

LOCAL NAMES

Amharic (plem); Bemba (mufutu); English (black plum, vitex, African oak); French (Prunier noir); Fula (galbihi); Hausa (dinya); Igbo (ucha koro); Luganda (munyamazi); Lunda (kashilumbulu); Nyanja (mfutu, msimsya, mfifya, mfimfy); Swahili (mfudu, mfulu, mfuru, mfuu, mfundu); Yoruba (oori-nla)

BOTANIC DESCRIPTION

Vitex doniana is a medium-sized deciduous tree, 8-18 m high, with a heavy rounded crown and a clear bole up to 5 m. Bark rough, pale brown or greyish-white, rather smooth with narrow vertical fissures. The bases of old trees have oblong scales.

Leaves opposite, glabrous, 14-34 cm long, usually with 5 leaflets on stalks 6-14 cm long. Leaflets distinctly stalked, ovate, obovate-elliptic or oblong, entire, 8-22 cm long, 2-9 cm wide. Leaf tips rounded or emarginate, leaf bases cuneate. Dark green above, pale greyish-green below, thickly leathery, with a few scattered stellate hairs on the upper surface, otherwise without hairs.

Flower petals white except on largest lobe, which is purple, in dense opposite and axillary cymes. Flowers small, blue or violet, 3-12 cm in diameter, only a few being open at a time.

Fruit oblong, about 3 cm long. Green when young, turning purplish-black on ripening and with a starchy black pulp. Each fruit contains 1 hard, conical seed, 1.5-2 cm long, 1-1.2 cm wide.

The generic name, 'Vitex', is an old Latin name for the genus.

BIOLOGY

Vitex species generally exhibit hermaphroditism, where both functional male and female organs are in the same flower (Lars Schmidt, 2000).



Vitex doniana slash (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)



Vitex doniana foliage (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)



Vitex doniana bark (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

ECOLOGY

V. doniana is the most abundant and widespread of the genus occurring in savannah regions. A deciduous forest tree of coastal woodland, riverine and lowland forests and deciduous woodland, extending as high as upland grassland. Requires a high water table.

BIOPHYSICAL LIMITS

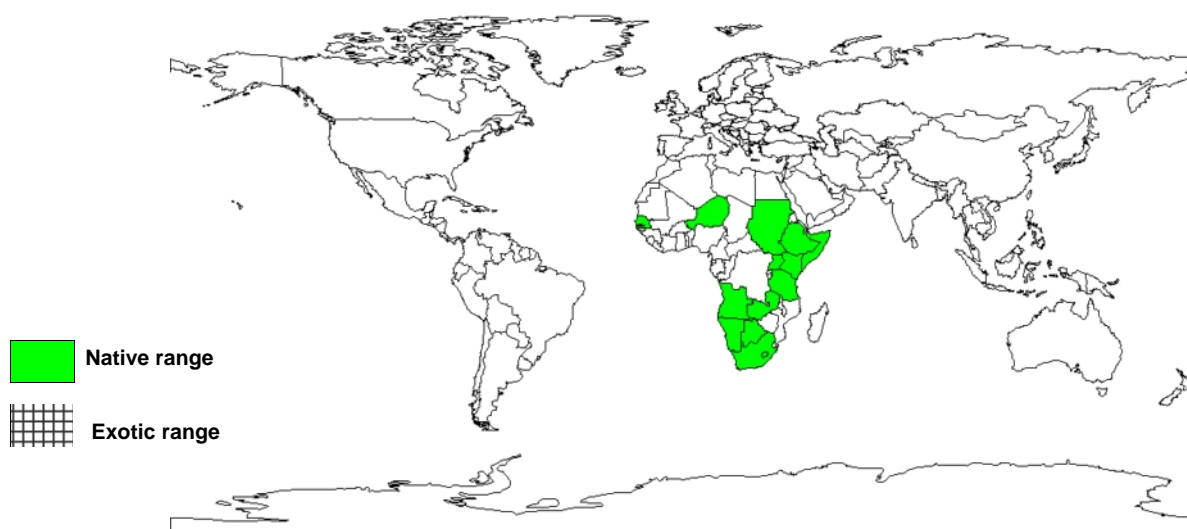
Altitude: 0-1 850 m, Mean annual temperature: 10-30 deg. C, Mean annual rainfall: 750-2 000 mm

Soil type: Occurs on a variety of soils of varying origins, usually alluvial soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Botswana, Ethiopia, Kenya, Lesotho, Namibia, Niger, Senegal, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia

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: The fruit is sweet and tastes like prunes; it is occasionally sold. It contains vitamins A and B and can be made into a jam. Leaves are often used as a herb for cooking.

Fodder: The leaves, pods and seeds are a good fodder.

Apiculture: *V. doniana* is a favourite tree for hanging bark beehives.

Fuel: Wood is used for firewood and charcoal.

Timber: Wood whitish to light brown. The tree produces a teak-like termite-resistant timber. It is quite hard and suitable for light building material, furniture, carvings and boats.

Alcohol: The fruit can be made into wine. The pounded leaves can also be added to warm filtered grain beer and then drunk.

Tannin or dyestuff: The bark yields a dye that can be used for cloth.

Medicine: The fruit is used to improve fertility and to treat anaemia, jaundice, leprosy and dysentery. The root is used for gonorrhoea, and women drink a decoction of it for backaches. The young tender leaves are pounded and the juice squeezed into the eyes to treat eye troubles.

SERVICES

Shade or shelter: The heavy rounded crown of *V. doniana* provides good shade.

Nitrogen fixing: The tree has nitrogen-fixing roots.

Soil improver: Leaves can be used for mulch.

Boundary/barrier/support: Grown in fields and along boundaries.

TREE MANAGEMENT

V. doniana has a medium growth rate. Coppicing and lopping are recommended forms of management.

GERMPLASM MANAGEMENT

Orthodox seed storage behaviour. Dormancy of air-dry stored seeds is considerable; while fresh seeds germinate more easily, moist storage at 3-5 deg. C for up to a year is possible. There are 1000 seeds/kg.

FURTHER READNG

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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>)