Albizia gummifera (J.F.Gmel.) C. A. Sm.

Fabaceae - Mimosoideae

LOCAL NAMES
English (peacock flower); Swahili (mshai,mkenge,mchani mbao)

BOTANIC DESCRIPTION
Albizia gummifera is a large deciduous tree 4.5-30 m, branches ascending to a flat top. Crown flat; bark smooth and grey.

Leaves bipinnate in 5-7 pairs, leaflets dark green roughly similar in size but top pinnae in 9-16 pairs, obliquely rhombic to subfalcate, apex obtuse or acute, 10-25 by 4-12 mm, pubescent or glabrous.

Flowers white-pink clusters with long hanging stamens; exserted for 15-28 mm. Fruit glossy (reddish or purplish brown) and numerous, 10-21 by 2-3.4 cm glabrous or nearly so; flat with raised edges.

Two varieties are recognized var. gummifera with leaflets conspicuously auriculate on the proximal side of the base and var. ealaensis without auriculate leaflets on the proximal side. The genus was named after Filippo del Albizzi, a Florentine nobleman who in 1749 introduced A. julibrissin into cultivation. The specific epithet 'gummifera' means the gum bearer.

BIOLOGY
The seeding time is spread but January and February seems to be the peak period. A. gummifera is hermaphroditic and reportedly hybridizes with A. grandibracteata, the hybrid being intermediate in attributes.

The pods and leaves of A. gummifera. (Hertel Gerard D.)

The leaves are paripinnate with 4-8 pairs of pinnae, each bearing 6-12 pairs of leaflets. (Hertel Gerard D.)

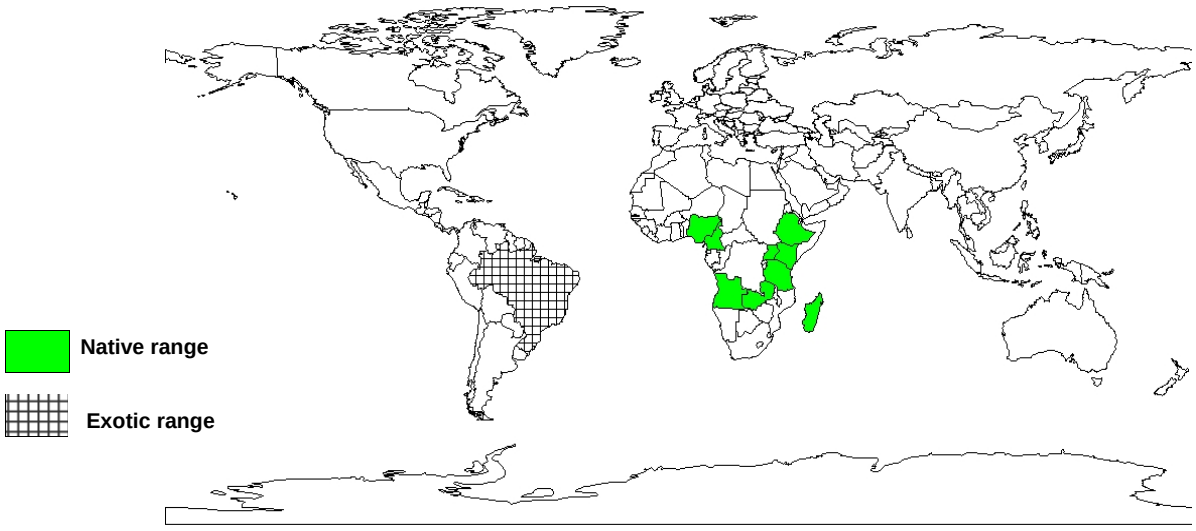
ECOLOGY
A. gummifera is common in lowland and upland rain-forest, riverine forest, and in open habitats near forests. It occasionally appears as a pioneer species in forests and in thickets.

BIOPHYSICAL LIMITS
Altitude: 600- 2 300m

DOCUMENTED SPECIES DISTRIBUTION

Native: Angola, Cameroon, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Nigeria, Tanzania, Uganda, Zambia

Exotic: Brazil



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
Apiculture: Bees visit the nectariferous flowers.

Fuel: The tree provides good fuelwood.

Timber: Bears pale brown heartwood of medium strength. Used as timber but not very durable. This timber is highly susceptible to wood borer attack.

Gum or resin: Despite its name, the tree yields little amounts of gum when its bark is cut.

Tannin or dyestuff: Bark has tannins.

Medicine: A bark decoction is used against malaria antiprotozoal properties further validated in in-vitro tests. Lipophilic extracts of A. gummifera revealed very promising antitrypanosomal activity with IC50 values below 1 æg/ml. Four new macrocyclic spermine alkaloids isolated from A. gummifera were active against 2 Gram-positive (Bacillus subtilis and Staphylococcus aureus) and 2 Gram-negative bacteria (Escherichia coli and Pseudomonas aeruginosa). In east Africa extracts from the crushed pods are taken for stomach pains and the bark decoction for malaria.

SERVICES
Erosion control: The root system of A. gummifera holds soil and prevents gulley erosion.

Shade or shelter: Is a useful shade provider in homes and pastureland.

Nitrogen fixing: Known to fix Nitrogen.

Soil improver: Known as a good mulch tree in Kenya. Leaf litter abundant during the leaf shedding season.

Ornamental: A. gummifera is planted in town avenues for aesthetic purposes.

Boundary or barrier or support: The tree’s branches can be used for fencing.

Intercropping: The ability to associate with crops is indicated by the tendency to leave the tree standing in cultivated fields, intercropped with coffee in Ethiopia.

Other services: Has ceremonial uses, especially as a meeting tree for traditional leadership assemblies. The leaves quicken the ripening process in bananas.

TREE MANAGEMENT
Lopping and coppicing while young to improve form.

GERMPLASM MANAGEMENT
Either untreated or soaked seeds are sown. Fresh seeds need no pre-treatment. Stored seeds are soaked in warm water and left to cool to room temperature. The seed coat may be nicked at the cotyledon end to hasten germination. Seed germination is good, 70-80%, within 10 days. Seeds should be collected while still on the tree to minimize insect damage. Seed can be stored for at least a year if kept dry and insect free through addition of ash.
There are 10 000-15 000 seeds /kg. Seed storage behavior orthodox, viability can be maintained for several years in hermetic storage at 10 deg C.

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SUGGESTED CITATION

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