

**Botanic name :** *Valeriana hardwickii* Wall. -- Fl. Ind. (Carey & Wallich ed.) 1: 166. 1820 (IK)

**Common name :** Indian Valerian

**Family :** Valerianaceae

**Habitat :** Terrestrial

**Distribution :** Native to Indian Himalayas; distributed in 900-3800 m., India, Bhutan, Nepal, Myanmar, Indonesia, Laos, Pakistan, Thailand, North Vietnam

**Description :** A perennial herb, reaching 150 cm; rhizomes short; roots slender, stolons one to many, or absent; stems erect, often hispidulous below, glabrous above except at nodes; leaves 1-3 pairs stem-leaves, large, compound with 3-5 leaflets; basal leaves long petiolate; blade pinnatisect or pinnatifid, rarely simple and cordate; terminal segment ovate to ovate-lanceolate, hispidulous to glabrate, base subrounded, margin entire or serrate, apex acuminate; lateral segments 4 or 6, remote, reduced toward petiole; cauline leaves similar, gradually reduced apically; flowers and fruit in remote dichasial clusters, flowers pink or white, small, arranged in paniculiform; bracts linear-subulate; bracteoles deltoid-ovate, margin entire or crenulate. Corolla white, pinkish white, or purplish, campanulate to funnelform, tube and lobes of equal length; stamens and style subequal to corolla in length or slightly exerted; fruits achene, broadly ovoid to ovoid, hispidulous or less frequently glabrous.

**Phytochemicals:** Essential oil [valeracetate (17.3%), bornyl acetate (15.3%), methyl linoleate (11.7%), cuparene (10.4%) and  $\alpha$ -cedrene (6.2%)], valeracetate, iridoids - valechlorine, and isovaleroxyvaltrate hydrine (roots and rhizomes) and Valepotriates, flavonoids- linarin, linarin isovalerate, luteolin, diosmetin, kaemferol, quercetin, apigenin, acacetin, neobudofficide and rhoifolin (aerial parts, whole plant), Sesquiterpenes of the volatile oil (valerenic acid and its other derivatives, valeranone, valeranal, and kessyl esters) and valepotriates (valtrate, didrovaltrate, acevaltrate, and isovaleroxyhydroxyvaltrate), sesquiterpenoids

**Medicinal/Economic uses :** Tranquilizer, bitter, carminative, expectorant, diuretic, hypnotic, antispasmodic, stimulant, aphrodisiac, emmenagogue, cytoprotective, diaphoretic, nervine, effective against nerve overstrain, epilepsy, hysteria, sleep disorder, eczema, ulcer, low blood pressure, rheumatism, painful menstruation, cramps, irritable bowel syndrome, insect bites, and various skin diseases; standardised mixture of valepotriates used in Europe as a mild sedative. Vietnamese use the plant as a folk medicine with anti-convulsant, sedative, anti-fatigue, and anti-dysmenorrheal properties. Juice of fresh drug used as a narcotic in insomnia and anticonvulsive in epilepsy. The root has been used traditionally to treat insomnia and blood, circulatory, and mental disorders, also to treat digestive problems and urinary tract infections for at least 1,000 years. It is used as sedative, anxiolytic, antidepressant, antispasmodic, and anti-HIV bioactivities. In Brazil, it has been used in conventional medicine for its sedative, anticonvulsant, hypnotic effects, and anxiolytic activity.