

Vitex trifolia

L.

Verbenaceae

LOCAL NAMES

Filipino (hand of Mary,dangla); Indonesian (galumi); Malay (lenggundi); Thai (khon thiso); Vietnamese (m[aj]n kinh)

BOTANIC DESCRIPTION

Vitex trifolia is a shrub up to 6 m tall, leaflets (1-)3, glabrous above (except for the midrib), densely greyish puberulous below.

Median leaflet oblong-elliptical to obovate, 2.5-9.5 cm x 1.5-4 cm, with 6-13 pairs of lateral veins, on a 1-6 mm long petiolule, lateral leaflets sessile or subsessile.

Cymes terminal and axillary, arranged in panicles; calyx 3-5 mm long, obscurely 2-lipped, with 5 small teeth, corolla blue to purple or violet, throat villous inside.

Fruit globose to ovoid, 5-6 mm long, black or bluish-black when mature.

V. negundo closely resembles *V. trifolia* but can be distinguished by its long-petioluled median leaflet and 3-5 leaflets.

BIOLOGY

In the Philippines, *V. trifolia* flowers year around.



Habit at S Casey Key
Florida (Forest & Kim Starr)



Fruit at S Casey Key
Florida (Forest & Kim Starr)

ECOLOGY

V. trifolia is found in teak forest, secondary forest and thickets up to 1100 m altitude, but also in mangrove forest and along the shore. The phenotypic variation observed between these habitats is given specific or sub-specific rank by various authors.

BIOPHYSICAL LIMITS

Altitude: Up to 1100 m.

DOCUMENTED SPECIES DISTRIBUTION

Native: Afghanistan, Australia, China, India, Indonesia, Japan, Madagascar, Malaysia, Mauritius, Myanmar, New Caledonia, Sri Lanka, Thailand, Vietnam

Exotic:



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS

Essential oil: The essential oil contains several terpenes, including cineol, terpineol and alpha-pinene.

Poison: Oils from the leaves of *V. trifolia* show considerable mosquito repellent activity. The active principle in the leaves of *V. trifolia* has been identified as rotundinal, a cycloterpene aldehyde. *V. trifolia* shows considerable potential as a botanical pesticide that may be applied both indoors and outdoors.

Medicine: A poultice of leaves is used to treat rheumatism, contusions, swollen testicles, and as a discutient in sprains. An infusion of the boiled roots is regarded as diaphoretic and diuretic, and is widely drunk in cases of fever and after childbirth. In Malaysia, various parts of the plants are considered a panacea for a wide variety of illnesses ranging from headache to tuberculosis. In Indonesia, the leaves are used in medicinal baths and a tincture or decoction of them for intestinal complaints, whereas the fruits are used as an anthelmintic. In the Bismarck Archipelago, the sap from crushed heated leaves is diluted with water and drunk to relieve headaches. In Vietnam, a decoction of dried fruits is given in the treatment of common cold, headache, watery eyes and mastitis. In Thailand, the fruits are used to treat asthmatic cough and haemorrhoids, and the root is applied in the treatment of liver diseases.

An ethanol extract (50%) of *V. trifolia* shows antispasmodic and antihistamine properties. A crude drug extract of *V. trifolia* leaves mediated a significant increase in lifespan in mice bearing sarcoma 180 cells, indicating potential antitumour activity.

SERVICES

Ornamental: *V. trifolia* are widely cultivated as ornamentals.

Boundary or barrier or support: *V. trifolia* is often used as a hedge plant, although it may trigger various allergic reactions (sneezing, respiratory problems, dizziness, headache, nausea) to people trimming or pruning such hedges.

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TREE MANAGEMENT

GERMPLASM MANAGEMENT

PESTS AND DISEASES

FURTHER READNG

Capareda, EP. 1999. *Vitex* L. In de Padua, L.S., Bunyaphatsara, N. & Lemmens, R.H.M.J. (Eds.): *Plant Resources of South-East Asia*. No. 12(1): Medicinal and poisonous plants 1. Prosea Foundation, Bogor, Indonesia. pp. 497-500, 502.

CSIR. 1976. *The Wealth of India: Raw materials*. Vol X Sp-W. CSIR.

Sunarno B et al. 1995. *Vitex* L. In Lemmens, R.H.M.J., Soerianegara, I. & Wong, W.C. (Eds.): *Plant Resources of South-East Asia*. No. 5(2): Timber tree: Minor commercial timber. Prosea Foundation, Bogor, Indonesia. pp. 502.

SUGGESTED CITATION

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 *Agroforestry Database: a tree reference and selection guide version 4.0* (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)