

Schotia latifolia Bush Boer-Bean



Schotia latifolia flowers and buds. Photo: qgrobler, iNaturalist.org CC BY-NC.

The *Schotia latifolia* tree is one of four in this genus of flowering plants in the legume Family, Fabaceae, Sub-family Detarioideae.

Distribution

Boer-Bean or Forest Boer-Bean trees occur in Southern Africa, south of the Zambezi River. The main centre of distribution is in the Eastern Cape but this species also occurs in restricted areas within Mpumalanga & Limpopo Provinces of South Africa..



Map of southern Africa showing nations (red borders, names in Capitals), South African provinces (purple borders and names) and Zambezi River. Map: Composite of Southern Africa elevation, Amitchell125 CC BY-SA 4.0; South Africa provinces, Htonl, CC BY-SA 4.0; Zambezi river basin, Eric Gaba, CC BY 3.0. All Wikimedia, Wikipedia.



The flat pods of *Schotia latifolia* vary from oval to elongated. They split open to reveal one or more seeds, each with a fleshy pale yellow aril. Photos: Left: Johan Eksteen, iNaturalist CC BY-NC; Centre: Abdul-lateef Ismail, iNaturalist CC BY-NC; Right: JMK, Wikimedia CC BY-SA 3.0

History

In 1770, N. J. Jacquin was the Director of the Imperial Gardens at Schonbrunn Palace in Vienna. He was an active traveller & collector of plants & seeds. His head gardener, Robert van der Schot, (Imperial Gardens) was held in high esteem, and Jacquin bestowed & named the tree in Schot's honour.

Dutch settlers in southern Africa found that the pods & seeds were edible so hence the common name for the edible "Boer- Bean". These pods & seeds were the staple food source of the Indigenous Africans.

Description

Small evergreen tree will grow up to 3 metres where the habitat is dry & scrubby. However, in moist areas of the forest, the tree may reach 15 metres in height. The Crown is rounded in shape unless growing in a forest habitat where the tree will be taller & more slender. The crown varies according to the forest canopy.

The Bark is usually smooth, reddish-brown to grey.

Leathery textured dark green compound leaves divide into distinct leaflets each with a small petiole. The pairs of elliptic and asymmetrical leaflets are arranged opposite to one another in an alternate arrangement.

Flowers can vary from flesh coloured to pale pink. Flowering is profuse in January & February each year. The flowers are borne in clusters on the end of stems. Pale flower colour is more insect attractant especially to butterflies, moths, wasps, beetles, ants & flies. It also attracts birds due to the copious quantities of nectar which drip from the trees.

Pods are broad, flat & green but when mature they become brown & woody. Astringent to taste, but monkeys eat the seeds.

Seeds are fleshy with yellow arils with an oil content which attracts birds. Seeds are dropped by birds as well as other small mammals & ants carry away the seeds that fall to the ground, firstly eating the aril. An aril is a fleshy, coloured covering or appendage of some seeds.

Shelter & Nesting Sites: All Boer-Bean trees are the preferred site for the Greater Double Collared Sun Bird (*Cinnyris afer*). Butterflies such as the Blue Spotted Emperor (*Charaxes Cithaeron*) & the Notodontidea Moth (*Odontoperas heterogyna*) are pollinators.



Both Blue-spotted Butterfly (left) and Greater Double-collared Sunbird (right) visit the flowers for the prolific nectar. Photos: Left: Nina Bieber, iNaturalist CC BY-NC-SA; Right: Paolo Candotti, iNaturalist CC BY-NC.

Uses

Seeds: Edible when picked green, then roasted by the indigenous Africans as well as the Dutch settlers & farmers. Same method is practised today. Seeds were steamed inside the pods, skin removed, then eaten. Same process when cooking broad beans I imagine.

Wood: Fence posts as wood is tough & white in colour. Not for commercial use.

Bark: Dyes, Green in colour. Tanning agent for leather goods.

Medicinal: Treatment of tick- borne diseases in livestock.

Antibacterial & Antioxidant activities of Hydroalcoholic Stem Bark Extract: Can be used as an alternative therapy against antibiotic resistant bacteria to prevent many radical related diseases.

