

## Delonix elata

(L.) Gamble

Fabaceae - Caesalpinioideae

### LOCAL NAMES

English (white gul mohur, creamy peacock flower, tiger bean, flamboyant tree); French (flamboyant); Gujarati (sandesa); Hindi (sidhasaru, sankesar, sidhsaru, sunkesula, vadanarayana, nirangi, kempukenfi ga, sankasura); Somali (lebi); Swahili (mseele); Tamil (pandenarayan, padenarayan)

### BOTANIC DESCRIPTION

*Delonix elata* is a deciduous tree about 2.5-15 m tall, with a spreading, rather rounded crown, crooked poor stem form and drooping branches. Bark smooth, shining; sometimes flaking.

Leaves 3-6 or more, bipinnate; pinnae usually 4-6 pairs; leaflets 10-14 pairs, oblong or oblanceolate-oblong, 0.6-1.2 cm long. Leaflets 1.25-4 mm wide, smaller than those of *D. regia*.

Flowers in terminal corymbs; stalks pubescent, lowest flowers stalks longest. Flowers open one at a time. Sepals 1.8 cm long, with a broadly ovate or rotundate-cuneate lamina narrowing into a distinct claw. Petals rounded in outline and crisped on margins 1.6-3.8 cm long, 1.8-4.2 cm wide; upper one smaller than rest, pale yellow; the remainder white; later all turning apricot. Staminal filaments pale brown or reddish, hairy at the base, 5-10 cm long; pedicels up to 3.75 cm. Ovary pubescent or tomentose all over.

Pods red-brown or purple-brown, up to 20 cm long and smooth, compressed elliptic-oblong.

The genera comprises of 3 tropical species.

*D. elata* is a varied species, two variants are recognized in east Africa. *Delonix* is from the Greek word "delos", meaning evident and "onux", a claw in allusion to the shape of the petals; the epithet "elata" means lofty or tall.

### BIOLOGY

*D. elata* is a hermaphroditic, deciduous tree. Flowers in the hot season or during the early rains, in east Africa this is normally around December and August-March in India. Fruit ripening is between May and July.



Flowers: Showy attractive flowers of *D. elata* from the hills south of Las Caanood, northern Somalia. (Chris Fagg)



Bark of *D. elata*: Greenish brown bark of *Delonix elata* from northern Somalia. (Chris Fagg)

**ECOLOGY**

*D. elata* prefers hot, dry Acacia-Commiphora bushland and thicket. It normally occurs on rocky, shallow, red soils.

**BIOPHYSICAL LIMITS**

Altitude: 100-1 400 m

Mean annual temperature: 27 deg C

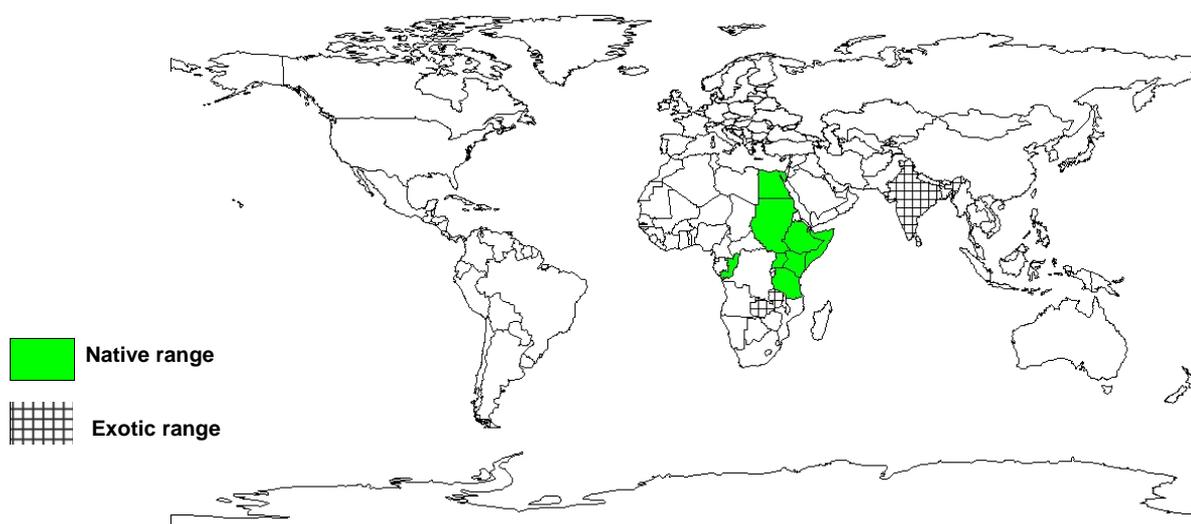
Mean annual rainfall: 580-900 mm

Soil type: Rocky soil, *D. elata* is susceptible to waterlogging.

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Congo, Djibouti, Egypt, Ethiopia, Kenya, Somalia, Sudan, Tanzania, Uganda

Exotic: India, Sri Lanka, Zambia



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:** Tiger bean is a promising source of micronutrients for goats, sheep, camels and cattle which eat the foliage and young pods.

**Fuel:** *D. elata* is very promising as a firewood source having high density, calorific value and carbon percentage, and low silica and nitrogen.

**Timber:** The wood weighing 90 kg/cu. ft after seasoning, is yellow, even-grained and easily worked. It is suitable for cabinet work, carvings and utensils.

**Gum:** The tree yields a dark coloured, mucilaginous gum.

**Medicine:** The leaf extracts are anti-inflammatory, a root decoction is drunk for abdominal pains. A psychosomatic medicinal use relating to scorpion bite treatment is reported from India.

**Other products:** beta-Amyrin, hesperitin and neohesperidin have been newly isolated from the dried roots of this plant in India. The seed oil of *D. elata* contains small amounts of sterculic and malvalic acids.

**SERVICES**

**Erosion control:** *D. elata* has potential use in soil conservation. In India it has been successfully used in protecting channel and river banks.

**Shade or shelter:** The tree has a low crown, effective as a shelter belt.

**Reclamation:** *D. elata* is a good tree for reforestation of difficult sites.

**Soil improver:** *D. elata* leaves as a green manure are rich in Magnesium, yielding 50-200 kg of mulch per year. In Madras, India the leaves are used as mulch in rice fields.

**Ornamental:** *D. elata* is a distinct, magnificent tree in bloom, suitable for cultivation in gardens, avenues and amenity parks.

**Boundary or barrier or support:** Poles from *D. elata* are used for fencing.

**Intercropping:** *D. elata* is a multipurpose tree commonly found planted or cultivated.

**TREE MANAGEMENT**

*D. elata* is a fast growing tree raised easily from seed. Because of its high light requirements, it should be planted in full sunlight. Young seedlings need protection from browsers. Pollarding, lopping and trimming are recommended management practices.

**GERMPLASM MANAGEMENT**

Seeds can be pretreated by scarification with concentrated nitric acid or soaking in water for 24 hours. In one study, high germination rates (75% at 42 and 56 days) were obtained with 7-minute acid treatment (Rokhade & Nalawadi 1989).

**FURTHER READING**

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**SUGGESTED CITATION**

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