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# ETHNOBOTANICAL SURVEY OF COMMONLY USED WILD MEDICINAL PLANTS IN HIGH HILLS OF DHAMI IN DISTRICT SHIMLA OF HIMACHAL PRADESH, INDIA

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## Abstract

In Himachal Pradesh native people of high hills have rich traditional knowledge about ethnomedicinal plants and its uses, in this respect an ethnobotanical survey was carried out in high hills of Dhami in district Shimla of Himachal Pradesh, India. The required information on ethnomedicines used by local peoples was collected through personal field visits, interview methods and by using a pretested questionnaire. The area has a high number of medicinal plants. It was observed that in high hills of Dhami 23 commonly used wild medicinal plants were *Asparagus racemosus, Berberis lycium*, *Bergenia ciliata, Buddleja crispa, Cannabis sativa*, *Carissa spinarum*, *Cuscuta reflexa, Diplazium esculentum, Emblica officinalis, Ficus auriculata*, *Fragaria indica, Justicia adhatoda*, *Mentha spicata, Myrica esculenta, Nicotiana tabacum*, *Opuntia stricta*, *Oxalis latifolia, Ricinus communis, Roylea cinerea*, *Rubus niveus*, *Rumex hastatus, Solanum nigrum* and *Viola canescens* and they are useful for different types of diseases. This study shows that local people are highly dependent on ethnobotanical medicines, which evolved over generations of experience and for the healthcare. This survey can help as baseline data on ethnomedicinal plants used in high hills of Dhami of district Shimla and it could be helpful in conservation of traditional knowledge as well as medicinal plants.

***Key words:*** Ethnomedicines, Medicinal Plants and Shimla district.

## Introduction

The state of Himachal Pradesh, located in the lap of Himalayas, has diverse climatic conditions due to altitudinal variation. The range of Himalaya varies from 450 m to 6500 amsl. These vast variations in topography, altitude, latitude and climate have made Himachal Pradesh a home for wide variety of flora and fauna (Collett, 1902; Radha *et al.,* 2019a); Himachal Pradesh possess great wealthy repository of ethnomedicines (Atkinson, 1882). Most of the medicinal plants found in Indian Himalayan Region used in traditional folk and ethnomedicines (Pandey *et al.,* 2016; Radha *et al.,* 2019b). The hills of Shimla district are rich in vegetation and represented by 1326 plant species belonging to 639 genera. This includes 1003 species of Dicotyledons belonging to 498 genera and 313 species of Monocotyledons grouped in 133 genera. In state of Himachal Pradesh approximately 150 species of aromatic plants and 500 species of medicinal plants have been reported in earlier studies (Chauhan, 1999; Singh, 2014; Thakur and Sarika, 2016; Radha *et al.,* 2019c).

The native people of Himachal Pradesh depends on different plant variety for their daily needs (Radha *et al.,* 2019d). But it was observed that with time new generation is not much interested in traditional knowledge and they have started using readymade products, thus neglecting the traditional knowledge learned from their fore father (Jain, 1991; Singh and Batish, 2015; Radha and Puri, 2018; Radha and Puri, 2019e). As no proper documented data is available solely for the wild medicinal plants used in high hills of Dhami village in district Shimla of Himachal Pradesh, India. A survey and documentation of this aspect of wild medicinal plants of the area will be helpful to the common man, students, teachers and finally science.

## Material and Methods

### Study Area

The present study was carried out in high hills of Dhami in district Shimla of Himachal Pradesh, India. Surroundings of Shimla district is abounding with beautiful vegetation and offering lots of opportunities to researchers, common man and students etc. The temperature of the high hills of Dhami in Shimla district varies from -10° to 30°C. It supports many numbers of wild edible plants, wild medicinal plants, rare and endangered species, native and endemic species provides an ultimate habitat to wild fauna. The local people of the peripheral villages of Himachal Pradesh generally depends on wild food, medicines, fuel, fodder, timber, fibres and gums etc. Most of these plant species find their use in traditional medicine folk uses and also used in modern industry (Singh, 2014; Bodh, 2018; Radha *et al*., 2019f).

