is dried & powdered & mixed with ghee make paste, paste is applied on effected portions externally.	Wild herb	May-Sept
17.	<i>Althea rosa</i>	Sazeposh	Malvaceae	Flower	Skin irritation in pregnant women.	Decoction of flowers is given to pregnant women to cure skin irritation.	Wild herb	June-Sept
18.	<i>Berberis lyceum</i> Royle	Kawdach	Berberidaceae	Root & fruit	Joint pain, stomachache.	Berries are used for stomach ache; boiled water of roots is used to treat bone fractures.	Spiny shrub	July-Sept
19.	<i>Berberis aristata</i>	Dandleder	Berberidaceae	Bark of roots	Back pain, weakness, jaundices.	The bark of the root is dried and crushed to make powder, the powder is taken orally.	Spiny shrub	July-Sept
20.	<i>Bergenia ligulata</i>	Pulfort	Saxifragaceae	Root stock	Wounds, Acidity, cough, fever.	The root is dried & crushed to make powder. The powder is mixed with ghee to make it paste, the paste is eaten daily for 2 weeks.	Wild herb	June-Sept

21.	Betula utilis D.Don	Burza	Betulaceae	Bark	Pungent, tonic & useful for convulsion, leprosy.	Bark obtained from the tree is used to cure leprosy; peeled sheets are used to decorate homes.	Wild tree	June-Aug
22.	Brassica oleracea	Hakh	Brassicaceae	Leaves	Corns and constipation.	Used as vegetable and treatment for constipation (intestinal disease).	Cultivated herb	April-Sept
23.	Calvatia gigantea	Mangde	Lycoperdaceae	Whole plant	Stomach tumors.	The eating of these fungi prevents stomach tumors.	Fungus	April-May
24.	Cannabis sativa L.	Bang/chars	Cannabaceae	Whole plant	Diarrhea, cholera, skin diseases, narcotic.	The leaves are bruised & smoked by people. The leaves and stem are crushed & made into powder mixed with ghee to make paste & paste is applied externally.	Wild herb	July-Sept
25.	Cedrus deodara(Roxb)	Deodar	Pinaceae	Wood	Itching allergy, Toothache, insect repellent.	Oil of wood is used for toothache, applied to skin to cure allergy, timber & fuel wood, box for storage of maize.	Wild tree	
26.	Chenopodium album lin.	Buthwa	Amaranthaceae	Whole plant	Jaundice & urinary problems.	Shoots are used as a laxative for constipation; roots are used against jaundice, young shoots as vegetable.	Wild herb	June-Oct
27.	Cichorium intybus linn.	Jangle hand /Posh hand	Asteraceae	Whole plant	Cough, chest pain, blood purifier.	The whole plant is crushed & made into decoction, 5-10ml of decoction once a day for 7 days. Vegetable used by women after child birth.	Wild herb	June-Sept
28.	Codonopsis rotundifolia	Tunda-jaide	Campanulaceae	Whole plant	Livestock medicine (Asthma & general weakness).	Extract of herb is used for the treatment of Asthma & general weakness in livestock.	Wild herb	Jun-Sept
29.	Coriandrum sativum L.	Dhaniwal	Apiaceae	Whole plant	Loss of hair, Headache, Cold, Piles, Spice.	Water extract of herb mixed with honey is used to cure the hair fall, also used as condiment in kashmiri WAZAWAN.	Cultivated herb	June-Sept
30.	Datura stramonium	Datur	Solanaceae	Whole plant	Asthma, toothache, antiseptic, Dandruff, Rheumatism.	Smoke of seeds is given to cure the toothache; seed powder mixed with mustard oil is used to cure rheumatism.	Wild herb	June-Sept
31.	Equisetum arvense	Gandumgud	Equisetaceae	Whole plant	Kidney infection, Scabies, toothache, Urinary infection	An extract is made & also used in powder form, the extract of 1-2ml early in the morning for 10 days. The powder is to clean teeth.	Fern	
32.	Euphorbia	Gurisochal	Euphoribaceae	Leaves &	Ringworm	White colored latex obtained from the	Wild herb	July-Sept

