



## ETHNO-BOTANICAL IDENTIFICATION OF SOME IMPORTANT MEDICINAL PLANTS OF KUNJAPURI HILL, UTTARAKHAND

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### ABSTRACT

Medicinal plants play important role in healthcare practices among the tribal and rural people. These Tribals and rural people have wonderful about the effective treatment of many health problems only by using these plants. This knowledge acquired by the tribal's and rural people usually passed from generation to generation only in verbal form. So an effort was carried out to asses' ethno botanical identification of some plants species used by local people of Kunjapuri Hill in district Tehri Garhwal of Uttarakhand. The information presented in this paper was gathered by frequent field visit in the forest and adjoining villages. The information collected on the basis of interview by local people found on kunjapuri Temple. The survey start from November 2016 and end March 2019. A total 55 plants were collected during the field visit out of which 44 plants species under 34 family were reported ethno medicinal by the local dwellers and used by them for different diseases. The plants used for different purposes are listed with scientific name, family, local name, ethno medicinal use. It can be concluded from this study that local dwellers of kunjapuri hill inherit a rich traditional knowledge about the medicinal use of plants and documentation of this knowledge will open the door for new research.

**KEYWORDS:** Ethno-medicinal plants, Rural people, Local dwellers, Kunjapuri Hill.

### INTRODUCTION

Ayurveda is measured by many scholars to be the oldest healing science. In Sanskrit 'Ayurveda means the science of life. Ayurveda information originated in India more than 5000 years ago and is often called the 'Mother of all healing'. Its stems from the ancient Vedic culture and was trained for the many thousands of years in an oral tradition from consummate masters to their disciples. Some of this knowledge was set to print a few thousand years ago but much of it is in accessible. The principle of many of the natural healing systems now familiar in the west have their roots in Ayurveda including Homeopathy.<sup>[1]</sup>

India is a veritable emporium of medicinal plants. It is imparted with rich natural resources, diverse ecological condition and a long practice of traditional medicine with their ethnic diversity and ancient civilization. The history of use of plants in medicine probably date to origin of

human race itself and the medicinal value of plants is recognized by every civilization on this earth.<sup>[2]</sup>

Ayurveda places great emphasis on prevention and encourages the maintains of health through close attention to balance in life, right thinking, diet, life style and the use of herbs. Knowledge of Ayurveda enables one to understand how to create this balance of body, mind and consciousness and how to make life style change to bring about and maintain this balance.<sup>[3]</sup> India an ancient heritage of traditional medicine. It is greatly to the acknowledgement of the people of India that they were acquainted with a far large number of medicinal plants that the native of any other country on the face of the earth.<sup>[4]</sup> Ethno-botany is the scientific relationships that exit between people and plants.<sup>[5]</sup> Ethno -medicine refers to the study of traditional medical practice which is concerned with the cultural interpretation of health, disease and illness and also addresses the health care in search of process and healing practiced based on the

theirs, belief and experiences indigenous to different culture used in the maintenance of health as well as in the anticipation, improvement and treatment of physical and mental illness.<sup>[6]</sup>

### AIM AND OBJECTIVES

1. Botanical verification of selected medicinal plants of Kunjapuri Hill of Rishikesh about 1 km around Kunjapuri temple.
2. Survey, collection, identification, and documentation of selected medicinal plants of Kunjapuri Hills of Rishikesh about 1 km around kunjapuri temple with special emphasis regarding those drugs described in Nighantus.
3. Collection of recent Ethno-medicinal information.
4. Preparation of herbarium.
5. Authentication of herbarium specimen by BSI and USAC.

**Study site:** The Himalayan region of Uttarakhand known as the Central Himalayas represents the combined areas of Kurmanchal and the Kedarkhand presently known as Kumaon and Garhwal respectively. Kunjapuri Devi temple district Narendra Nagar Tehri Garhwal is the region of Central Himalaya, lies between 78.170° E and 30.280° N. Kunjapuri Devi temple is sacred temple of immense importance in Hindu religion. Located at an height of 1676 meter on a hill, Kunjapuri devi temple is one of the 52 Shaktipeeth in Uttarakhand. Here at Kunjapuri Devi temple, the chest of burned Sati had fallen. Kunjapuri Devi temple also offers panoramic views of snow-capped mountains and peaks such as swarga Rohini, Gangotri, Banderpunch and Chaukhamba. Kunjapuri Devi temple is also completes the triangle of three Siddha Peeths lying on top mountains in Tehri Garhwal district. Kunjapuri-Surkunda Devi-Chandrabadni makes the triangle of Siddha Peeths.

