J. Mountain Res. P-ISSN: 0974-3030, E-ISSN: 2582-5011
Vol. 16(1), (2021), 137-142 DOI: https://doi.org/10.51220/jmr.v16i1.13

Traditional Use of Wild Medicinal Plants By The Folklore of Garhwal Himalaya: A Case Study From Jaiharikhal Block in Pauri Garhwal, Uttarakhand

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Received: 19.04.2021; Revised: 19.05.2021; Accepted: 29.05.2021

Abstract: Uttarakhand Himalaya is a treasure of wild medicinal plants which are traditionally used by the folklore since ancient times when there were no medical facility by and large. This knowledge was initially restricted to some vaidyas in the region but with the passage of time it was inseminated to others specially the credit goes to researchers at various level who ventured in to this knowledge and any how brought it in the form of literature. This contribution is also an attempt by the authors to gather information from rural folk of Jaiharikhal block in District Pauri Garhwal and to present it before scientific community. The information was collected using combined approach of observation, discussion with common habitants and experts, and was further checked for an accuracy using the available literature. A total of 46 Wild-Edible medicinal plants were noted belonging to 34 families and 41genus. Different plant parts, such as wood oil, resin, latex, roots, root bark, tubers, Rhizomes, stems, bark, leaves, flowers, seeds, hairs on pods, Bulb, fruiting body, fruits and whole plant etc were used by the native communities for the treatment of various ailments.

Keyword: Wild Medicinal Flora • Ancient Literature • Traditional Uses • Folklore • Jaiharikhal

Introduction

India is one of the countries in the world having mega biodiversity with the presence of over 45000 different plants species. Of these, about 15000-20000 plants have great curative relevance. However, three-quarters of plant species are used for their medicinal values by traditional communities (Sharma, 2004). The inhabitants of the Himalayan region across the world have a close relationship with nature. Their life course is fully dependent on forests for fodder, timber, fruits, food, and medicinal plants for their healthcare management. The folklore of the Himalayan region is quite rich in traditional knowledge about the type and use of medicinal plants in different ailments. Charak Samhita is a complete encyclopedia of ayrvedic science with 8 sthanas (Sutrasthanas, Nidansthanas, vomansthanas, sharirsthanas, indriysthanas, chikitsasthanas, Kalpasthanas and siddhisthanas) divided into 120 chapters (Bagde et.al., 2013). As per Ayurvedic literature, Lord Brahma was the creator of this divine science who inseminated this knowledge to Daksh Prajapati and Ashwini Kumaras (Bagde et.al. 2013). The description of these medicinal plants is also available in different ancient literature, viz., Veda and Puranas (Dobriyal and Godiyal, 2007).

According to Qureshi and Ghufran (2005), the herbal medicines play an imperative role in rural areas where locally produced drugs are still being used as household remedies for different ailments. Kamraj (2000) is of the opinion that due to their better cultural recognition, lesser side effects, and also the ethno-medicinal significance, the herbal medicine sector is growing as the mainstay for primary health care in the developing countries.

An analysis of the history of traditional ayurvedic system of treatment among folklore of different Himalayan regions in India, it is known that initially this knowledge was restricted to some vaidyas in the region but with the passage of time it was inseminated to others; specially the credit goes to researchers at various level who ventured in to this knowledge and any how brought it in the form of literature (Aswal and Mehrotra, 1994; Rai and Sharma, 1994; Samant, et.al., 1998; Sharma, 2004; Kala, 2006; Shah et.al., 2009; Bhatt et.al., 2010; Dangwal et.al., 2010; Tiwari, et.al., 2010; Kumari et.al., 2012; Sharma, 2013; Prakash, 2014; Bhatia et.al., 2014; Singh and Attri 2014 and Baluni, 2015, 2020). This contribution is also an attempt by the authors to gather information from rural folk of Jaiharikhal block in District Pauri Garhwal and to present it before scientific community. The information was collected using combined approach of observation, discussion with common habitants and experts, and was further checked for an accuracy using the available literature. A total of 46 Wild-Edible medicinal plants were noted belonging to 34 families and 41genus. Different plant parts, such as wood oil, resin, latex, roots, root bark, tubers, Rhizomes, stems, bark, leaves, flowers, seeds, hairs on pods, Bulb, fruiting body, fruits and whole plant etc were used by the native communities for the treatment of various ailments.

