SOME IMPORTANT ETHNOMEDICINAL PLANTS FROM BHAGIRATHI VALLEY OF DISTRICT UTTARKASHI (GARHWAL HIMALAYA)

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Abstract: Present communication deals with important medicinal plants collected during the field survey from the Bhagirathi valley of Uttaranchal state having ethnomedicinal uses. Specimens were collected and studied during the extensive survey of the area during 2008 to 2010. Information were gathered from local ethnic groups having traditional knowledge of herbal medicines. Information were cross checked for authenticity of investigated results.

Key words: Ethnomedicinal plants, Bhagirathi valley, Herbal, Ailments, Disorder, Indegenous.

INTRODUCTION

The uniqueness and extraordinary natural value of the Himalaya is well known world over . This area is the storehouse of the numerous medicinal and aromatic plants, which are exploited for their utilization in drugs, pharmaceutical and perfume industries (Chopra *et al*., 1956, Anonymous, 1978). From centuries, indigenous people of Himalayan region had ununiquely perceived and utilized the wild growing plant species as medicine, spices and condiments etc (Jain, 1991) . The importance of Himalaya as source of natural wealth and sacred place of learning has been established since ancient time. The importance of Himalayas as cited in Charaka Samhita by Agnivesha and Charaka (1992) "There is excellence among the mountains named Himalayas which is the best habitat of medicinal plants" Ethnobotany of kumaon and Garhwal region was first described by Atkinson (1882). Dr. E.K. Janaki Ammal (1954) of Botanical survey of India intiated first organized study in this field. The use of wild medicinal plants in eastern and central Himalaya was reported by Rao (1981), Gangwar and Rama Krishan (1990), Bhatt and Gaur (1992) and Manandhar (1995). Ethnobotanical studies in western Himalayas were made by Shah & Joshi (1971), Nautiyal (1981), Rajwar (1984), Badoni (1986), Gaur (1999), Sharma (2003), Samant *et al*. (1998), Dhyani (2007) and Khan *et al*. (2009).

STUDY AREA

Uttarkashi is one of the thirteen districts of the Uttaranchal state. Areawise it is largest district of the Uttaranchal and its total geographical area measures 8016 Sq. Km. It is situated in the middle and Greater Himalayan range between 30° 26` to 31° 28` North latitude and between 77° 37` and 79° 45` east longitude approximately.

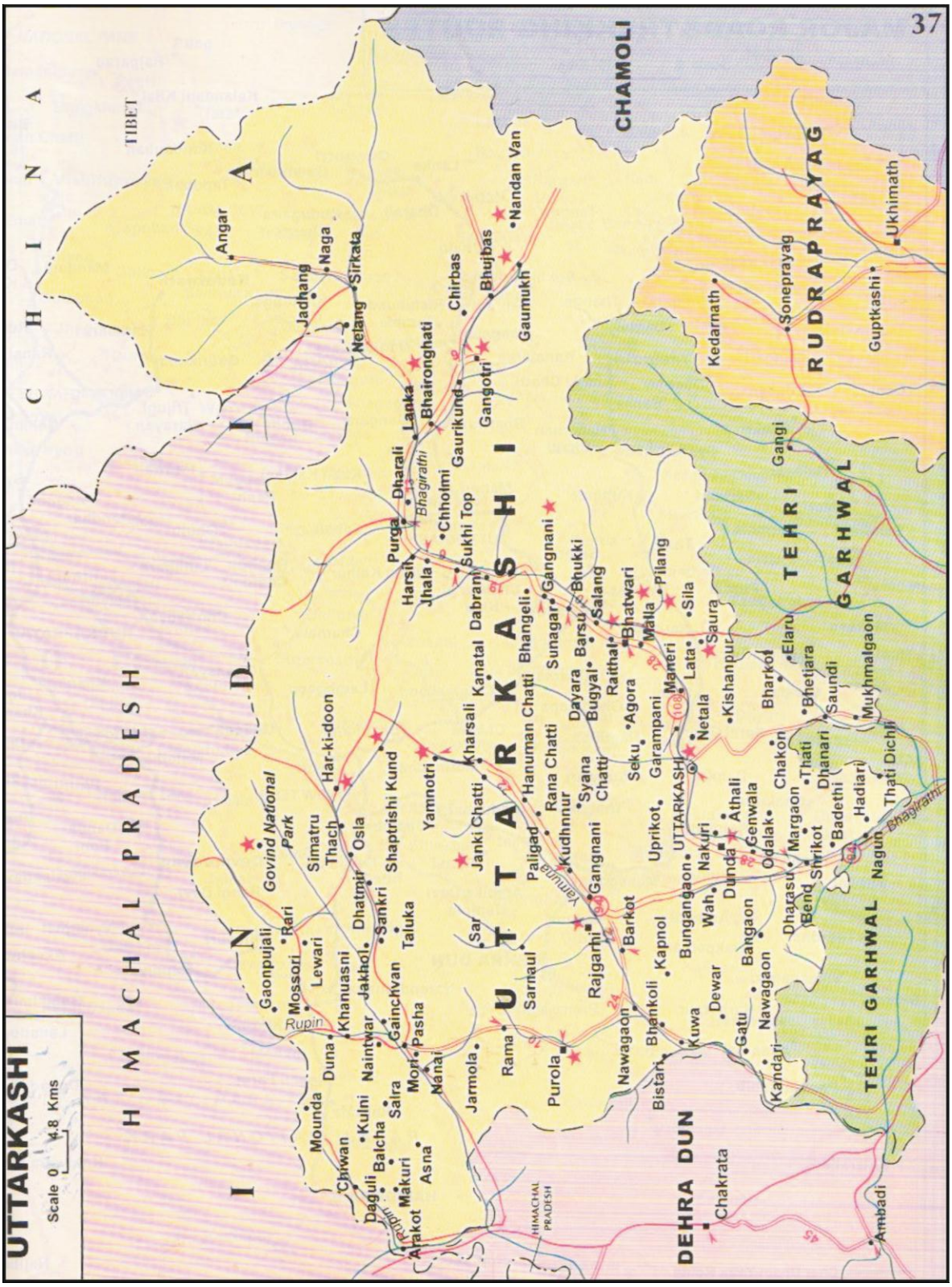
It is bounded in the north by the Himachal Pradesh and Tibet, on the east by Chamoli district, on the South by Tehri and on the South west by District Dehradoon of the Uttranchal. The district head quarter is situated in the town of the Uttarkashi which is about 1150 mts. above the sea level. There are two important valleys in the district, the Bhagirathi valley and the Yamuna valley. Both valleys are not only rich in natural resources but also the areas of main human settlement.