	helioscopia Linn.			stem	infection, skin problem, Arthritic pain.	herb is used to cure skin eruption & warts, leaves & stem latex are used against ringworm infection.		
33.	Foeniculum vulgare Mill	Badiyan	Apiaceae	Seeds	Acidity, cold cough, blood purifier, joint pains.	The seeds are ground to make powder or used as such; the powder is mixed with warm water .the extract of 2-7ml early in the morning for 10-15 days.	Cultivated herb	May-Sept
34.	Fritillaria roylei Hook.	Sheethkar	Liliaceae	Roots	Abdominal pain, stomachache.	The roots of the herb are crushed & mixed with water & given to patients.	Wild herb	June-Sept
35.	Gentiana kurroo Royle.	Nilkanth	Gentianaceae	Rhizome	Kidney & urinary tract infection.	For the treatment of kidney and urinary tract infection roots are crushed & make course powder.	Wild herb	June-Sept
36.	Geranium wallichianum	Rathenjoth	Geraniaceae	Roots	Premature delivery, Hepatitis, toothache, weakness.	Roots are used to cure the toothache, a tea is also made from the crushed roots to cure weakness.	Wild herb	June-Oct
37.	Helianthus annulus Linn.	Gulaftab	Asteraceae	Seeds	Joint pains, whooping cough.	Seed oil is gently warmed and applied on painful joints, also used as fodder.	Cultivated herb	June-Sept
38.	Indigofera heterantha wall ex. Brand	Zand	Fabaceae	Bark & shoots	Toothache, vermifuge.	Juices of bark are vermifuge, shoots as fodder, branches as ropes & fuels. (A special type of charcoal is made from the branches which are used during harsh winters to protect from cold).	Wild shrub	May-Sept
39.	Iris napalensis	Mazermund	Iridaceae	Root stock	Swelling in throat, expectorant.	The root is dried, crushed to make powder, the powder & ghee is to make paste .the powder is taken orally.	Cultivated herb	May-Sept
40.	Juglans regia Linn.	Doon	Juglandaceae	Fruit, wood, bark	Sex stimulant, hypertension.	Nuts are edible and sex stimulant .nuts is also used to cure hypertension. Bark is used to clean teeth commonly called as DANDASA.	Cultivated tree	May-Aug
41.	Malva neglecta L.	Sochal	Malvaceae	Shoots & leaves	Stomachache, wounds, coughs.	Paste of leaves is made which is applied externally on effected portions; juice is also prepared .used as vegetable.	Wild herb	May-July
42.	Malva sylvestris L.	Gurisochal	Malvaceae	Whole plant	Diarrhea, dysentery.	The root is made into powder which is used.	Wild herb	May-Sept

43.	Matricaria chamomilla	Fuckgass	Asteraceae	Whole plant	Insecticide & Fungicide.	The whole plant is crushed & extract is obtained which is used.	Wild herb	May-Sept
44.	Mentha arvensis Linn.	Pudina	Lamiaceae	Whole plant	Weak memory	Infusion of leaves in combination with seeds of <i>Coriandrum sativum</i> is given to increase memory power.	Cultivated herb	May-Aug
45.	Mentha longifolia Linn.	Jangle pudina	Lamiaceae	Flower & leaves	Stomachache	Shoot is used for stomachache & gas trouble, juice of leaves expels worms from the stomach.	Wild herb	May-July
46.	Morchella esculenta	Guchi	Morchellaceae	Fruiting body	Antiseptic, stomachache, wound healing.	Powder of the fruiting body is poured on wounds, It causes rapid healing, and local people export it outside the state to earn money under rules and regulations.	Fungus	April-May
47.	Morus alba L.	Tul	Moraceae	Wood & fruit	Laxative & purgative.	Fruits are eaten both fresh & dry. Leaves are used in rearing silkworm.	Cultivated tree	May-Sept
48.	Nymphaea maxicana	Bum posh	Nymphaeaceae	Flowers, Rhizome.	Hair fall, boils, fever.	Rhizome powder is mixed with oil to make paste which is applied on hair to check hair fall, flower decoction is given against fever.	Wild shrub	June-Aug
49.	Origanum vulgare L.	Baber	Lamiaceae	Seeds	Digestion regulates menstruation.	Seeds used as juice to regulate menstruation. Also used as Condiment.	Wild herb	June-Sept
50.	Parrotiopsis Jacquemontiana (Decene) Rehder	Poush/poh	Hamamelidaceae	Stem & branches	General body pain, skin infection.	The stem is pressed by hot iron & oil is extracted, the extracted oil is pasted on effected portions externally.	Wild shrub	
51.	Plantago lanceolata	Gul	Plantaginaceae	Whole plant	Stomach & intestinal problems, piles.	Seeds & fruits are laxative & used for stomach & intestinal problems, piles and constipation, fresh leaves as vegetables.	Wild herb	May Aug
52.	Plantago major	Bud gull	Plantaginaceae	Whole plant	Fever, back pain.	An extract of whole herb is used, used as vegetable in juvenile stage.	Wild herb	May Aug
53.	Podophyllum hexandrum	Wanwagun	Berberidaceae	Rhizome& fruit	Acidity, Tumor, heart abnormalities.	Used as fruit, the root is crushed mixed with warm water & filtered .the filtered is then used.	Wild herb	April-June
54.	Portulaca oleraceae	Nunner	Portulacaceae	Leaves & shoot	Ulcer, liver, heart, kidney, cough.	Juice is extracted from herb ,2-4ml of juice is taken for 10 days. Also taken as vegetable in study area.	Wild herb	May-Sept
55.	Raphanus sativus L.	Mug	Brassicaceae	Whole plant	Hair fall, Dandruff.	The fresh juice of whole plant (5ml)is used daily after hair wash, prevents falling of hair.	Cultivated herb	July-Oct

