

ORCHIDACEAE

Dactylorhiza hatagirea (D. Don) Soo [= *Orchis hatagirea* D. Don; *Orchis latifolia* non L.]

Vernacular names: Arabic – Salab; Hindi - Salam panja; Sanskrit - Salam pamisri; Tamil – Salamisri.

Trade names: Salap.



Dactylorhiza hatagirea (D. Don) Soo

Distribution: INDIA: Sporadically occurs in the Himalayas and N.E. India, across Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh, between altitudinal ranges of 2400 - 3500 m; EUROPE; NORTH AFRICA; Temperate ASIA; CHINA; South East TIBET; PAKISTAN; NEPAL and BHUTAN.

Habitat: Found in alpine meadows in moist, humus rich soil amongst grasses, near snow streams and in association with other herbs.

Population status / Cause for RET: Critically endangered. The threats are due to loss of habitat and indiscriminate collection of rhizomes from natural population for preparation of medicine.

Description: Terrestrial herbs, up to 60 cm high. Rhizome tuberous with 2 – 5 finger like lobes. Stem robust, slender with leaves throughout or scaly towards base. Leaves 3 – 6, erect, subsessile, broadly lanceolate to oblong, ligulate or elliptic, 7 – 16 x 2.5 – 4 cm, acute at apex. Inflorescences of spicate racemes, densely flowered. Flowers purplish-lilac or pinkish or rarely white. Fruits ellipsoid. Seeds many, minute.

Fl. & Fr.: June - September.

Parts used commercially: Tuberous rhizomes, used in Ayurveda, Siddha, Tibetan, Unani and Folk medicine.

Medicinal properties and uses: The rhizome of this plant is credited with aphrodisiac, demulcent, nutritive, astringent and tonic properties. The rhizome is used as nervine tonic and aphrodisiac. The mucilage jelly of the rhizome is used to treat

diarrhoea, dysentery and chronic fever. It is also given in paralytic affections.

In Unani system of medicine, it is used in seminal debility, chronic diarrhoea and general weakness in debilitated women after delivery. It is used in cut wounds.

Substitutes and adulterants: Under the trade name 'Salap', substantial quantity of Salap is being imported from abroad, such materials include rhizomes of *Orchis mascula* L. and *O. laxiflora* Lam. The term Salap is applied to many crude drugs, which gives room for adulteration and malpractice.

Cultivation practices: Being an orchid, this plant can be considered as an inherently slow-growing and poorly regenerating species because of pollinator specificity and requirement of mycorrhizal association. Therefore, this plant becomes more important from conservation point of view.

Since the seeds are minute and have low viability, cultivation through seeds is difficult. Cultivation is possible through splits and divisions of the tuber having stem portions with bud. The germplasm of this plant species is very well maintained in Sikkim State Forest Nursery located at Kyongnosla in East Sikkim.

Commercial / Ex-Im data: It is traded in various levels viz. local, regional, national and global markets. The collection of rhizome from this plant species from wild sources and its marketing is officially banned. However, some quantities of the drug are still reaching the markets under the garb of its being imported or produced through cultivation. The rhizome is collected by nomadic shepherds and local villagers and sold to local traders. The whole plant is uprooted during October when the aerial parts start drying up and the rhizome is separated from the plant, which are dipped in hot water for about an hour, afterwards it is peeled and dried under the Sun.

Crude drug markets located at Kishtawar and Udhampur in Jammu & Kashmir, Chamba and Kullu in Himachal Pradesh and Ramnagar and Tanakpur in Uttarakhand deal with this crude drug. The current market rate of the crude drug is Rs. 700 per kg.

Substantial quantities of Salap are imported from Afghanistan, Iran and Turkey. Such materials include rhizomes of *Orchis mascula* L. and *O. laxiflora* Lam. (Orchidaceae). Main crude drug markets are located in Mumbai and Delhi where this raw drug is available.

Legal: Included in Negative List of Exports.

References: Selvam, A.B.D. (2012). Pharmacognosy of Negative Listed Plants. Pp. 59-68.