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**INDIGENOUS TRADITIONAL KNOWLEDGE ON SOME MEDICINAL PLANTS**

**FROM KOTABAG BLOCK (RAMNAGAR), NAINITAL**

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**ABSTRACT**

Indigenous medicine is an important component of indigenous knowledge system, which is widely practiced by local communities all across the India. The prevalent practice of herbal remedies has descended down from generation to generation and includes the cure from simple ailments to the most complicated one. This paper describes the plants used in indigenous medicine and healthcare in Kotabag block of Nainital district, Uttarakhand. A total of 25 plants belonging to 23 genera and 16 families were described. Different plant parts were used to cure various ailments.

**Keywords:** Medicinal Plants, Kotabag Block, Traditional Knowledge, Local Communities

**INTRODUCTION**

Indigenous Traditional Knowledge (ITK) is an integral part of the culture and history of a local community. It is evolved through years of regular experimentation on the day to day life and available resources surrounded by the community [1]. It is the unique, traditional, local knowledge existing within and developed around specific condition of men and women indigenous to a particular geographical area. Besides monitoring their cultural liveliness, this knowledge system is vital for their well-being and for sustainable development. World Health Organization (WHO) has

stated that 80 % of the world's population depends on traditional medicine for its primary health care and is indispensable for its survival. For indigenous and local communities who depend on ITK for their Livelihood as well as to manage and exploit their local ecosystem in sustainable manner, ITK is a valuable asset. The community have developed the indigenous knowledge system to conserve and utilize the biological diversity of their surroundings [2]. The recognition of the creativity of the traditional communities is essential for the conservation of biodiversity as well as

conservation of intellectual diversity [3]. Economic, social and political factors are gradually uprooting many such untapped resources from their native habitats resulting in loss and erosion of very rich indigenous knowledge. It provides useful clue for planning projects for conservation of biological diversity, sustainable uses of natural resources, indigenous health practices etc.

Medicinal plants are main ingredients of local medicine and thus of vital importance in Traditional Health Care System [4]. This system consists of two sub-systems viz. Folk stream and Classical stream [5, 6]. The folk stream system is based on oral tradition, practiced by local villagers and tribal communities (Non Codified System NCS). The classical stream is based on theoretical knowledge, experimental and physiological explanation provided by many learned physicians and surgeons of earlier time like Charak, Sushruta etc. (Codified System CS). In the present study an attempt was made to gather information on some traditional use of medicinal plants from different villages in Kotabag Block of Nainital district to document the medicinal uses of plants to cure the common diseases.

#### **MATERIALS AND METHODS**

Field survey have been made during 2011-2012 to gather data on traditional uses of medicinal plants across various villages in

the Kotabag block; a part of Kumaun Himalaya in Nainital district (29° 29' 44" N Lat. And 79° 20' 05" E Long.) of Uttarakhand state in India. Folk stream system (Non Codified System) was used to collect the information. The information was gathered using semi-structured questionnaires about the types of ailments treated by the traditional use of medicinal plants and the preparation of herbal medical formulation. Standard method of collection, preservation and maintenance of specimen in the herbarium were followed [7, 8, 9].

#### **RESULTS AND DISCUSSION**

Present study provides information on 25 plant species belonging to 23 genera and 16 families (**Table 1**). Out of these plant species 12 species are herbs, 05 are shrub, 07 are trees and 01 is climber. The plant part used for medical preparation was bark, flowers, rhizomes, root, leaves, seeds and whole plant. In some cases whole plant including roots (e.g. *Solanum nigrum*) were used. The study area is rich in medicinal plant resources. More information may be explored from the peoples residing in the remote villages of the block. In view of the importance of traditional medicine which provides health services to 80% of the world population, demand of herbal drugs by the pharmaceutical and depleting natural plant resources is increasing. Present study will be helpful to document the medicinal utility

of less known plants available in remote areas of the country and will be helpful to conserve the heritable knowledge in the field of herbal treatment and general uses of plants in village ecosystems.

### CONCLUSION

There is growing pressure on the natural habitats of medicinal plants all over the world. This is mainly due to the rapidly growing global demand for herbal medicine as people feel safer with indigenous cure and cost is much less than modern drugs. Most of the medicinal plant species are threatened with extinction due to unsustainable harvesting. To maintain the ecosystem equilibrium awareness of the sustainable utilization of medicinal plant species is important and their conservation in sustainable environment is urgently needed keeping in view the demand among the local communities and their drugs in global market.

