

Acacia dealbata Silver Wattle

TAXONOMY

Division Angiosperm
Subclass Dicotyledonae
Family MIMOSACEAE

Previous Taxonomic Names

Has been named as *Acacia dealbata* since 1822 (J. Link).
Also named *Acacia decurrens* var. *dealbata* (Maiden 1906).

Taxonomic Identification Number 6717 (ANH et al 2005)

Taxonomic Status

Long-lived perennial

Common Name

Silver Wattle (ANBG n.d.)

MORPHOLOGY

Tree to 30m high in forests and along watercourses or shrub on drier sites.
Bark usually smooth (fissured at the base of old trunks only), grey-green or dark grey to almost black. Branchlets often glaucous. Leaves bipinnate, usually bluish-grey with 10-30 pairs of pinnae and a gland at the junction of each pair of pinnae. Pinnules linear, crowded, 20-40 pairs. Inflorescences on racemes or pedicels, globular, 25-35 bright yellow flowers (Walsh & Entwisle 1996).



Bipinnate leaves, single gland at base of each pair of pinnae

SUBSPECIES

Acacia dealbata ssp. *dealbata* - widespread across Corangamite Region

Acacia dealbata ssp. *subalpina* - not naturally occurring in the Corangamite region.

HYBRIDS

Acacia dealbata is reported to hybridise with the following species:

Acacia decurrens, Early Black Wattle native to NSW and ACT, now naturalised in Victoria.

Acacia baileyana, Cootamundra Wattle native to NSW

Acacia pataczekii at Tower Hill in Tasmania.

Acacia mearnsii, Late Black Wattle indigenous to Victoria - different flowering times usually prevent hybridisation in a natural setting.

A. podalyriifolia, Golden Ball Wattle native to NSW and Qld. European garden hybrids with this species have been described as *A. x hanburyana*.

A. dealbata ssp. *subalpina* from NSW, ACT and Victoria. In situations where *A. dealbata* ssp. *subalpina* occupies upper mountain slopes, and *A. dealbata* ssp. *dealbata* occurs on



the lower slopes, intermediates between the two are common (Maslin 2001). Note that while *A. dealbata* ssp. *subalpina* is a Victorian species it does not occur naturally in the Corangamite region.

Hybrids are a concern where nurseries are distributing non-local species for revegetation projects in place of or with indigenous *Acacia dealbata*.

SIMILAR SPECIES

Acacia nanodealbata, Dwarf Silver Wattle - endemic to Victoria, found especially in Otway Ranges. A bushy shrub or tree between 3-7m in height with shorter, closer glabrous (no bristles or hairs) pinnae and broader pods than *A. dealbata* (Costermans 1983).

Acacia mearnsii, Black Wattle indigenous and widespread in the region. Darker green leaves, does not have grey, waxy coating. The glands are irregularly spaced along the main stems.

Acacia decurrens, Early Black Wattle an environmental weed in Victoria, endemic to NSW and ACT (Maslin 2001).

GEOGRAPHIC RANGE

Acacia dealbata ssp. *dealbata* is widespread in Victoria in areas over 500 mm rainfall, usually at altitudes between 350-1000 m above sea level. It also occurs naturally in NSW and Tasmania (Maslin 2001).

Note that Flora of Victoria does not show Acacia dealbata occurring at Geelong although the DSE Flora Information System records do.

BIOREGIONS

It occurs across all bioregions in Corangamite: Central Victorian Uplands, Victorian Volcanic Plains, Otway Plain, Otway Ranges and Warrnambool Plain.

PLANT COMMUNITIES

In Corangamite, Silver Wattle is common in Dry Forests and Grassy Woodlands in the Central Victorian Uplands bioregion. It is also found in Heathy Woodlands in Otway Plain, Wet Forests in Otway Ranges, Woodlands of the Warrnambool Plain and grasslands, riparian ecosystems and dry forests of the Victorian Volcanic Plain.

FRAGMENTATION

Widely cultivated. Fragmentation appears to be recent, since European settlement.

POPULATION DENSITY

Unknown

RELEVANT HISTORY & RESEARCH

No specific research records have been found for this species.

BREEDING SYSTEMS

FLOWERING

Flowers July–October (Walsh & Entwisle 1996).

POLLEN

Medium to abundant pollen yields (Gowers 1990). Highly perfumed (Earl et al 2001).

POLLINATION

Partially self-incompatible (Moffett & Nixon, cited in Kenrick 2003).

POLLINATORS

Insects, including bees (Earl et al 2001).

SEED

SEED DESCRIPTION

Seed in straight or slightly curved pods, flattish, 5-9 cm long, 8-12 mm wide and slightly constricted. Light brownish-purple in colour, often with a whitish bloom (Walsh & Entwisle 1999).

38-85 seeds/gram (GAV n.d.).
Approximately 45-84 viable seeds/gram (Earl et al 2001).
An average of 53 germinants/gram at 25°C (Gunn 2001).
Seed persists in soil for around 50 years (Earl et al 2001).

SEED CROP

Plants mature early, setting seed at 4 to 5 years (Gowers 1990).
Large crops are produced every 2 to 3 years (Ralph 1994).
Seed can be collected from February to March (Ralph 1994) and seed drops quickly after ripening (GAV n.d.).

