



Indigenous Uses Of Threatened Ethno-Medicinal Plants Used To Cure Different Diseases By Ethnic People Of Almora District Of Western Himalaya

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*The plants have been used as a source of medicines by man from ancient times to the present day. Initially these were the main parts of folk or ethno medicine practiced in India and other parts of the world like China, Middle East Africa and South America. Later a considerable part of this indigenous knowledge was formulated, documented and eventually passed into the organized systems of medicines such as Ayurveda, Yunani, Siddha or other systems. A large number of medicinal plants of great commercial value grow spontaneously in the study area. The present study is based on a field survey of the district of Almora, to find out the plants of medicinal values. The researcher investigates "The peoples of study area specified like to use ethno-medicine or not in their cases of ailments?" Researcher also wanted to authenticate hypothesis "There is differences of sex in the belief/ use of ethno –medicine in their diseases?" The present study deals with the indigenous uses of *Taxus baccata* Linn., *Thalictrum foliolosum* DC., *Berberis aristata* DC., *Baliospermum montanum* Will., *Thymus serpyllum* Linn., *Coleus forskohli* Will., *Bergenia ciliata* (Haworth) Sternb., *Clerodendrum serratum* Linn., *Oroxylum indicum* Linn., *Valeriana hardwickii* Wall. *Valeriana jatamansii* Jones., *Celastrus paniculatus* Will., *Malaxis acuminata* D. Don, *Habenaria intermedia* D. Don., *Habenaria edgeworthii* Hook. f. ex .Collett., *Costus speciosus* (Koenig ex Retz.) Smith, *Dioscorea deltoidea* Wall., *Curculigo orchioides* Gaerth, *Gloriosa superba* Linn., *Polygonatum cirrhifolium* Wall. Royl., *Polygonatum verticillatum* Linn. Total fifty-two different diseases have been cured by the reported species. Out of fifty-two diseases, twenty-eight diseases (54%) cured by single plants, nine diseases cured by two (17%) species, seven diseases cured by three (14%), seven diseases cured by four (13%) species and one diseases cured by six (2%) species.*

Key words: Almora district, Biostatistics, Ethno-medicine, Indigenous uses,

Introduction

The plants have been used as a source of medicines by man from ancient times to the present day. Initially these were the main parts of folk or ethno medicine practiced in India and other parts of the world like China, Middle East Africa and South America. Later a considerable part of this indigenous knowledge was formulated, documented and eventually passed into the organized systems of medicines such as Ayurveda, Yunani, Siddha or other systems. Subsequently, with the advance in the techniques of phytochemistry and pharmacology, a number of active principles of medicinal plants were isolated and introduced as valuable drugs in modern system of medicine (Ved Prakash, 2001). It can be accreted that different areas of the Almora district have great altitudinal variations. Due to these great altitudinal variations, wide array of climatic zones are available which favors the luxuriant growth of diversified and rich vegetation which also has a number of raw drugs described in Ayurvedic texts, that's why this value of biodiversity as a source of pharmaceutically important substances. Farnsworth and Soejarto 1985, McNeely 1988, Principe 1991 and Pearce and Puroshothaman 1992, while documentation on ethno-botanical knowledge was done by Maikhuri et al. 2000, Nautiyal et al. 2001. A comprehensive review has described such rich diversity and use of medicinal flora within Uttarakhand Joshi 2002, Kumari et al 2009 and 2011, besides a study conducted on the medicinal plant diversity in riparian zone of River Ganga at Haridwar Gangwar and Joshi, 2006 to understand the use of plant species from Himalayan region to cure various ailments. Presently, 95% raw materials required by pharmaceuticals and drug manufactures

are collected from the wild and remote areas (Kehimker, 2000). The pharmaceutical sector is using 280 medicinal plant species, out of which 175 are from the Indian Himalayan Region Dhar et al, 2002.

Methods

The present study is based on a field survey of the district of Almora, to find out the plants of medicinal values. The researcher investigates “*The peoples of study area specified like to use ethno-medicine or not in their cases of ailments?*” Researcher also wanted to authenticate hypothesis “*There is differences of sex in the belief/ use of ethno –medicine in their diseases?*” The work was conducted among local people, rural persons, farmers and vaidyas to know the local names and medicinal importance of plants mentioned. The people under reference were interviewed using a structured questionnaire to have information about the plants with their local names, their parts used, mode of preparations of used plant(s). These plant(s) with medicinal values were collected from local populace and studies were made to know their medicinal uses. The subjects were randomly sampled by using the numbers they were assigned and consulted. During the period the researcher taken a sample of 300 (150 male and 150 female) and interviewed them. In this connection the peoples were interviewed from different areas of the district. The questionnaire was written in Standard English. It was acceptable to rephrase the questionnaire in Kumauni (Local language of Kumaun region of Uttarakhand) but not to prompt replies. The following are the format of questionnaire.

