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Chandra Kanta
Department of Botany, Doon (PG.) College of Agriculture, Sciences and Technology, Dehradun, Uttarakhand, India

Ishwar Prakash Sharma
Patanjali Herbal Research Department, Patanjali Research Institute, Haridwar – 249 405, Uttarakhand, India

Mudasir Ahmad Shiekh
Department of Botany, Doon (PG.) College of Agriculture, Sciences and Technology, Dehradun, Uttarakhand, India

Correspondence
Chandra Kanta
Department of Botany, Doon (PG.) College of Agriculture, Sciences and Technology, Dehradun, Uttarakhand, India

Ethnobotanical studies on medicinal plants of Langate area, Kupwara, Jammu and Kashmir, India

Chandra Kanta, Ishwar Prakash Sharma and Mudasir Ahmad Shiekh

Abstract
Most of the world population unable to afford pharmaceutical drug and is depend on traditional medicines. In India, Jammu and Kashmir is populated with several ethenic groups having their own knowledge of traditional herbal medicine inherited from their forefathers. The present study deals with the identification, documentation and ethnobotanical exploration with respect to medicinal value of some medicinal plants from Lagnate area in Kupwara District of Jammu and Kashmir, India. In this study, total 23 medicinal plants belonging to 23 genera and 19 families were surveyed from this area which considered the rich resources of valuable ingredients along with they play critical role in the development of human cultures worldwide. Traditional knowledge of plants in many tribal communities is changing because of rapid socio economic and cultural changes. This is particularly true for the Gujjar and Bakerwal tribal's of Kupwara district. Documentation of this knowledge is valuable for the communities and their future generations of this area. It is considered that special attention should be paid to conserve these valuable Medicinal plants for future generation.

Keywords: ethnobotany, medicinal plants, kupwara, tribals, traditional

Introduction
Ethnobotany includes the study and evaluation of plant-human relations in all phases and the effect of plant environment on human society. Schultes (1962) [25] defined it, "the study of relationship which exists between people of primitive societies and their plant environment". Ethnobotany, virtually a new field of research which might be generates valuable results to the ethnologists, archaeologists, anthropologists, plant-geographers, pharmacologists etc. In India, earlier different ethnobotanical studies have been done in different parts, *viz.* Morni and Kalesar, Haryana (Jain, 1984) [8]; Tharus in Kheri district, U.P. (Maheshwari *et al.*, 1980) [18]; Bhoxa tribe, Bihar and Pauri Garhwal, Uttarakhand (Maheshwari and Singh, 1984) [17] and Eastern Rajasthan (Upadhyay *et al* 2010) [34]. It was estimated in a report of world health organization, 2003, about 80% population of developing countries are unable to afford pharmaceutical drug. India is one of the developing country and having high plants diversity in a wide range of ecosystems. It included about 17,000 species of higher plants, of which approximately 8,000 species are considered medicinal and used by village communities, particularly tribal communities, or in traditional medicinal systems, such as the Ayurveda. The state Jammu and Kashmir located in western Himalaya of the country is populated with several ethenic groups with their own knowledge of traditional herbal medicine inherited from their forefathers. The term of medicinal plants include a various types of plants used in herbalism along with medicinal activities and these are the backbone of traditional medicine to local people due to rich sources of ingredients which can be used in drug development and synthesis (Davidson, 2000). Besides that these plants play a critical role in the development of human cultures around the whole world. In India, Ethnopharmacology in drug development initiated by Farnsworth (1990) [2]. Most of the modern society and life style disease such as vitality, diabetes, memory loss etc. which are generally not cure through allopathic medicines can be overcome by using herbal medicines (Kumar, 2000). Upadhyay *et al* (2008); Saini *et al* (2010) [24]; Sharma and Kumar (2011, 2012) [27, 28] conducted studies on Ayurvedic crude drugs for cure of digestive diseases, leprosy, skin diseases, malaria and paralysis. Although, modern medicine has been superior over traditional medicine but traditional practice of herbal medicines have often maintained their popularity for historical and cultural reasons

(Chaurasiya *et. al.*, 2013) [35]. Natural products have been played an important role throughout the world in treating and preventing human diseases which are come from various sources including terrestrial plants, microorganisms, marine organisms, vertebrates and invertebrates and its importance in modern medicine has been discussed in different reviews and reports (Snader, *et al.*, 2000; Kinghorn *et al.*, 2006) [20, 9]. On this basis this study carried out on identification, documentation and ethnobotanical exploration including medicinal values of important medicinal plants available in Lagnate area of Kupwara District, Jammu and Kashmir, India.

