Ekebergia capensis

Sparrman

Meliaceae

LOCAL NAMES
Afrikaans (esseboom,essenhout); Amharic (lol,sombo); Bemba (mwela); English (dog plum,ekebergia,Cape ash); Lozi (munyonga,mungombayami); Lunda (mupembe); Tongan (mumbafwe); Xhosa (umGwenyezinja); Zulu (uVungu,uManaye,umGwenya-wezinja,umNyamathi,uSimanaye)

BOTANIC DESCRIPTION
Ekebergia capensis is an evergreen or semi-deciduous, medium-sized to large tree, 7-20 (max. 35) m tall. Stem swollen at base; may be tall and fluted in forests and much shorter or unfluted in the open; it may also be buttressed. Branching is erect, then spreading and finally drooping, giving a moderately heavy, flattish crown; 2nd year branchlets slender, usually less than 6 mm in diameter, marked by old, circular leaf scars and conspicuously dotted with white lenticels. Bark grey, grey-brown to almost black, often mottled, smooth or rough, sometimes flaking in small circles or squares; slash red with white streaks.

Leaves compound, 10-36 cm long, 8-18 cm broad, with common midrib, sometimes slightly winged, alternate; stalks jointed to the stem and leaving a scar on falling. Leaflets usually in 3-5 pairs, occasionally up to 7, with a terminal leaflet, leathery, opposite, almost stalkless and smooth; may be long and rather narrow, tapering to the point, broadly oval or almost egg-shaped, glossy green; sessile.

Flowers small, greenish-yellow or white, occasionally touched with pink, 5-petalled, borne in panicles that are long, branching heads, in the axils of leaves; male and female on different trees, sweetly scented, produced in loose sprays about 8 cm long. Each panicle consists of 12-70 flowers, making the tree very conspicuous when in full bloom.

Fruits round, resembling small apples, thin skinned, almost spherical, 1-2 cm in diameter, succulent, with a faint onionlike taste, sweet scent, long stalks, turning pink to bright red when mature with a whitish flesh; drying and splitting to release seeds. Seeds white, oval, 2-4 or occasionally only 1.

The generic name, ‘Ekebergia’, is in honour of Captain Carl Gustaf Ekeberg (1716-1784); the specific name, ‘capensis’, means ‘of the Cape’.

BIOLOGY
Where conditions are favourable, E. capensis is covered with flowers every year, although in unfavourable localities trees may flower sparsely and only once in several years. In southern Africa, trees flower from September to November, and fruiting occurs from December to April but may occur as late as June; in Zambia, flowers appear between August and October and fruits November to January. Pollination is by bees and ants. Fruits are eaten by monkeys and birds, which help to disperse the seed.

An evergreen tree up to 20 meters tall. The wood is pale brown, light, soft and suitable for furniture. Stock and game readily browse the fresh and fallen leaves. A good garden tree. (Botha R)

Leaves drooping, spirally arranged, compound. Leaflets 9 - 13 per leaf, glossy green, variable in shape and size. The leaves are used as a remedy for intestinal worms. (Botha R)

The bark is light grey to almost black and smooth with rough and flaky patches near the base; the trunk may be slightly buttresed or fluted. The bark contains 7,23% tannin and is used for tanning leather. The bark and root also have medicinal uses. (Botha R)

ECOLOGY
E. capensis can tolerate slight drought conditions and very light frost but is tender to severe frost. It occurs in a variety of habitats including high-altitude evergreen forests, riverine forests and coastal sandveld; it is an occasional tree of sub-montane and swamp forests; it is rare on anthills in miombo and savannah woodland. It also occurs in scrub, both along the coast and inland, where it may be stunted or gnarled. E. capensis is found in most parts of Zambia except for the northwest corner and most of Luapula Province. Outside Zambia, it extends in a belt down the eastern side of the continent from Ethiopia through Kenya, Tanzania and eastern Democratic Republic of Congo to the Cape, South Africa. Trees are found in most of the forests of South Africa from the Cape to Swaziland and the Transvaal, although not plentiful in the Amatola Mountains. It is a threatened species in Uganda and a protected tree in South Africa.

BIOPHYSICAL LIMITS
Altitude: 1400-3 000 m, Mean annual rainfall: 750-2 000 mm

Soil type: The species does particularly well in deep sandy soil.

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Botswana, Burundi, Cote d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Ghana, Guinea-Bissau, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, Senegal, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, 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.

PRODUCTS
Food: Although the flesh of the fruit is edible, it is not very palatable.

Fodder: Domestic stock and game (bushbuck, kudu, nyala) readily browse the fresh and fallen leaves, especially during times of drought. Baboons, vervet and samango monkeys, bushpig, bushbuck and nyala eat the fallen fruit beneath the tree. A useful tree to attract fruit eating birds.

Apiculture: Trees provide forage for bees.

Fuel: Firewood and charcoal can be obtained from the trees.

Timber: The heartwood and sapwood are not clearly defined; wood is susceptible to insect attack, is light (air-dry 592 kg/cubic m), soft, with an even grain, easily worked; straw-coloured to light brown; polishes well, but is not very durable. It must be treated with a 10% solution of zinc chloride to protect against insects. Used for furniture, light construction, poles, tool handles, panelling, beams for boat building, sides of wagons, doors, windows, carving, interior carpentry and broom handles.

Tannin or dyestuff: The bark contains 7.23% tannin and is used for tanning leather.

Medicine: A decoction of the root is said to relieve headaches and chronic coughs; leaves provide a remedy for intestinal worms. Bark is used as an emetic and to cure dysentery.

Other products: Branches are burned in the fields to ward off evil spirits.

SERVICES
Erosion control: E. capensis is employed in soil conservation.

Shade or shelter: Trees are worth cultivating for the useful shade they provide; they also act as windbreaks.

Ornamental: As E. capensis has a non-aggressive root system, it is suitable for large gardens and parks; in South Africa, it has been planted as a street tree.

Intercropping: Trees may be intercropped with coffee and bananas.

TREE MANAGEMENT
Trees are fairly fast-growing. Young trees should be protected from cattle and game for the 1st 2 years. This is a fast-growing species with a growth rate of up to 1 m/year; it responds well to watering.

GERMPLASM MANAGEMENT
Seed storage behaviour is uncertain; 52% germination is observed with seeds at 21% mc, 39% germination after 9 months of subsequent storage at 4 deg. C. There are 2900-8600 seeds/kg.

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SUGGESTED CITATION

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