With the help of questionnaire data were collected The collected data has been analyzed with the help of important non- parametric test i.e., chi-square (χ^2) test.

$$X^2 = \sum \left[\frac{(F_o - F_e)^2}{F_e} \right]$$

Where, F_o = observed frequency

F_e = expected frequency for each cell

F_e = (frequency for the column) (frequency for the row)/n

Questionnaire

Name: Age: Sex:..... Occupation:.....Address:.....

1. Many people in this district like to use traditional medicine. Do you like to use ethno- medicine in different diseases in yourself/your family members?

Yes

No

2. Are you/ your family member suffering from any chronic disease and which plant you use for this?

Disease	
Plants	
Parts Use	

3. Where do you get traditional medicine?

Collect Own

Friend or Relative

Ayurveda Shop

Traditional Healers

4. How often do you use traditional medicine?

Every day

More than once a week

More than once a month

Less than once a month

5. Kindly see the list/pictures of the plants and say the plant that you use from amongst these plants in any diseases?

Botanical name	Local Name	Diseases	Use Pattern
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Baliospermum montanum Will.

Berberis aristata DC

Bergenia ciliata (Haworth) Sternb.

Celastrus paniculatus Will.

Clerodendrum serratum Linn.

Coleus forskohli Will.

Costus speciosus (Koen.) Sm.

Curculigo orchioides Gaerth

Dioscorea deltodea Wall.

Gloriosa superba Linn.

Habenaria edgeworthii Hook. f.ex.Collett. D Don

Habenaria intermedeia D Don

Malaxis acuminata Don

Oroxylum indicum L.

Polygonatum cirrhifolium Wall.

Polygonatum verticillatum Linn.

Taxus baccata Linn.

Thalictrum foliolosum DC.

Thymus serpyllum Linn.

Valeriana hardwickii Wall.

Valeriana jatamansi Jones

Results and discussion

A large number of medicinal plants of great commercial value grow spontaneously in the study area. The present study deals with the indigenous uses of *Taxus baccata* Linn., *Thalictrum foliolosum* DC., *Berberis aristata* DC., *Baliospermum montanum* Will., *Thymus serpyllum* Linn., *Coleus forskohli* Will., *Bergenia ciliata* (Haworth) Sternb., *Clerodendrum serratum* Linn., *Oroxylum indicum* Linn., *Valeriana hardwickii* Wall. *Valeriana jatamansii* Jones., *Celastrus paniculatus* Will., *Malaxis acuminata* D. Don, *Habenaria intermedia* D. Don., *Habenaria edgeworthii* Hook. f. ex .Collett., *Costus speciosus* (Koenig ex Retz.) Smith, *Dioscorea deltoidea* Wall., *Curculigo orchioides* Gaerth, *Gloriosa superba* Linn., *Polygonatum cirrhifolium* Wall. Roysl., *Polygonatum verticillatum* Linn. In total, 21 species belonging to 15 families, 2 species are trees, 1 shrub, 16 herbs and 2 climbers. The families of Taxaceae, Ranunculaceae, Berberidaceae, Euphorbiaceae, Saxifragaceae, Verbenaceae, Bignonoaceae, Celastraceae, Costaceae, Dioscoreaceae, Hypoxidaceae having single species, Lamiaceae, Valerianaceae having two species and Orchidaceae, Liliaceae having three species. These species were used by the inhabitants for curing various diseases such as Eye Diseases, Toothache, Diabetes, Vaginal Discharge, Tuberculosis, Production of Semen, Insect/Snake Bite, Body Strength, Tonic, Immune Modulator, Acidity, Wound, Blood Purifier, Menopause, Skin Diseases, Cuts, Indigestion, Kidney Pain, Infertility, Broken Bones, Urinary Disorder, Diarrhea and Dysentery, Cough and Cold, Kidney Stone, Worm Infection, Abortion, Constipation, Loss of Appetite, Fever, Jaundice, Piles, Asthma, Abdominal pain, destroying Lice's, Joint Pain, Arthritis, Gonorrhoea, Mouth cancer, Tonsil Pain, Heart Diseases, Painful Menstruation, Eczema, Stress and Anxiety, Mental Disorder, Herpize, Headache, Jalodar Roga, Gout, Leprosy, Sukha Roga, Paralysis and Burn. The utilization pattern of the species indicated that roots of 7, rhizome of 2, root stock of 1, tuber of 5, stem of 1, leaves of 5, seed of 2, whole plant of 5 and root bark of 1 were used are presented in Figure 1. Total fifty-two different diseases have been cured by the reported species. Out of fifty-two diseases, twenty-eight diseases (54%) cured by single plants, nine diseases cured by two (17%) species, seven diseases cured by three (14%), seven diseases cured by four (13%) species and one diseases cured by six (2%) species were presented in Figure 2.

