

Seed Notes for Western Australia

No. 20 *Lasiopetalum*, *Thomasia* and *Guichenotia*

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Lasiopetalum, *Thomasia* and *Guichenotia*

The word *Lasiopetalum* comes from the Greek *lasios* meaning hair and *petalon* for leaf or petal and refers to the hairy calyx. They are commonly called velvet bushes. At least one species was cultivated in England as early as 1791. *Thomasia* was named after the Thomas brothers and their sons who were Swiss plant collectors in the 17th century. They are commonly called paper flowers because of the papery sepals surrounding the tiny flowers. The genus *Guichenotia* was named after Antoine Guichenot, a gardener and plant collector on the 1801–1803 Baudin expedition.

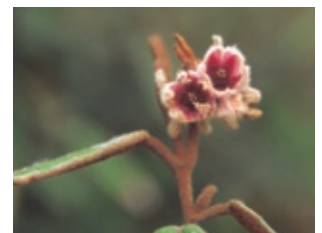


Above: *Lasiopetalum floribundum*. Photo – Sue Patrick

Below: *Lasiopetalum parvuliflorum*. Photo – Andrew Crawford

Description

Species in the three genera (family Sterculiaceae) are mostly shrubs and sub-shrubs, generally densely covered in stellate or star-shaped hairs. Plants range from dwarf to medium size. The leaves of *Lasiopetalum* are mostly alternate and have no stipules (leaf-like appendages found at the base of the leaf),



unlike the *Guichenotia* which has leafy stipules. *Thomasia* also has leafy stipules but species in the genus do not have the ribbed calyx lobes characteristic of *Lasiopetalum*. The flowers of all three genera are usually small and insignificant, with the persistent calyx being the most showy floral part. *Lasiopetalum* flowers are axillary or terminal, bisexual, crowded with five calyx lobes and five petals and range in colour from white, to cream to pink. In *Thomasia* the calyx is purple, blue or white and in *Guichenotia*, pink to purple. Species in the latter genus have three to five ribs per calyx lobe. Some species are quite ornamental, mainly for their foliage with the new shoots being reddish or rusty in colour. The flowers are not dramatic from a distance but are attractive when viewed closely. They may be useful as cut flowers.

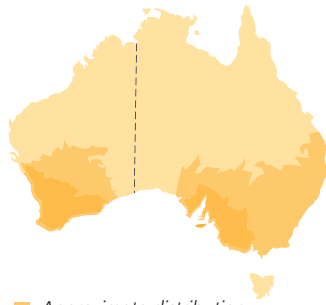


Top: *Lasiopetalum drummondii*. Photo – Anne Cochrane

Above: *Thomasia formosa*. Photo – Sue Patrick

Geographic distribution and habitat

Lasiopetalum is endemic to Australia, occurring over the entire continent except the Northern Territory, although the majority of species occur in Western Australia. There are about 35 species in total in Australia. There are more than 30 species of *Thomasia* from Western Australia. *Guichenotia* is an endemic Western Australian genus. Plants of all three genera commonly occur in temperate to semi-arid heathland, woodlands and forest, although several species of *Lasiopetalum* are found along creeklines and in moist gullies. Most species are drought tolerant and adapt well to different soils. Species of all three genera can occur from the coast to the dry inland.



Approximate distribution of *Lasiopetalum*, *Thomasia* and *Guichenotia* in Australia.



Habitat of *Lasiopetalum pterocarpum*. Photo – Anne Cochrane

Seed collection

The fruit of all three genera is a valvate capsule enclosed in the persistent calyx. The capsule is usually divided into three cells in *Lasiopetalum* and *Thomasia* but into five cells in *Guichenotia*. Seed is rarely available commercially and species are often grown from cuttings. Collecting seed is reasonably easy but the flowers have often not been fertilised or else the seed has aborted, and so the effort of collecting is not well rewarded in many species. This is perhaps why seed is not readily available. Insect predation can also be a problem. The calyx of the flower, which forms the outer part of the fruit, changes colour and fades from cream, white or pink to brown and becomes papery when ripe. The ovaries within the centre of the calyx will swell to form the capsule and accommodate the seeds. It is these swollen fruits that should be collected. The seed will be hard and brown or black and there will usually be three (*Lasiopetalum*), 10 (*Thomasia*) or up to 15 (*Guichenotia*) seed per capsule.

Thomasia solanacea. Photo – M. McDonald



Reproductive biology

Little is known about the reproductive biology of *Lasiopetalum*, *Thomasia* or *Guichenotia*. It is likely that insects pollinate the flowers of all species. Flowering generally occurs between winter and spring with fruit developing in late spring and summer.



Thomasia montana.
Photo – Anne Cochrane



Seed quality assessment

Mature seed of *Lasiopetalum*, *Thomasia* and *Guichenotia* is generally dark brown to black and full. Seed that is lighter in colour or even slightly shrivelled is unlikely to be viable.

A simple cut-test will reveal whether or not the seed is filled. These cut seed will then need to be discarded as they will not germinate. It is possible to

nick the seed coat slightly to reveal the white endosperm and therefore determine whether the seed is good. These seed should then germinate well after this treatment, provided they have not been damaged. It is also possible to assess seed quality by conducting a flotation test. Simply place the seeds in a jar of water with some detergent and agitate. The filled seed should sink to the bottom and the empty seed will float. It is advisable that seed of both floaters and sinkers are cut to confirm this.



Above: *Guichenotia seorsiflora* seed.

Below: *Thomasia* sp. toolbrunup seed.

Photos – Anne Cochrane



Below: Seed of *Thomasia tenuivestita*.

Photo – Anne Cochrane



Seed germination



Above: *Lasiopetalum monticola* seed. Photo – Anne Cochrane

Variable germination has been reported for different species. The seed coat of species in all three genera is hard, so physical dormancy needs to be overcome by using scarification or chipping of the seed coat (as mentioned above) or soaking in warm to hot water (just off the boil) for 24 hours. This will allow the seed to imbibe water and begin germination. Untreated seed will eventually germinate if left in soil for a few months but pre-treatment of the seed coat will hasten germination.



Above: *Lasiopetalum pterocarpum* seed.

Below: Seed of *Lasiopetalum monticola*.

Photos – Anne Cochrane



Below: Seed of *Thomasia multiflora*.

Photo – Anne Cochrane





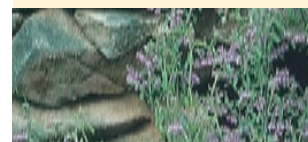
Top left: *Lasiopetalum pterocarpum*. Top right: *Lasiopetalum membraniflorum*. Above: *Thomasia quercifolia*.
Photos – Anne Cochrane

Recommended reading

Elliot, W. R. and Jones, D. L. 1984. *Encyclopaedia of Australian Plants Suitable for Cultivation*. Volume 5 and 6. Lothian Publishing, Melbourne.

Sharr, F. A. 1978. *Western Australian Plant Names and their Meanings. A Glossary*. University of Western Australia Press, Perth.

Seed Notes for Western Australia



These **Seed Notes** aim to provide information on seed identification, collection, biology and germination for a wide range of seed types for Western Australian native species.

THREATENED FLORA



SEED CENTRE

They have been written and compiled by Anne Cochrane, Manager of DEC's Threatened Flora Seed Centre.

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Seed Notes

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