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Københavns Universitet

Dacrycarpus imbricatus (Blume) de Laubenf.

Schmidt, Lars Holger; Luu, Nguyen Duc To

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Dacrycarpus imbricatus (Blume) de Laubenf.

Taxonomy and nomenclature

Family: Podocarpaceae. The species is divided into 4 varieties; var. *imbricatus*, var. *patulus*, var. *robustus* and var. *curvulus*.

Synonyms: *Podocarpus imbricatus* Blume, *Podocarpus cupressiana* R. Br. Mirbel.

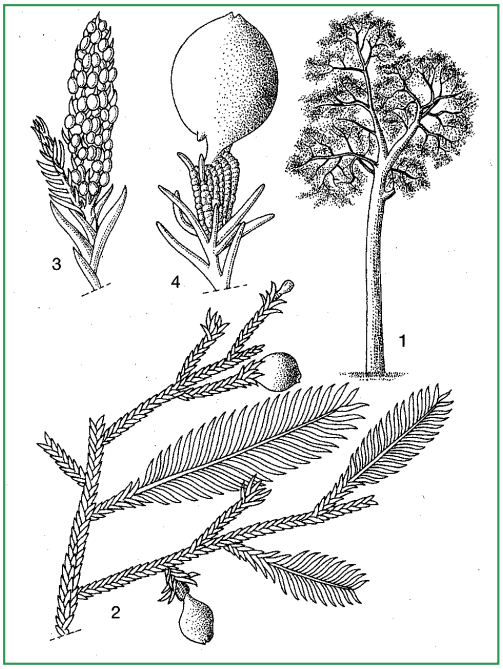
Vernacular/common names: jamuju (Indonesia), igem (Philippines), phaya-makhampom (Thailand), thong long ga, thong nang (Vietnam).

Dacrycarpus consists of 9 species in SE Asia - Pacific. It is closely related to the genus *Podocarpus* and was formerly included as a 'section' of that genus. It also shows close resemblance to the genus *Dacrydium*.

Distribution and habitat

Naturally occurring from southern China, Indochina, Myanmar, Thailand, Malaysia and throughout Indonesia and the Philippines to New Hebrides and Fiji in the Pacific Ocean. Important forest tree in Hainan Island (S. China).

The species mostly occurs in humid montane or sub-montane habitats such as mist forests or mountain rainforests. Often scattered but sometimes co-dominant at altitude 700-2500 (- 3400) m.a.s.l.



1, tree habit; 2, twig with seed cones; 3, pollen cone; 4, seed cone. From: Plant Resources of SE Asia 5(2).

Uses

Moderate timber quality used for furniture, plywood and construction timber. As ornamental very popular as bonsai.

Botanical description

Up to 50 m high and 100-150 (-200) cm diam. bark red brown or rugose. Inner bark orange with brownish resin. Two types of leaves: on young branchlets linear and spreading featherlike, 6-12 mm long, 1 mm wide, keeled; leaves on old branches and fruiting branches small, scale-like with acute tip, turning yellow with age. Male cone axillary, 1 cm long, ¼ cm wide. Female solitary or grouped in two at the tip of twigs, with an involucre of elongated leaves at the base, making up the receptacle, which at maturity enlarges to about twice the size of the fruit and turning bright red.

Mature fruits before processing. Vietnam. Photo: Lars Schmidt

Fruit and seed description

Fruis: female reproductive organ borne on a red receptacle, green when young, turning light brown at maturity.

Seed: seed handling unit is the female reproductive organ with or without aril (receptacle) and is made up of the morphological seed plus a leathery epimatium. It is sub-globose, 4-5 mm wide and 6-7 mm long. The embryo is small and embedded in the thick endosperm. There are 16,000-20,000 seeds per kg.

Flowering and fruiting habit

The species is dioecious, i.e. male and female flowers are on separate trees. Pollination in S. China – N. Vietnam from February-April with seed maturing in October to December.

Harvest

Seeds are considered mature and ready for dispersal once the receptacle has turned into a brightly red or brownish coloured swelled aril. Seed bearing structures are scattered and harvest quite work intensive. They may be collected by cutting down fruit bearing branchlets, by climbing or from the ground. If collected from the forest floor the ground should be cleaned and preferably covered with sheets or tarpaulins since the fruits are rather small and, once the aril fades, quite inconspicuous.

Processing and handling

The immature fruits may be after-ripened by keeping them moist until they take the mature colour. The fleshy aril should be removed by washing as soon as possible after collection. Seeds sown with aril, either fresh or after drying and storage, have shown poor germination, suggesting presence of germination inhibitors in the aril.

Storage and viability

Seeds have recalcitrant to intermediate storage character. They tolerate drying to about 15-29% mc and can be stored cool for 3-4 months without significant loss in viability.

Dormancy and pretreatment

The aril presumably contains inhibitors and should be removed before sowing.

Sowing and germination

Germination is epigeal, cotyledons needle-like. Seeds with removed aril are sown in seedbed with moist sand mixed with soil. Germination may take from 2 weeks to 3 months. Seedlings are shade tolerant.

Vegetative propagation

Rooting of cuttings can be done from coppice material. In a test 7-10 cm cuttings were root dipped in ABT. After 3 months 80% of cuttings had rooted successfully.

Mature tree in Ka Bang, Central Vietnam. Photo: Lars Schmidt

Selected readings

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THIS NOTE WAS PRODUCED IN COLLABORATION WITH VIETNAMESE TREE SEED PROJECT

Authors: L. Schmidt, *Forest & Landscape Denmark*
Nguyen Duc To Luu, Central Forest Seed Company, Vietnam Tree Seed Project, Hanoi

Forest & Landscape Denmark
Hørsholm Kongevej 11
DK-2970 Hørsholm
Denmark Website:
Phone: +45-35281503
Fax: +45-35281517
Email: SL-International@kvl.dk
www.SL.kvl.dk