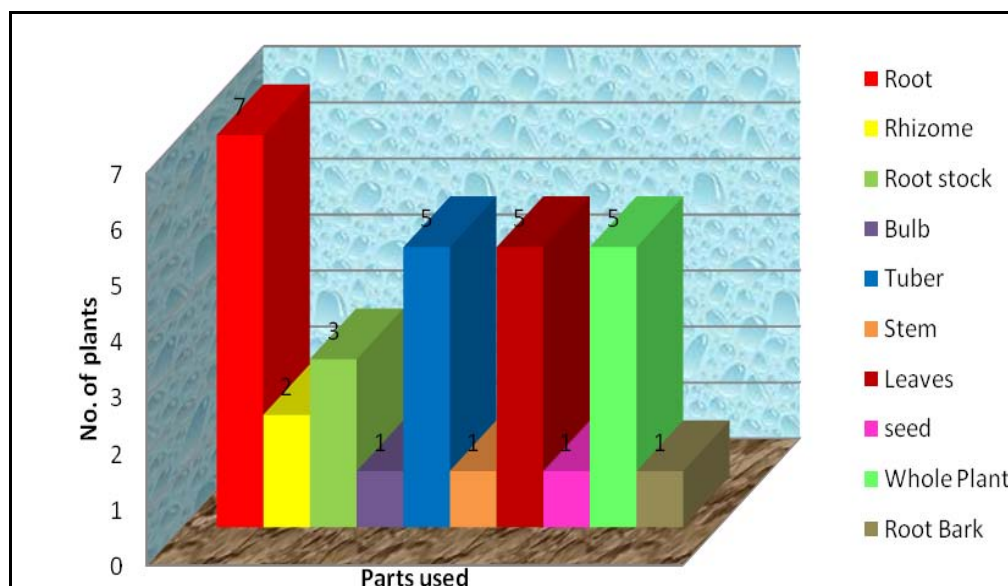


Figure 1: Plant Parts used in Different Diseases

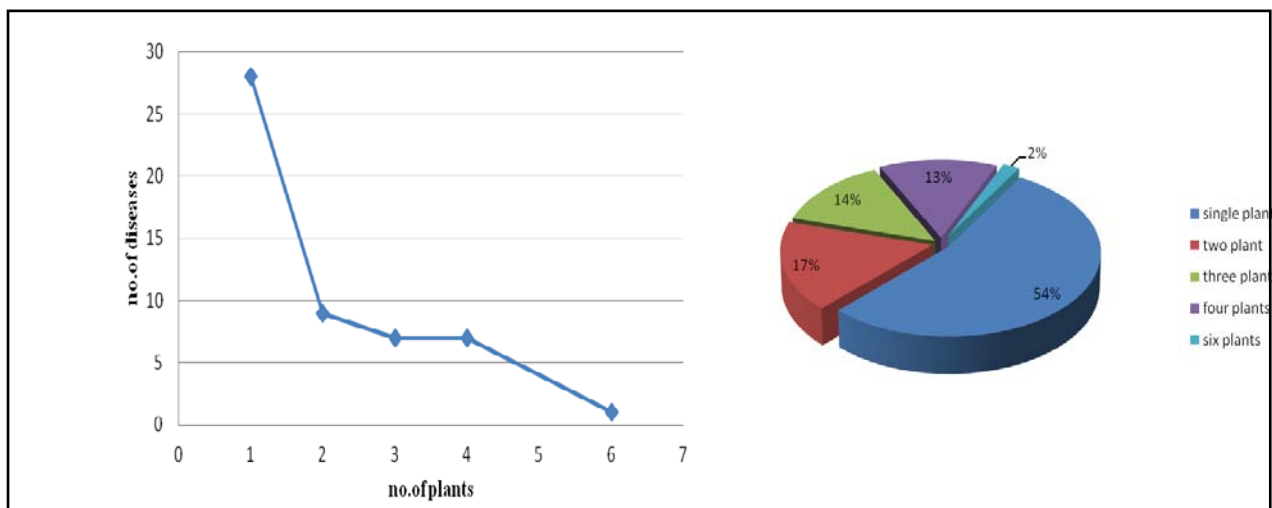


Figure 2: Disease Cured by Different Plants

To check the first hypothesis, “*The peoples of study area specified like to use ethno-medicine or not in their cases of ailments?*” the researcher interviewed 300 peoples from the area specified. In course of investigation, they were given obtained to answer in the form of Yes/No. The results obtain was as follows: 250/50 ie. 250(83.33%) peoples interviewed said Yes and 50(16.66%) peoples said No. On the other hand the expected frequency is 150 (Yes) and 150(No) ie. 50% each for 300 peoples. To check the significant difference between the F_o and F_e , the researcher took the help of statistical method prominently known as chi-square test (χ^2). Obtain data were analysed and the value got after analysis were recorded as 133.32. In the same way the second hypothesis “*There is differences of sex in the belief / use of ethno –medicine in their diseases?*” in which 150 were male subjects and 150 were female subjects. The option was the same ie. the subjects had to say Yes or No to the question “Do you like to use ethno-medicine in case of your ailments or not”? Observations are noted below; out of 150 male subjects, 85 (56.66%) said Yes and 65 (43.33%) said No whereas among 150 female subjects, 97 (64.66%) said Yes and 53(35.33%) said No. Obtain data were analysed and the value obtained after analysis were recorded for two independent sample is as 2.01. The tabulated value and calculated value of degree of freedom are presented in Table 1. The Calculated value is much grater than the tabulated value in one sample chi-square test and the calculated value is lesser than the tabulated value in two independent chi-square test.

Table 1: Results of χ^2 test

Chi-square test	Calculated value	Tabulated value	Df
One sample χ^2 test	133.32	3.84	1
Two independent χ^2 test	2.01	3.84	1

In the present study important threatened ethno-medicinal plants (Figure 4-24) and their uses are described as follows:

***Baliospermum montanum* Will.**

- Root powder made out of this plant is used in getting relief from piles, jaundice and fever.

- Small quantity of seeds, taken orally causes purgation (constipation).
- Its leaves are dried to make powder that is useful for curing asthma.
- Oil made out of its seed is applied externally to have relief from skin diseases.
- Seed oil externally applied in rheumatic pains.

***Berberis aristata* DC**

- Extract of root is instilled in eye in Eye Diseases.
- Root is boiled in water and this lukewarm decoction is used as mouthwash and helpful in the growth of wisdom tooth.