56.	<i>Rheum emodi</i> Wall. ex Meissn	Pambchalan	Polygonaceae	Roots & leaf	Hair loss, boils.	Warm poultice prepared from the dried roots is applied on non healing boils .leaves used as vegetables in study area.	Wild herb	June-Aug
57.	<i>Robinia pseudoacacia</i>	Kikar	Fabaceae	Leaf & wood	Cuts & wound healing.	The leaves are crushed and made into paste, paste is applied on effected portions.	Cultivated tree	
58.	<i>Rosa</i> sp	Gulab	Rosaceae	Flower	Cough, throat infection, chest pain ,Headache .	Petals of the flower are mixed with sugar, almond, & fermented to form KHAMBEER, a pinch of Khambeer is eaten daily during winter seasons to cure cough ,throat infection .	Wild shrub	April-Sept
59.	<i>Rumex acetosa</i> L.	Abjie	Polygonaceae	Whole plant	Asthma, skin disease.	The paste made from the leaves is applied on affected portions externally. used as vegetable in juvenile stage.	Wild herb	May-Aug
60.	<i>Salix alba</i> L.	Veer	Salicaceae	Wood & tender branches	Analgesic	The leaves are boiled in water along with <i>Prunella vulgaris</i> & the resulting warm water is applied on the legs of patient.	Cultivated tree	June-Aug
61.	<i>Saussurea lappa</i> C.B Clarke	Kuth	Asteraceae	Roots	Cough, toothache, vermifuge for worm.	Powder of root is used for cough & toothache, juice of roots is used within a sweetener to cure rheumatism.	Wild herb	Jull-Sept
62.	<i>Solanum tuberosum</i> L.	Alu	Solanaceae	Underground modified stem	Headache	Used as vegetable, also cure headache. People of the study area still do barter system of trade with the people living in towns. They exchange <i>Solanum tuberosum</i> with rice.	Cultivated herb	May-Sept
63.	<i>Solanum nigrum</i>	Cambe- tamtar / Makoi	Solanaceae	Fruit	Blood purifier, jaundice	Fruit is directly eaten to cure jaundice and blood purifier.	Wild herb	June-Oct
64.	<i>Sorghum halepense</i>	Durham	Poaceae	Root stock	Boils, skin infection	The roots are dried & then crushed into a powder. The powder & oil is mixed to make paste, paste is applied externally.	Wild herb	June-Sept
65.	<i>Stellaria media</i> L.	Nick hack	Caryophyllaceae	Whole plant	Skin problem, pulmonary disease.	As a remedy to cure to treat itchy skin conditions and pulmonary diseases.	Wild herb	June-Aug
66.	<i>Taraxacum officinale</i> Weber ex wiggers	Madan hand	Asteraceae	Whole plant	Blood purifier, jaundice.	Leaf decoction is used as tonic, diuretic, and a cure for jaundice & as a blood purifier.	Wild herb	April-July
67.	<i>Trachyspermum ammi</i> L.	Jawand	Apiaceae	Fruits	Bronchitis, digestion, stomach	The herb is used to cure stomach pain, digestion; bronchitis .herb is used as a	Cultivated herb	May-Sept