Propagation

Once seeds are dried for storage, scarification is beneficial. Germination is improved by pouring near boiling water on to the seeds. Soak in warm water 12-24 hours. This allows moisture to swell the seed content in readiness for sowing into trays in semi-shade areas. Germination should take place in a few weeks. Prick out into single containers when two leaves appear. Take care with the tap



Like many plants in the Family Fabaceae, leaflets are arranged in opposite pairs. Photo: Abdul-lateef Ismail, iNaturalist

root as they are very sensitive. Harden off in semi-shade in readiness for planting.

Landscape & Garden Use

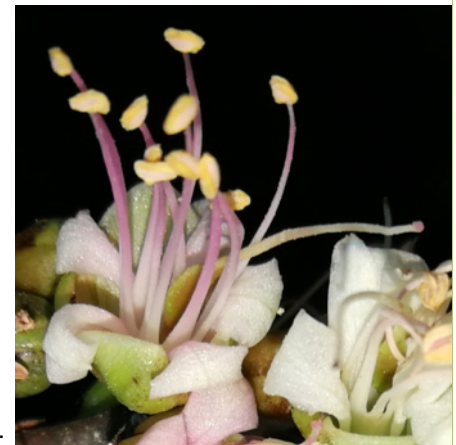
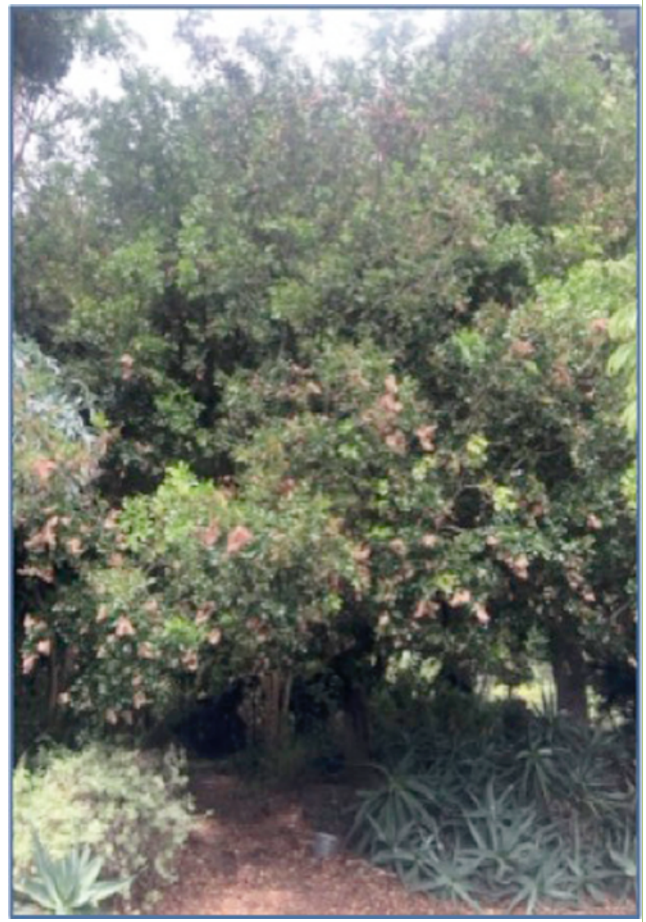
Schotia latifolia is found in the 21st Century Garden (right side of path & close to the Hanson Gate) in Geelong Botanic Gardens.

A cluster of plantings are found along Anderson Street fence (on the East side) of the Melbourne Botanic Gardens.

Bonsai Specimen for the home enthusiasts.

