Acacia xanthophloea Benth.

Fabaceae - Mimosoideae

LOCAL NAMES
Afrikaans (koorsboom); English (sulphur bark,Naivasha thorn tree,fever tree); Swahili (mgunga); Tswana (more o mosetlha); Zulu (umKhanyakude,umHlosinga,umHlofunga,umDlovune)

BOTANIC DESCRIPTION
Acacia xanthophloea is a large tree, 15-25 m tall, with a crown that is somewhat spreading, branching fairly up the trunk. Bark smooth, slightly flaking, yellow to greenish-yellow. New twigs purple tinged but flaking later to reveal the yellow underlayer.

Leaves 4 (max. 10) cm long with a hairy midrib. Pinnae 4-7 pairs, about 10-17 pairs of small leaflets. Stipules spinescent, spines white, straight, up to 7-10 cm in length, paired, often slender and conical at the base.

Buds pink; flowers fragrant, in round golden balls on slender stalks; several borne together with a tuft of leaves, in the axils of the thorns.

Pods 5-19 cm long, pale brown, straight, flat, rather papery, moniliform with segments mostly longer than wide, usually breaking into segments containing individual seeds borne in small clusters. Pods turn from green to pale greyish-brown when mature. Each pod contains 5-10 elliptic, flattened seeds, pale to dark green.

The generic name ‘acacia’ comes from the Greek word ‘akis’, meaning ‘point’ or ‘barb’; the specific name ‘xanthophloea’ is based on Greek words meaning ‘yellow bark’.

BIOLOGY
After pollination by insects, the development of the fruit takes 4-6 months. In southern Africa, flowering occurs from September to November while fruiting is from January to April. Despite the production of a large number of flowers, often only a few pods develop.

Grove of fever trees, Nogorongoro Crater, Tanzania. The name "fever tree" comes from the association of this tree with low lying, wet areas, which are prime habitat for mosquitoes that carry malaria. (William M. Ciesla, Forest Health Management International, www.forestryimages.org)

Tree growing at the Lake Nakuru National park in Kenya. (Breithaupt J.)

Compound gall formed from interlocking leaflet bases and rhachillae caused by the microscopic mites of the Eriophyoidea (Neser S)

ECOLOGY
A. xanthophloea grows near swamps, riverine forests or at lakesides and is able to tolerate several degrees of frost. It grows in semi-evergreen bushland and woodland in areas with a high groundwater table and often forms dense stands in seasonally flooded areas. Trees can withstand cold but not cold winds or frost.

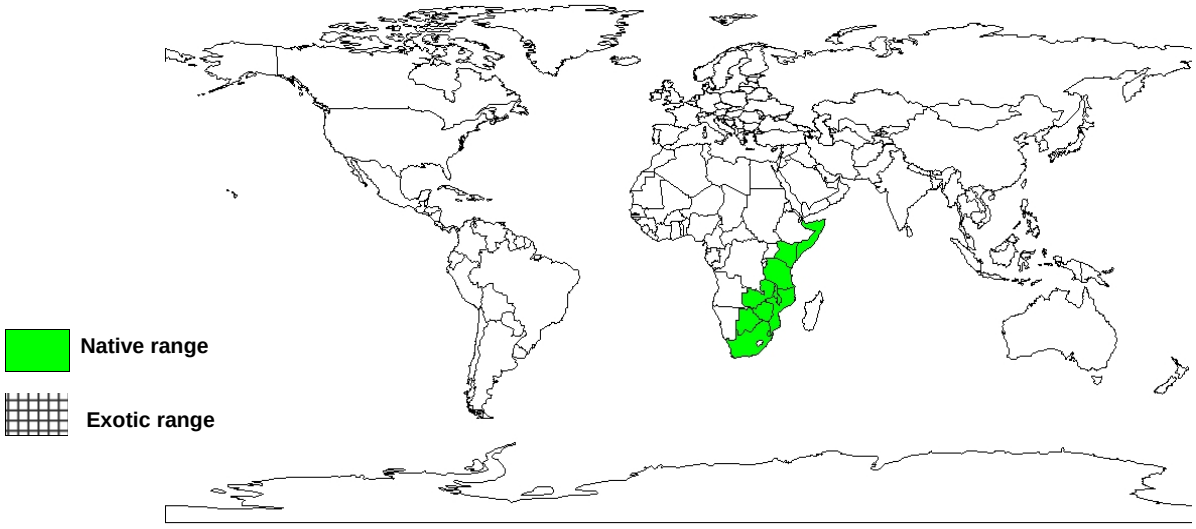
BIOPHYSICAL LIMITS
Altitude: 600-2100 m

Soil type: A. xanthophloea prefers sandy soils.

DOCUMENTED SPECIES DISTRIBUTION

Native: Botswana, Kenya, Malawi, Mozambique, Somalia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe

Exotic: Taiwan, Province of China



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: Foliage and pods provide food for livestock; young branches and leaves are eaten by elephants and the leaves and pods by giraffe and vervet monkeys.

Apiculture: Trees produce good bee forage.

Fuel: A. xanthophloea is planted as a source of firewood, although it produces a gum that leaves a thick, black, tarlike deposit when burnt.

Timber: The wood is hard, heavy, pale brown with a red tinge. It is valuable as timber; it should be seasoned before use, as it is liable to crack. It is used to make poles and posts.

Medicine: The roots and powdered bark of the stem are used as an emetic and as a prophylactic against malaria.

SERVICES
Erosion control: Groves of this tree can be planted next to dams and streams on the farm to curb soil erosion.

Shade or shelter: A. xanthophloea provides nesting sites for birds.

Nitrogen fixing: A. xanthophloea fixes atmospheric nitrogen.

Ornamental: The well-shaped decorative tree is a potential candidate for amenity areas.

Boundary or barrier or support: Trees are planted as live fences.

TREE MANAGEMENT
A. xanthophloea is one of the fastest-growing thorn-tree species in southern Africa, with a growth rate of 1-1.5 m/year. It can withstand lopping. If planted as an ornamental, trees should be planted in groups of up to 5 for the best effect. This species does not have an aggressive taproot, but because of its large size it should not be planted close to buildings.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox. Mature and properly dried seeds can be stored in airtight containers at room temperature for at least 1 year, and for several years at 10 deg. C with 4.5-9% mc. Storage with insecticides is recommended. On average there are 24 000-30 000 seeds/kg.

PESTS AND DISEASES
Vervet monkeys often eat young pods, so seeds are not readily available from the natural stands. Insects often attack seeds.

FURTHER READNG

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SUGGESTED CITATION

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