

Growing *Rothmannia capensis*

This beautiful tree is suitable even for small gardens, it can be planted as an individual specimen tree or in a small grove.

This tree is fairly easy to grow from seed. Remove the seeds from the brown fruit and sow them in a mixture of 3 parts river sand to 1 part compost. It is important to keep the seed mix moist until germination, which takes place from 14 days onwards. This tree grows very well in light shade or full sun, preferring loam or sandy soils to clay. It grows moderately fast (0.7 m per year) and may flower in its second year, but most take a little longer. It is frost and to some extent drought-resistant.

Rothmannia globosa (Hochst.) Keay

Family: Rubiaceae

Common names: September bells, bell gardenia (English); klokkies-valsakatjiepiering (Afrikaans); umGubhe (Xhosa); umPhazane (Zulu); Thudwane (Venda); siKoba (Swati)

South African Tree List No. 695

The bell gardenia is a small, decorative garden tree that attracts bees with its scented, bell-shaped flowers.

Description

This slender tree, usually 4–7 m in height, can reach 12 m, depending on the climatic conditions. The bark is brown or dark grey, smooth when young, but rougher in old age and marked in rectangular segments. The shiny, simple leaves are oval or lanceolate with a paler underside which displays the yellow or reddish midrib and veins. Trees are usually evergreen, but may be briefly deciduous.

The scented, bell-shaped flowers are creamy white, usually with pink speckles in the throat and are borne singly or in clusters of 2 to 4 on short side branches. They are about 25 mm long and 35 mm wide. The flowers are almost stalkless and appear from August to November. The trees are often in full bloom in September hence the common name. The fruits are round, about 25 mm in diameter and green when young but turn brown as they ripen from January onwards.

Derivation of name and historical aspects

The specific name *globosa* means roundish and refers to the shape of the fruit. *Rothmannias* are related to gardenias and *Rothmannia capensis* with larger flowers, is also cultivated in gardens.

Distribution

The tree is found in coastal and dune bush along riverbanks and in evergreen forest from the Eastern Cape to Limpopo Province and Swaziland.