					pain.	special spice during preparation of pickles (ANCHAAR).		
68.	Urtica dioica	Soi	Urticaceae	Whole plant	Dandruff.	The whole herb is crushed & extract is obtained from it .the extract is used to wash hair with cold water.	Wild herb	June-Sept
69.	Viola odorata	Nun posh	Violaceae	Flower	Cough & Cold	It cures cough .the leaves of herb are used as vegetable during juvenile stage.	Wild shrub	May-Aug
70.	Valeriana jatamansi	Budjeeth	Valerianaceae	Root stock	Abdominal pain, stomachache, heart diseases.	Powder of the root is used, the 2-3 gm of powder with cold water for chronicle abdominal diseases.	Wild herb	June-Sept

Discussion

A total of 70 plant species were identified belonging to 41 different families, primary source of medicines were wild herbs 59% followed by cultivated herbs 18% shrubs 10% trees 8% fungi 3% and fern 2% (fig.2). Information related to number of plant species used to treat different ailments is presented in (fig.3). The following species were the most important based upon their medicinal properties; *Aconitum heterophyllum* Wall, *Anemone obtusiloba* D. Don, *Artemisia absinthium* (L.), *Arnebia benthamii*, *Atropa acuminata*, *Cedrus deodara* (Roxb.), *Equisetum arvense*, *Podophyllum hexandrum*, *Rosa sp* and *Saussurea lappa* C.B. Clark. *Solanum nigrum* are used to cure jaundice, *Podophyllum hexandrum* is used to cure small tumors and its powder is an antiseptic for healing wounds. *Geranium wallichianum* is used to treat Hepatitis and it is suggested that it should be screened for further pharmacological studies. Asthma is also a common problem among the elderly in the study area and *Atropa acuminata* is effective against asthma. Diseases such as rheumatism, pneumonia and different fevers spread during harsh weather conditions. Local communities have no contact with urban areas in the winter, when heavy snowfall prevents travel and available plant resources are used to cure ailments.

This study highlighted the valuable role of herbal medicines in the local health care system of the Kupwara; local healers (HAKEEMS) extensively use plants for treating different ailments. Traditional medicines are used preferentially over allopathic medicines because they are inexpensive, easily available and normally self-administered. The hilly areas of the district Kupwara (Chowkibal, Keran, Karnah, Jumgand) remain cutoff from district headquarter Kupwara during the winter season, with the result the area does not receive medical facility, eatable items as the heavy snowfall closes the areas.

The modern generation is inclined towards the use of allopathic medicines and it seems that traditional knowledge of plant use is in severe danger of being lost. The results provide sound a foundation for the medicinal uses of various plant species and provide a basis for future detailed pharmacological studies.

