

## LOCAL NAMES

English (Timor white gum, Timor mountain gum); Indonesian (popo, ampupu); Portuguese (palavao preto); Vietnamese (b[aj]ch d[af]n d[or])

## BOTANIC DESCRIPTION

*Eucalyptus urophylla* is an evergreen tree up to 45 m tall, or, in unfavourable conditions, a shrub; bole straight, branchless for up to 30 m, up to 2 m in diameter; bark variable depending on moisture and altitude, usually persistent and subfibrous, smooth to shallow, close longitudinal fissures, red-brown to brown; sometimes rough, especially at the base of the trunk.

Juvenile leaves subopposite, stalked, broadly lanceolate; adult leaves phyllodinous, subopposite to alternate, long stalked, broadly lanceolate, 10-15 x 5-8 cm, discolourous; lateral veins just visible.

Inflorescence an axillary, simple umbelliform, condensed and reduced dichasium called a conflorescens; umbels solitary, with 5-8 flowers; peduncle somewhat flattened, 8-22 mm long.

Seed small, 4-6, angular to more or less semi-circular, black.

The genus *Eucalyptus* was described and named in 1788 by the French botanist l'Héritier. The flowers of the various *Eucalyptus* species are protected by an operculum, hence the generic name, which comes from the Greek words 'eu' (well), and 'calyptos' (covered). The specific epithet comes from the Greek uro- (with an elongated or tail-like appendage), and phylla (leaves).

## BIOLOGY

Flowering usually starts within 2 years from planting. The bisexual flowers are open to many pollen vectors such as insects, birds or small mammals. Some wind pollination is also possible. There is a capacity for selfing if out-crossing fails. This is an evolutionary advantage in the survival of the populations.



*E. urophylla*, 6 year old provenance trial, San Carlos, Costa Rica. (David Boshier)

**ECOLOGY**

*E. urophylla* frequently occurs as the dominant species in open, often secondary montane forests. It grows on mountain slopes and in valleys and is commonly found on basalt, schists and slates, but rarely on limestone.

**BIOPHYSICAL LIMITS**

Altitude: (350)500-3 000 m, Mean annual temperature: 8-29 deg. C, Mean annual rainfall: 1 000-1 500 mm

Soil type: Develops best on deep, moist, well-drained, acidic or neutral soils derived from volcanic or metamorphic rock. Also commonly found on basalt, schist and slates, but rarely on limestone.

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Indonesia

Exotic: Australia, Brazil, Cameroon, China, Congo, Cote d'Ivoire, French Guiana, Gabon, Madagascar, Malaysia, Papua New Guinea, Vietnam



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**

Fuel: *E. urophylla* makes satisfactory fuelwood and charcoal.

Fibre: *E. urophylla* is particularly suitable as a source of mid-density to low-density eucalypt fibre for pulp and paper production.

Timber: *E. urophylla* is an important source of heavy timber. In Timor, the wood is used in heavy construction, bridging, flooring and framing. The round wood is used for building poles and fence posts.

Tannin or dyestuff: The bark has a tannin content of over 10%, but it is not used commercially.

Essential oil: The leaves yield a pale yellow oil. The major components of the oil are paecymene (76%), alpha-pinene (7%) and gamma terpenene (4%). The essential oil is a good source of paracymene, which possesses disinfectant properties and is utilized in soapmaking and in the perfumery industry.

**SERVICES**

Reclamation: *E. urophylla* is increasingly being used in reforestation programmes.

**TREE MANAGEMENT**

Spacing varies with purpose of the plantation. For pulpwood, 3 x 2 m is commonly used, and for fuelwood or poles spacing may be closer. It is essential to keep the field free of weeds until the trees are 6 months old. Thinning is done every 2 years from the age of 3 years onwards. *E. urophylla* has good coppicing ability and can be expected to produce at least 3 coppice rotations after the initial seedling rotation.

**GERMPLASM MANAGEMENT**

On average there are 210 000-470 000 viable seeds/kg.

**PESTS AND DISEASES**

Seedlings of *E. urophylla* are susceptible to attack by termites and stem borers such as *Zeuzera coffeae*. In the Solomon Islands, die-back attributed to the coreid insect *Amblypelta cocophaga* has been observed in 3-4-month-old plantings. Damping-off of seedlings occurs in cases of high humidity. Root fungi such as *Botryodiplodia* spp., *Fusarium* spp. and *Helminthosporium* spp. are all a problem. A canker disease caused by *Cryphonectria cubensis* is found on *E. urophylla* in West Africa and South America.

**FURTHER READNG**

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Soerianegara I, Lemmens RHMJ (eds.). 1993. Plant Resources of South-East Asia. No. 5(1): Timber trees: major commercial timbers. Backhuys Publishers, Leiden.

**SUGGESTED CITATION**

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