Materials and Methods

This study was carried at Langate in Kupwara district of Jammu and Kashmir, India. The district has a total geographical area of 2379 km^2 and the study area lies between 34º 45' and 75º 20' east longitudes. During investigation, extensive field survey was done in different part of this area and valuable plants were collected from February, 2017 – May, 2017. The method which was used to document the traditional knowledge including interactions and interviews with the local persons who have an enormous knowledge of medicinal plants mostly was obtained from tribal (Gujjaras and Bakerwalls). About 55-60 informants having 60-70 years old persons have been consulted. Informants have been separately asked to share their traditional knowledge on the utilization of medicinal plants such as local name, plant part used, ailments in which plant parts used and mode of administration. In order to bring accuracy the information collected has been cross linked with other persons also. The field specimens have been collected and identified with the help of literature (Hooker, 1897; Kaul, 1985) [3, 13]. Data was collected according to Jain (1995) and Khan (1993) and recorded in field note book. Apart from that, various available floristic literatures (Kirtikar and Basu, 1933-1935; Wali and Tiker, 1964; Javeid, 1968; Nasir and Ali, 1970-1987; Stewart, 1972; Kachroo, *et al*. 1977; Kachroo, 1978; Nawchoo and Kachroo, 1995) [15, 7, 11, 10] have been consulted for identification purposes.

Results and Discussion

In this study, total 23 medicinal plants from 19 angiospermic families were identified as medicinal plants. Each medicinal plant is provided with its scientific name, followed by family, local name and medicinal uses (Table-1). Expect *Viscum album* which was found a shrub all the plants were herbaceous in nature. Dominantly asteraceae family was found superior which having four medicinal plants followed by malvaceae (two plants), and all other family has only single plant found as medicinal properties (Fig. 1). These all plants distributed along latitudinal range with different habitats. Similar works have been done on several aspects of plants *viz.* ethnomedicine, dyes, tannins, narcotics, fibers, timbers, etc. (Bhandari, 1974; Jain, 1981a,b; Singh and Pandey, 1980, 1981, 1982; Katewa and Guria, 1997; Sebastian and Bhandari, 1984a; Nargas and Trivedi, 1999, Sharma and kumar, 2010) [1, 4, 5, 32, 31, 33 12, 26, 19, 27, 28]. Now a day, herbal medicine plays an important role in rural areas and various locally produce drugs are still being used as household remedies for various diseases especially in these areas for different ailments (Qureshi & Ghufran, 2005) [23]. The ingredients isolation and their screening for new therapeutics from medicinal plants is an interesting part to the clinical biologists (Mahalingam *et al.*, 2010) [22]. These ingredients mainly contain aldehyde and phenolic compounds (Lai and Roy, 2004) [16]. Similarly Pareek and Trivedi (2011) [21] surveyed on medicinal plants of Kaladera region, Jaipur (Rajasthan) which highlighted the useful ethnobotanical information about the uses of plants by the tribals of this regions. Recently, Agboola *et al.* (2014) worked on ethnobotanical studies of medicinal plants, which are useful in various diseases in Abeokuta South Local Government Area of Ogun State, Nigeria in which they studied 63 plants species belonging from 33 families which were used in curing cold, malaria, fontanel, diarrhoea, typhoid, chicken pox, measles and small pox.