- Decoction of root is very useful in Diabetes. In the process adopted roots are put in a class of water for whole night and after funneling taken orally in empty stomach in morning.
- Soft part of root soaked full night in water taken orally in empty stomach. It provides relives in fever.
- Decoction of stem bark is very useful in vaginal discharge.

***Bergenia ciliata* (Haworth) Sternb.**

- Its root powder is used to relief in kidney stone and other urinary disorders.
- Powder made out of root is also used in diarrhea and cough.

***Celastrus paniculatus* Will.**

- Its seed that is said to be oozy in its oil from used in jalodar roga.
- Crush seed is boiling in water and to make thick solution and to apply locally to cure rheumatoid arthritis, gout and leprosy.
- Its oil massage is very – very useful to cure sukha rog (beri-beri).
- Oil of seed used for massage on the effected part of body in paralysis.
- Oil expressed from seeds is applied to itch.
- Seed oil useful in mental disorder, seeds and bark used as febrifuge, roots antidote to snake bite.

***Clerodendrum serratum* Linn.**

- Powder of twigs of this species mix with zinger and *Acorus calamus* Linn. in equal quantities. This mixture is taken with honey to cure common cough and cold.
- Leaves are grinded to extract juice out of them to apply externally to get relief from Herpeez.
- The leaves can be used or external application in headache.
- Whole body parts are ground with water to prepare a paste which is applied to cure fever.

***Coleus forskohli* Will.**

- Decoction of whole plant is used to get rid chronic cough.
- Juice extract of leaves is used in abdominal pain and indigestion.
- Leaves extract of this plant is also used in reducing flatulence.
- Root juice is administrated orally in constipation.
- Root extract taken against intestinal worms.

Costus speciosus (Koenig ex Retz.) Smith

- Its root is crusted to its powder form and is readied to the administered orally to remove constipation.
- To serve as blood purifier.
- To remove worm infestation.
- To gain general health.
- Fried rhizome is administered orally with Gur for abortion.

Curculigo orchoides Gaerth.

- It is in practice that rhizome of this plant is left to dry. After drying it is pulverized and its powder is used to cure urinary disorder, diarrhea, abdominal pain, jaundice and piles.
- The past made out of whole plant is externally applied in bone fracture.
- Roasted tubers are administered orally as vegetable which is relieving in cough.
- Boiled underground parts eaten with salt; roasted powder of rhizome given in asthma; seeds believed to cause abortion; decoction of rhizome with saw-dust of Deodara taken in tuberculosis.

