

## Cassia abbreviata

Oliv.

Fabaceae - Caesalpinioideae

### LOCAL NAMES

Afrikaans (sambokpeul); Bemba (musambafwa,munsokansoka); English (sjambok pod,long pod cassia); Somali (rabuya,domader); Swahili (mkakatika,mbaraka)

### BOTANIC DESCRIPTION

*Cassia abbreviata* is a single-stemmed shrub or small tree 2-15 m with a medium round canopy. Bark grey to brown, very rough on older trees. Young branchlets glabrous, pubescent or puberulous.

Leaves with petiole and rachis (5-25 cm long) eglandular. Leaflets in 5-12 pairs, petiolulate, ovate-elliptic to oblong-elliptic, sometimes elliptic-lanceolate, 1-7.5 cm long, 0.8-4.5 cm wide, rounded to obtuse or subacute at apex, usually pubescent or puberulous.

Flowers fragrant, racemes 0.5-9 cm long. Bracts persistent while flowers are open. Petals yellow, 1.5-3.5 cm long, 0.7-1.8 cm wide. Stamens 10; filaments of 3 each with an S-bend near base and a swelling half-way along their length.

Pods cylindrical, 30-90 cm long, 1.5-2.5 cm in diameter, from velvety to glabrous and blackish, transversely but not longitudinally partitioned within.

Seeds embedded in pulp, brown-black, 9-12 x 8-9 x 3 mm.

Based on petal size, pubescence and geographical distribution three subspecies, namely *abbreviata* Brenan, *beareana* (Holmes) Brenan and *kassneri* (Bak. f.) Brenan are recognized for *C. abbreviata*.

The generic name is from the Greek name 'kassia'.

### BIOLOGY

*C. abbreviata* is hermaphroditic and subsp. *abbreviata* hybridizes with *Cassia burtii*. Sometimes this tree flowers after shedding its leaves. Flowering occurs between July and November and fruit ripening occurs between May and September.



tree (Mark W. Skinner @ USDA-NRCS PLANTS Database)

**ECOLOGY**

*C. abbreviata* commonly occurs in Acacia-Commiphora bushland, becoming rare in woodland or wooded grassland. Usually found on anthills and clayey soils. The long pod cassia is moderately fast growing, drought tolerant and can withstand moderate frost. The mature trees are fire resistant, however young seedlings are vulnerable.

**BIOPHYSICAL LIMITS**

Altitude: 350-1 000 m

Mean annual temperature: 27 deg C

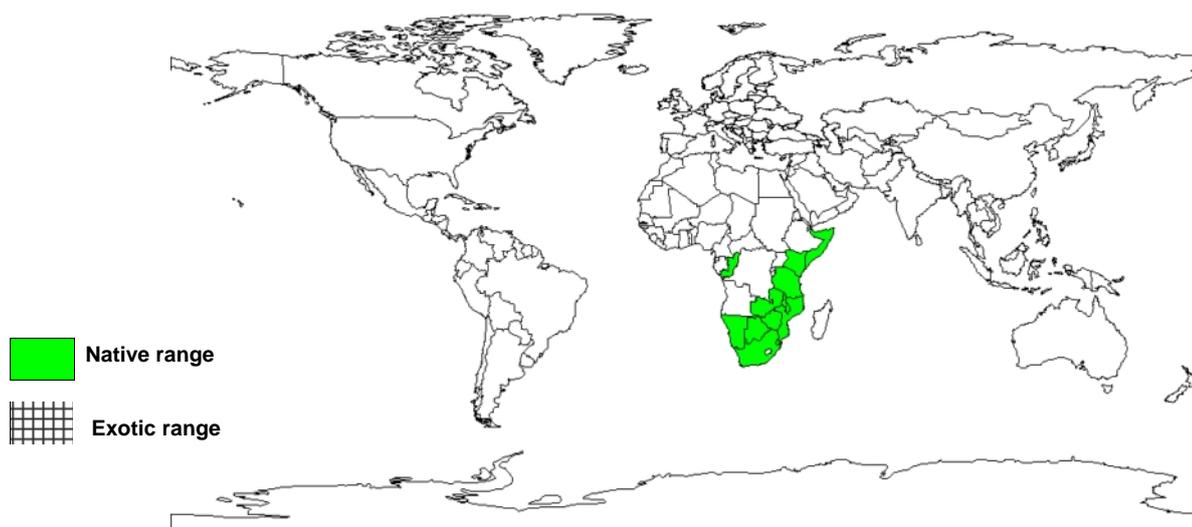
Mean annual rainfall: 1 400 mm

Soil type: Prefers deep light/sandy and well drained soils (gleysols).

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Botswana, Congo, Kenya, Malawi, Mozambique, Namibia, Somalia, South Africa, Swaziland, Tanzania, 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**

Fodder: Young branches are browsed by wildlife, the fruit pulp and seeds are popular with birds.

Fuel: Tree a useful source of charcoal and firewood.

Timber: Timber heavy (896 kg/cu. m), dark brown, coarse-grained heartwood with pale blotches, used in house construction.

Tannin or dyestuff: Stem bark is used in dyeing.

Medicine: Root decoction used in treating gastrointestinal disorders, malaria, gonorrhoea, pneumonia, uterus complaints and as a purgative. Stem bark used to treat dysentery, diarrhoea, gonorrhoea, toothache, blackwater fever, abdominal pains and as an abortifacient. Smoke of burnt branches inhaled to relieve headaches. The laxative activity of most *Cassia* spp. is linked to the anthraquinone emodin and its associated glycosides. Methanolic extracts of the stem bark antagonized responses to acetylcholine and serotonin in a concentration-dependent manner.

Other products: A number of anthraquinones, triterpenoids, alcohols and organic acids have been isolated from the flowers, leaves, root bark and stem bark of *C. abbreviata*.

**SERVICES**

Erosion control: This deeply rooting tree is important in soil conservation and erosion control.

Shade or shelter: It provides shade.

Soil improver: The slow decomposing leaves are ideal for mulching.

Ornamental: *C. abbreviata* is a showy tree with a beautiful yellow bloom, persisting fruit pods and good form. It is an ideal choice for gardens and avenues and interesting tree to train as a bonsai.

Intercropping: Has great potential for intercropping, deeply rooting, therefore is unlikely to compete with crops for mineral nutrients and water.

Other services: The smell of crushed *C. abbreviata* leaves is said to drive snakes from their holes.

**TREE MANAGEMENT**

Pollarding, coppicing, trimming and pruning are recommended management strategies. Over-watering results in poor flower display. Root trimming is necessary because the plants develop a long taproot early and should be planted out in 1-2 weeks.

**GERMPLASM MANAGEMENT**

Soaking in hot water improves seed germination. Seeds germinate 4-10 days after sowing.

**FURTHER READING**

Brenan JPM. 1967. Leguminosae II, subfamily Caesalpinioideae. In: Flora of tropical East Africa. Crown Agents, London

Kokwaro JO. 1976. Medicinal plants of East Africa. East African Literature Bureau.

Mutasa SL and Kahn MR. 1995. Phytochemical investigations on *Cassia abbreviata*. *Fitoterapia*. 66(2): 184.

Parry O and Duri ZJ. 1994. The spasmolytic action of *Cassia abbreviata*. *Fitoterapia*. 65(3): 260-264.

Venter F, Venter J-A. 1996. Making the most of Indigenous trees. Briza Publications.

**SUGGESTED CITATION**

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 *Agroforestry Database: a tree reference and selection guide* version 4.0 (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)