

**LOCAL NAMES**

English (elm, camdeboo stinkwood, camdeboo, cannibal stinkwood, white stinkwood); Swahili (kimungwe); Xhosa (umVumvu); Zulu (uSinga lwesalukazi)

**BOTANIC DESCRIPTION**

*Celtis africana* is a deciduous shrub to a large tree up to 30 m tall in a forest habitat, and a medium-sized tree up to 12 m under domestication, with a broadly rounded dense crown.

Leaves alternate, egg-shaped, simple, pinnately veined, 5-13 cm long, 2.5-5 cm wide, with a long acuminate tip, only upper half of leaf serrated, three distinct veins branching from the base of the leaf, somewhat thickened. New leaves bright, fresh green and hairy, turning dark green and smoother on maturity.

Flowers monoecious, very small (6 mm diameter), greenish and inconspicuous. Male and female (bisexual) flowers are produced on stalks in leaf axils, appearing in spring in Africa.

Fruit fleshy, masses of small, globose (rounded) drupe and berry-like on 13 mm long stalks; sweet and edible, dark yellow-brown or nearly black when ripe.

Bark grey or nearly white and smooth, may develop scales and be loosely peeling in old trees, sometimes with horizontal ridges.

**BIOLOGY**

The flowers are pollinated by bees and appear in spring (August to October). Masses of small, rounded, dark yellow-brown or nearly black berry-like fruits when ripe follow the flowers in late summer (October to February).

**ECOLOGY**

*Celtis africana* is common and widespread in southern Africa. It occurs in a wide range of habitats from the coast up to 2 100 m, from the Cape Peninsula northwards through South Africa to Ethiopia, where it grows in dense forest, on rocky outcrops, in bushveld, open grassland, mountain slopes, coastal dunes and along river banks. It is associated with higher rainfall or moist places.

**BIOPHYSICAL LIMITS**

Altitude: 0-2 100 m

Temperature:  $\leq 15^{\circ}\text{C}$  -  $\geq 38^{\circ}\text{C}$ . *C. africana* can withstand frost and drought

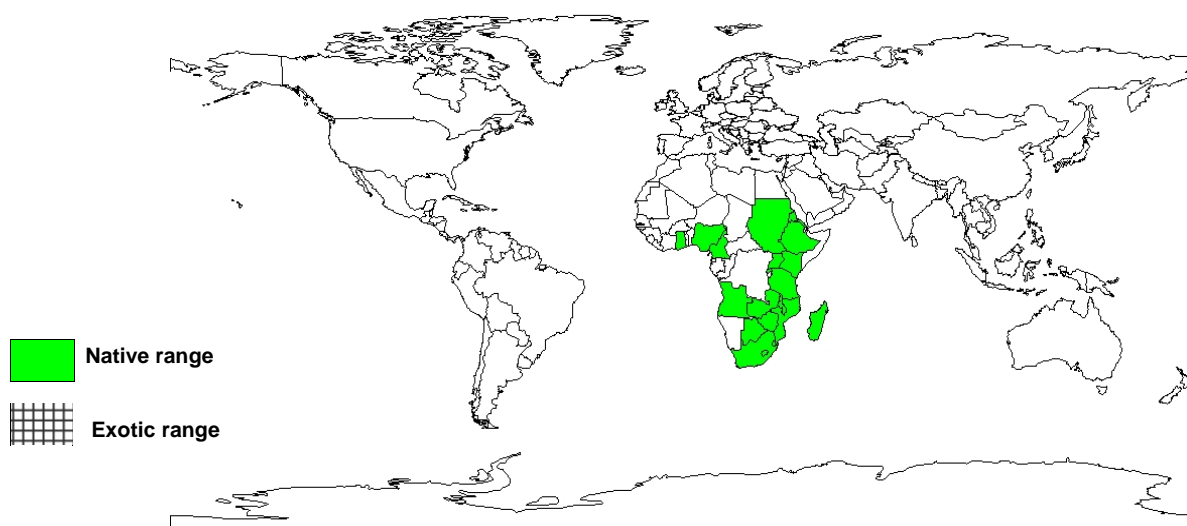
Rainfall: 1700 - 2000 mm

Soil type: deep, rich loamy soil with plenty of water in summer.

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Angola, Botswana, Cameroon, Eritrea, Ethiopia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Nigeria, Rwanda, South Africa, Sudan, Swaziland, Tanzania, Uganda, Yemen, Republic of, Zambia, Zanzibar, 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**

Fodder: *Celtis africana* leaves are browsed by cattle and goats, and are food for the larvae of the long-nosed butterfly. Many bird species like rameron pigeons, willow warblers, black-eyed bulbuls, mousebirds and crested barbets, as well as black and white colobus monkeys and baboons feed on the fruits and disperse the seeds.

Timber: The mature wood of *Celtis africana* is white to yellowish. The medium hard timber rots and splits. With proper seasoning it becomes tough and strong, and polishes well, but is difficult to work. It is a good general timber suitable for making planks, shelving, yokes, tent-bows, tool handles, furniture and general building construction.

**SERVICES**

Shade or shelter: In the garden, with other crops, it makes an ideal shade tree. The deciduous nature of the tree makes it ideal for planting on the north or west sides of a building - where the shade provided cools the building in summer and the leaf allows the sun to heat the building in winter.

Ornamental: This is an excellent tree for large gardens and parks, and has proved to be a successful street and avenue tree. It also works well as a specimen plant in a tub in a courtyard garden, and makes a beautiful bosnai subject.

Other services: The species is an insect haven and is the host tree for the larvae (larval food plant) of the African snout butterfly (*Libythea labdaca*) and *Charaxes cithaeron*.

It is thought to have magical properties. The wood is mixed with crocodile fat as a charm against lightning, and many people believe that it has the power over evil and that pegs of wood driven into the ground will keep witches away.

**TREE MANAGEMENT**

Side pruning may be necessary when planted as shade tree, on parking or along avenues.

**GERMPLASM MANAGEMENT**

The storage behaviour of *C. africana* seeds is described as orthodox probable. Its viability can be maintained for several years in hermetic air-dry storage at 3°C. Freshly collected seeds germinate easily. Seeds collected from the ground are usually infested by insects, so it is best to harvest from the tree.

With the berry flesh removed the seeds should be sown in a flat seedling tray filled with river sand and well decomposed compost (5 parts river sand to 1 part compost). The seeds should be covered with a thin layer of river sand and kept moist. The trays should be placed in a warm but shaded area. Germination takes 15-30 days with an expected rate of 70%. Seedlings should be transplanted into good, rich soil and be given plenty of water leading to a fairly fast growth, putting on 1 – 2 m per year.

**PESTS AND DISEASES**

The species is known to host the larvae of the African snout butterflies *Libythea labdaca* and *Charaxes cithaeron* which feeds on its leaves.

**FURTHER READING**

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**SUGGESTED CITATION**

Orwa C, Mutua A, Kindt R, Jamnadass R, Simons A. 2009. Agroforestry Database: a tree reference and selection guide version 4.0 (<http://www.worldagroforestry.org/af/treedb/>)