Chapter 15
Plant Species Used by Locals as Ethno-Medicine in Gulmarg Wildlife Sanctuary, Kashmir Himalaya (India)

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ABSTRACT

Villages in the Indian Himalayan Region have a rich repository of the indigenous knowledge and practices. Documentation of such knowledge is urgently required in view of the advent of modernization. Therefore, an attempt is made to document the indigenous uses and practices of the plants utilized by the local inhabitants of the Gulmarg Wildlife Sanctuary, Jammu and Kashmir, India. A total of 48 plant species belonging to 46 genera and 25 families are used traditionally to cure various diseases. Various plant parts of these species are used to cure cold, cough, fever, liver disorder, kidney stones, skin diseases, and eye and ear complaints. Such kinds of studies will help in developing a comprehensive database of the plants used traditionally, strengthening the health care system in the villages, and conserving traditional knowledge for the future.

INTRODUCTION

The discovery of plants for medicinal purposes has a long tradition extending back to old civilizations (Noman, 2003). Numerous wild and cultivated plants play a vital role in the culture, customs and traditional health care system (with no or few side effects) of tribal communities and this interrelationship has evolved over generations of experience and practice (Hassan, Ahmad and Mohi-ud-din, 2013). This is the reason that people in developing countries where many resources are not available, especially for...
health care (Bangladesh, Nepal, Sri Lanka, Indonesia, and India), have strong convictions towards this system (Malik, Siddique, Sofi and Butola, 2011). A total of 7,500 plant species are estimated to be used by 4,635 ethnic communities for human and animal health care across the country (Baba et al., 2012). As they have no side effects, now they have become valuable in the development of healthcare and conservation programs in different parts of the world (Balick, 1996). Further, documentation of such knowledge provides clues for the identification of novel drug discovery (Cox, 2000). However, while great deal of information about the traditional uses and practices is still intact with tribal, the native healers are often reluctant to share their knowledge with outsiders (Lone, 2003; Rajoriya, Choudhary, Shah, Rawat and Jat, 2016) and solely transmit it orally from one generation to another. Due to this fact, such knowledge is disappearing from the society.

India occupies a premier position in the uses of herbal drugs and nearly 2,500 plant species are used in botanically different medicinal health care formulations. The estimated number of medicinal drug manufacturing units in India is over 7,800 which consume about 20,000 tons of herbs annually (Ramakrishnappa, 2002). Ayurveda, Unani, and other medicinal systems are the classical examples of such information (Fabricant & Farnsworth, 2001).

In Himalaya, approximately 8,000 species of flowering plants occur, out of which 1748 plants are mostly used for ethnomedical purpose for curing different disease ((Adhikari, Babu, Saklani, & Rawat, 2010; Akash & Navneet, 2018; Akash, Navneet & Bhandari, 2018 a,b,c; Akash, Navneet & Bhandari, 2019; Akash, Navneet, Bhandari & Bijalwan, 2019; Wani, Kumar & Akash, 2015, 2016). At the same time, this region is severely affected by various anthropogenic pressures like grazing, trampling, scraping etc. which causes severe threat to these medicinal plants (Akash & Navneet, 2019).

The Kashmir Himalaya, often referred as Terrestrial Paradise on Earth, is located at the northwestern tip (Mittermeier, Gil, Hoffman, Pilgrim, Brooks, Mittermeier, Lamoreux and Da Fonseca, 2005), and supports a rich and spectacular biodiversity of great scientific curiosity and significance (Hussain, 2001). It alone contributes nearly 20% of the total Himalayan plant wealth within just 2.15% (15,948 km²) of the total land area (Dar, Bhagat and Khan, 2002). Several ethnobotanical studies have been carried out throughout the Kashmir Himalaya like Ara and Naqshi, (1992); Bhat, Nigam and Majaz, (2012a, 2012b); Bhat, Mahajan, Sayyed and Bhat, (2014); Chak, Agarwal and Kak, (2009); Dad and Khan, (2010); Jan and Khare, (2013); Kapahi, Srivastava and Sarin, (1993); Kaul, (2010); Khan, (2016); Khan, Khuroo and Dar,(2004); Khuroo, Rashid, Reshi, Dar and Wafai, (2007); Lone, (2003); Lone and Bhardwaj, (2013a, 2013b); Lone and Pandit (2007); Lone, Bhardwaj, Shah and Tabassum (2014); Mala, Lone, Lone and Arya, (2012) Mir, (2014a, 2014b, 2014c, 2014d); Mir and John, (2014); Navchoo and Bhat, (1994); Shapoo, Kaloo, Ganie and Singh, (2013); Singh, (1995); Singh and Bedi, (2017); Wagay, (2014) etc. But a very few studies have been conducted on different aspects of traditional uses of the plants present in the Gulmarg Wildlife Sanctuary (GWLS). Therefore, the present study has been conducted to document the indigenous knowledge and practices of the species used to cure various diseases.

**STUDY AREA**

The Gulmarg Wildlife Sanctuary (GWLS) has a rich heritage of traditional medicinal plants and is home to ethnic groups like Gujjars and Bakerwals, which have a rich heritage of traditional knowledge especially related to medicinal plants. It falls 26 km to the southwest of District Baramulla, stretching between 74°.17’ to 74°.79’ N latitude and 34°.55’ to 34°.60’ E longitude, at an altitude of 2400-4300m
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