

Diospyros mespiliformis

African ebony

Hochst. ex A. DC.

Ebenaceae

LOCAL NAMES

Afrikaans (jakkalsbessie); Amharic (ayeh); Arabic (jughan, abu seleba, gugham, gughan, abu sebela, jokhan); Bemba (muchanja); English (jackal-berry, swamp ebony, African ebony, ebony diospyros, West African ebony); Lozi (mutomwa, mupako, muchenje); Lunda (mutomwa); Nyanja (mchenja, mchenjasumu, mvimbe); Somali (kolati); Swahili (mgiriti, mjoho mpweke); Tigrigna (ayeh, aye); Tongan (muchenje); Trade name (African ebony)

BOTANIC DESCRIPTION

Diospyros mespiliformis is a tall, evergreen tree 15-50 m high, with dense, rounded and buttressed stem. Bark grey-black or black, smooth in young trees rough with small regular scales in older trees, pinkish when slashed. Young branchlets are green, tomentellous with pinkish-white hairs, glabrescent later. Crown is very branchy with dense foliage.

Leaves alternate, shiny-green above, paler beneath, 4-7 cm long, 1.5-5.5 cm wide, oblong elliptic or oblanceolate-elliptic, rarely lanceolate-elliptic, pubescent when young later becoming glabrescent or with few persistent, appressed hairs beneath, acute or subacuminate at the apex, cuneate or rounded at base with impressed midrib above, prominent beneath. Flowers pentamerous, white and fragrant. Male flowers sessile hairy and clustered on axillary peduncles. Female flowers solitary, shortly pedicellate and axillary with a 5-lobed calyx.

Fruits usually globose, fleshy, up to 3 cm in diameter, greenish and pubescent when young, yellowish to orange yellow and glabrous when ripe, bell shaped, with persistent style and enlarged calyx and contain 4-6 seeds. Seeds, dark brown, bean-shaped shiny and glabrous.

The generic name *Diospyros* means 'divine pear', and the specific name *mespiliformis* is derived from two words, 'mesos' meaning half, and 'pilos', which is bullets.

BIOLOGY

D. mespiliformis is dioecious and pollinated by bees. Flowering takes place in the rainy season while fruit ripening, which coincides with the dry season takes place 6-8 months after flower fertilization. In southern Africa, flowering occurs from October to November and fruiting from April to September.



Foliage (USAID)



Diospyros mespiliformis (Boffa, Jean-Marc)

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ECOLOGY

The species occurs in woodlands, savannahs and along riverbanks. It prefers areas with permanent water that helps in natural regeneration, and it grows faster in frost-free areas. *D. mespiliformis* occurs naturally from Ethiopia in the north to Swaziland in the south. It favours heavy soils on riverbanks but also occurs in open woodland and is commonly found on termite mounds. This is a protected tree in South Africa.

BIOPHYSICAL LIMITS

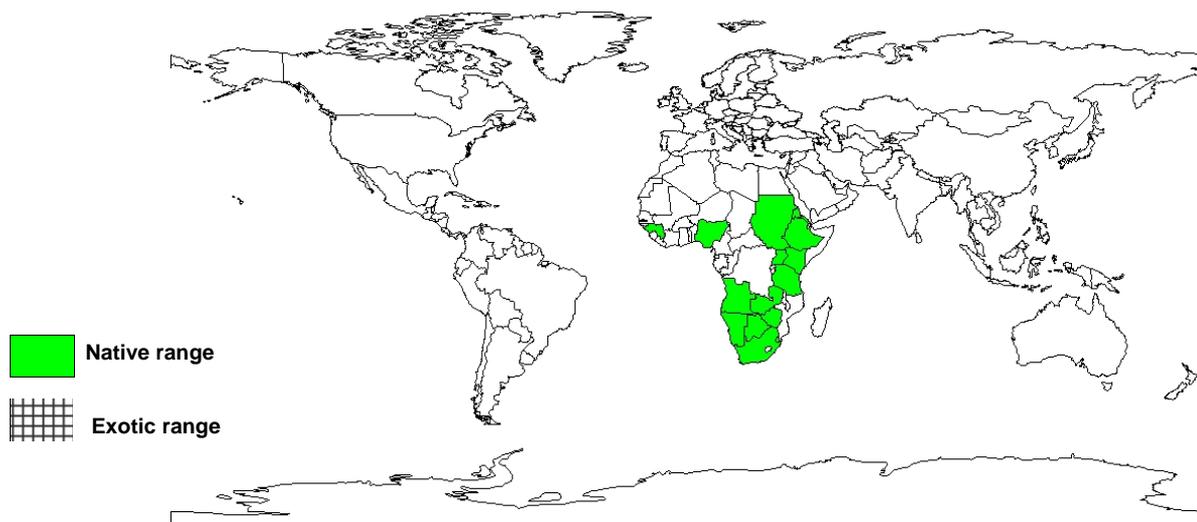
Altitude: 350-1250 m., Mean annual temperature: 16-27 deg. C., Mean annual rainfall: 500-1 270 mm.

Soil type: *D. mespiliformis* prefers rocky soils along seasonal water courses and swamps. It grows well in moist, red loams, volcanic and loamy sands.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Botswana, Eritrea, Ethiopia, Guinea, Kenya, Namibia, Nigeria, South Africa, Sudan, Swaziland, Tanzania, Uganda, Yemen, Republic of, Zambia, 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.

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PRODUCTS

Food: The edible fruit is used fresh in fermented drink or dried and stored for later use. It can also be made into a type of porridge or more commonly mixed in with mealie meal.

Fodder: Leaves are eaten by elephant, giraffe, black rhino, eland and kudu, while fruits are eaten by kudu, klipspringer, warthog, baboons, vervet monkeys, yellow spotted rock dassies, pigeons, parrots, hornbills, louries and bulbuls; a definite asset to any farm.

Apiculture: It provides very good bee forage.

Fuel: *D. mespiliformis* makes good fuelwood and charcoal.

Timber: Wood with a light coloured sapwood, and a dark brown, fine grained, hard and heavy (air-dry 850 kg/cubic m) heartwood. It is hard, strong, fungi and termite resistant and is used for construction purposes, furniture, carvings, floors, stamping blocks, pestles and walking sticks. Dugout canoes are made from this wood especially in Botswana and Namibia.

Medicine: The leaves, roots, bark and fruits contain antibiotic qualities and have many medicinal uses in West Africa. Roots and bark are used to stop purging and to enhance fertility, while the leaf decoction is used as remedy for fever, otitis and wound dressing. Bark and roots for infections such as malaria, pneumonia, syphilis, leprosy, dermatomycoses, as an anthelmintic and to facilitate child birth. Different parts used against diarrhoea, headache, toothache and as a psycho-pharmacological drug.

SERVICES

Ornamental: The large trees have a non-aggressive root system and are suitable for very large gardens and farm gardens.

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TREE MANAGEMENT

Slashing and weeding should be practiced until the trees are well established. Protection from fires helps improve crop stocking in natural forests, and trees should be sheltered in cold areas. The tree can be coppiced.

GERMPLASM MANAGEMENT

Seed storage behaviour is orthodox. Viability can be maintained for one season in open storage, but can be maintained for several years in hermetic storage at 3 deg C with 5-6% mc. On average there are 2 400-3 200 seeds/kg. Under ideal conditions seeds germinate within 50 days.

PESTS AND DISEASES

Seeds are attacked by seed borers.

FURTHER READING

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