

## Chapter 61

# Wild Plants Used as a Forest Ecosystem Services by the Local Inhabitants of Champawat District of Uttarakhand to the Subsistence of Their Livelihood

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### **ABSTRACT**

*This chapter deals with scientific information about the wild socioeconomic plants used by the local inhabitants of the Champawat district of Uttarakhand for the enhancement of their livelihood. During this entire study, it was observed and documented that poor rural people of this area are educationally and financially backward, and they do not have any permanent source of income; due to this reason they are unable to fulfill their necessary requirements. Therefore, they are totally dependent on various forest ecosystem services, viz., selling prepared herbal medicines, wild edible fruits, and wild ornamental plants, etc., which shares approximately 45-50% of their total annual income and plays a vital role for the upliftment of their livelihood. During this research work, a total of 63 plant species belonging to 58 genera under 46 families have been documented, which are being used as livelihood resources by the locals of this area.*

## INTRODUCTION

India is one of the great resources of biodiversity in the world. In India, the Central Himalaya is a great reservoir of various flora and fauna. The Himalayan region possesses great diversity of vegetation, which is important from aesthetic, medicinal, and nutritional aspects. According to an estimate, between 35,000 and 70,000 plant species are used in medicine worldwide. It is believed that out of these, 1,600 species of medicinal plants are being traditionally used in India. Himalaya is recognized as one of the hotspots of biodiversity, harboring nearly 8,000 species of flowering plants, including 25.3% that are endemic. About 1,748 plants are reported as used for medicinal purposes in Indian Himalaya. A large number of wild plants growing in this zone are used for food, medicine, edible fruits, fodder, fuel, timber, and many other purposes by local communities. Thus, a very close relationship and dependence have been established between the forest and inhabitants of the hill. The Himalayan vegetation ranges from sub-tropical deciduous to evergreen forests across the foothills to alpine meadows above the timberline (Singh & Attri, 2014). **The present study area district, Champawat, comes under Kumaun Himalaya of Uttarakhand, which was earlier known as Kali Kumaun.** During the 11<sup>th</sup> to 12<sup>th</sup> century, it was a capital of “Chanddynasty” (a ruler of the Kumaun region). Since that ancient time, this area was lush and green with different kinds of vegetation. This district lies between 28.9529<sup>o</sup>N and 29.5212<sup>o</sup>N latitude and 79.8132<sup>o</sup> E and 80.3178<sup>o</sup>E longitude, covering an area of about 1,766 square kilometers. It is ringed by Udham Singh Nagar to the south, Nainital to the west, Pithoragarh and Almora to the north, and Nepal to the east. The Kali River acts as an international border with Nepal. Some perennial rivers and rivulets, viz., Jabgura, Kali, Ladhiya, Lohawati, and Ramganga, constitute the drainage system of the district. This area falls in the Shivalik hills and lesser Himalayan zone, and is very rich in flowering and non-flowering plants because of varied vegetations, climate, topography, soils, rivers, and valleys, etc. Until now, there has been no previous work done by any researchers, particularly for the assessment of wild plants used as a livelihood subsistence, although some fragmentary reports are presented earlier by several workers (Kumari et al., 2011; Osmaston, 1978; Pande & Pande, 2002, 2003; Pant & Samant, 2010; Pusalkar & Srivastava, 2018) regarding different plant groups, but the information about wild plants and their uses for livelihood subsistence is completely lacking in this area. There are some interior areas in the Champawat district of Uttarakhand where people are financially and educationally backward, and they are not engaged in any kind of permanent jobs. Therefore, they are totally dependent on the forest ecosystem for the subsistence of their livelihood. So in this research paper an attempt has been made to document the wild plants that are being used as livelihood subsistence by the locals of this smallest border district of Uttarakhand.

## MATERIALS AND METHODS

The research work was carried out in the Champawat district of Kumaun Himalaya, Uttarakhand during the years 2017–2018. In this research work, different places in the Champawat district and its nearby areas, namely, Pancheshwar, Munch, Tamli, Mudiyani, Pokhari, Kharhi, and Pati were regularly surveyed for the documentation of economic plant resources of this area. During this survey period, a number of local fruit vendors, natives (older household members and women), farmers, and experienced personnel in the forest department were interviewed. Group discussion and other participatory methods were also used to learn about the economic uses of these plants used by local peoples. Necessary permissions have

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