Traditional uses of some common plants in indigenous folklore of Dronagiri: A mythic hill of Uttaranchal

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This communication deals with the traditional uses of 19 common plants used by the local inhabitants and Vaidyas of Dronagiri, a mythic hill of Almora district in Uttaranchal in their indigenous folklore. For each plant specimen described, botanical name, local name(s), parts, preparation, mode and use(s) are given.

Keywords: Traditional uses of plants, folklore, Uttaranchal

The Himalayan zone of U.P. (Kumaon and Garhwal) recently carved under the separate state of Uttaranchal has already been identified as one of the richest biodiversity centres of the country. Dronagiri, a mythic hill of Uttaranchal is well known and observed as a hot spot pocket of medicinal plant biodiversity in Almora district. The people inhabiting the area are the migrated families of different ethnic groups, which are mostly the retired army personnel and freedom fighters of the then British India. All these families are scattered throughout the entire pocket within small houses locally known as Khat. Cultivation of potato and radish and selling of indigenous agricultural instruments prepared from the forest products particularly from the Oak trees are their main economic activities. Although tremendous contribution has been made towards the ethnobotanical exploration of Kumaon Himalaya, these studies are mainly confined to a particular tribal population of Pithoragarh district known as Bhotias or Ban Raut, while the plants associated with these studies mostly belong to the high alpine flora of Kumaon Himalaya. However, the indigenous herbal practices of rural people of subalpine and temperate Himalaya like Dronagiri and their adjoining areas i.e. Tarak-Tal, Pandukholi and Khera Khanshar are still unexplored. Hence, the author has conducted an ethnobotanical case study in these areas and the information documented is communicated in this paper.

Methods of survey

The information was gathered during the plant collection trips to Kumaon Himalaya in the year 2000-2001. Most of the plant species reported in this paper are new, while in few cases i.e. Agave americana; Grewia optiva and Pinus
no similarity has been found with the uses reported by the earlier workers6-8,10,20. The plant species described in this paper are enumerated alphabetically with correct botanical nomenclature, family name, specimen no., local name, and status of the plant, i.e., wild or cultivated. The method of indigenous preparations, approximate doses, and route of administration are also given.

**Observations**

**Agave americana** Linn. (Agavaceae), KRA-23925, (Local name: Rambans), Wild

1-2 teaspoon powder of the seed with about 50 ml of hot water twice a day is given orally for the treatment of boils and blood purification. About 25-30 ml leaf juice from young plants thrice a day for one week is also given for abortion in early pregnancy. The fibrous leaves of mature plants are soaked in running water for about one month for easy separation of pulp. After manual separation of pulp the remaining fibres are thoroughly washed and used for the preparation of ropes, mats and decorative goods.

**Angelica glauca** Edgew. (Apiaceae), KRA-23854, (Local name: Gandrayan), Wild, Cultivated

Leaf powder in the form of paste mixed with the oil of yellow sarson (*Brassica campestris*) is applied locally for about one month to cure white patches on the body, while about one teaspoonful dried powder of the root with hot water is given orally twice a day for one week in case of acute bronchitis and constipation.

**Betula utilis** D.Don (Betulaceae), KRA-22264, (Local name: Bhoj patra), Wild

1-2 teaspoonful of fine powder of dry stem bark of the tree with hot milk mixed with honey or sugar is given daily for 5-7 days to children of about 5-10 years to kill the intestinal worms.

**Carthamus tinctorius** Linn. (Asteraceae) KRA-23926, Wild

1-2 teaspoonful of leaf powder mixed with one glass of milk is given to pregnant ladies as tonic for having healthy child. The dried powder of flowers mixed with coconut oil is used as a natural hair tonic to prevent hair fall.

**Eleusine coracana** (Linn.) Gaertn. (Poaceae), KRA-22291, (Local name: Maduwa), Cultivated

1-2 chapattis made of about 50 g flour are prescribed daily for three days with hot water to cure acute constipation.

**Fagopyrum esculentum** (Linn.) Moench (Polygonaceae), KRA-23927, (Local name: Ougal), Cultivated

Young plants cooked in iron vessel are given to anaemic patients. Some people also use this preparation to cure constipation. The seeds are highly nutritious. The flour of this grain mixed with wheat flour is used to prepare chapattis and given to sick persons as a source of extra energy and for fast recovery.

**Ficus auriculata** Lour. (Moraceae), (Local name: Timla), Domesticated

Fruits are edible. Unripe fruits are used for vegetable and to cure diabetes and
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high blood pressure. The latex of the plant is used externally in eye ailment.

**Glycine max** (Linn.) Merrill (Fabaceae), KRA-23928, (Local name: Kala bhatt), Cultivated

The seeds are commonly used to cure jaundice. About 50-100 g seeds, soaked overnight are ground to paste. The paste is then mixed with rice in a ratio of 1:2 and cooked in iron vessel. The prepared product (locally known as Rajod) is given twice a day for about one week to cure jaundice.

**Grewia optiva** J.R. Drum ex Burret (Tiliaceae), KRA-23859, (Local name: Bimal), Domesticated

Seeds are laxative. Paste of the seeds mixed with a glass of hot milk is given to pregnant ladies to facilitate easy delivery. Fresh leaves of the tree are given to buffalo and cow for enhancing lactation potential. The fibres of young stems are crushed to paste and mixed with hot water and used as shampoo by local ladies for washing hair.