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Materials and methods

Study Area: The present study was based on field survey conducted in 2020-21 in Jaiharikhal Block district Pauri Garhwal to gather information about traditional knowledge of folklore on wild medicinal plants and how they use it in their daily life. Information was collected with the help of questionnaire and discussions with sub urban people, rural folk, farmers and local herbal healers (Vaidyas). Plant Specimens of medicinal values were collected and confirmed about their ethnobotanical usage by consulting relevant literature. Periodic field trips were made during the flowering and fruiting season. All the plant specimens are dried, pressed and identified properly with the help of available literature, monographs (Gaur, 1999).

Results and Discussion

During present field observation and gathered information through questionnaire, it was concluded that 46 Wild-Edible medicinal plants are in use by the folklore in Jaiharikhal Block of Pauri-District (Table-1). The species fall under 34 families and 41genus and represent diverse life forms, i.e., climber 04 species, herbs 16 species, shrubs 06 species and trees 20 species. Different plant parts, such as wood oil, resin, latex, roots, root bark, tubers, Rhizomes, stems, bark, leaves, flowers, seeds, Bulb fruiting body, fruits and whole plant etc were used by the native communities for the treatment of ailments. Most of the time local healers (Elderly men or women) used fresh material for medicinal formulations.

Table-1: Different Wild-Edible medicinal plants used by local communities of Jaiharikhal block from district – Pauri Garhwal.

S.No	Botanical Name	Family	Habit	Local Name	Part used
1	*Argyrcia nervosa* (Burm.f.)	Convolvulaceae	Climber	Vriddadaru	Whole plant
2	*Mucuna pruriens* (L.) DC.	Fabaceae	Climber	Kauch	Roots and hairs on pods
3	*Tinospora cardifolia* (Willd.) Hook Fr	Menispermaceae	Climber	Giloy	Stem
4	*Rubia cordifolia* L.	Rubiaceae	Climber	Majethi	Roots
5	*Allium sativum* L	Alliaceae	Herb	Lasuna	Bulb
6	*Centella asiatica* (L.) Urban	Apiaceae	Herb	Brahmi	Whole plant
7	*Cuminum cyminum* L.	Apiaceae	Herb	Zeera	Fruit
8	*Coriandrum sativum* L	Apiaceae	Herb	Dhaniya	Fruit
9	*Tagetes minuta* L.	Asteraceae	Herb	Jangali genda	Flowering tops
10	*Vernonia cinerea* (L) Less	Asteraceae	Herb	Kalijiri	Leaf, flower and seed
11	*Dioscorea bulbifera* L.	Dioscoreaceae	Herb	Genthi	Roots
12	*Trigonella foenumgraecum* L	Fabaceae	Herb	Methi	Seed and fruit
13	*Glycyrrhiza glabra* L.	Fabaceae	Herb	Muleti	Stem and root
14	*Ocimum sanctum* L.	Lamiaceae	Herb	Tulsi	Whole plant
15	*Mentha arvensis* L.	Mimosaceae	Herb	Pudina	Leaf
16	*Bergenia ligulata* (wall) Engle.	Saxifragaceae	Herb	Silpara	Rhizomes
17	*Datura stramonium* L.	Solanaceae	Herb	Dhatura	Leaves, flowering tops and seeds
18	*Valeriana jatamansi* Jones.	Valeriancaceae	Herb	Sumaya	Rhizomes and rootlets
19	*Elettaria cardamomum* Maton	Zingiberaceae	Herb	Elaechi	Seed
20	*Hedychium spicatum* Ham.ex smith	Zingiberaceae	Herb	Banhaldi	Rhizomes
21	*Nerium odorum* Blanc	Apocynaceae	Shrub	Kaner	Leaf and root
22	*Berberis aristata* (D.C.)	Berberidaceae	Shrub	Kingore	Roots, root bark, stem
23	*Ricinus communis* L.	Euphorbiaceae	Shurb	Arandi	Roots, root bark, leaves and seeds
24	*Hibiscus rosa-sinesis* L.	Malvaceae	Shrub	Gudehal	Fruit
25	*Punica granatum* L.	Punicaceae	Shurb	Dalyma	Fruits
26	*Withania somnifera* (L) Dunal	Solanaceae	Shurb	Aswagandha	Roots
27	*Mangifera indica* L.	Acanthaceae	Tree	Aam	seeds and bark
28	*Cassia fistula* L.	Caesalpiniaceae	Tree	Amaltas	Fruits and roots
29	*Saraca asoca* (Roxb.)	Caesalpiniaceae	Tree	Ashoka	Bark and leaf
30	*Terminalia arjuna* (roxb) ex. DC	Combretaceae	Tree	Arjuna	Bark
31	*Terminalia bellirica*	Combretaceae	Tree	Bahera	Fruits

