

## GENTIANACEAE

**Swertia chirayita** (Roxb. ex Flem.) Karsten [= *Gentiana chirayita* Roxb. ex Flem.; *G. chirayita* Wall.; *Swertia chirayita* (Wall.) C.B. Clarke]

Vernacular names: Arabic - Kasbuzarira; Hindi - Chirata; Sanskrit - Kirata-tikta; Tamil - Nila vaambu.

Trade name: Chiretta



**Swertia chirayita** (Roxb. ex Flem.) Karsten

**Distribution:** INDIA: Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Meghalaya and Sikkim between altitudinal ranges of 1400 – 3270 m; CHINA; TIBET NEPAL and BHUTAN.

**Habitat:** Occurs sporadically in subtropical and temperate forests, in open forest margins, cool and moist places or in shady moist slopes among tall grasses.

**Population status / Cause for RET:** Endangered. The major threats to the wild population of this plant species are loss of habitat and harvesting of the plant for medicinal uses.

**Description:** Annual or biennial herbs, 60 – 125 cm high. Stem robust, branching, cylindrical below, 4-angled upwards and contain a large pith. Leaves opposite-decussate, broadly ovate or lanceolate, 3.5 – 10 x 1.5 – 4 cm, glabrous, obtuse or cordate at base, acuminate at apex, margins entire, usually with 3 – 7 prominent lateral veins. Inflorescences of large leafy panicles of solitary-axillary or axillary and terminal clusters of 3 – 5 flowers. Flowers yellowish-green outside, purple inside, tetramerous, drooping or erect, 5 – 8 mm across. Fruit a capsule, ovoid or ellipsoid. Seeds numerous, minute, globose, brownish; testa close, alveolate.

**Fl. & Fr.:** July – August / September – October.

**Parts used commercially:** Whole plant, used in Folk, Ayurveda, Siddha, Unani, Homoeopathy and in Modern

medicine.

**Medicinal properties and uses:** This plant is credited with tonic, febrifuge, alterative, carminative, expectorant, laxative, stomachic, anthelmintic and anti-diarrhoeal properties. It is employed in drug formulations prescribed for the treatment of toxic fever, malarial fever, urinary disorders, bronchial asthma, bilious affections, burning of the body, constipation, diarrhoea, dyspepsia, flatulence and skin diseases.

**Substitutes and adulterants:** The market sample of this raw drug is generally mixed with other species of *Swertia*, of which *S. angustifolia* Buch.-Ham ex D. Don and *S. alata* Royle are most common. The whole herb of *Andrographis paniculata* (Burm.f.) Nees (Acanthaceae) is often sold in the name of Chirayita. *A. paniculata* is often substituted for or confused with *S. chirayita*.

**Cultivation practices:** It can be propagated by seeds in temperate Himalayan region. The seeds that are very small should be sown on the surface of a well-prepared seedbed. Later on, the seedlings are transplanted into the field. The whole plant is uprooted at fruiting stage in the month of September and October and is dried in shade. Most of the leaves are being detached from the stem during drying. Therefore, fresh plant materials should be cut into pieces before drying to avoid loss of leaves.

**Commercial / Ex-Im data:** It is traded in various levels viz. local, regional, national and global markets. Only limited quantity of this raw drug is obtained from eastern parts of the Kumaon region of Uttarakhand and Sikkim. A bulk raw drug is imported from Nepal. Major crude drug markets are located in Ramnagar, Tanakpur, Siliguri, Kolkata and Delhi where this crude drug is commercially available in larger quantities. The current market rate of this raw drug is Rs. 75/- per kg.

**Legal:** Included in Negative List of Exports.

**Reference:** Selvam, A.B.D. (2012). Pharmacognosy of Negative Listed Plants. Pp. 215-230.