

**LOCAL NAMES**

English (hairy mahang); Filipino (kuyonon,himindang,binunga); Indonesian (tutup ancur,hanuwa,mara,mapu); Javanese (tutup ancur); Malay (ka-lo,kundoh,mahang puteh,tampu); Thai (ka-lo,hu chang lek,mek,paang,lo khao); Vietnamese (hach dâu nam)

**BOTANIC DESCRIPTION**

*Macaranga tanarius* is a small- to medium-sized dioecious tree up to 20 m tall, usually much shorter; branches rather thick, glaucous, pubescent when young.

Leaves alternate, blade peltate, suborbicular, 8-32 x 5-28 cm, rounded at the base, acuminate at the apex, entire, sometimes denticulate or slightly lobed, with distinct veins, hairy when young; petiole 6-27 cm long, with large caducous stipules at the base.

Flowers in axillary, paniculate inflorescences, composed of bracts enclosing clusters of flowers; male flowers minute, many in a cluster with (min. 3) 5-6 (max. 10) stamens, female flowers few in a cluster, with a subovoid, glandular, 2-celled ovary and 2 large stigmas.

Fruit a bicoccus capsule, about 1 cm in diameter, with long,soft prickles, yellowish, glandular outside. Seeds globose, about 5 mm in diameter, rugose.

The generic name is after a native name from Madagascar.

**BIOLOGY**

*M. tanarius* is a dioecious, wind pollinated tree, flowering and fruiting fairly regularly.



Habit at Waikapu stream, Maui, Hawaii (Forest and Kim Starr)



Leaves and flowers at Mokulele Hwy, Maui, Hawaii (Forest and Kim Starr)

**ECOLOGY**

A very fast-growing pioneer species, *M. tanarius* is often common in secondary forests, especially in logging areas. It is also found in thickets, brushwood, village groves and beach vegetation.

**BIOPHYSICAL LIMITS**

Altitude: Up to 1500 m, Mean annual rainfall: 1000-2800 mm, Mean annual temperature: 10-30 deg.C

Soil type: Occurs on clayey, loamy and sandy soils, usually in lowlands.

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Australia, Brunei, Cambodia, China, Indonesia, Japan, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Taiwan, Province of China, 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**

Food: In Sumatra, fruit are added to palm juice when it is boiled down into crystals, improving the quality of the sugar produced.

Fuel: Good firewood is provided by *Macaranga tanarius*.

Fibre: *Macaranga* yields a high-quality pulp and produces high-quality particleboard.

Timber: The timber is soft and light, about 500 kg/cubic m air-dry. It is not durable or resistant to termite attack but is fairly tough. The grain is straight or only shallowly interlocked, with a moderately fine and even texture. Pepper growers in southern Sumatra use it to make temporary ladders to harvest their crop.

Gum or resin: In Indonesia and the Philippines, the gum tapped from the bark is used as a glue, particularly for joining parts of musical instruments.

Tannin or dyestuff: The bark contains tannin, which is used for toughening fishing nets. Nets dipped in a decoction of the bark will stand the influence of seawater for a considerable amount of time. In Indonesia, the leaves have been reported to dye matting black, like other Euphorbiaceae.

Alcohol: Bark and leaves are widely used in the Philippines in the preparation of a fermented drink called 'basi' made from sugarcane.

**SERVICES**

Shade or shelter: *M. tanarius* has been recommended as a shade and shelter tree to promote natural regeneration on deforested land.

GERMPLASM MANAGEMENT

Seed storage behaviour is orthodox. There are approximately 54 500 dry seeds/kg.

**FURTHER READNG**

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Sosef MSM, Hong LT, Prawirohatmodjo S. (eds.). 1998. PROSEA 5(3) Timber trees: lesser known species. Backhuys Publishers, Leiden.

**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>)