References

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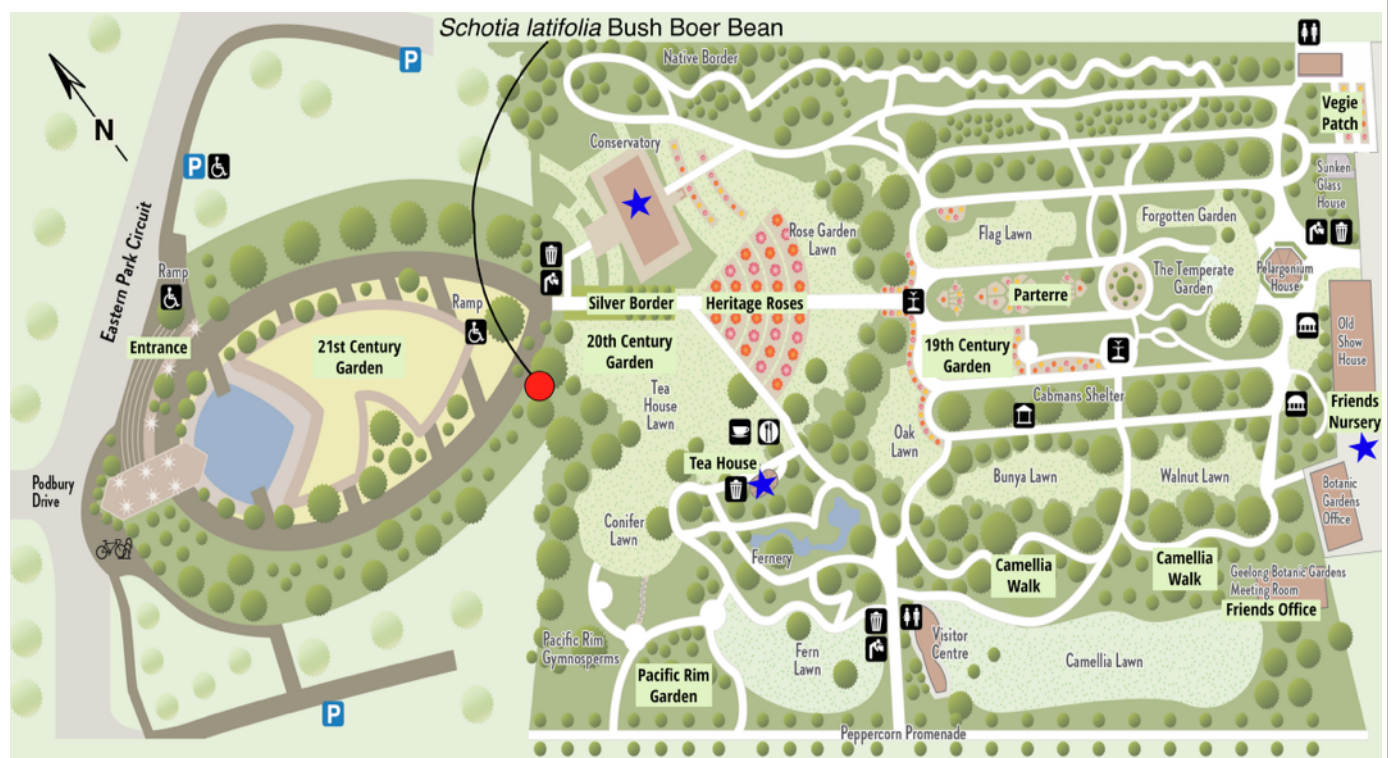


Above: *Schotia latifolia* shrub at GBG.

Photo Beverley Stringer.

Right: Individual flower, Photo: Craig Peter, iNaturalist CC BY-NC.

Below: Map of Geelong Botanic Gardens showing location of *Schotia latifolia* in the 21st Century Garden.





***Schotia latifolia* Botanical drawing** showing plant parts. Main image (centre): Twig showing inflorescence and leaves; 1.(bottom left) Flower with one to four petals and ten stamens; 2.(bottom left, right of 4.) Stigma with ovary above petals (ie. superior). 3.(bottom second from left) Four Sepals; 4.(above 3.) Anther; 5.(Bottom, right of 6.) Attachment of ovaries, fused to the cup-like hypanthium, below the sepals; 6.(bottom centre, right of 2.) Ovary, showing ovules; 7.(top left) Seed pod closed; 8.(top right) Open seed pod showing seeds with arils; Image: Hooker, W.J., Exotic Flora, vol. 3: t. 159 (1827), tropical.theferns.info CC BY-NC-ND

