

KHAYA NYASICA (AFRICAN MAHOGANY)

Common names

(Bemba) : mululu, mushikishichulu

(English) : African mahogany, East African mahogany, Mozambique mahogany, nyasaland mahogany, red mahogany

(Nyanja) : mbawa, mlulu

(Swahili) : mkangazi

(Tongan) : mululu

(Trade name) : African mahogany, munyama, red mahogany, Uganda mahogany



Botanic description

Khaya nyasica is a large tree, sometimes exceeding 60 m in height. Bark grey to brown, mainly smooth but flaking off in characteristic scales. Leaves compound, paripinnate, large, 2-7 pairs of leaflets; leaflets oblong-elliptic, 17 x 7 cm, surface dark glossy green, paler green below; margin entire; petiolules and petioles. Flowers white, up to 10 mm in diameter, sweetly scented, inconspicuous, produced in large, many-flowered, axillary, branched sprays or panicles. Fruit an ovoid woody capsule, 3-5 cm in diameter, creamy brown, splitting into 4-5 valves; seeds winged. The specific epithet is after nyasaland (now Malawi) where this splendid tree was collected for scientific identification.

Ecology and distribution

Natural Habitat

East African mahogany prefers terraces and stable, gently sloping riverbeds in riparian forests; it also grows well on adjacent colluvial slopes at the margins of floodplains. Where sufficient moisture is available, the species is not limited by topographic position. It is frost sensitive and shares the dominant canopy position with *Diospyros mespiliformis*, *Parinari excelsa* and *Syzygium cordatum*. In the Democratic Republic of Congo, it grows in well-developed gallery forests with *Chrysophyllum* species.

Geographic distribution

Native : Democratic Republic of Congo, Malawi, Mozambique, Tanzania, Uganda,

Zambia

Exotic : Cuba, United States of America

Biophysical limits

Altitude: 0-1000 m, Mean annual temperature: 18-28 deg. C, Mean annual rainfall: 600-1600 mm Soil type: Grows best on moist, well-drained, deep alluvial soils.

Reproductive Biology

The flower is small, white and sweet scented. A many-flowered raceme or panicle develops at the end of the dry season or at the beginning of the rainy season, mainly during November. The flowers are known to be insect pollinated. In South Africa, the fruits from the previous year's flowers ripen between March and July and even later. Seeds are winged and spiral on the air for some distance away from the mother tree.

Propagation and management

Propagation methods

K. senegalensis has been successfully planted as bare root and as stumps. Use of containerized seedlings yields better results. Germination of fresh seed can sometimes be nearly 100% and begins in about 3 weeks. Propagation by seedlings or wildings is also possible. Asexual reproduction techniques have not been developed.

Tree Management

No guidelines exist for stocking in natural forest. Since natural East African mahogany is probably best managed in mixed stands, a few hundred seedlings/ha on the ground and a few 10s of saplings free to grow later should be satisfactory. Periodic weeding is necessary after planting, as it is sensitive to competition from weeds, grass and brush. It coppices poorly.

Germplasm Management

Seed capsules are clipped from trees when the capsules begin to split. The capsules are sun dried until they split and then shelled by hand. The seed is further dried and then stored in sealed containers in a refrigerator, because viability is lost quickly at ambient air temperatures. Seed storage behaviour is intermediate. Seeds store well in cool places. There are 2000-3800 seeds/kg.

Functional uses

Products

Fuel: Suitable for firewood. Timber: Used for framing, panelling and veneer. Large logs are used to make dugout canoes. Medicine: Bark infusions containing a bitter substance are drunk to treat colds and oil from the seeds is rubbed into the hair to kill lice.

Services

Shade or shelter: Casts a dense shade, hence suitable as a shade tree.

Ornamental: Used as an ornamental tree because of its dense canopy.

Pests and diseases

Attacked by mahogany shootborer, *Hypsipyla robusta*, which causes forking and reduced growth, but apparently is resistant to the mahogany borer, *H. grandella*, of the Americas. Browsing animals and rodents can destroy new production and set back development of sapling stands if not controlled.