

# Syzygium cordatum

umdoni

Hochst. ex Krauss

Myrtaceae

## LOCAL NAMES

Afrikaans (waterbessie); Bemba (mufinsa,mukute,mushingu); English (water-berry tree,water tree,waterwood); Lozi (mutoya); Luganda (kanzironziro,kalunginsanvu,muziti); Lunda (musombo); Nyanja (mwenye,nyowe,msombo,mchisu,katope); Swahili (mzambarau wa mwitu); Tongan (katope); Trade name (umdoni); Zulu (umDoni)

## BOTANIC DESCRIPTION

*Syzygium cordatum* is a medium-sized tree, 6-15 (max. 20) m in height; dwarf forms 30-45 cm high have been reported; young trunks banded and blotched in grey and white and are fairly smooth; in old trees the bark is dark brown, light grey or reddish, thick, rough, fissured and can be pulled off in thick, corklike, square pieces; young stems squarish with winged edges.

Leaves very many, near the ends of branches, thick, leathery, smooth, opposite, elliptic, oval or almost circular, up to 2.5-13 x 1.9-8 (17) cm, bluish-green on top, paler green under, gland dots inconspicuous; apex bluntly pointed to rounded; base round and notched; margin entire and often wavy; petiole absent or extremely short; midrib lateral with conspicuous net veins; usually stalkless but may occasionally have short stalks, in which case they may be confused with those of *S. guineense*; new foliage is bright red.

Buds sturdy, in dense, branched terminal sprays, their round shiny pink tops appearing just above the smooth, green calyx. Open into creamy white to pinkish, sweetly scented flowers that yield excellent, abundant nectar; petals fall early, leaving the stamens forming an airy puff; stamens the most conspicuous feature, in dense heads, about 2-2.5 (max. 10) cm in diameter at the ends of branches; filaments 10-15 mm long.

Fruit an ovoid, fleshy berry, about 1.3-1.5 cm, slightly oblong, deep pink, purple or purple-black when mature, ellipsoid with a permanent calyx on top, 10-18 mm long; inside the fruit is a single, whitish seed.

The genus name, '*Syzygium*', is derived from the Greek word 'syzygios' (paired), on account of the leaves and twigs that in several species grow at the same point; the specific name is the Latin word 'cordatus', meaning 'heart-shaped', in reference to the heart-shaped base of the leaves.

## BIOLOGY

*S. cordatum* hybridizes freely with *S. guineense* and *S. gerrardii* where they occur together. Flowers bloom from spring to winter and are popular with bees and other insects, which are the pollinating agents. The fruits is eaten by numerous animal species that act as the dispersal agents for the seeds.



flower cluster (Trade winds fruit)



Unripe fruit (Trade winds fruit)



Foliage with flowers and fruit cluster (Trade winds fruit)

**ECOLOGY**

*S. cordatum* is common near fresh water or along fresh watercourses. It occurs in lowlands as well as medium- to high-latitude forests, along stream banks and in riverine thickets. The tree is believed to indicate underground water and is strongly fire resistant. Trunk is forked and towards the coast it is often luxuriant looking, and is sparser inland in rocky places. In Natal, *S. cordatum* is an indicator of areas suitable for sugarcane farming. The tree is resistant to cold but not frost, and it is a protected species in South Africa.