Dioscorea deltoidea Wall.

- In its Powder form taken orally, it cures dysentery, abdominal pain and piles.
- With milk its powder used as general tonic to improve general health.

Gloriosa superba Linn.

- Their root that is very toxic is made to go through purification with cow urine and after purification process it is used for deworm.
- Its dried root are pulverized to make powder that is in use to get rid it diseases like piles, skin disease, worm infection and snake bite orally.
- Its root powder taken with **gur** to facilitate the case of abortion.
- Used in surgical emergencies for wound- healing.
- It is also useful in getting rid of destroying lice.
- Paste of root is applied externally on joints.
- Root ground to paste in water is given 250-500 g dose in abdominal colic.

- Powder of tubers taken in intermittent fever.
- Extract of leaves given in suppressed urination.

***Habenaria intermedeia* D. Don.**

- Juice extraction of the plant is taken to develop resistance and immunity in one's body and mind.
- It is an important ingredient in the preparation of Chyavanprash.

***Habenaria edgeworthii* Hook.f. ex. Collett.**

- Extract juice of tuber of this plant tones up body tissues in which the person feels immense strength.

***Malaxis acuminata* D. Don.**

- Used as a tonic to cure tuberculosis. It is also used as an ingredient of Asthawargha.
- Decoction of bulb is used to increase the quantity of semen or to stimulate the production of semen.
- Paste of pseudo bulb can be applied externally in case of insect bites.
- It is also used in the preparation of chyawanparash.

***Oroxylum indicum* Linn.**

- Its root bark decoction is used in rheumatoid arthritis and backache.
- Its root bark decoction is taken to cure diarrhea, cough and fever.
- Root bark decoction is in practice locally in edema and vatic disorder.
- Powder of *Rivea hypocrateriformis* (Desr.) root of *Salmalia malabarica* DC. and root of this plant are powdered and given 1-2 tea spoon ful with milk in gonorrhoea.
- The decoction of the bark is taken for curing gastric ulcer and a paste made of the bark powder is applied for mouth cancer, scabies and other skin diseases. The seed is ground with fire-soot and the paste applied to the neck for quick relief of tonsil pain. Also, a paste made of the bark is applied to the wounds of animals to kill maggots. Decoction of the bark is given to animals for de-worming. The sword-like fruit or a branch of the plant is used by the farmers to kill crabs in wet paddy fields.
- The bark from the trunk, branches, roots etc., of the *Oroxylum indicum* tree is stripped off and they are dried in the sun for around 2-3 days. After drying, the surface layer is scraped off and a handful of the dried barks/roots are boiled in two to two and a half litres of water for about one and a half hours till the liquid attains a dark red colour. After this the mixture is cooled down and then strained to separate the liquid from the mixture and this liquid is stored in a bottle. One cup of this liquid is then taken three to four times a day. A spoonful of honey is added to the decoction to neutralize its bitter taste.

***Polygonatum cirrhifolium* (Wall.) Royl.**

- Its tuber is in small pieces is put in a glass of water during night and is said to use it in the morning in empty stomach to develop immunity. Such process helps in removing weakness.
- Leaves eaten as vegetable; root infusion with milk used as an aphrodisiac and blood purifier.
- Paste made out of its roots is used in cuts and wounds.
- Especially the root is traditionally used in afflictions from menopause.
- As a topical application, the roots are said to expedite the healing of cuts and burns, skin irritations and inflammations,
- As a face wash it is good for acne, blemishes and all kinds of imperfections of the skin.
- When consumed as its tea, it is said to alleviate a range of symptoms associated with menopause, indigestion, diabetes, broken bones, insomnia, kidney pains, and even infertility.

***Polygonatum verticillatum* Linn.**

- Its tuber increases antigenic properties in one's body and serves as general tonic.
- It is a good immune modulator and promotes life span and vitality.
- Roots are eaten raw or cooked and their powder is given in gastric complaints.
- Paste of root is applied on wounds for healing.

***Taxus baccata* Linn.**

- Its powder of leaves is efficacious in case of diseases like dry cough and chronic asthma.
- Powder made out of its leaves is use to cure epilepsy and urinary diseases.
- The leaves have been used in a steam bath as a treatment for rheumatism.
- Barks applied as plaster on fractured bones.

***Thalictrum foliolosum* DC.**

- In rural areas it is often seen that people suffer from loss of appetite due to various region and careless living. To improve appetite its root powder is used frequently.
- It is also used in fever.
- Its juice too is used in eye diseases.
- Root is used in Jaundice.

