

LOCAL NAMES

English (gamboge tree); German (Gutti,Gummigutt); Thai (rong);
Vietnamese (dang hoang)

BOTANIC DESCRIPTION

An evergreen, small to medium-sized tree, up to 15 m tall, with short and straight trunk, up to 20 cm in diameter; bark grey, smooth, 4-6 mm thick, exuding a yellow gum-resin.

Leaves opposite, leathery, elliptic or ovate-lanceolate, 10-25 cm x 3-10 cm, cuneate at base, acuminate at apex, shortly stalked.

Flowers in clusters or solitary in the axils of fallen leaves, 4-merous, pale yellow and fragrant, unisexual or bisexual; male flowers somewhat smaller than female and bisexuals; sepals leathery, orbicular, 4-6 mm long, persistent; petals ovate, 6-7 mm long; stamens numerous and arranged on an elevated receptacle in male flowers, less numerous and reduced in female flowers; ovary superior, 4-loculed, with sessile stigma.

Fruit a globose berry, 2-3 cm in diameter, smooth, with recurved sepals at the base and crowned by the persistent stigma, 1-4 seeded.

Seeds 15-20 mm long, surrounded by a pulpy aril.

The gum-resin from *G. hanburyi* is often called Siamese gamboge to distinguish it from the similar product from the bark of *G. morella* Desr., called Indian gamboge. The species are closely related, and *G. hanburyi* has been considered in the past as a variety of *G. morella*.

BIOLOGY

Normally it flowers in November and December and fruits from February to April.

ECOLOGY

Gamboge tree occurs naturally in rain forest.

BIOPHYSICAL LIMITS

Altitude: Up to 800 m, Mean annual rainfall: 1000-2500 mm.

DOCUMENTED SPECIES DISTRIBUTION

Native: Cambodia, China, Sri Lanka

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

Gum or resin: The tree is valued because of the resinous sap, called gamboge, which exudes from incisions in the bark. The reddish-yellow to brownish-orange sap contains 70-80% resin and 15-25% gum. The main acidic component of the resin is cambogic acid (C₃₈H₄₄O₈). The main components of the gum are arabinose (ca. 50%), and galactose (ca. 40%); the gum is soluble in water and forms a yellow emulsion in water. This sap is used as a golden-yellow colouring matter for varnishes, lacquer, paints, and ink.

Medicine: Gamboge is a drastic purgative, an emetic, and a vermifuge for treating tape worm, but it is no longer used in human medicine. Sometimes it is given to cows as purgative.

Timber: The wood is pale or brownish-yellow, straight grained, with fine texture, and fairly heavy, weighing about 900 kg/m³. It is moderately hard and works easily; it takes a fine polish. The wood is sometimes used for interior work.

SERVICES

TREE MANAGEMENT

Gamboge tree is not in cultivation; only wild trees are tapped. Usually trees are not tapped before they are 20 years old, when the trunk has attained a diameter of about 15 cm. A spiral incision is made in the trunk just below the lowest branches, and the exudate is collected in a bamboo container. About every 3 days the content is poured into smaller bamboo stem parts (about 75 cm long), in which the gum-resin coagulates in about a month or longer. The bamboo containers are then cracked and the gamboge is removed in cylindrical sticks (pipe gamboge), which is the usual form in trade. Sometimes gamboge is moulded and pressed into cakes.

GERMPLASM MANAGEMENT**PESTS AND DISEASES**

FURTHER READNG

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SUGGESTED CITATION

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