**BIOPHYSICAL LIMITS**

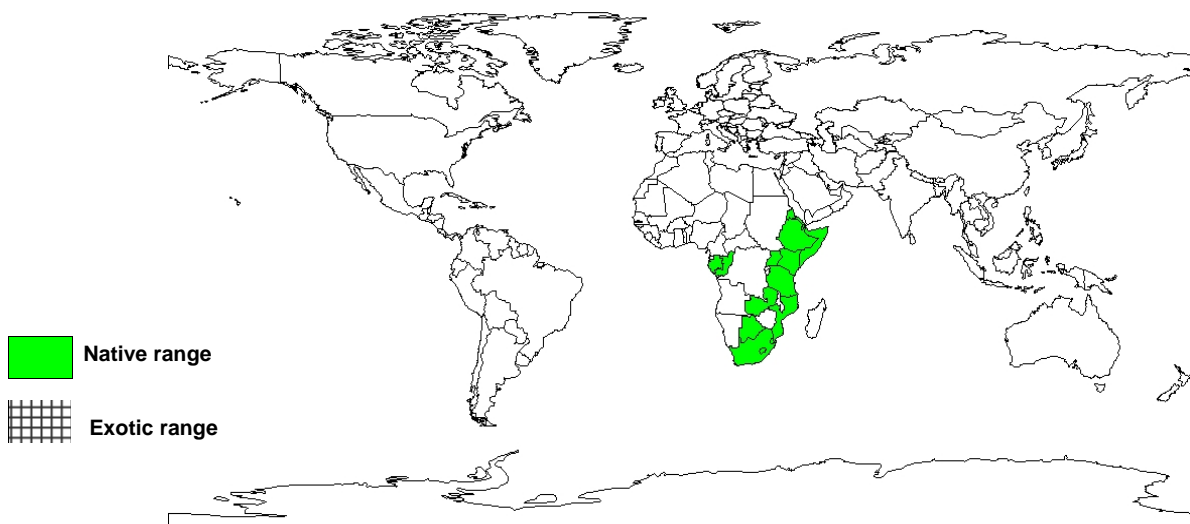
Mean annual rainfall: 750-1 200 mm

Altitude: 0-1 800 m

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Botswana, Central African Republic, Congo, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Gabon, Kenya, Lesotho, Mozambique, Somalia, South Africa, Swaziland, 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.

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**PRODUCTS**

**Food:** The bitter-tasting fresh fruit is eaten raw or used to make an alcoholic drink. A good quality jelly can be cooked from the ripe fruit.

**Fodder:** The leaves are browsed by game (kudu, nyala, bushbuck and grey duiker), and they eat the ripe fruit.

**Apiculture:** Flowers are popular with bees, which results in a very good honey flow.

**Fuel:** *S. cordatum* is popular as a source of firewood and charcoal.

**Timber:** The light, reddish-brown to greyish wood is medium hard, heavy (750 kg/cubic m) and works well but should be water seasoned. It is used for good quality furniture, window frames, beams and rafters and, being durable in water, it is especially suitable for boat building.

**Tannin or dyestuff:** A blue dye can be obtained from the bark.

**Poison:** Pieces of the bark or powdered bark are used as a fish poison for catching small fish in small ponds; it turns the water bluish for up to 3 days.

**Medicine:** Roots and bark are boiled and the decoction is used as a remedy for indigestion and giddiness; an extract of the leaves is used as a purgative or diarrhoea treatment.

**SERVICES**

**Erosion control:** *S. cordatum* can withstand extended periods of waterlogging and can be used to stabilize river and stream banks.

**Shade or shelter:** *S. cordatum* provides the much-needed shade and shelter for domestic stock and game on the farm.

**Ornamental:** *S. cordatum*, with its evergreen glossy leaves, abundant, creamish-white flowers and blackish fruit, is an asset to any garden.

**Boundary or barrier or support:** *S. cordatum* makes an effective screen plant in a shrubbery.

**Other services:** Milk gourds are seasoned by the pleasantly aromatic wood smoke of *S. cordatum*. The tree is used in magic.

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### **TREE MANAGEMENT**

Pollarding is practised to produce close, rounded heads of young branches. Groves of this tree should be planted around water points, springs or on banks of streams or rivers. This is one of southern Africa's fastest growing trees (up to 1m/year), with a rather aggressive root system. If there is limited space, trees can be grown in containers, in which case they will flower and fruit at an earlier age.

### **GERMPLASM MANAGEMENT**

Seed storage behaviour is recalcitrant; the seed maintains its viability for a day. Embryo mc at maturity is 60.8%; whole seed mc is 46%. Lowest safe mc is 43.5% for slow drying and 31.5% for rapid drying. On average, there are 400-450 seeds/kg. All the flesh should be removed before seeds are dried in the shade.

### **PESTS AND DISEASES**

Larvae of *Charaxes protoclea azota*, *C. druceanus*, *Deudorix dinochares*, *D. diocles*, and *D. antalus* (butterflies) feed on the leaves of *S. cordatum*.

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**SUGGESTED CITATION**

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