Antidesma bunius

Sprengel

Euphorbiaceae

LOCAL NAMES
Burmese (kywe-pyisin); English (currant tree,Chinese laurel,nigger's cord,salamander tree); Filipino (bignay,bignai); French (antidesme); Indonesian (hoon,wooni); Javanese (wuni); Malay (buni,berunai); Thai (ma mao luang); Vietnamese (ch[of]im[of]i,choi moi)

BOTANIC DESCRIPTION
Antidesma bunius may be shrubby, 3-8 m high, or may reach up to 15-30 m. It has wide-spreading branches forming a dense crown.

Leaves evergreen, alternate, oblong, pointed, 10-22.5 cm long, 5-7.5 cm wide, dark-green, glossy, leathery, with very short petioles.

Flowers tiny, odorous, reddish, male and female on separate trees, the male in axillary or terminal spikes, the female in terminal racemes 7.5-20 cm long.

Fruits round or ovoid, up to 8 mm across, borne in grape-like pendent clusters (often paired) and which are extremely showy because the berries ripen unevenly. Skin thin and tough but yields an abundance of bright-red juice which leaves a purple stain on fabrics, while the pulp, only 3 mm thick, is white with colorless juice. Whole fruits very acid, much like cranberries, when unripe, sub-acid and slightly sweet when fully ripe. Some tasters detect a bitter or unpleasant aftertaste, unnoticeable to others.

There is a single, straw-colored, ridged or fluted very hard seed, 3cm long, 6 mm wide.

The generic name Antidesma is derived from the Greek ‘anti’-against and ‘desma’-a band or constriction, alluding to its use as anti-snake venom in India.

BIOLOGY
A. bunius is dioecious. In Indonesia, the trees flower in September and October and the fruits mature in February and March. The fruiting season is July to September in North Vietnam. In Florida it extends from late summer through fall and winter because some trees bloom much later than others.

Foliage and fruit (Trade winds fruit)

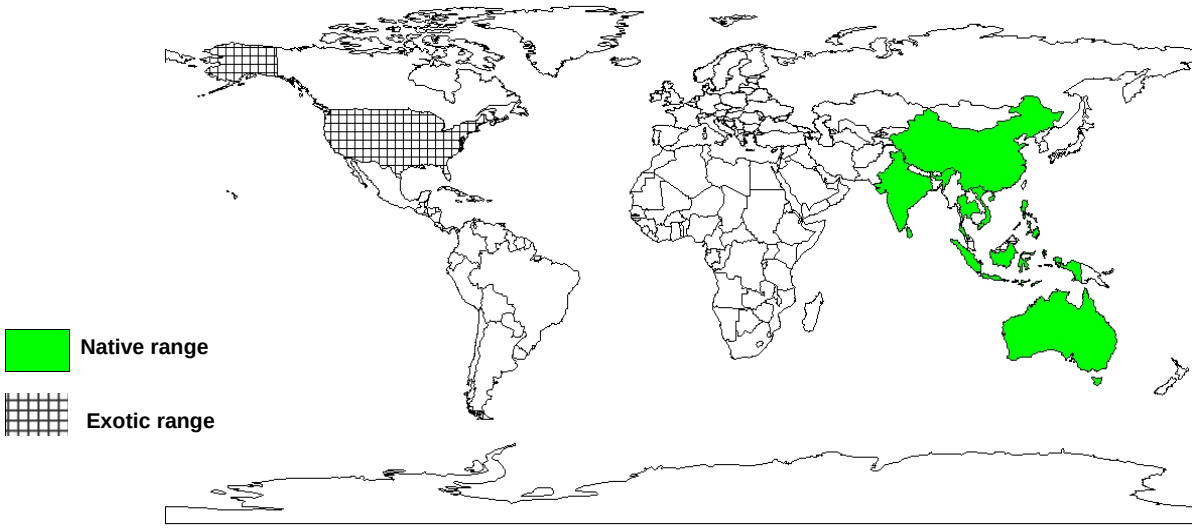
Detail of leaves and unripe fruits. (unknown)

ECOLOGY
The tree is not strictly tropical for it has proved to be hardy up to central Florida. It thrives in Java from sea-level to 1 200 m. It grows well and flowers but does not set fruit in Israel.

BIOPHYSICAL LIMITS
Altitude: 0-1 200 m

DOCUMENTED SPECIES DISTRIBUTION

Native: Australia, China, India, Indonesia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam
Exotic: Cuba, Honduras, Israel, Malaysia, Puerto Rico, US



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: Mostly children eat the fruits. Indonesians cook the fruits with fish. Elsewhere the fruits (unripe and ripe together) are made into jam and jelly though the juice is difficult to jell and pectin must be added. Some cooks add lemon juice as well. If the extracted bignay juice is kept under refrigeration for a day or so, there is settling of a somewhat astringent sediment, which can be discarded, thus improving the flavor. For several years, the richly colored jelly was produced on a small commercial scale in southern Florida. The juice makes excellent syrup and has been successfully fermented into wine and brandy. In Indonesia and the Philippines, the leaves are eaten raw or stewed with rice. They are often combined with other vegetables as flavouring.

Fibre: The bark yields a strong fiber for rope and cordage. The timber has been experimentally pulped for making cardboard.

Timber: The timber is reddish and hard. If soaked in water, it becomes heavy and hard.
Gum or resin:

Poison: The bark contains a toxic alkaloid. The heavy fragrance of the flowers, especially the male, is very obnoxious to some individuals.

Medicine: The leaves are sudorific and employed in treating snakebite in Asia.

SERVICES
Reclamation: A. bunius has occasionally been employed in reforestation projects.

Ornamental: The dark green and glossy, alternate leaves make the tree an attractive ornamental.

TREE MANAGEMENT
The trees should be spaced 12-14 m apart, each way. One male tree should be planted for every 10 to 12 females to provide cross-pollination. Wind-protection is desirable when the trees are young. Otherwise they require very little cultural attention.

GERMPLASM MANAGEMENT
Depulped and dried fruits of A.bunius may be stored for 2-5 years in airtight containers without a serious decrease in seed viability. There are about 2 800 seeds/kg.

PESTS AND DISEASES
The tree is attacked by termites in Southeast Asia. In Florida, the leaves may be heavily attacked by mealybugs and by scale insects and sooty mold develops on their excretions. Here, also, the foliage is subject to green scurf and algal leaf spot caused by Cephaleuros tirescens.

FURTHER READNG

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

Whitmore TC (ed). 1983. Tree Flora of Malaya: A manual for Foresters. Vol. 2. Forest Department, Ministry of Primary Industries. Malaysia.

SUGGESTED CITATION

Orwa C, Mutua A , Kindt R , Jamnadass R, Simons A. 2009. Agroforestree Database:a tree reference and selection guide version 4.0 (http://www.worldagroforestry.org/af/treedb/)