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Seed Notes for Western Australia

No. 19 *Lambertia*

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Lambertia

The genus *Lambertia* was named by botanist James Smith, in honour of author Aylmer Bourke Lambert, who was a patron of botany in the 18th and 19th centuries. Species in the genus are commonly called native honeysuckles (WA) or mountain devils (NSW). *Lambertia formosa*, the mountain devil, was first cultivated in England in 1788. Several species are worthy of cultivation and have great potential for floriculture.



Above: *Lambertia echinata* ssp. *echinata*. Photo – Andrew Brown



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Lambertia multiflora var. *darlingensis*. Photo – Anne Cochrane

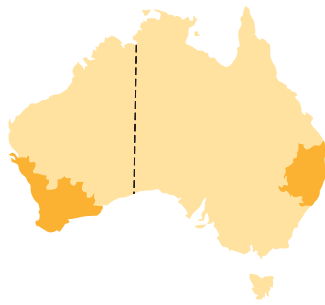
Description

Lambertia (family Proteaceae) are either small to tall shrubs or small trees. They have smooth bark with lenticels (raised bumps) on the stems. Their leaves are arranged in whorls or are opposite, and may be entire or lobed and often pungent-pointed. Flowers are borne as terminal or axillary inflorescences, although *L. uniflora* bears solitary flowers. The flower of the *Lambertia* is tubular and may be red, pink, orange or yellow. The fruit is a beaked follicle that is generally sessile (without a stalk) and splits when the fruit is ripe. The fruits of some species can be quite ornamental with multiple beaks or horns.



Geographic distribution and habitat

The genus is confined to the Australian mainland. There are more than 10 species of *Lambertia*, with all but one endemic to the south-west of Western Australia. Plants occur in kwongan heathland or in dry sclerophyll (low rainfall) forest or woodland and require free-draining soils, generally acidic in nature. Plants grow in sand over lateritic gravel or granites. The survival of several Western Australian rare species in this genus are threatened by the dieback disease, *Phytophthora cinnamomi* and the wind-borne disease aerial canker.



Approximate distribution of *Lambertia* in Australia.



Lambertia orbifolia. Photo – Leonie Monks

Reproductive biology

Flowering in the genus *Lambertia* is often year-round, with a peak in spring. Nectar-eating birds are attracted to plants due to the long flowering period. The spreading shrubs and small trees are a useful refuge for visiting birds. The flowers are pollinated by birds such as honeyeaters and spinebills. These birds have curved beaks and long delicate tongues that can probe the tubular flowers to gather nectar. Their head feathers usually carry the pollen. Native bees may also be implicated in pollination. A number of species have lignotubers and can resprout after fire, while others are killed by fire and regenerate from seed.



Lambertia inermis. Photo – Sue Patrick

Seed collection

The fruit of the *Lambertia* turns from green to brown when ripe, although some species can be collected when the major part of the follicle is still green but the suture between the two sides has turned brown. The seed coat will be orange when immature and black or dark brown when ripe. Seed collected when orange will not germinate. Some species produce very few fruits and while still green and immature can be quite cryptic within the foliage. Fruits are easy to collect although collecting can be time consuming. There are one or two round or triangular-shaped seeds within each follicle. Some species retain seed within the mature fruit for several years.



Above: *Lambertia orbifolia* seed.

Below: Fruit of *Lambertia echinata* ssp. *echinata*.

Photos – Anne Cochrane





Collecting seed of *Lambertia echinata*.
Below: Green follicles of *Lambertia orbifolia*.
Photos – Anne Cochrane



Seed germination

Germination of *Lambertia* seed is generally good without treatment of any kind. Seed begins germinating within a few weeks. Sow the seeds directly into pots or on sand, filter paper or vermiculite in small dishes.



Above: Germinating seed of *Lambertia orbifolia*.
Photo – Anne Cochrane



Lambertia echinata ssp. *occidentalis*. Photo – Anne Cochrane

Seed quality assessment

Seed can be extracted from the woody fruits by leaving them in a paper bag in a warm dry place for a few days. Never store seed in unopened fruit as it can easily go mouldy. Good seed is firm and white with a black seed coat. The seed will be rounded if full. Insect damage to developing seed can be a problem in some species and signs of frass (the debris or excrement of insects or insect larvae) and holes may be evident.

Damaged seed should be discarded as it will not germinate.





Top left and right: *Lambertia echinata* ssp. *echinata*. Above: *Lambertia multiflora* var. *darlingensis*. Photos – Anne Cochrane

Recommended reading

Elliot, W. R. and Jones, D. L. 1984. *Encyclopaedia of Australian Plants Suitable for Cultivation*. Volume 3. Lothian Publishing, Melbourne.

Hnatiuk, R. J. 1995. *Lambertia Flora of Australia* 16, 425-436. CSIRO, Melbourne.

Obbens, F. and Coates, D. 1997. Conservation biology and management of *Lambertia* species. Project No. 443. Report to

Environment Australia. Department of Conservation and Land Management, Perth.

Sainsbury, R. M. 1991. *A Field Guide to Smokebushes and Honeysuckles (Conospermum and Lambertia)*. University of Western Australia Press, Perth.

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.



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The **Seed Notes** are available from www.naturebase.net

Seed Notes

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