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*Boerhavia diffusa*



*Cassia fistula*



*Euphorbia hirta*



*Emblica officinalis*



*Mimosa pudica*



*Calotropis procera*



*Taraxicum officinale*



*Ricinus communis*



*Achyranthes aspera*



*Ageratum conyzoides*



*Solanum nigrum*



*Murraya koenigii*

Figure 1: Some Common Ethno-Medicinal Plant of Study Area

Table1. Some important ethno-medicinal plants of Kotabag block

S. No.	Botanical Name	Local name	Family	Habit	Part Used	Uses
1.	<i>Achyranthes aspera</i>	latzira	Amaranthaceae	Herb	Root, seed	Root is used for pyorrhoea, cough and fevers. It is believed that regular brushing avoids tooth decay and cures pyorrhoea
2.	<i>Adhatoda vasica</i>	vasa	Acanthaceae	Shrub	Leaves	A warm decoction of the leaves is used for scabies and other skin diseases. The fresh leaf surface macerated with honey is chewed for relieving cough and bronchitis at the interval of three to four hours.
3.	<i>Ageratum conjoinds</i>	Gamalva	Asteraceae	Herb	Leaves	Leaf juice is applied for blood clotting Plant with the roots of <i>Thalictrum foliolosum</i> made into past and applied on sores, cut and various skin ailments.
4.	<i>Asparagus racemosus</i>	Kairua	Liliaceae	Shrub	Whole plant	The tuberous roots are pickled, young shoots eaten as vegetable, tuber with honey in diabetes and dysentery Roots are a part of chawanprash. Juice of fresh root with oil is used in headache.
5.	<i>Artemisia sp.</i>	Pati	Asteraceae	Herb	root	Leaf juice is used to wash wound to prevent septic
6.	<i>Azadirachta indica</i>	Neem	Meliaceae	Tree	All parts	The fresh juice of the leaves is given for intestinal worms, with honey the juice is prescribed for jaundice and skin disease.
7.	<i>Bahunia variegata</i>	Kachnar	Papilionaceae	Tree	Unopen buds	Cooked buds are used as vegetable. Pickle of buds is used in various stomach diseases
8.	<i>Boerhavia diffusa</i>	Punarnava	Nyctaginaceae	Herb	All parts	Its fresh juice is used to cure various eye diseases like conjunctivitis and night blindness. Root paste with ghee is used as eye liner to cure redness of eye.
9.	<i>Calotropis procera</i>	Aak	Asclepiadaceae	Shrub	leaf	The leaf juice is applied to skin diseases Flower juice mixed with <i>Piper nigrum</i> is used in epilepsy The smoke of burning leaves is inhaled for the cure of asthma and cough Its milk and stem is also used in animal health care such as treatment of chronic tumour and retention of placenta (ROP).
10.	<i>Carica papaya</i>	papita	Caricaceae	Tree	fruit	Fruit pulp is used to cure amoebic dysentery and digestive disorders due to its purgative properties.
11.	<i>Cassia fistula</i> Linn	Amaltas	Caesalpiniaceae	Tree	Root, leaf, Fruit and bark	Leaf juice is rubbed in skin diseases. Root bark, seed and leaves mixture is given as laxative. Bark juice is used in toothache. Fruit pulp is used in asthma and skin diseases.
12.	<i>Cassia tora</i>	Chakavat	Cesalpiniaceae	Tree	Roots, Leaves, and Seeds.	It is very useful in treating skin diseases like ringworm and itching or body scratch and psoriasis. Decoction of the fruit is used in the treatment of fever
13.	<i>Centella asiatica</i>	Brahmi	Umbelliferae	Herb	Leaves	An ointment made of leaf juice. Leaves are used for mouth ulcer.
14.	<i>Curcuma longa</i>	Haldi	Zingiberaceae	Herb	Rhizome	The fresh juice is used for many skin infections. Powder mixed with milk is used to cure internal injury and cough and cold.
15.	<i>Cuscuta reflexa</i>	Amarbel	Cuscutaceae	Climber	Whole plant	Plant decoction is given to pregnant women for early elimination of placenta.
16.	<i>Dhatura metel</i>	Datura	Solanaceae	Shrub	All parts	The leaves of the species are smoked to cure cough. Roots are used in toothache and for brushing teeth
17.	<i>Emblica officinalis</i>	Amla	Euphorbiaceae	Tree	Fruits	It is use in fever, vomiting, indigestion, habitual constipation and other digestion troubles. Its paste mixed with shikakai and retha is used to wash hairs to reduce hair fall and greying. Ayurvedic medicine(one of the constituents of "Triphala")

18.	<i>Euphorbia hirta</i>	Dudhi	Euphorbiaceae	Herb	All parts	It is traditionally used as a remedy to treat asthma. In some places leaf extract mixed with <i>Piper nigrum</i> is given in snake bite to nullify venom. Leaf juice is applied in boils and skin diseases
19.	<i>Eupatorium</i> sp.	Kalabasa	Asteraceae	Herb	Leaves	Leaf juice is applied to stop bleeding
20.	<i>Mimosa pudica</i>	Chui-mui	Mimosaceae	Herb	Leaves	Leaf paste is used in boils
21.	<i>Murraya koenigii</i>	Meethi neem	Rutaceae	Tree	Leaves, Decoction	Leaves are used in indigestion and diabetes. Its decoction is given to animal in Diarrhoea, Arthritis
22.	<i>Ricinus communis</i>	Arand	Euphorbiaceae	Shrub	Leaves, seeds	Leaves paste is applied in headache Leaves with hot mustard oil are also used in gout Seed oil is used in joint pains
23.	<i>Solanum nigrum</i>	Makoy	Solanaceae	Herb	Whole plant	Plant juice is used to cure jaundice
24.	<i>Solanum virgeanum</i>	Katari	Solanaceae	Herb	Seeds, Fruits, Leaves	Seeds are given in jaundice Fruits are used in piles Leaf extract is used in skin infections
25.	<i>Taraxicum officinale</i>	Karnfool	Asteraceae	Herb	Root, Leaves	Root is used in stomach ache and leaf decoction is used to cure cough and cold.