

Erythrina caffra

Thunb.

Fabaceae - Papilionoideae

LOCAL NAMES

Afrikaans (kuskoraalboom, koraalboom, Cape kafferboom); English (lucky bean, kaffir broom, coral tree, coast erythrina); Xhosa (umSintsi); Zulu (umSintsi)

BOTANIC DESCRIPTION

Erythrina caffra is 9-12 (max. 21) m tall; trunk and branches grey, sometimes set with short, sharp prickles.

Leaves trifoliolate, the terminal leaf being the largest, borne on long stalks, which sometimes have a few, short prickles; leaflets broadly ovate to elliptic, 8-16 x 8-18 cm, lateral leaflets slightly smaller, on short stalks, without hairs or spines; apex tapering; base tapering; base of lateral leaflets asymmetric; margin entire; leaflets resemble those of *E. lysistemon* and when the tree is not in flower, it is difficult to tell them apart.

The flowers, which are produced before the leaves, are borne in large clusters at the end of the thick stalks. They are orange-scarlet with a tinge of terra cotta or are cream. They have short, broad, standard petals, the lower half of which curves upward to expose the stamens, and these give the flower (botanical racemes) a bewhiskered appearance.

The pods are narrow, cylindrical, dark, up to 6.5 cm long, deeply constricted between the seeds, with the constrictions often long and narrow and without hairs. The pods split to show small, shiny, coral-red seeds, marked on 1 side with a black spot. On weathering, the seeds are inclined to lose their brilliancy to become a rich red-brown.

Erythrina comes from the Greek word 'eruthros'-red, alluding to the showy red flowers of the *Erythrina* species and *caffra* from 'Kaffaria' (Eastern Cape, South Africa).

BIOLOGY

In its native range *E. caffra* flowers from late spring to early summer. The flowers contain nectar in large quantities and are visited by sunbirds and insects which pollinate them.



Bark pale grey with slight longitudinal fissures. (Ellis RP)



Flowers in dense, broad heads up to 100x200mm in size. The calyx is noticeably brown coloured. (Ellis RP)



Pods borne in hanging clusters (Ellis RP)

ECOLOGY

E. caffra is a tree of coastal districts. In South Africa it occurs from Port Shepstone to the Humansdorp District, the wild tree seen furthest from the coast being about 53 km inland in Albany District. It appears in the north in the Hlabisa and Lake Sibayi areas in Zululand. It is a tree of the wooded stream banks. It is fairly drought resistant and will stand several degrees of frost. Where frosts are heavy, it may grow but will not flower well.

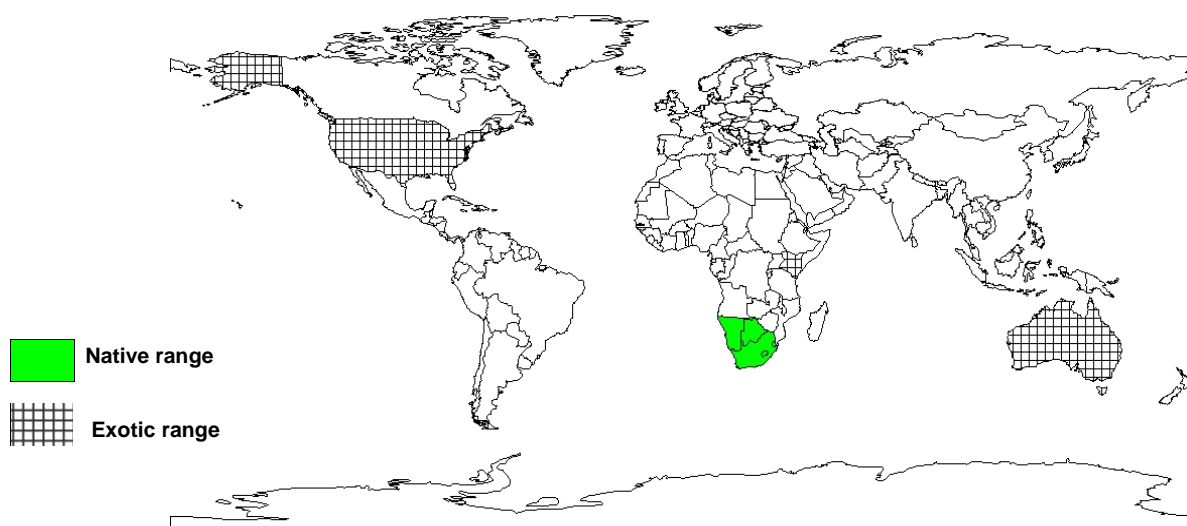
BIOPHYSICAL LIMITS

Mean annual rainfall: 900-1500 mm, Altitude: 0-1000 m: Mean annual temperature: 18-22 deg.C

DOCUMENTED SPECIES DISTRIBUTION

Native: Botswana, Lesotho, Namibia, South Africa, Swaziland

Exotic: Australia, Kenya, US



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: *E. caffra* becomes increasingly important as a protein supplement (for example the palatable stems) during the dry periods when pasture grasses are scarce and of low nutritive value.

Fuel: The tree is a good source of firewood.

Timber: The wood is white or grey blue and is very soft, light and spongy. It is used in making canoes, troughs, floats and fishing nets; when tarred, it makes good roofing shingles.

Poison: The seeds are said to be poisonous.

Other products: In Africa, the seeds are sometimes used to make necklaces.

SERVICES

Erosion control: The trees can be used in soil conservation.

Nitrogen fixing: *E. caffra* fixes atmospheric nitrogen.

Soil improver: *E. caffra* trees usually drop their leaves during the dry periods, and these act as a mulch.

Ornamental: The species is a valuable garden tree in the tropics and subtropics.

Boundary or barrier or support: The trees are used to make live fences around homes, water sources and crops to protect them from livestock.

TREE MANAGEMENT

The tree is fast growing. If used for fencing, it should be pruned once a year during the dry season to promote the production of woody biomass for use as new posts. Two prunings a year are recommended to produce palatable stems and leaves for animal fodder. More frequent pruning results in low biomass production and rapid mortality.

GERMPLASM MANAGEMENT

Seed storage behaviour is orthodox. Before seeds are stored they should be sun dried for 1 day after residues of the pod have been removed. They can be stored for several years, retaining a high percentage of viability. Storage should be in tightly closed containers, in a cool, dry place. For long-term storage, seeds should be kept in a low-temperature seed-storage facility (approximately 5 deg. C and 30-40% r.h.), and those damaged by insects and disease should be discarded.

PESTS AND DISEASES

Small, yellowish eggs of a type of beetle may sometimes be seen on the seeds, and when they hatch, the larvae develop in the seed. Sometimes borers and defoliating insects attack the trees.

FURTHER READNG

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Palmer E, Pitman N. 1972. Trees of Southern Africa Vol. 2. A.A. Balkema Cape Town.

Powell MH, Westley SB (eds.). 1993. Erythrina production and use: a field manual. Nitrogen Fixing Tree Association, Hawaii.

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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/>)