Ziziphus mucronata

Willd.

Rhamnaceae

LOCAL NAMES
Afrikaans (blinkblaar-wag-'n-bietjie,buffelsdoring); Amharic (foch,ado kurkura); English (buffalo thorn,Cape thorn); French (jujubier de la hyene); Ndebele (umphafa); Shona (muchecheni); Swahili (mkunazi); Tigrigna (gaba-harmaz); Tswana (mokgalo); Xhosa (umPhafa); Zulu (umKhobonga,umLahlankosi,umPhafa,isiLahla)

BOTANIC DESCRIPTION
Ziziphus mucronata is usually a shrub or medium-sized tree up to 9 m tall with a trunk that is frequently crooked; branches spreading, often drooping, branching well above ground or near the base. Bark grey-brown and smooth when young (often spiny), but becoming darker brown and fissured with age.

Leaves ovate to broadly ovate, mucronate, 2.5-8 x 1.9-8 cm, shiny, densely hairy to quite smooth. The twigs, leaf stalks and veins (3-nerved from the base) often covered with fine hairs, especially when young. The strong thorns are in pairs, 1 straight to 2 cm and the other smaller and recurved, leaves arising between the 2 thorns.

Flowers small, yellow, inconspicuous, bisexual, in tight axillary clusters, often producing copious nectar.

Fruit a round, reddish-brown, glossy drupe. Trees with 2 types of fruit, the small type 7-10 mm in diameter and the large type 15-25 mm in diameter, all often remaining on the tree after the leaves have fallen. The pulp is dry and meally.

The generic name is derived from the latinized version of the Arabic vernacular name 'zizouf' for Z. jujuba; 'mucronata' refers to the shape of the leaf.

BIOLOGY
Z. mucronata is a hermaphroditic species. In South Africa, flowering is from October to April and fruiting from February to August.

Ziziphus mucronata fruit (Joris de Wolf, Patrick Van Damme, Diego Van Meersschaut)

Ziziphus mucronata (Patrick Maundu)

ECOLOGY
Z. mucronata grows in areas dominated by thorny vegetation in both temperate and tropical climates. Also found in open scrubland, woodland, forest margins and riverine vegetation. It is a very hardy species, most common in dry areas; it is resistant to both frost and drought. Regarded as an indicator of underground water.

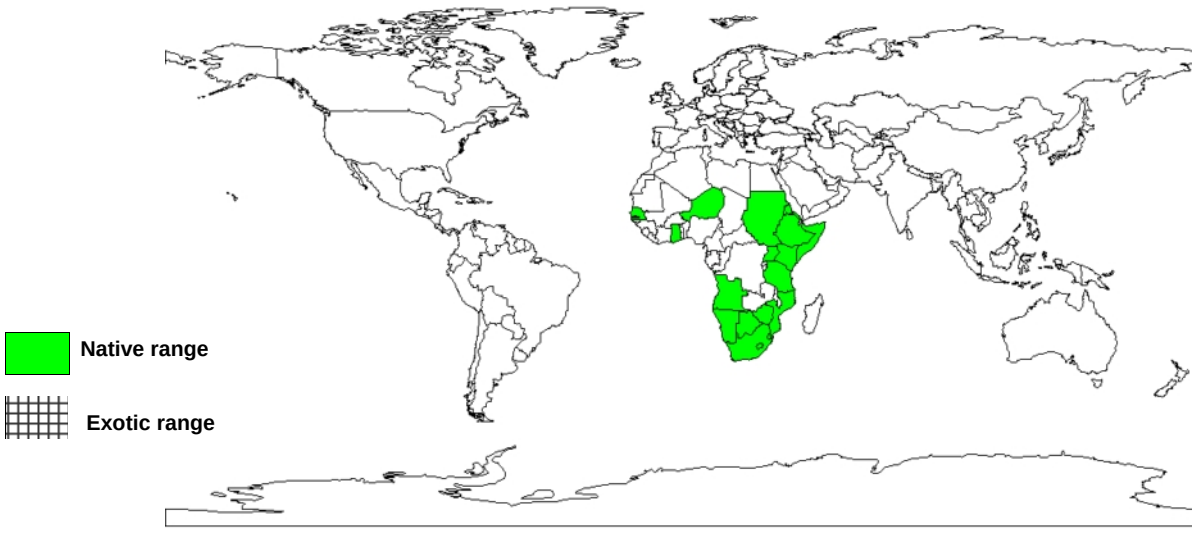
BIOPHYSICAL LIMITS
Altitude: Up to 2 000 m, Mean annual temperature: 12-30 deg. C, Mean annual rainfall: 446-1 200 mm

Soil type: Fluvisols and a variety of fine texture soils. Tolerant to shallow soils, seasonal waterlogging, salt spray and soil salinity.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Botswana, Eritrea, Ethiopia, Ghana, Kenya, Lesotho, Mozambique, Namibia, Niger, Senegal, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zimbabwe

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, with thin, mealy flesh and a sweetish taste, is eaten fresh or dried, in meal or porridge. The young leaves can be cooked and eaten as spinach; they are not very palatable but are nutritious. Seeds are roasted, crushed and used as a coffee substitute.

Fodder: A valuable fodder tree, especially in drier areas. Stock and game (giraffe, eland, kudu, sable, black wildebeest, nyala, impala, klipspringer, springbok, Sharpe's greysbok, steenbok, Damara dik-dik and warthog) relish the highly nutritious leaves and fruit.

Apiculture: Beekeepers consider Z. mucronata a valuable source of nectar.

Fuel: The wood is hard and makes good firewood and charcoal.

Timber: The termite-resistant wood is used for building poles and posts, live and dry fences, and for hunting and fishing weaponry. Whips and bows are made from saplings and from the flexible shoots. Thorny branches are sometimes used to make kraals.

Tannin or dyestuff: The bark contains 12-15% tannin.

Medicine: A wide remedy for almost any pain is a poultice of the powdered and baked roots, which are eaten after they are removed from the affected area. Boils and other skin infections are treated with leaf paste, and this, together with an infusion of the roots, is a treatment for tubercular gland swellings, measles, dysentery, lumbago and chest complaints. Roots are used to treat snakebite. The bark is used as an emetic; bark decoction is used for rheumatism and stomach troubles; bark infusion is used to treat coughs; and bark is used in a steam bath to purify the complexion.

SERVICES
Boundary or barrier or support: A useful species to plant as a hedge around camps. It forms an impenetrable hedge for at least 10 years before the crown is too high off the ground to act as a barrier.

TREE MANAGEMENT
Z. mucronata is very adaptable, growing in all types of soil and standing intense heat and cold equally well. A fast-growing tree, under good conditions it will reach a height of 4-6 m in 4-5 years. Can be managed through lopping, pollarding and coppicing.

Trees can be planted as scattered groups of 10-20 individuals to act initially as fodder trees and later as shade. Young trees must be protected from browsing cattle. The root system is not aggressive.

GERMPLASM MANAGEMENT
Orthodox storage behaviour; viability maintained for 2 years in hermetic air-dry storage at 5 deg. C. There are 500-2000 seeds/kg.

PESTS AND DISEASES
Larvae of the butterflies black pie (Tuxentius melaena), common dotted blue (Tarucus sybaris sybaris), Hintza pie (Zintha hintza), and white pie (Tuxentius calice calice) feed on the leaves.

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SUGGESTED CITATION

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