***Thymus serpyllum* Linn.**

- Whole plants juice mixed with honey is used orally in case of cough and asthma.

- The paste of whole plant is mixed with castor oil to apply externally of to redeem arthritis.
- In case of burn its juice used with ghee is applied locally to relief burn.
- Its powder used with saindha namak in abdominal pain and indigestion for quick relief.

***Valeriana hardwickii* Wall.**

- Plants extract given in treatment of malaria.
- The pounded root or leaves are used as a poultice to treat boils.
- It is also used to regulate the menstruation.
- Decoction of whole plant is useful in liver disease.
- Externally, it is used to treat eczema.

***Valeriana jatamansii* Jones.**

- Its powder is said to be useful and effective in curing epilepsy, stress, anxiety and mental disorder.
- It is also said that it tones up the whole nervous system and makes up its working highly generative.
- Local populace is of the opinions that it works also in arthritis.
- Dried roots also used as an incense and insecticide.
- Used as a remedy for hysteria, hypochondria.

A large number of plants that grow wildly are used in traditional systems of medicine and a few of them are having trade values too. More than 43% of the total flowering plants are reported to be of medicinal importance and a large number of them are used in Indian System of Medicine (Pushpangadan, 1995). Uttarakhand, on account of its unique setting within the Himalaya region, possesses luxuriant and varied vegetation. Almost every plant has economic value from either a nutritional, religious (Kumar B, 2009), esthetics or medicinal viewpoints Kumari et al 2011). In fact a large percentage of crude drugs in the Indian market come from this Himalayan area (Badoni and Badoni, 2001). Several studies have been carried out on the use of the medicinal plants in the IHR in general (Sarkar et al, 2010; Das et al., 2007; Sharma et al., 2011; Shreekar et al., 2009) and Uttarakhand (Samant et al., 1998; Gaur, 1999; Dhar et al., 2002; Pande et al., 2001; Kala et al., 2004; Kala et al., 2005; Samant et al., 2001; Samant et al., 2002; Samant et al., 2003; Pant, 2005; Pant et al 2009; Bisht et al., 2009; Bhawana, 2011; Bhattacharyya et al., 2010). In the Almora district, total 187 ethnomedicinal plants in traditional system of medicines are in use (Kumari et al., 2011). Some studies have been carried out on the use of ethnomedicine in veterinary (Singh et al 2009).

The researcher made investigation in detail regarding this claim and recorded on the basis of interviewing 300 peoples of the area both male and female whether they like to use ethno-medicines or not and the data obtained were statistically treated applying chi-square method. It was seen that the calculated value is greater than the tabulated value. The projected import of it is that the hypothesis "*There is no difference between observed frequency and expected frequency*" is thus rejected and significant difference between distribution is accepted. In other words, we can say that the people of Almora district in majority do like to use ethno-medicine. Similarly on basis of process adopted and method used as in both hypotheses, the observation of the researcher stands on that the calculated value is less than the tabulated value. In the second hypothesis, its implied meaning is that "There is no difference of sex in the belief on ethno – medicine in the use of their diseases". This is why; the null hypothesis is accepted reasonably. It can therefore be asserted that in spite of variation in sexes, both sexes like/prefer to use ethno-medicine in the specified area that is among the people of Almora district.

The ethno-medicinal plants that is use for treatment is worked on particular systems of human body (Sharma PV, 1954-1981 and Charak Samhita, 1984). Like some plants cure the digestive system and another on the respiratory system. In this study, total 17 systems are cured by the documented ethno-medicinal plants that are presented in table 2.