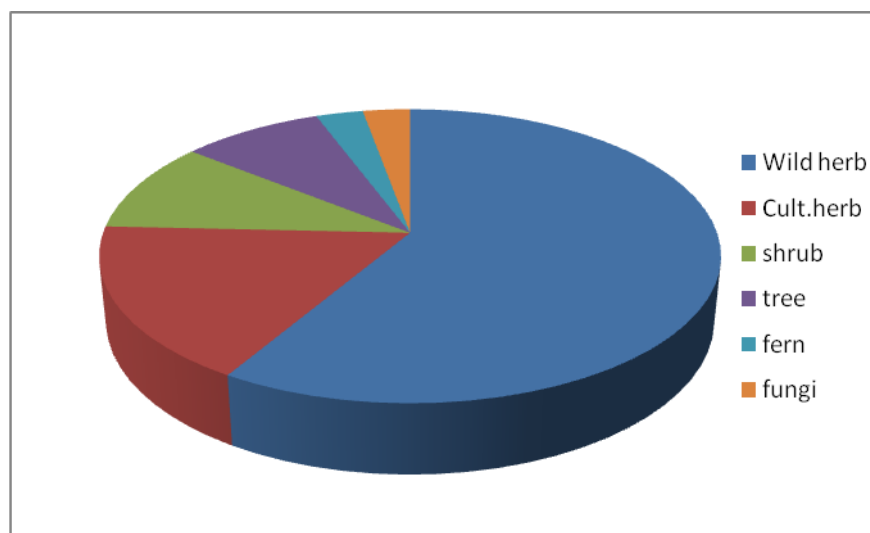


Fig (2):-Types of plants with ethno medicinal uses in Kupwara(Chowkibal, Keran, Karnah, & Jumgand)

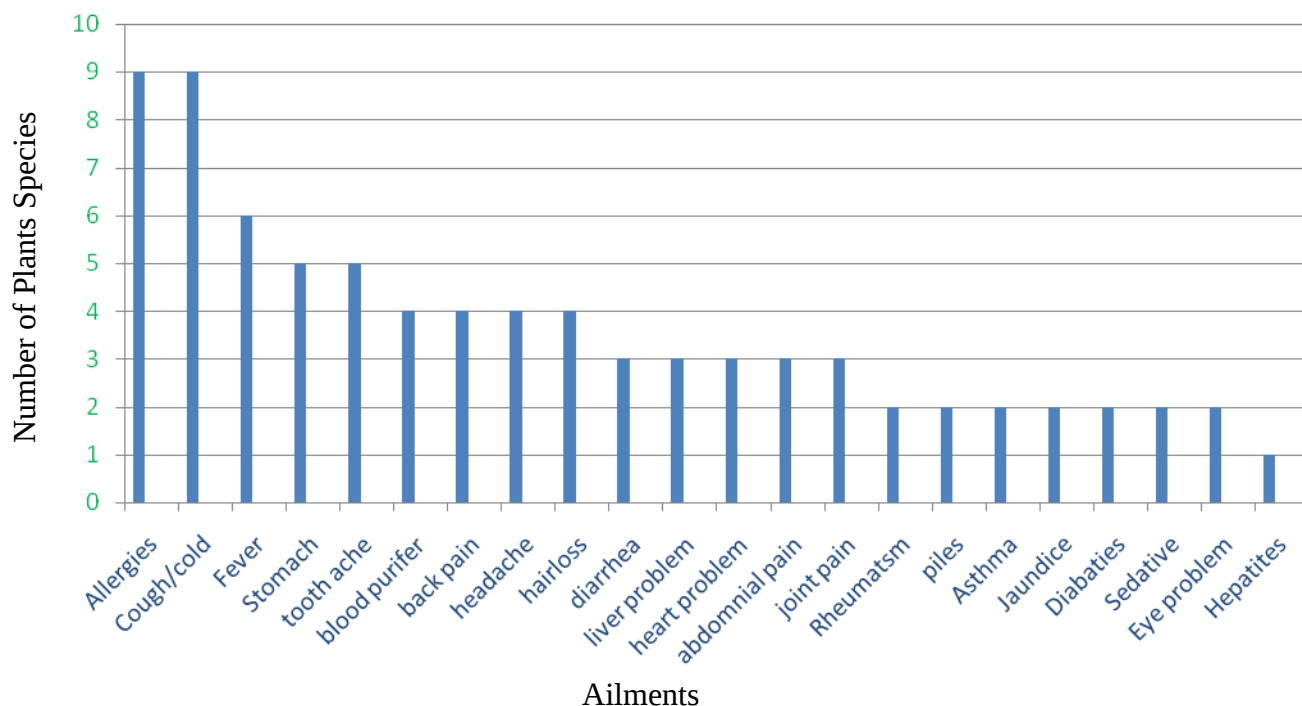


Fig (3):-No. of plant species used to treat various ailments in Kupwara (Chowkibal, Keran, Karnah, and Jumgand).