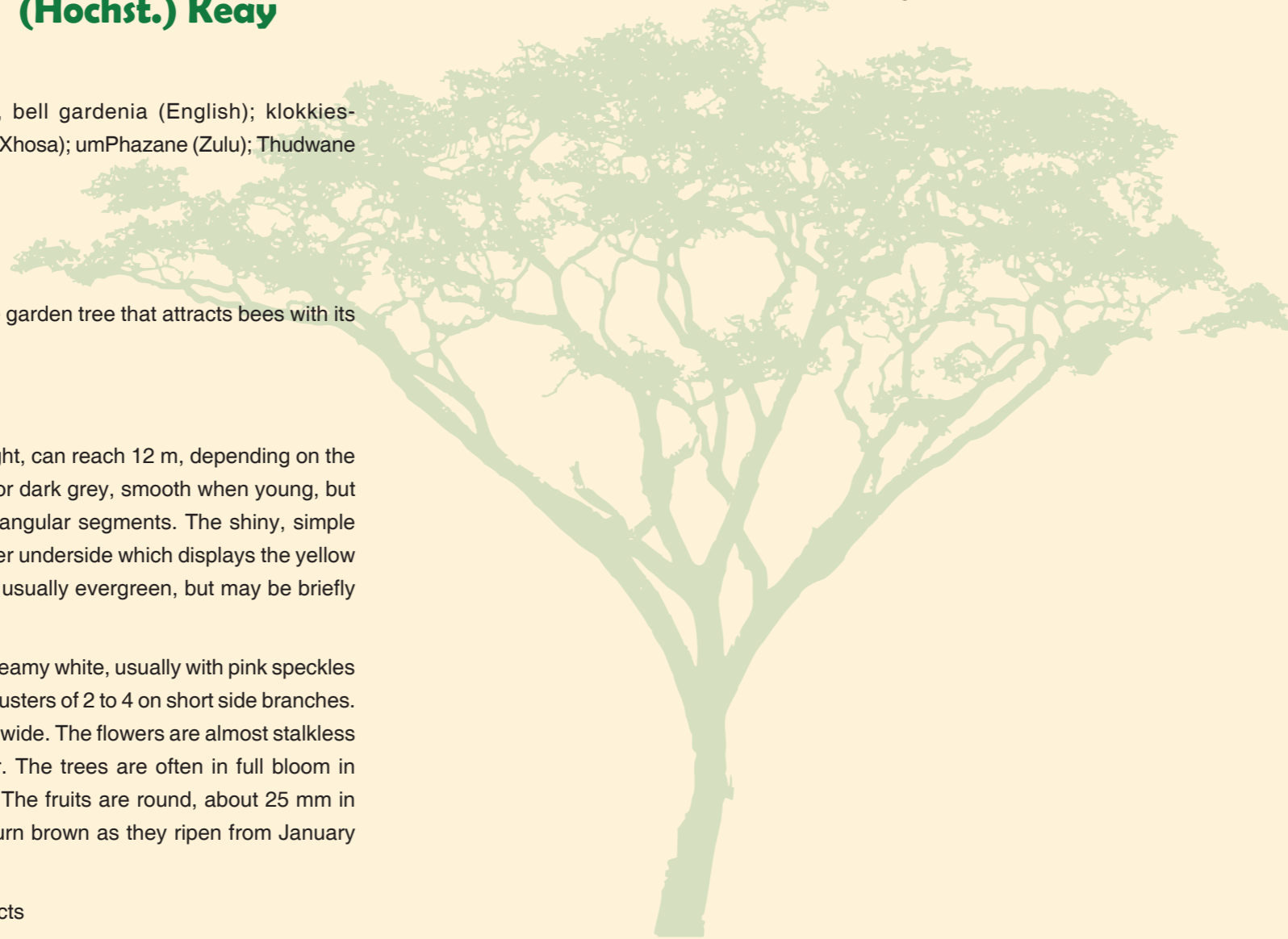
Ecology

Monkeys, baboons and birds eat the fruit of the bell gardenia. Carpenter bees pollinate the flowers.

Uses and cultural aspects The powdered roots are rubbed into incisions in some parts of southern Africa to treat leprosy. Mpondo men once used the shells of the fruit as clothing. The fruits are recorded as edible and the dried fruits are used to make necklaces.

Growing *Rothmannia globosa*

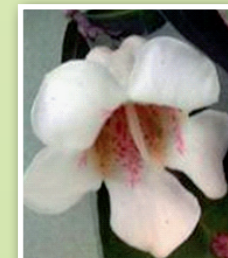
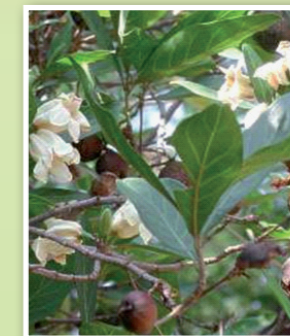
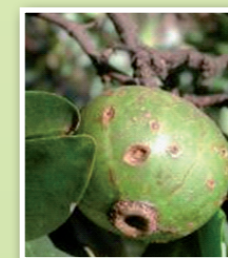
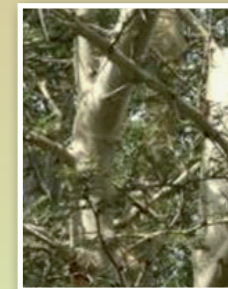
The plant is easily cultivated from seed in well-drained soil to which plenty of compost has been added. It is fairly fast growing and tolerates some frost and makes a beautiful small tree for townhouse gardens.



To find out if SANBI has seed of this or other SA species, please email our **seedroom**. This page forms part of the South African National Biodiversity Institute's plant information website <http://www.plantzafrika.com/>

Arbor Week 2010

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Acacia xanthophloea Benth

Family: *Fabaceae: Mimosoideae*

Common Names: Fever tree (English), Koorsboom (Afrikaans), mooka-kwena (Northern Sotho), umHlosinga (Zulu), nkelenga (Tsonga), munzhelenga (Venda).

The fever tree is an attractive, semi-deciduous to deciduous tree approximately 15 to 25 meters tall and has an open, rounded to spreading or flattish crown which is sparsely foliated. The characteristic, almost luminous, lime green to greenish-yellow bark is smooth, slightly flaking, and coated in a yellow powdery substance described by some as sulphurous. If the powdery surface is rubbed away with the finger it will reveal a green bark beneath. Young twigs have a red-brown bark which peels off leaving the twigs sulphur yellow. The long straight white thorns are arranged in pairs and although they are very significant on young trees they often become barely noticeable on mature specimens.

Bright yellow, golden, ball-like flowers which are sweetly scented are borne in clusters on shortened side shoots at the nodes and towards the ends of branches. Flowering occurs from August or September to November. Flowers are followed by the production of yellowish- brown to brown pods which split open to reveal the small hard brown seeds, which may be harvested from January to April.

The genus name *Acacia* is derived from the Greek word *acantha* meaning spine, thorn or prickle and the species name *xanthophloea* is derived from the Greek words *xanthos* meaning yellow and *phloios* meaning bark.

The fever tree occurs mainly in depressions and shallow pans where underground water is present or surface water collects after summer rains. It is also found in low-lying swampy areas, along the margins of lakes and on river banks. It often forms pure, dense stands of closed woodland in seasonally flooded areas on alluvial soils. This tree can be found from Kenya in the north to KwaZulu Natal in the south. It is a prominent feature in the lowveld region of South Africa.

This tree is popular amongst birds for nest building as the thorns add extra protection against predators such as snakes. Young branches and leaves are eaten by elephant and the leaves and pods are eaten by giraffe and *vervet* monkeys. Monkeys and grey *louries* also eat the flowers. The gum and green seeds are eaten by baboons. Insects such as bees are attracted by the yellow colour and sweet scent of the flowers and perform a pollination role.