### Data collection

For the documentation of ethnomedicinal plants used by native people of high hills of Dhami in district Shimla of Himachal Pradesh were surveyed during the year of 2019 to

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2020. The information on wild medicinal plants used by local people of study area was collected by using questionnaire and interview methods. A total of 41 informants were randomly selected for interviews. Only those ethnomedicinal plants were documented which were most frequently used by the local people of study area for the treatment of different ailments. The specimens of ethnomedicinal plants being used by the local people of high hills of Dhami were collected, dried and mounted on herbarium sheets with labelled information describing from when and where they were collected. Vouchers of plant specimens were places in the herbarium of Shoolini University, Solan, Himachal Pradesh, India. Plants were identified with the help of experts from Botanical Survey of India, Dehradun, Uttarakhand.

## Results and Discussion

The present study documents the ethnomedicinal plants used by native people of Dhamiin district Shimla of Himachal Pradesh, India. Extensive field visits were carried out to complete this study. Ethnomedicinal plants used by native people were documented during field visits by interacting with the native people. Interactions revealed that the native people possess good traditional knowledge about uses of ethnomedicinal plants and they were in knowing how to use them. A total of 23 commonly used ethnomedicinal plants were documented from study site. It was found that some of these medicinal plant species belongs to same or different families. In high hills of Dhami the commonly reported diseases were skin diseases, cough, cold, stomach infections, asthma, wounds and fever etc.

In present study it was found that *Asparagus racemosus* is used fordiabetes and stomach pain, *Berberis lycium* is used for Jaundice and cold, *Bergenia ciliata* is used for fever and cold, *Buddleja crispa* is used for cold, dysentery and fever, *Cannabis sativa* is used for abdominal pain, *Carissa spinarum* is used for headache and indigestion, *Cuscuta reflexa* is used for hair fall and stomach pain, *Diplazium esculentum* is used for asthma and digestion problems, *Emblica officinalis* is used for jaundice and diarrhoea, *Ficus auriculata* is used for diarrhoea and dysentery, *Fragaria indica* is used for digestion problems, *Justicia adhatoda* is used for cough, cold and asthma *Mentha spicata* is used for headache and digestive problems*, Myrica esculenta* is used for cough, diarrhoea and fever, *Nicotiana tabacum* is used for skin allergy and diabetes, *Opuntia stricta* is used fordiabetes, *Oxalis latifolia* is used for fever and digestive problems, *Ricinusn communis* is used for headache, *Roylea cinerea* is used for skin allergy, *Rubus niveus* is used for dysentery and indigestion problems, *Rumex hastatus* is used for bloody dysentery*, Solanum nigrum* is used for asthma and skin allergy and *Viola canescens* is used for cold and asthma. In all 23 plants documented for ethnomedicinal purposes belongs to Asparagaceae, Berberidaceae, Saxifragaceae, Scrophulariaceae, Cannabaceae, Apocynaceae, Convolvulaceae, Athyriaceae, Euphorbiaceae, Moraceae, Rosaceae, Acanthaceae, Lamiaceae, Myricaceae, Solanaceae, Cactaceae, Oxalidaceae, Euphorbiaceae, Lamiaceae, Rosaceae, Polygonaceae, Solanaceae and Violaceae families were maximum in number.

## Conclusion

The current study shows that study area is rich in medicinal vegetation and local peoples are enriched with folk traditional knowledge about these wild medicinal plants. It can be concluded that documentation of this traditional knowledge is novel information from study site. The traditional knowledge, plant biodiversity, and cultural practices of the local people are facing high threat due to fast urbanization and uncontrolled browsing in this study region. It is also highlighted that satisfactory attention has not been put in promoting and conserving traditional wild medicinal plant species. Thus there urgent need is to adopt large scale plantation of these wild medicinal plants within the forests so that the tribal people are profited.

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