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THE MEDICINAL IMPORTANCE OF FEW IMPORTANT PLANT SPECIES OF LAHAUL AND SPITI (COLD DESERT), SITUATED IN THE WESTERN HIMALAYAS

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ABSTRACT

The present paper is focussed on herbal potential and medicinal value of the plants of the cold desert of Lahaul and Spiti which is situated in the western Himalayas. Most of the plant species of this area have medicinal importance; but very less information is available. Various field surveys and research were carried out for getting the herbal potential and medicinal value of the plants of the study area. The first hand information was recorded on the plants used as herbal remedies for the treatment of various diseases through personal interviews or personal contact with the local people of different remote localities. This is an effort to highlight the medicinal information of the studied medicinal plants of this area so that the population of these plants can be preserved from the natural habitat and their herbal benefits can be delivered for the betterment of the human beings and moreover society.

KEYWORDS: Medicinal Plants, Herbal Potential, Treatment, Population.

INTRODUCTION

The present study is focussed on the importance of few important medicinal plants collected from pattan valley of Lahaul and Spiti; which is a cold desert. This part is situated in the western Himalayas and is hemmed by high mountain ranges on all sides creating a vast rain shadow zone which makes this area devoid of significant precipitation makes this region a cold desert. This part of Himachal Pradesh is a rich repository of medicinal and aromatic plant wealth which is situated in Indian Himalayan region (IHR).The typical cold desert of Lahaul-Spiti possesses rich trans-Himalayan flora. The terrains and climatic conditions of this part are very hard, rugged and inhospitable which makes the flora growing in this area more hardy and important. Being a tribal district, the region is rich in ethno-botanical and cultural heritage. The fauna growing in these harsh climatic conditions produce a number of secondary metabolites for their survival .these secondary metabolites are gums, resins, oils, tannins, glycosides etc. Which afford them safe survival. Presently most of the medicinal are growing in the wild and in the current scenario; the demand and supply of medicinal plants are mis-matching. At present 90% of the supply is from forest and only 10% by the way of cultivation. Due to the collection of medicinal plants in wild state, habitat destruction by soil erosion, grazing, landslide, collection by unskilled workers, conversion of habitats to crop based agriculture has reduced the availability of medicinal plants, Moreover, the plants where plant parts and whole of the plant is used for their medicinal properties have greater rate of extinction because plants cannot regenerate to such pace in which they are exploited in such hard natural habitats. The irrational extraction of wild medicinal plants has endangered many of its high value gene stock (Pushpangadan and Nair, 2001; Rao and Rajasekharan, 2002). Many plant species are present at varying threat status ranging from low risk-near threatened to critically endangered (Badola and Pal, 2000; 2003; Ved and Tandon, 1998). About 60 medicinal and aromatic plant species from H.P. are enlisted as threatened, their status ranges from vulnerable to critically endangered (vulnerable, 27; endangered, 21 and critically endangered, 12) (Ved et al., 2003). Because of the danger of extinction, a number of these medicinal and aromatic plant species have been included in negative list of export by the Government of India (Anonymous, 2003). Therefore, efforts are necessary to develop and implement various strategies for the conservation, protection and regeneration of lost medicinal wealth. Ex-situ cultivation of the species concerned will ease the pressure on the natural habitats.

MATERIALS AND METHODS

Seed Collection: Seeds of the following medicinal plant species were collected from Pattan valley and other locations in Lahaul and Spiti district, Himachal Pradesh (altitude: 2900 to 4500 m amsl) during August-September and same duration of subsequent years and various field surveys were carried out for getting the herbal potential and medicinal value of the plants of the study area. The first hand information was recorded on the plants used as herbal remedies for the treatment of various diseases through personal interviews or personal

contact with the local people of different remote localities. The seeds and plant specimens were collected and preserved in the form of herbarium and identified and relevant literature was consulted.

1. *Verbascum thapsus* L.
2. *Malva verticillata* L.
3. *Elsholtzia eriostachya* Benth.
4. *Meconopsis aculeata* Royle.
5. *Physochlaina praealta* (Decne.) Miers
6. *Aquilegia fragrans* Benth.
7. *Pleurospermum candollii* Benth. ex Clarke

The seeds and plant material of all above species were collected from the populations growing in the wild and separated manually. The seeds were air dried for a fortnight at room temperature after which they were stored in plastic air tight jars at room temperature for subsequent studies.