### MATERIAL AND METHODS

An 'Ethno-medicinal study of selected medicinal plants of Kunjapuri Hill' Forest Division Narendra Nagar, District Tehri Garhwal, Uttarakhand, was conducted under the guidance of Supervisor and Co-supervisor during the period of Nov 2016 to March 2019 with a view to study the ethno-medicinal importance of plant species of this area and to record the folk wisdom of the natives. The study area comprises about 100 hectare. Frequent field trips in and around the study area were undertaken in order to survey the inhabiting area of the local people and to collect plant specimens together with important information in context to ethno-medicinal practice. The traditional healers were identified and interviewed extensively during the study.

Two basic approaches were carried out to study the traditional knowledge. The first approach, which is called "Inventory" was surveying of study area, collection of plant specimens and the second approach which is called 'Interview' involves asking questionnaire about

the local name and medicinal uses of plants by the local dwellers of Kunjapuri hill. The collected specimens of plant species were shown to the local peoples and asked for their knowledge about the plants. The local healers, elders and women were consulted for the medicinal uses of the plants and this was checked with different people having knowledge of traditional healthcare. Both the approaches were repeated with knowledgeable persons, elders, and traditional healers etc.

The plants specimens were collected by the scholar with team of P.G. Department of Dravyaguna, Rishikul Campus, Haridwar, Uttarakhand Ayurveda University Dehradun. The local peoples were also requested to accompany the scholar for on spot identification of plants in the forest and collection of plants specimens for herbarium preparation. Plants were photographed and specimens were collected, numbered, documented, prepared herbarium following usual methods of herbarium preparation and preserved. Collected plant specimens were preliminarily identified with the help of Supervisor, Co-supervisor, Regional Flora and varified by Botanical Survey of India (BSI), Scientist (Uttarakhand Space Application Centre). Questionnaire was planned to collect information on the local name of the plants, medicinal uses, part used, method of preparation of medicine, approximate doses for ailments, and collection for personal use or for selling. The recorded plant species are arranged in their Binomial Name along with their Natural Order, Sanskrit Name, English Name, Hindi Name, Local Name and description of their morphological features. Ethno-medicinal uses of plants used by local dwellers are described along part used, preparation of medicine, dose and comparatively analyzed with known medicinal uses in the Ayurvedic Lexicons.

### RESULTS

During the present study 44 plant species under 34 families were reported by the local informers and used by them for their primary health care. Out of 44 plant species 04 species belongs Rosaceae, 04 species belongs to Asteraceae, 02 species belongs to Lamiaceae, 02 species belong to Rannunculaceae, 01 species belongs to Pinaceae, Polygonaceae, Berberidaceae, Orchidaceae, Asparagaceae, Menispermaceae, Violaceae, Anacardiaceae, Zingiberaceae, Buddlejaceae, Amaranthaceae, Lauraceae, Solanaceae, Lythraceae, Dioscoreaceae, Asclepiadaceae, Rubiaceae, Gesneriaceae, Leguminaceae, Fagaceae, Cucurbitaceae, Urticaceae, Vitaceae, Hypercaceae, Verbenaceae, Araceae, Acanthaceae, Apiaceae, Santalaceae and Onagraceae.

Analysis of the data based on their habitat shows that 18 species were Herbs, 16 species were Shrubs, 06 species were Trees and 03 species were Climbers.

Table No. 1: Distribution of plants found in kunjapuri Hill.