TOPOGRAPHY AND CLIMATE

Bhagirathi Valley in the district begins from the Gaumukh and runs south westward till Hersil from where it turns abruptly towards the south. Total length of the valley in the district is more than 100 km. The Bhagirathi in its path makes deep gorges and rapids. Hilly tracts of Bhagirathi valley ranges from 1150 mts to 6000 mts (Gangotri and Bander Poonch). Higher region of districts remains under the snow cover except during the summer season. Gaumukh and Doriyani are the main glaciers and the Thangla, Mulingla and Shrang Khant are the main passes of the district. The Ganga is the main river of the district. The average annual rain fall is between 125 to 415.2 mm. The climate is pleasant and salubrious at high attitudes. The best flowering season for collection of medicinal herbs it the month of September to October.

Topography of this area depends on the hills, rivers and valleys. In terms of diversity of the climate, three important zones are recognized in the study area i.e. the subtropical zone, temperate zone and alpine zone.

The lowest range climate zone is the subtropical zone covering the elevation range of 1150 to 1700 mts. The average annual temperature of this zone ranges from 13.5° to 19.0°C. Monsoon starts in the middle of June and lasts upto the end of September. Mist increases the humidity to saturation point. In autumn due to continuous sunshine the humidity decreases.


37
UTTARKASHI
Scale 0 4.8 Kms
I N D I A
C H I N A
TIBET
HIMACHAL PRADESH
U T T A R A K H A N D
CHAMOLI
RUDRAPRAYAG
TEHRI GARHWAL
DEHRA DUN
Gaonpujali
Govind National Park
Rari
Mossori
Lewari
Simatru
Thach
Har-ki-doon
Khanuasni
Jakhol
Dhatmir
Osla
Shaptrishi Kund
Sankri
Taluka
Gainchwan
Pasha
Nainwar
Kulni
Mounda
Duna
Chiwan
Dagli
Balcha
Makuri
Asna
Arakot
Saira
Mori
Nanai
Jarmola
Rupin
Tons
Sar
Janki Chatti
Yamnotri
Kharsali
Kanatal
Dabrani
Bhangeli
Sunagar
Gangnani
Bhukki
Salang
Bhatwari
Pilang
Sila
Saura
Kishanpur
Bharkot
Elaru
Bhetiara
Saundi
Mukhmalgaon
Thati Dichli
Hadiari
Nagun
Bhagirathi
Badethi
Shrikot
Dhanari
Thati
Chakon
Margaon
Dharasu
Bend
Odalak
Genwala
Athali
Dunda
Nakuri
Wah
Nawagaon
Bangaon
Gatu
Dewar
Kuwa
Kandari
Bistari
Bhankoli
Kapnol
Bungangaon
Uprikot
Garampani
Materi
Lata
Netala
Seku
Agora
Raithal
Malla
Dayara
Barsu
Bugyal
Syana
Chatti
Hanuman Chatti
Rana Chatti
Kudhnnur
Gangnani
Paligad
Barkot
Rajgarhi
Sarnaul
Purola
Rama
Jhala
Harsil
Purga
Dharali
Lanka
Bhaironghati
Gaurikund
Sukhi Top
Chholmi
Bhagirathi
Gangotri
Gaumukh
Bhujbas
Chirbas
Nandan Van
Nelang
Jadhang
Naga
Sirkata
Angar
Gangi
Kedarnath
Soneprayag
Guptkashi
Ukhimath
Chakrata
Ambadi
UTTARKASHI
Yamuna
Bhagirathi
HIMACHAL PRADESH

Spring is the hottest season of the year. Majority of the population is localized in the rural areas lacking modern medicinal facilities. Medicinal herbs flourishing in the valley have been in constant use by local inhabitants who are wholly dependent on local plants around them for treating various ailments by using the plants in their own traditional methods. Indigenous knowledge of Himalayan ethnic groups viz., Bhotias, Byansi, Chawndasis, Jads, Joharis Malchas and Tolchas have played vital role in discovery of novel products on ethnomedicine.