Table 2: Plant Species Works on Different Systems

Plant Species	Systems
<i>Baliospermum montanum</i> Will.	Gastrointestinal System
<i>Berberis aristata</i> DC.	Ocular (eye) Disease, Gastrointestinal System, Hematopoietic System
<i>Bergenia ciliata</i> (Haworth) Sternb.	Urinary System
<i>Celastrus paniculatus</i> Will.	Nervous System, Urinary System
<i>Clerodendrum serratum</i> Linn.	Respiratory system
<i>Coleus forskohli</i> Will.	Gastrointestinal System, Cardiovascular system
<i>Costus speciosus</i> (Koenig ex Retz.) Smith	Urinary System, Reproductive System
<i>Curculigo orchioides</i> Gaerth.	Gastrointestinal System, Urinary System, Skin Disorder
<i>Dioscorea deltoidea</i> Wall.	Circulatory System, Digestive System
<i>Gloriosa superba</i> Linn.	Reproductive System
<i>Habenaria edgeworthii</i> Hook. f. ex. Collett.	Vitalizer, Rejuvenative
<i>Habenaria intermedia</i> D. Don.	Vitalizer, Rejuvenative
<i>Malaxis acuminata</i> D. Don.	General Metabolism, Vitalizer
<i>Oroxylum indicum</i> Linn .	Nervous System, Anti inflammatory
<i>Polygonatum cirrhifolium</i> (Wall.) Roysl.	Respiratory System, Vitaliser, Rejuvenative
<i>Polygonatum verticillatum</i> Linn.	Vitaliser, Rejuvenative, Aphrodisiac,
<i>Taxus baccata</i> Linn.	Respiratory system, Cardiovascular system
<i>Thalictrum foliolosum</i> DC.	Ocular (eye) Disease, Hepatic disorder (Liver disease)
<i>Thymus serpyllum</i> Linn.	Digestive System, Skin Disorder
<i>Valeriana hardwickii</i> Wall.	Nervous System, Cardiovascular system
<i>Valeriana jatamansii</i> Jones.	Nervous System, Cardiovascular system

On the basis of the systems that are cured by the documented species the cluster analysis have been done. The dendrogram is produced by grouping analysis and five groups can be seen in figure 3.