S. No	Binomial Name	Natural order	Sanskrit Name	English Name	Hindi Name	Local Name
1	Malaxis acuminata D.Don	Orchidaceae	Jeevaka	Not described	Jeevaka	Hari-musali
2	Berberis lycium Royle	Berberidaceae	Daru-haridra	Barberry	Daru-haldi	Kingora
3	Thalictrum foliolosum DC.	Ranunculaceae	Pitaranga	Indian meadow rue	Piyaranga Pilijada	Makkar-ghas
4	Asparagus curillus Buch-Ham. ex Roxb	Asparagaceae	Satavari	Asparagus	Shatavar	Jiran, Kaur
5	Pinus wallichiana A.B. Jackson	Pinaceae	Sarala	Chir-pine	Chira	Chira
6	Cissampelos pareira L.	Manispermaceae	Ambashtha, Patha	False pareira	Padi	Nirbishi, Kali-bel
7	Viola canescens Wallich in Roxb	Violaceae	Vanapshika	Pansy violet	Vanafsa	Kauru
8	Rhus parviflora Roxb	Anacardiaceae	Tintideek		Tung	Hinsar
9	Hedychium spicatum Buch-Ham	Zingiberaceae	Shatti	Spiked ginger lily	Karpur-Kachri	Banaldi, Sedua
10	Buddleja asiatica Laur	Buddlejaceae		White-Butter-fly-bush	Neemda	Bhati, Sin-wali
11	Achyranthes bidentata Blume	Amaranthaceae	Apamarga	Prickly-chaff flower	Chicheree, Latjira	Latjira
12	Cinnamomum tamala (Buch-Ham)	Lauraceae	Tamalaka	Indian cassia	Tejpata	Kirkiria
13	Solanum nigrum Linn	Solanaceae	Kakmachi	Black-night-shade	Makoi	Makoi
14	Woodfordia fruticosa (L) Kurz	Lythraceae	Agnijwala, Dhataki	Fire flame bush	Dhaya	Dhali, Dhaul
15	Dioscorea bulbifera L.	Dioscoreaceae	Varahikanda	Potatoyam	Varahikanda	Gethi
16	Cryptolepis buchmanii Roem & Schult	Asclepiadaceae	Medhasingi	ND	Jambu-patra Sariva	Dudibel, Dudil
17	Rubiaceae cordifolia L.	Rubiaceae	Manjistha	Indian-madder	Manjeetha	Manjeetha
18	Didymocarpus pedicellata R.Br.	Gesneriaceae	Shila-pushi	ND	Pathar-phori,	Pathar-phori,
19	Bauhinia semla Wunderlin	Leguminosae	ND	ND	Kanda	Semla, Kandali
20	Prunus cerasoides D.Don	Rosaceae	Padmaka	Himalayan-wild-cherry	Padam	Paiyan, Phaja
21	Quercus leucotrichophora A. Camus	Fagaceae	ND	White-oak	ND	Banj, Sita-supari
22	Pyrus pashia Buch-Ham. ex D.Don	Rosaceae	ND	ND	ND	Mehal, Mole
23	Gerbera gossypina (Royle) G. Beauv	Asteraceae	ND	ND	ND	Kapasi, Kuph
24	Rubus niveus Thunb	Rosaceae	ND	Mysore-Raspberry	ND	Anchu, Kalahinsar
25	Leptodermis lanceolata Wall.	Rubiaceae	ND	ND	ND	Padera, Bara-mujara
26	Trichosanthes tricuspidata Lour	Cucurbitaceae	Swetpushpi	ND	Indrian	Indrayani, Indrain
27	Eupatorium adenophorum Spreng	Asteraceae	ND	ND	ND	Kharna, Bakura
28	Erigeron canadensis L.	Asteraceae	ND	ND	ND	ND
29	Clematis montana Buch-Ham ex DC.	Ranunculaceae	ND	Himalayan clematis	Churanhar	Kaunia, Kujju
30	Rumex hastatus D.Don	Polygonaceae	ND	Arrow leaf dock	ND	Amera, Alm
31	Urtica parvifolia Roxb	Urticaceae	ND	Stinging nettle	Bicchu -ghas	Kandali
32	Vitis Jacquemontii R. Parker	Vitaceae	ND	ND	ND	ND
33	Hypericum oblongifolium Choisy	Hypericaceae	ND	ND	Basant	Peoli, Chaya
34	Lantana camara L	Verbenaceae	ND	Wild sage	ND	Laltenya
35	Arisaema tortuosum (Wallich) Schott	Araceae	ND	ND	ND	Bang, Bag-mugri
36	Lepidagathis cuspidata Nees.	Acanthaceae	ND	ND	ND	Kalela

37	Rubuspaniculata Sm.	Rosaceae	ND	ND	ND	ND
38	Ainsliaelatifolia(D.Don)Sch.Bip	Asteraceae	ND	ND	ND	Kauru, Ram- ban
39	BupleurumhamiltonniBalak	Apiaceae	ND	Hares Ear	ND	Jangali-Jeera
40	SaussureaheteromalaD.Don	Asteraceae	ND	ND	ND	Murang
41	LeucaslanataBenth	Lamiaceae	ND	ND	ND	Dornp-uspi
42	Ajugabracteosa Wall Ex Benth	Lamiaceae	Nalkanthi	Bugle	Neelkanthi	Neelkanthi
43	OsyrislanceolataHochst&Steud	Santalaceae	ND	ND	ND	Bakroliya
44	OenotheraroseaAit	Onagraceae	ND	Pink eveing primrose	ND	ND

## DISCUSSION

The use of plants species as medicine by local people of Kunjapuri Hill, district Tehri Garhwal, Uttarakhand had chosen practice in this region throughout history. It was found during the study that traditional healers of more age having good traditional knowledge about the uses of medicinal plants of study site. Among all the local people, young generation did not show interest in traditional system of medicine but consensus among users indicates these wild herbs species have curative effect.

## CONCLUSION

The ethno medicinal survey of the Kunjapuri Hill, district Tehri Garhwal, Uttarakhand revealed that people of this area are possessing good knowledge of herbal drugs but as these local dwellers are in progressive exposure to modernization, their knowledge of traditional use of plants may be lost in due course. The knowledge needs more invention and research related to isolation and purification of active ingredients from these plants should be carried out to provide leads in future drug therapy.

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