RESULTS AND DISCUSSION

S. No.	Species/Family	Local/ Common names	Description	Parts used/Medicinal uses	Location of seed collection
1.	*Verbascum thapsus* Linn. (Scrophulariaceae)	Mullein, Bantamaku, Gider-tamaku	Upright biennial growing to 2m. has a slightly hairy, gray green oval to lance-shaped leaves, spikes of bright yellow flowers.	(Leaves, flowers, fruit, roots) Leaves and flowers may be used as an infusion to reduce mucus formation applied externally as a good wound healer. In Germany, flower steeped in olive oil used as a remedy for ear infections.	Parrak (3000 amsl)
2.	*Malva verticillata* Linn. (Malvaceae)	cluster mallow, curly leaved mallow, Laffa	A biennial herb, 30-90cm high, stem erect, branched, glabrous, covered with hairs, green. Leaves alternate, simple and palmetely lobed, petioles 2-8 cm long, flowers reddish, seeds flattened with a V-shaped slit on one side.	(Leaves, stem, roots) Infection in urinary system, lithiasis, obstruction of milk secretion, stems and leaves used in hepatitis. Roots, tiredness of the lower limbs and body, perspiration caused due to weakness or of unknown origin.	Thapak (2900 amsl)
3.	*Elsholtzia eriostachya* Benth. (Lamiaceae)	Var-Pusilla	Aromatic slender erect mint like annual to 45 cm. Leaves oblong to lanceolate, softly hairy, short stalked, flowers tiny, yellow, numerous in a stout cylindrical, terminal shaggy haired spike, corolla 4-lobed, calyx smaller, with linear hairy lobes.	(Whole plant) *Elsholtzia eriostachya* is used in menorrhagia and pathogenic diseases in uterus. *Elsholtzia* sps. used to treat cuts and burns, as folk medicines for treating cough, headache inflammation, protect heart from ischemic damage.	Thapak (2900 amsl)
4.	*Meconopsis aculeata* Royle. (Papaveraceae)	Himalayan Blue poppy, Simla-Kanta; Kumaon- Kanda.	Bristly-haired, monocarpic plant with erect stem to 60 cm. Leaves deeply and irregularly pinnate lobed, sparsely bristlely haired, flowers blue, very rarely purple red.	(Leaves, flowers, roots) Whole plant is used in Tibetan medicines. Analgesic and febrifuge, used to help broken bones, to treat inflammation from fractures and pain in the upper body regions especially around the ribs. Plant especially the root-considered narcotic and	Neelkanth (4450 amsl) Endangered

				poisonous.	
5.	*Physochlaina praealta* (Decne.) Miers (Solanceae)	Bajarbhang, nandru, lalthang	Its is a perennial herb 0.6 – 1.3 m in height, leaves petioled, flowers pedicelled, calyx lobes lanceolate, corolla is tubular funnel shaped.	(Leaves, seeds, flowers) Leaves applied to boils; poisonous, antiodote, sedative, narcotic, anodyne, dilation of pupil and also used as a vermifuge to eradicate round worms, as an emetic in cases of bilious attack.	Rashal (Jobrang) (3200 amsl) (Vulnerable)
6.	*Aquilegia fragrans* Benth. (Ranunculaceae)	Columbine, lande, kumuk	Stem erect, 40-80 cm, branched above, leaves blue-green above, twice divided into three; leaflets 3-lobed, with shallow oblong teeth, flowers several, white or cream, 3-5 cm with straight or curved backward projecting spurs inner petals.	(Whole plant) *Aquilegia fragrans* is used in the treatment of pneumonia fever and headache, boils, wound healing and skin problems. *Aquilegia* sps. used as Anodyne, antispasmodic, astringent, diaphoretic, diuretic, febrifuge, parasiticide, resolvent and salve.	Shansha Gar (3800 amsl)
7.	*Pleurospermum candollii Benth. ex Clarke (Apiaceae)*	Bann	Stem 10-20 cm thick, leaves pinnate, fruit 7-9 mm, lateral ridges broad, furrows 3-2 vittate.	(Fruit) Dysentery, dyspepsia, renal pain, stomachache and flatulence.	Neelkanth (4500 amsl)

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