

## **Cordia africana**

mukumari, mukebu

Lam.

Boraginaceae

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### LOCAL NAMES

Afrikaans (grootblaarpieringbessie); Amharic (wanza); Arabic (gambil); English (Sudan teak, East African cordia, large-leafed cordia); French (sebestier d'Afrique); Luganda (mukebu); Swahili (mringaringa, mringamringa, mukumari, makobokobo); Tigrigna (auhi, ekhi, awhi); Trade name (mukebu, mukumari)

### BOTANIC DESCRIPTION

*Cordia africana* is a small to medium-sized evergreen tree, 4-15 (30) m high, heavily branched with a spreading, umbrella-shaped or rounded crown. Bole typically curved or crooked. Bark greyish-brown to dark brown, smooth in young trees, but soon becoming rough and longitudinally fissured with age; young branchlets with sparse long hairs.

Leaves alternate, simple, ovate to subcircular, 7.5-17.5 (max. 30) cm long, 3.5-10.2 (max. 30) cm broad; thinly leathery; dark green above, paler green and velvety below; with prominent parallel tertiary net-nerve (about 7 pairs of lateral nerves); apex broadly tapering or rounded; base rounded to shallowly lobed; margin entire; petiole slender, 2.5-7.6 cm long.

Buds oval, stalkless, pleated open into flowers that are bisexual, white, sweet scented, shortly pedicelate or subsessile, massed in compact panicles covering the crown, with a white mass of attractive flowers; calyx less than 1 cm long, strongly ribbed, back of lobes covered with short, soft, brown hairs; corolla lobes crinkled, white, long-exserted, funnel-shaped, about 2.5 cm long; cymes many flowered.

Fruit a drupe, smooth, spherical, oval tipped, fleshy, 1.3-1.5 cm long; green when young, yellow to orange when mature; with a sweet, mucilaginous pulp and short remains of the calyx at the base; contains 2-4 seeds, which lack endosperm.

The generic name honours a 16th century German botanist, Valerius Cordus, and 'africana' simply means 'from Africa'. The specific epithet of the synonym, 'abyssinica', implies that the plant was described from Ethiopia.

### BIOLOGY

Flowering starts when trees are 3-5 years old. In Sudan, flowering occurs in October to December and fruiting from January to April; in Kenya, flowering is from April to June. It is repeated at intervals over several weeks and is evidently triggered off by rain showers. After pollination by insects, fruit development takes a period of almost 6 months. Fruit is eaten and probably dispersed by birds.

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### ECOLOGY

The species occurs at medium to low altitudes, in woodland, savannah and bush, in warm and moist areas, often along riverbanks. It is frost tender. It will grow in drier conditions but thrives in good rainfall areas and is scattered in occurrence. It occurs in afro-montane rainforest and undifferentiated afro-montane forest (mixed Podocarpus forest), usually along margins and in clearings. It is an early colonizer in forest regrowth. It is often left when forests are cleared for cultivation, as the tree is an excellent shade tree for crops. Also found in riverine forest and secondary bushland, transgressing into humid types of woodland. In West Africa, this species seems to be restricted to montane and submontane habitats; it has limited distribution in the lowland habitats of the Democratic Republic of Congo.

### BIOPHYSICAL LIMITS

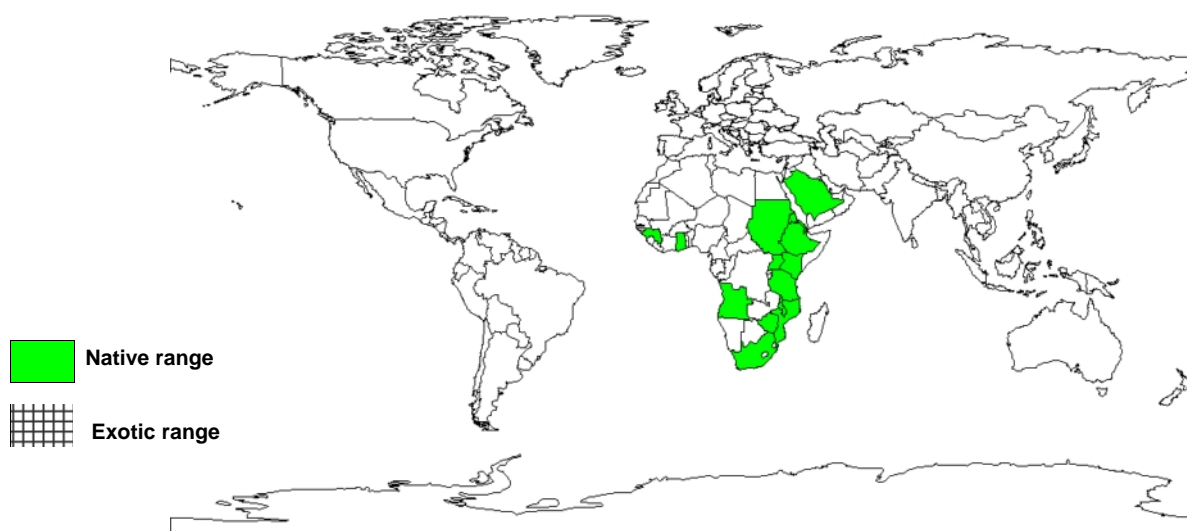
Altitude: 550-2 600 m, Mean annual rainfall: 700-2 000 mm

Soil type: Large leafed cordia thrives in forest soil.

### DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Ghana, Guinea, Kenya, Malawi, Mozambique, Saudi Arabia, South Africa, Sudan, Tanzania, Uganda, Yemen, Republic of, 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: Mature fruits have a sweet, mucilaginous, edible pulp.

Fodder: Leaves provide fodder for the dry season.

Apiculture: *C. africana* provides good bee forage, as the flowers yield plenty of nectar. Beehives are often placed in the trees.

Fuel: Trees are a good source of firewood.

Timber: The heartwood is pinkish-brown, reasonably durable, relatively termite resistant; it works easily and polishes well but is often twisted and difficult to saw. It is used for high-quality furniture, doors, windows, cabinet making, drums, beehives, joinery, interior construction, mortars, paneling and veneering.

Medicine: The fresh, juicy bark is used to tie a broken bone; this splint is changed occasionally with a fresh one until the bone is healed.

### **SERVICES**

Shade or shelter: *C. africana* is planted as a shade tree in coffee plantations; it is usually left in the fields, as it provides excellent shade for crops.

Soil improver: Leaf fall in the dry season is heavy, and the leaves make good mulch.

Ornamental: Trees are planted in amenity areas.

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### **TREE MANAGEMENT**

The species grows fairly fast, reaching 7-8 m in 7 years; management practices include pollarding, lopping and coppicing.

### **GERMPLASM MANAGEMENT**

After extraction, seeds are dried in the sun to 6-8% mc; can be stored for at least 1 year in hermetic storage at 3 deg. C with no loss in viability. There are about 18 000 seeds/kg.

**FURTHER READNG**

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**SUGGESTED CITATION**

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