SEED DISPERSAL

Seed dispersal is through birds (Gowers 1990) and ants (Earl et al 2001).

EXTRACTION & STORAGE

Seed needs to be separated from its pod. This can be achieved by placing pods on a tarp in direct sunlight to stimulate opening or rubbing pods over a sieve (Ralph 2003).
82% germination after 5 years storage at 18-22°C (Gunn 2001).

PROPAGATION TREATMENT OPTIONS

Seed should be scarified or heat-treated prior to sowing (Earl et al 2001).
Seed that floats is not viable (Ralph 2003).
Smoke treatment has improved germination with some *Acacia* species (Ralph 2003).

GERMINATION TIME

Acacia species usually germinates in 3-10 weeks and seedlings are generally fast growing (Ralph 2003).

FIELD ESTABLISHMENT

Tube stock
Direct seeding is very successful (Earl et al 2001; Ralph 1994).
Regenerates from seed or suckers, particularly after fire, ploughing or ripping (Earl et al 2001).

SEED COLLECTION RANGE - *Acacia dealbata subsp dealbata*

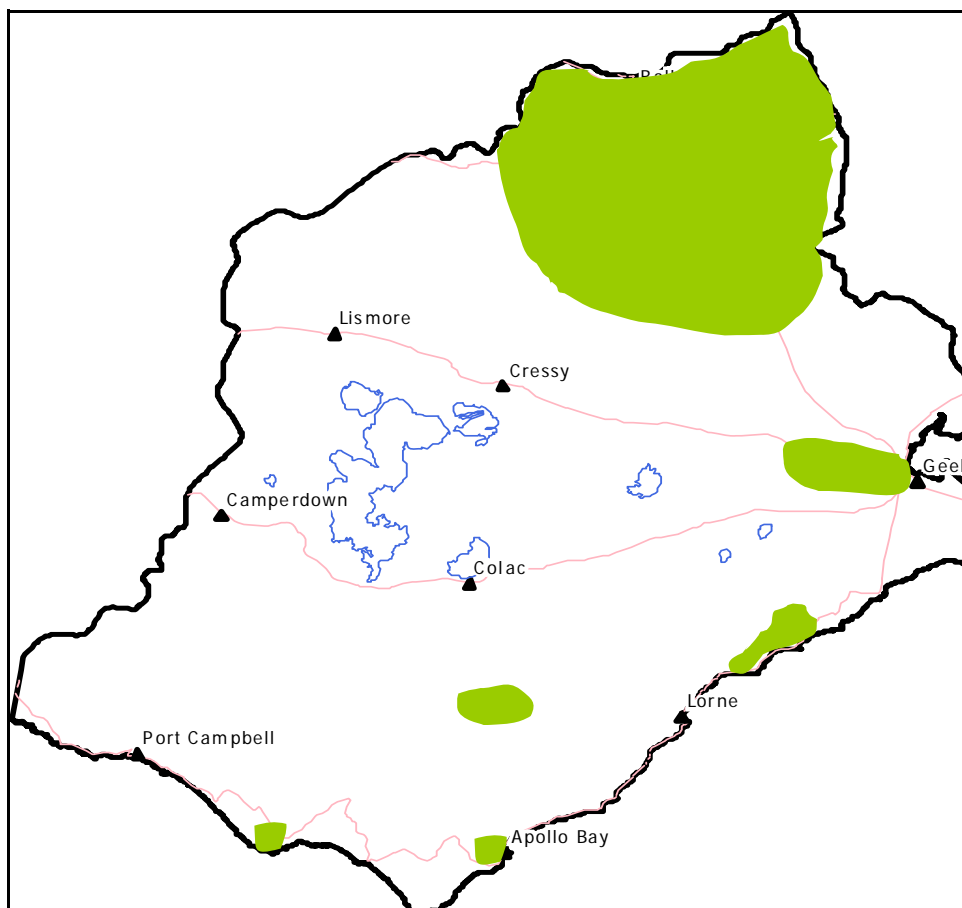
Narrow - within which, seed should be collected from remnant stands that are close to the revegetation project.

On existing information, coastal populations of *Acacia dealbata* appear to be distinctly separated and differences in provenances have been observed in nursery situations. For this reason, it is important to maintain collections within these populations until further research suggests otherwise.

Assessment of coastal populations in areas such as Wattle Hill, Forest and Anglesea is required. In the Otway Ranges, particular attention needs to be made to ensure correct identification of *Acacia dealbata* and *Acacia nanodealbata* as these occur in similar locations along the coast. Where possible, collect from at least 30 plants from healthy populations to maintain genetics.


Intermediate - within which, collection can be extended to formally contiguous remnants

Where populations are still very large and connected such as in the Central Victorian Uplands around Ballarat, it is appropriate to collect broadly. Collection should focus on matching seed from similar soil types and ensuring collection from at least 30 –50 parent plants to maintain genetics. Collectors should avoid areas with weedy wattles such as *Acacia decurrens* and *Acacia baileyana* as these can hybridise with *Acacia dealbata*.



MAP: *Acacia dealbata* distribution

DATA SOURCE: Flora Information System, Biodiversity and Natural Resources—May 2005

 Broad distribution of remnant *Acacia dealbata*

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