

LOCAL NAMES

Afrikaans (bosbeeskloof); Cantonese (kanchivala); English (variegated bauhinia, St. Thomas tree, bell bauhinia, orchid tree, hairy bauhinia, mountain ebony, yellow tree bauhinia); Hindi (kural, gurial, padrian, gwiar, kachnar, kolar); Malay (akbar tapak kerbau, kupu-kupu); Sanskrit (phalgu, pita kanchana); Swahili (msaponi, musaponi); Tamil (iruvaji, segapu-manchori, manthari); Zulu (isiThibathibana)

BOTANIC DESCRIPTION

Bauhinia tomentosa is usually a scrambling, many-stemmed shrub or small tree reaching 4 m (max. 8) in height, the branches often drooping, with many slender twigs. Bark grey and smooth or slightly hairy on young branches, becoming brown and smooth on the older stems.

Leaves deeply divided for almost half their length, with a small apical appendage between the lobes; each lobe is oval to almost elliptic, most often small about 2.5 x 2.5 cm, but may be up to 8 cm, pale fresh green; apex of each lobe broadly tapering; base of the whole leaf shallowly lobed; margin entire, petiolate; leaf stalk 10 to 30 mm long.

Flowers bell-shaped, up to 7 cm long, beautiful and distinctive, pendulous, solitary, with large, lemon-yellow petals, 1-3 of which have a dark maroon patch at the base and turning a veined reddish brown with age.

Fruit a woody pod, slender, pale brown, velvety, pointed, 10-11 x 1.5-2 cm, dehiscent, splitting on the tree to release 6-12 seeds. Seeds 7-8.5 x 5.5-7 x 2-3 mm, ovate, compressed, glossy, reddish brown, somewhat rugose to nearly smooth, with V-shaped marginal hilum, often bearing an apical, hook-shaped funicular remnant.

The generic name commemorates the Bauhin brothers Jean (1541-1613) and Gaspard (1560-1624), the Swiss botanists; the two lobes of the leaf exemplify the two brothers, and *tomentosa* is derived from *tomentose*, meaning with dense, interwoven hairs.

BIOLOGY

Trees flower in their 2nd year and are usually very floriferous, bearing flowers during most months of the year. In southern Africa, flowering can be observed from December to March; young fruits appear in January and mature in June or later.



The flowers are pale yellow, but the petals are often pinkish in the bud. (Botha AD)



The lovely, drooping flowers showing the 5 yellow, subequal petals. (Botha AD)



Bell-shaped flowers solitary, pendulous and large (7cm in diameter). (Ellis RP)