	(Gaerth.) Roxb.				
32	*Terminalia chebula* (Gertn.) Retx	Combretaceae	Tree	Harad	Fruits
33	*Emblica officinalis* Gaertn.	Euphorbiaceae	Tree	Amla	Fruit
34	*Juglans regia* L.	Juglandaceae	Tree	Akhrot	Leaves, stem bark, and fruits
35	*Cinnamomum tamala* (Ham.) Nees ex.Eberm.	Lauraceae	Tree	Tejpatta	Leaves and Bark
36	*Cinnamomum zeylanicum* Nees	Lauraceae	Tree	Dalchini	Bark
37	*Melia azedarach* L.	Meliaceae	Tree	Daikan	Leaves, barks and fruits
38	*Ficus carica* L.	Moraceae	Tree	Fig	Fruit and latex
39	*Ficus glomerata* Roxb., Pl. Corom	Moraceae	Tree	Gular	Fruit, Bark and roots
40	*Ficus benghalensis* (Linn)	Moraceae	Tree	Bargad	Fruits, barks and leaves
41	*Myrica esculenta* Ham. Ex.D.Dun	Myricaceae	Tree	Kaphal	Barks and fruits
42	*Eugenia jambolana*. Lam	Myrtaceae	Tree	Jamun	Bark and seed
43	*Cedrus deodara* (Royale ex.D.Don)	Pinaceae	Tree	Devdara	Wood oil and bark
44	*Pinus roxburghii* Sarg	Pinaceae	Tree	Chir	Bark and resin
45	*Sapindus mukorossi* Gaertn	Sapindaceae	Tree	Ritha	Fruits
46	*Taxus baccata auct*. (Non L.)	Taxaceae	Tree	Thuner	Leaves and bark

Formulations are in the form of fresh juice (swarasa), paste (lepa), decoction with boiled water (kwatha), powder (churna), ghrita & taila (oil), kasaya (decoction) and paka (semi solid preparation with ghee or oil). Specific use and SOP of particular herb in a particular disease is not mentioned here as it is already available in literature elsewhere (Negi, 1994; Bahuguna, et.al., 2006)

The inhabitants of rural areas are largely dependent on medicinal plants for curing various ailments (Samant et al. 2007). But due to overexploitation and habitat degradation, the population of most of the economically important species is decreasing fast (Samant et al. op cit). One other reason of diminishing traditional knowledge of medicinal plants is the sole dependence on allopathic mode of treatment. Though significant work has been conducted on traditional use of medicinal plants around different parts of Himalaya (In Pakistan by Qureshi & Ghufran, 2005; in western Nepal by Singh and Hamal, 2013; in Himachal Pradesh by Aswal & Mehrotra,1994; in Sikkim Hills by Rai and Sharma, 1994; in Jammu and Kashmir by Bhatia et. al, 2014; in Darjeeling Hills by Sharma, 2013; and in Uttarakhand by Singh & Attri, 2014; Baluni, 2015, 2020, etc.), yet majority of urban and semi urban population believes more on allopathic system of treatment, might be due the reason that at Government level, the ayurvedic system of treatment could not get more attention. It is desirable to give priority to culture these medicinal herbs in large scale by using even biotechnological tools.

The inhabitants of Uttarakhand are still considerably dependent on traditional vaidyas (practitioners of Ayurveda) and local healers for

treating diseases (Kala 2000, 2005a). Specialists are people for whom medicinal and aromatic plants are major components of their livelihood, such as trained practitioners (vaidyas, Ayurvedic doctors, pharmacists), folk knowledge based vaidyas, dai (women practitioners), and other traditional health practitioners. There are quite a few people who used medicinal plants as a home remedy merely on the basis of past experiences. However, recent years have witnessed fragmentation and outright loss of the traditional plant knowledge. This is high time to conserve and inseminate this very important knowledge and plan a national policy for culture and conservation of these plant species.

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