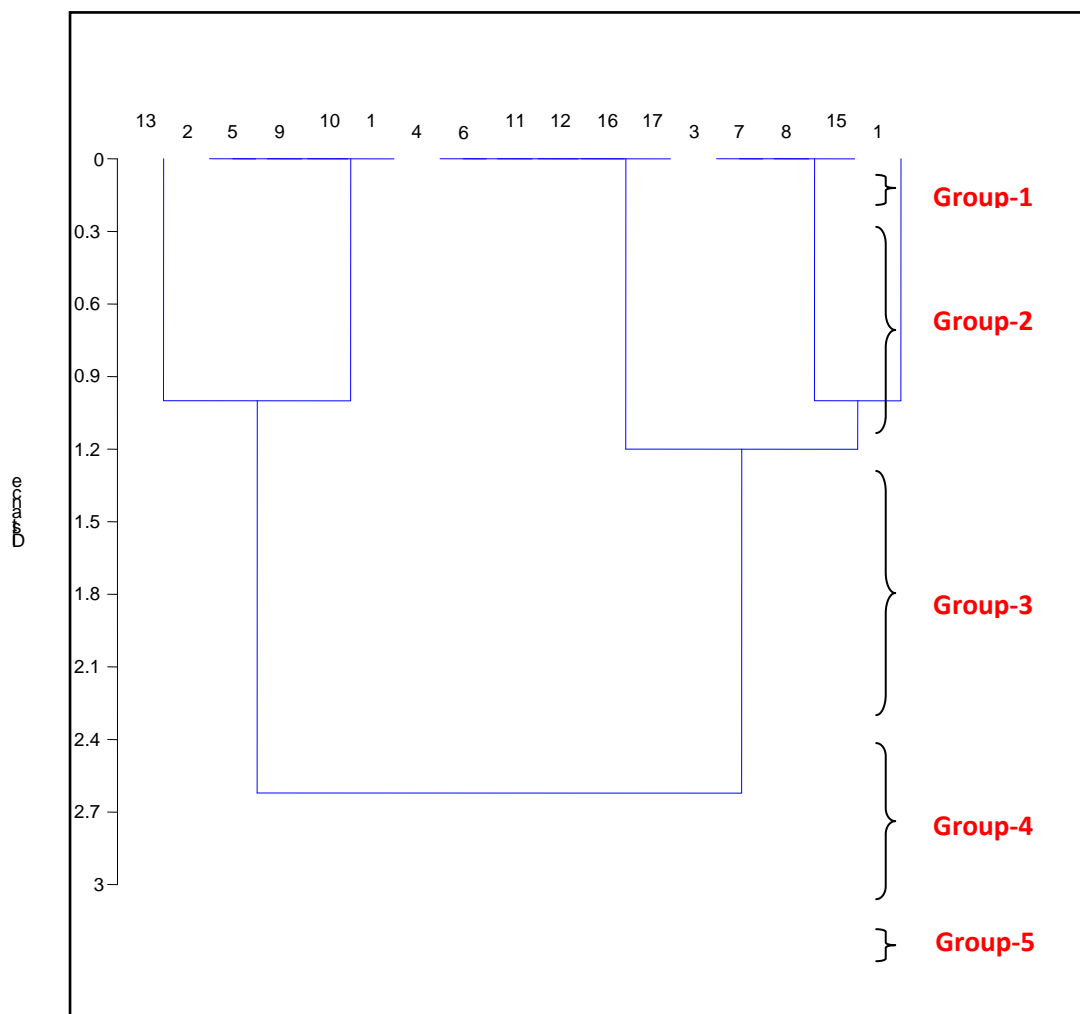


Figure 3: Clustering on the Basis of Systems

In this figure, 1 represent the Respiratory system , 2- Cardiovascular system, 3- Ocular (eye) Disease, 4- Hepatic disorder (Liver disease), 5- Gastrointestinal System, 6- Hematopoietic System, 7- Digestive System, 8- Skin Disorder, 9- Urinary System, 10- Nervous System, 11- Anti inflammatory, 12- General Metabolism, 13- Vitalizer, 14- Rejuvenative, 15- Reproductive System, 16- Circulatory System, 17- Aphrodisiac. *Taxus baccata* Linn., *Clerodendrum serratum* Linn., *Polygonatum cirrhifolium* (Wall.) Royl, works on Respiratory system. *Taxus baccata* Linn., *Coleus forskohli* Will., *Valeriana hardwickii* Wall., *Valeriana jatamansii* Jones, works on Cardiovascular system. *Thalictrum foliolosum* DC., *Berberis aristata* DC., Works on Ocular (eye) Disease. *Thalictrum foliolosum* DC. Works on Hepatic disorder (Liver disease). *Berberis aristata* DC., *Baliospermum montanum* Will., *Coleus forskohli* Will., *Curculigo orchoides* Gaerth works on Gastrointestinal System. *Berberis aristata* DC., Works on Hematopoietic System. *Dioscorea deltoidea* Wall. and *Thymus serpyllum* Linn. works on Digestive System. *Thymus*

Serpyllum Linn. and *Curculigo orchioides* Gaerth works on Skin Disorder. *Bergenia ciliata* (Haworth) Sternb., *Celastrus paniculatus* Will., *Costus speciosus* (Koenig ex Retz.) Smith and *Curculigo orchioides* Gaerth works on Urinary System. *Oroxylum indicum* Linn, *Valeriana hardwickii* Wall., *Valeriana jatamansii* Jones and *Celastrus paniculatus* Will. works on Nervous System. *Oroxylum indicum* Linn. works on Anti inflammatory. *Malaxis acuminata* D.Don. works on General Metabolism. *Habenaria intermedia* D.Don., *Habenaria edgeworthii* Hook. f. ex. Collett., *Polygonatum verticillatum* Linn., *Polygonatum cirrhifolium* (Wall.) Royl, and *Malaxis acuminata* D.Don. works as Vitalizer. *Habenaria intermedia* D.Don., *Habenaria edgeworthii* Hook. f. ex. Collett., *Polygonatum verticillatum* Linn., *Polygonatum cirrhifolium* (Wall.) Royl, works on Reproductive System. *Costus speciosus* (Koenig ex Retz.) Smith. and *Gloriosa superba* Linn. works on Reproductive System. *Polygonatum verticillatum* Linn. works on Aphrodisiac.

Ethno-medicine has no adverse effect on health. Their continuance for long, it is seen that eradicates/root out the diseases forever. More so, these medicinal plants are easily available at their door steps. Due to various reasons, the medicinal plants that are naturally grown in abundance in this hilly area are now a day's seen in extinction fast. Nearly 30 species of Garhwal Himalaya have been listed in various categories under threat in the Indian Red Data Books Nayar and Shastri, 1987-90 of which 24 species are from high altitude alpine regions. Rawat et al 2001 listed 45 more species (excluding Red Data Book) which need special attention for conservation. This list also contains as many as 30 species from high altitudes Nautiyal et al, 2004. There has been a considerable decrease in the number of families in sub alpine and alpine zones of district Uttarkashi dependent on grazing.

Most of the medicinal plants exploited indiscriminately from the wild. Due to non-availability in abundance, different populations are completely wiped out for making the collection activity difficult. Medicinal plants and their uses in the indigenous medicines are well known to many Indian communities. The recent trend has been to blend the traditional knowledge with modern health care practices to provide effective health care services to a wider population. The basic ingredients in the traditional medicines are the medicinal plants, which are depleting at a faster rate due to increase in consumption and indiscriminate drawl of resources from the wild. With the changing scenario, there is a need to enhance and promote the conservation and cultivation of these natural resources especially of medicinal plants. In addition to the requirement for conservation of medicinal plants it has also become essential to protect and patent the traditional knowledge (Raghupathy, 2001). Thus the conservation of medicinal plants is becoming and imperative for both technique grower and man for promotion of their protection and patent of the traditional knowledge. It also requires mobilization of these steps expeditiously for future welfare of the common man of the district and also living elsewhere.

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