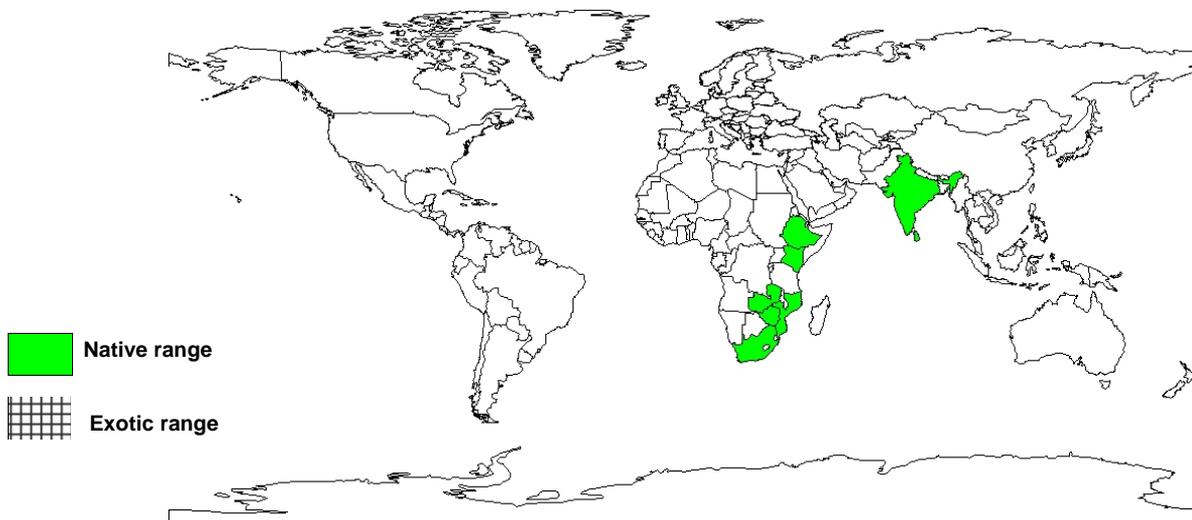
ECOLOGY

The hairy bauhinia grows from Natal and Zululand to eastern Transvaal, northwards to tropical Africa, and eastwards to Sri Lanka and India. In South Africa, it grows in forest, bushveld and the coastal dune bush. It also occurs in low-altitude woodland, often forming part of the riverine thickets, and on the forest edges. In Zambia, it grows in thickets and on stream banks and rocky slopes of the central and southern provinces and the Luangwa Valley. Trees can be found growing naturally from Ethiopia in the north to KwaZulu Natal in the south. Trees grow in the shade or in full sun, can withstand light frost and are somewhat drought hardy.

DOCUMENTED SPECIES DISTRIBUTION

Native: Ethiopia, India, Kenya, Mozambique, South Africa, Sri Lanka, Zambia, Zimbabwe

Exotic: Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, Cuba, Gambia, Ghana, Guinea, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo, 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: Not an important browsing tree for cattle as it contains prussic acid in the pods and the flowers; goats tend to nibble the leaves but do not consume much. Leaves are browsed by the black rhino, kudu and grey duiker; the flower buds and mature flowers are consumed by the grey lourie.

Fibre: Trees yield a fibre suitable for making baskets.

Timber: The wood makes rafters for huts.

Tannin or dyestuff: Leaves are used to manufacture a yellow dye.

Medicine: The dried leaf and flower bud of *B. tomentosa* and a decoction of the root and bark are used medicinally by the African doctors of South Africa. In India and Sri Lanka, the root bark is used internally for conditions of the large intestine, while the flower is used as a remedy for dysentery and diarrhoea. A decoction of the root bark is used in India as a vermifuge and an infusion of the stem bark as an astringent gargle. The fruit is said to be diuretic, and the seed is eaten in India as a tonic and aphrodisiac. In Madura, the leaf is an ingredient in a plaster applied to abscesses. A decoction of the root bark is used as a vermifuge, and an infusion made from the stem bark is used as an astringent gargle. A decoction of the root bark is used for abdominal troubles and as an anthelmintic. An infusion of the root bark is used as an external application to inflamed glands, abscesses and skin conditions, while the fruit is said to be diuretic and an infusion of the rind is used as an astringent gargle. A paste of the seed made with vinegar is used as a local application to the wounds produced by venomous animals.

SERVICES

Boundary or barrier or support: *B. tomentosa* can be effectively used as a hedge or a screen plant between camps, along fences or between blocks of various crops, for example, in tomato lands.

Ornamental: The attractive tree is ideal for small gardens, and since the root is not aggressive, it can be planted close to a swimming pool or paving.

TREE MANAGEMENT

Trees are fast growing, up to 900 mm a year. Flowering can be stimulated by pruning the plants once a year during the winter. For planting in dry areas, it is advisable to obtain seeds from plants growing in dry areas.

GERMPLASM MANAGEMENT

Storage behaviour of seeds is orthodox; short-term storage.

PESTS AND DISEASES

The butterfly *Deudorix diocles* breeds in the pods. Beetles sometimes destroy all the flowers on a tree in a single morning.

FURTHER READING

- Anon. 1986. The useful plants of India. Publications & Information Directorate, CSIR, New Delhi, India.
- Beentje HJ. 1994. Kenya trees, shrubs and lianas. National Museums of Kenya.
- Coates-Palgrave K. 1988. Trees of southern Africa. C.S. Struik Publishers Cape Town.
- Dale IR, Greenway PJ. 1961. Kenya trees and shrubs. Buchanan's Kenya Estates Ltd.
- Delorit RJ, Gunn CR. 1986. Seeds of continental United States; Legumes (Fabaceae). Agronomy Publications.
- Hong TD, Linington S, Ellis RH. 1996. Seed storage behaviour: a compendium. Handbooks for Genebanks: No. 4. IPGRI.
- Noad T, Birnie A. 1989. Trees of Kenya. General Printers, Nairobi.
- Palmer E, Pitman N. 1972. Trees of Southern Africa Vol. 2. A.A. Balkema Cape Town.
- Venter F, Venter J-A. 1996. Making the most of Indigenous trees. Briza Publications.
- Williams R.O & OBE. 1949. The useful and ornamental plants in Zanzibar and Pemba. Zanzibar Protectorate.

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/>)