MATERIALS AND METHODS

Ethnobotanical data was collected for two years during 2008 to 2010. Medicinal uses of plants were recorded through interviewing local medicine man, head of the families, elders and curers following standard ethanobotanical investigations suggested by Jain (1963, 1995) and Martin (1995). In order to ensure the accuracy , individual statements were double checked with other knowledgeable peoples of the community and detailed information was collected pertaining to indigenous skills and use of wild plants in traditional health care system.

RESULTS AND DISCUSSION

All the medicinal plants studied are enumerated alphabetically with their family, local names, parts used and ethnomedicinal uses.

Table: Some important ethnomedicinal plants of Bhagirathi Valley of District Uttarkashi.

Sl N.	Taxa	Family	Local Name	Plant Parts Used	Ethnomedicinal Uses
1	*Aconitum ferox* wall.	Ranunculaceae	Bish	Underground Stem and Roots	Useful in sore throat, paralysis, chronic fever, neuralgia, muscular rheumatism.
2	*Ajuga bracteosa* Wall ex Benth.	Lamiaceae	Ratpatiya, Laudda, Phul Jadhi	Leaves	Leaves mixed with black pepper used for diabetes and stomach- ache.
3	*Allium humile* kunth.	Amaryllidaceae	Laichu	Shoot/ Crushed	Used in indigestion.
4	*Angelica glauca* Edgew.	Apiaceae	Choru	Roots	Used in stomach-ach, cold and cough.
5	*Arisaema wallichianum* Hk.f.	Araceae	Faran, Laddu,Meen	Roots/ Rhizome	Skin boils, extract applied to heal the wounds.
6	*Arnebia benthameen* (Don) john.	Boraginaceae	Balchari, Balchaddi	Roots	Used in bronchitis and asthma.
7	*Artemisia maritima* L.	Asteraceae	Kunja, Moin	Shoot/ Powder	Laxative, Vermifuge.
8	*Berberis asiatica* DC.	Berberidaceae	Chotar	Roots/ Extract	Useful in eyetroubles as pain killer.
9	*Bergenia stracheyi* Engl.	Saxifragaceae	Silphari	Roots/ Powder	Used in Gall stones and joint pain.
10	*Betula utilis* D. Don.	Betulaceae	Bhojpatra	Inner Bark/ Extract	Used in eye diseases.
11	*Cannabis sativa* L.	Cannabinaceae	Bhang	Seed, Leaf, Flower/ Powder	Used in Jaundice, fever.
12	*Dactylorhiza hatagirea* (D.Don.) Soo.	Orchidaceae	Salempanja, Garurpanja, Hathajadi	Tubers	Used as aphrodisiac, Tuber paste applied on cuts.
13	*Geranium wallichianum* Don ex. Sw.	Geraniaceae	Saura, Ratijari	Roots/ Leaves	Headache, rheumatic pains, decoction of roots used for dysentery and cold.

14	*Nardostachys grandiflora* DC.	Valerianaceae	Jatamansi	Roots	Roots are used to cure Epilepsy and hysteria.
15	*Podophyllum hexandrum* Royle.	Podophyllaceae	Bankakari	Roots	Root powder used for stomach problems.
16	*Rheum emodi* wall.	Polygonaceae	Dholu	Roots/ Rhizome	Used for internal injuries.
17	*Rhododendron arboreum S*m.	Ericaceae	Semroo, Burans	Leaves/ Flowers	Used in skin disease and as heart tonic.
18	*Saussurea obvallata* wall.	Asteraceae	Brahm Kamal	Flowers/ Roots	Reproductive disorder, Hydrocele, Roots are applied as a paste in cuts.
19	*Saussurea simpsonina* C.B. Clarke	Asteraceae	Yogeshwar	Roots	Used in male Reproductive disorders.
20	*Thalictrum foliosum D*C.	Ranunculaceae	Banglajari	Roots	Used in opthalmia and urinary infection.
21	*Valeriana jatamansii* Jones	Valerianaceae	Banbasi, Mushkbala	Roots	Emetic, gastric problems.

From the study area 21 species of medicinal plants belonging to 20 genera and distributed over 17 families have been collected, out of which 18 species belong to Dicotyledons and 3 to Monocotyledons. Out of 21 species collected, 18 are herbs, 1 shrubs and 2 trees. Seeds, roots, rhizomes, stems, barks, leaves, flowers and fruits form the ingredients of medicines.

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