Table 1: List of medicinal plants with their medicinal properties

S. No	Name of plant	Common name	Family	Habit	Medicinal uses
1.	*Artemisia absinthium*	Tethwan	Asteraceae	Herb	Obesity, liver infection, diabetes and intestinal infection
2.	*Taraxacum officinale*	Handd	Asteraceae	Herb	Common cold, back pain, chest infection
3.	*Utrica dioica*	Soie	Utricaceae	Herb	Rheumatism
4.	*Lavatera cashmeriana*	Sazposh	Malvaceae	Herb	Skin irritation in pregnant women
5.	*Dipsacus inermis*	Wopal haakh	Dipsacacae	Herb	Cough, general body weakness, tightening of blood vessels, pain and swelling of body parts
6.	*Trigonella foenum*	Meth	Fabaceae	Herb	Diabetes, body pain, cold, constipations, stomach problem and intestinal infection
7.	*Podophyllum hexandrum*	Wanwagon	Podophyllaceae	Herb	Tumors, diarrhea, constipation
8.	*Coriandrum sativum*	Daniwal	Apiaceae	Herb	Stomachache, insomnia
9.	*Jurinea cataonica*	Dhupa	Asteraceae	Herb	Improves vision
10.	*Arnebia benthamii*	Kahzabaan	Boriginiaceae	Herb	Control hair loss, increases lactation
11.	*Euphorbia wallichii*	Guru daud	Euphorbiaceae	Herb	Nerve troubles, skin infection, dropsy
12.	*Saussurea costus*	Kouth	Asteraceae	Herb	Arthritis
13.	*Prunella vulgaris*	Kulwauth	Lamiaceae	Herb	Headache, fever, muscular pain
14.	*Iris hookeriana*	Mazar mund	Dridaceae	Herb	Act as rodent repellent, frozen feet
15.	*Datura stramonium*	Datur	Solanaceae	Herb	Cure urinary infection, tooth ache
16.	*Cannabis sativa*	Bhang	cannabinaceae	Herb	Cholera and rheumatic
17.	*Rumex acetosella*	Abji	Polygonaceae	Herb	Cure cough, gaseous bloat and sprained body parts
18.	*Malva sylvestris*	Sotsaal	Malvaceae	Herb	Treatment for weak eye sight
19.	*Allium sativum*	Rhoon	Lillaceae	Herb	Stomach problems, hypertension, asthma, respiratory disorders and eye vision
20.	*Brassica oleracea*	Haakh	Brassicaceae	Herb	Constipations and corns
21.	*Plantago lanceolata*	Kashur gul	Plantiginaceae	Herb	Cough and urinary disorders
22.	*Viscum album*	Kaw khoor	Loranthaceae	Shrub	Migraine, epilepsy, rheumatism
23.	*Papaver somniferum*	Khaskhash	Papaveraceae	Herb	Relives pain, diarrhea, fever, hypertension, cancer, snake bites etc.

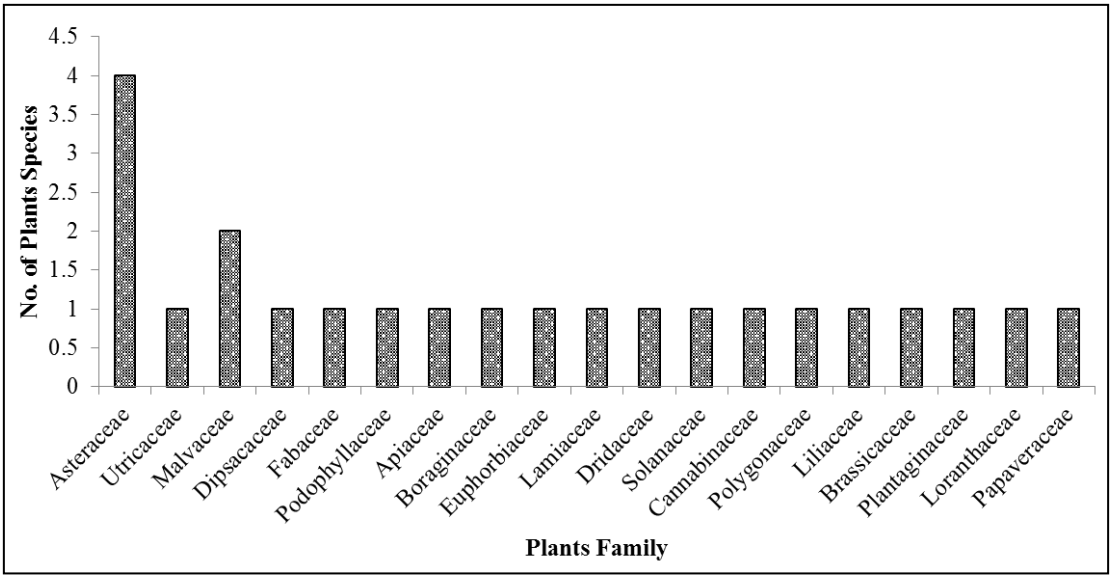

Fig 1: Number of medicinal plants species along with their families

Conclusion

Plants are the main part of folk medicines which need to rise gradually in traditional system of medicine. In our selected study area, the tribals are using herbal medicine since long time. Traditional knowledge of plants in many tribal communities is changing because of rapid socio economic and cultural changes. This is particularly true for the Gujjar and Bakerwal tribal's of Kupwara district. Documentation of this knowledge is valuable for the communities and their future generations in this area. It is considered that special attention should be paid to conserve these valuable Medicinal plants for future generation.

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