The wood is hard, heavy and a suitable general purpose timber but it should be seasoned before use otherwise it is likely to crack. The main stems and larger branches are used to fence out hippo from fields on the Pongola floodplain and the timber is reputed to be used for boxwood. Medicinally the bark is used for treating fevers and eye complaints.

Early pioneers thought that this tree caused a fever since people travelling or living in the areas where it grew contracted a bad fever. They therefore associated the fever with the tree. This however was erroneous as the swampy places where fever trees grow are also ideal breeding grounds for mosquitoes, which carry malaria. Thus through these early settlers the myth was born and the plant acquired its name as the fever tree.

The fever tree is an exceptionally attractive tree and is often used to decorate gardens and urban landscapes. Its contrasting bark, feathery foliage, and architectural attributes make it an eye-catcher and thus suitable as a focal point in a landscape. A fast growth rate of

approximately 1.5 m per year under ideal conditions make this plant a good candidate for gardeners and landscapers who want quick results.

This plant has root nodules containing nitrogen fixing bacteria as do most members of the *Mimosaceae* family and these play an important role in the nitrogen enrichment of soils which then has a positive impact on the growth of plants around the fever tree. The dappled shade underneath the canopy is ideal for smaller plants which require protection from the full brunt of the sun's rays but still require sufficient light.

The fever tree is relatively easy to propagate. Before sowing, the seed should be soaked in hot water overnight. This causes the seeds to swell and usually by the next morning they are ready to be sown. Seed can be sown in seedling trays using a well drained seedling medium and then covered lightly. When the seedlings reach the two-leaf stage (approximately six to eight weeks after sowing) they should be transplanted from seedling trays into nursery bags, taking care not to damage the long taproot. Seedlings and young trees transplant well. Seed and young growing plants are available at selected seed stockists and nurseries respectively.

Due to its mature dimensions it is recommended not to plant it close to buildings. This tree can tolerate moderate frost and can often be seen in cultivation in the cooler areas on the highveld such as certain parts of Johannesburg and Pretoria.

Acacia xanthophloea belongs to the pod bearing family Fabaceae. There are 40 species, subspecies and varieties of *Acacia* represented in South Africa. Many species such as the fever tree have leaflets which fold up at night. A special feature of this family is the *pulvinus* which is a conspicuous thickening at each petiole and *petiolule* base which allows the leaves to close at night and also during extreme heat. Stipules (or a stipular scar) are always present and are often modified into thorns or spines as is the case with the fever tree.

The genus *Acacia* is mostly confined to Africa where almost all have stipular spines or recurved thorns. It is also found in Australia where most are without thorns. *Acacias* are conspicuous, particularly in drier areas, becoming dominant in many vegetation types and are important fodder trees with useful wood, gum, and bark. *Acacias* are also host to many butterfly species which have specialised in feeding on the flowers pods or leaves.

Rothmannia capensis Thunb

Family: *Rubiaceae*

Common names: wild gardenia, common Rothmannia (English); wildekatjeepering (Afrikaans.); Modulatshwene (Northern Sotho); Mukubudu (Venda); umPhazane-mkhlu (Zulu); iBolo (Xhosa)

South African Tree List No. 695

Rothmannia capensis is one of the loveliest indigenous trees for the home garden. It attracts birds and it has a non-aggressive root system.

Description

This evergreen tree grows up to 10 m tall in woodlands but reaches 20 m in forest, with a dense, roundish crown. The bark on younger branches is smooth and grey-brown, but darker grey on older stems and branches and rough or cracked like crocodile skin. The glossy green leaves are often crowded towards the ends of the branches and have little bumps or pockets (*domatia*) in the axils of the veins.

The beautiful bell-shaped flowers are borne singly in summer from December to February. They are creamy white with purplish red streaks and speckles inside the flower tube. They have a strong sweet scent, which lingers even after they dry, and are about 80 mm long. They are followed by round, hard, green, 70 mm fruits, with a leathery skin marked with faint grooves. The fruits soften when ripe and turn brown. They contain many flat seeds embedded in pulp.

Distribution

Rothmannia capensis is distributed from Limpopo in the north to the Western Cape in forests, kloofs, and on rocky ridges from sea level up to about 1 600 m.

Name derivation

Rothmannia was named in honour of Dr Georgius Rothman (1739-1778) by his friend *Thunberg*. Both were pupils of *Linnaeus*. The Latin word *capensis* means from the Cape.

Economic value

The hard pliable wood is popular for instrument handles but also for making various household utensils. It makes durable spoons for cooking and stirring sticks for porridge. Dry wood makes a hot fire and the fruits are edible but not very tasty. Baboons, *vervet* and samango monkeys eat the green and ripe fruits off the trees and bushbuck, grey duiker and bushpigs immediately devour dropped fruits in forests.

Medicinal use

The powdered roots are used for treating leprosy and rheumatism. The powder is rubbed into tiny incisions made into the skin over the effected parts. Juice from the fruits is heated and applied to wounds and burns to speed up the healing process. The effected parts are also held in smoke from the burning roots.