Acknowledgements

The author is highly thankful to the people of Kupwara (Chowkibal, Karnah, Keran, and Jumgand) for sharing the information on plants that are used by them in day to day life. Also thankful to principal (Dr. Rakesh Trivedi) H.O.D Botany (Dr. Santosh Nagar) Dr. J. S. Sikka, Dr. Sudip Ray (Taxonomist) and other staff members of Botany department (P.M.B. Gujarati science college Indore, MP) for providing guidance and necessary facilities during the course of this work.

References

01. Balic MJ, *Annals of the Missouri Botanical garden* ,4;57-65,(1996).
- 02.BSI, Flora of India. Botanical survey of India Kolkata 1996.
- 03.Dar GH, Bhagat RC. Khan MA. Biodiversity of Kashmir Himalaya ,valley book house , sriganar-kashmir;2001.
- 04.Dar GH ,vir j ,kachroo p, Buth HH. Ethno botany of Kashmir ,Sudh Valley .*J.Econ tax Bot* 1984;668.
- 05.Dutta BK and Dutta PK, Potential of ethnobotanical studies of north-east India; an overview, *ind. Jr.Trad.Knowledge*,4(1):7-14,(2005).
- 06.Harshburger, J.W, 1896. Purposes of ethno botany Botanical gazette,21;146-154.
- 07.Hariharan GN, Balayi P, Taxonomic research in India: *Future prospects. curri sci*,2002,83(9):1068.
- 08.Hussain M. Geography of Jammu and Kashmir ,Rajesh publications New Delhi;2001.
- 09.Hussain Z.S, R.N. Malik ,M. javaid and S. Bibi 2008 Ethnobotanical properties and uses of medicinal plants of Morgha biodiversity park, Rawalpindi *pak j .Bot* .40(5);1897-1911.
- 10.Kaul MK, Gaur RD. Characteristics of ethnopharmacological resources in Kashmir Himalaya ,in: Glimpces of Indian ethno pharmacology, edited by P Pushpangan,V Georage (TBGRI, Trivandrum India),1995,185.
- 11.Kaul MK, Medicinal plants of Kashmir & Ladakh, Temperate and cold Arid Himalaya ,(Indus publishing co.Delhi),1997,8:123.
- 12.Kachroo P,Nahvi IM. Ethno botany of kashmir. In;Forest Flora of Srinagar and plants of Neighborhoods. Bishen Singh Mahindra pal singh,Dehradun;1987.
- 13.Lone FA, lone S, Aziz MA, & Mala FA, ethnobotanical studies in tribal areas of Kupwara ,India ,*Int. Jr. Pharma & Bioscience*,3(4);399-411(2012).
- 14.Mahmood, A, Mahmood A Tabassum A 2011,Ethnobotanical survey of plants from district Sialkot, Pakistan ,*J.APP.Pharm*.2(3);212-220

- 15.Mala FA ,Lone MA, Lone FA and Aray N, Ethno-medicinal survey of Kajinaag range of Kashmir Himalaya, India ,*Int. jr. Pharma and Biosciences*,3(2);442-449(2012).
- 16.Mukhopadhyay S. conservation, protection and biodiversity of Medicinal plants(eds Gautama PL et al).in. Indian society for plant genetic resources ,NBGPR campus ,New Delhi;1996 p.1965p.15-28.
- 17.Navchoo IA, Buth GM. Studies on the medicinal plants used by gujjar a backward tribe of Jammu and Kashmir in; *Advances in plant sciences research* , edited by KC sahani (Bishen singh Mehendra pal singh, Dehradun, India),1994,1:191.
- 18.Pareek SK. Medicinal plants in India :present status and future prospects. prospects of medicinal plants (eds Gautama pl et al),in; *Indian society for plant generic resources, NBPGR campus New delhi*;1996 p 5-14.
- 19.Schultes RE, The role of ethanobotanists in the search of new medicinal plants, *Lloydia*, 25; 257-266(1962).
- 20.Stewart RR. An annotated catalogue of the vascular plants of west Pakistan and Kashmir. *Fakri press Karachi Pakistan*.1972.
- 21.Sullivan K, Shealy CN. Complete natural home remedies, elements book limited,Shaftesbury,UK;1973.
- 22.Singh JS .the biodiversity crises :A multifaceted revives .*Currsci* 2002;82(6);638.
- 23.Utkarsh G. Patenting life; Biodiversity & Intellectual property Rights.*Resonance*,2001,51.