**Juglans regia** Linn. (Juglandaceae), KRA-23841, (Local name: Akhrot), Domesticated

Rind of young fruits is ground to paste with water and applied on the head in cases of loss of hair caused by a special kind of hair fall disease locally known as "Khaair". Some people also use the fresh rind to treat tooth problems. The edible part of the fruit is given to the patients in case of neurological disorders. The local concept behind this remedy is that the structure of the seed resembles the structure of human brain and thus may have the property of strengthening the brain and cure the neurological disorders particularly in case of head injury.

**Macrotyloma uniflorum** (Lam.) Verde. syn. *Dolichos uniflorus* Lam. (Fabaceae)

KRA-23930, (Local name: Gahat, Kulth), Cultivated

Hot decoction of the seed is used to warm up the body during extreme cold. 1-2 cup hot decoction of about 100 g seeds is given for one to two weeks (depending upon the condition of patients) to treat kidney stone. The decoction in combination with *Dioscorea belophylla* in the ratio of 1:1 is administered orally for one week as an antifertility and abortifacient agent.

**Pinus roxburghii** Sargent (Pinaceae), KRA-22214, (Local name: Chair), Wild

Seeds are edible. Fresh resin is applied locally on cuts and wounds and then tightened with clean cloth for about 5-7 days to prevent infection from microorganisms.

**Pyracantha crenulata** Linn. (Apiaceae), KRA-23929, (Local name: Ghingaru), Wild

Ripe fruit is delicious and eaten by local people to cure constipation. While 25-30 ripe fruits with small pinch of salt twice a day for 15 days is given to pregnant anaemic ladies.

**Pyrus pashia** Buch-Ham. ex D.Don (Rosaceae), KRA-23872 (Local name: Mehal), Wild

The ripe fruit is delicious and eaten by
children. 4-5 ripe fruits twice a day for 15-30 days are advised by the local Vaidya for the treatment of asthma.

**Quercus lucotrichophora** A. Camus (Fagaceae), KRA-23911, (Local name: Baj), Wild

Gum of the tree is used for gonorrhreal and digestive disorders. 25-30 ml decoction of about 50 g bark twice a day for one to two weeks is given to the patients suffering from asthma. The wood of the tree is very hard and used for making indigenous agricultural implements locally known as ‘Hal’ (plough) and ‘Danala’. In recent past the wood was used as a raw material for the preparation of coal on commercial scale. But now, due to deforestation and ecological imbalance the forest department has banned this practice.

**Ricinus communis** Linn. (Euphorbiaceae), KRA-23914, (Local name: Arendi), Wild

Leaves are used for the treatment of arthritis. 2-3 young leaves are tightened overnight on the knee with the help of thin cloth daily for a week or longer. During the course of its application the tightened leaves promote fast blood circulation and the patient gets relief. The seed oil is used for the treatment of spondilitis and joint pain. About 20-25 ml decoction of the young leaves twice a day for 15-30 days is given to control diabetes.

**Rubus ellipticus** Smith (Rosaceae), KRA-22176 (Local name: Hissalu), Wild

Fruits are delicious. 1-2 spoonfuls of paste of the young leaves with cold water thrice a day is given orally in case of acute diarrhoea. While, the same amount of paste is administered orally with hot water in case of constipation. A decoction of the root is used as an intoxicant for the preparation of local wine.

**Solanum incaum** Linn. (Solanaceae), KRA-23906, (Local name: Bis), Wild

The fruit and seed are highly toxic and sometime cause death of children and animals. Seed powder in small quantity about 500-1000 mg (according to the resistance power of the patients) is given to those patients suffering from asthma and symptoms like tuberculosis. The paste of the fresh fruit is applied externally on cuts and wounds.

**Toona hexandra** (Wallich ex Roxb.) M. Roem. syn. Cedrella toona Roxb. ex Rottb. & Willd. (Meliaceae), KRA-23916, Domesticated

Leaves are used as natural insecticide. Fresh leaves are used to protect food grains from insects; their paste is used while storing the grains for long duration. About 50 ml decoction of the leaves twice a day for 15-30 days is given to the patients suffering from diabetes. The mature wood of the tree is used for making doors and frames.

**Discussion**

Traditional herbal care is an established ancient system of treatment in India. This unique traditional system of health care progressed from generation to generation within the society and is still prevalent within the remote tribal and rural areas of the country. In recent years
multifarious human activities, increasing urbanization, cutting of forests and migration of tribal groups towards urbanised areas has led to serious threats to the folk traditions and may further lead to extinction of Indian ethnic diversity in near future.

Uttaranchal, the earlier part of U.P. hills is one of the richest emporia of ethnobotanical heritage evaluated from time to time by several workers. The plants reported in these studies belong to the category of endangered taxa of high alpine zone. The ethnomedicinal claims discussed in this paper offer great potential for pharmaceutical industries and can serve as an excellent source of a variety of lead molecules for drug discovery programme. During the survey, it is noticed that few of the local indigenous herbal practitioners known as “Vaidyas” and few of the old villagers of these areas have very good knowledge of the indigenous herbal preparations from common plants of their surroundings. Keeping in view the present trend of excessive exploitation of natural resources and degradation of diversified Himalayan biomes, the neglected mountain ranges of Uttarakhand need immediate attention for consistent exploration and systematic documentation of untapped indigenous knowledge inherited from generation to generation. Since India had joined the World Trade Organization (WTO), the pharmaceutical industries are concerned about product patents regime. Before revising the patent act, there is an urgent need to translate all the available traditional knowledge as per international standards and safeguard the patenting rights of the stakeholders. However, it must be remembered that if the ethnobotanical information is to be of value in modern drug discovery programme, it has to be collected in more detail with respect to the information like symptoms, method of indigenous preparation, doses, source of information, route of administration and the final outcome of the treatment.

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