

# Action Statement

Flora and Fauna Guarantee Act 1988

No. 189

## Velvet Daisy-bush

*Olearia pannosa* subsp. *cardiophylla*

### Description and distribution

Velvet Daisy-bush (*Olearia pannosa* subsp. *cardiophylla*) is a sprawling rhizomatous shrub that grows to approximately 1 metre high and wide. It has ovate-oblong leaves about 30–120 mm long and 18–65 mm wide that are mostly hairless above at maturity but densely covered with short whitish or yellowish hairs below. The flower heads are 35–75 mm diameter, with white ray florets and yellow disc florets.

Velvet Daisy-bush is largely confined to Victoria, with populations found in and near the Brisbane Ranges National Park, near Geelong, coastal woodland near Anglesea, Wedderburn and Rushworth. It is believed to have been formerly widespread across Victoria and is known to occur in South Australia.

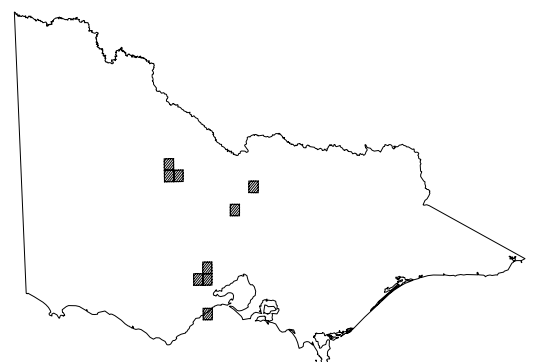
Populations vary in number and habitat area. There are several populations in the Brisbane Ranges area both on private and public land including the Brisbane Ranges National Park and Steiglitz Historical Park and road reserves. There is a recently confirmed population within the Moorabool Water Reserve and a roadside occurrence at Maude. Populations are also known on roadsides at Point Addis and in the Ironbark Basin Reserve, both near Anglesea. North of the Divide, three sites are known near Rushworth on private property and one plant occurs south of Wedderburn on a roadside.

### Habitat

Velvet Daisy-bush occurs mainly in dry open forest, on shallow rocky soils where the mean annual rainfall ranges from 450 to 650 millimetres.



Velvet Daisy-bush (*Olearia pannosa* subsp. *cardiophylla*) (Photo: John Eichler)



Distribution in Victoria  
(from *Flora Information System*, DSE 2004)

Populations of the Velvet Daisy-bush have been found in Lowland Forest, Heathy Dry Forest and Grassy Dry Forest associated with Red Stringybark (*Eucalyptus macrorhyncha*), Messmate (*Eucalyptus obliqua*), Golden Wattle (*Acacia pycnantha*) and Austral Grass-tree (*Xanthorrhoea australis*). At Wedderburn, the Velvet Daisy-bush site is dominated by Blue Mallee (*Eucalyptus polybractea*), Broombush (*Melaluca uncinata*), Wallowa (*Acacia euthycarpa*), and Rough Spear-grass (*Austrostipa scabra*), while the Rushworth site occurs in Grey Box (*Eucalyptus microcarpa*) / Red Ironbark (*Eucalyptus tricarpa*) open forest (Foreman unpub. data).

The species is found on a range of surfaces and substrates from Ordovician slates and sandstones with sand loam, silty loam or loamy topsoils, to Tertiary sediments with sand topsoils over sheet ironstone or topsoils of ironstone gravel.

### Life history and ecology

Flowering is at its peak in October with fruits produced between December and May. Seed dispersal is thought to be limited, and combined with a minimum lifespan of 38 years, the taxon appears to be a long-lived, slow growing one (Wisniewski *et al.* 1987). The root system includes many fleshy, sub-tuberous roots up to 30cm long. Although plants may be rhizomatous and some clonal growth may occur, most populations have been shown to contain several genotypes. There are genetic and, to some degree, morphological differences between northern and southern populations (Smith 2002).

### Current conservation status

#### National conservation status

Velvet Daisy-bush has not been listed under the Commonwealth **Environment Protection and Biodiversity Conservation Act 1999**.

#### Victorian conservation status

Velvet Daisy-bush has been listed as threatened under the **Flora and Fauna Guarantee Act 1988**.

Velvet Daisy-bush is considered 'vulnerable' in Victoria (DSE 2003).

### Decline and threats

The known populations of Velvet Daisy-bush are widely dispersed and many comprise very plants, therefore, any single threat can endanger the survival of an entire population. Threats to this species include grazing by native herbivores, rabbits and domestic stock, inappropriate fire regimes, altered nutrient and soil moisture levels and land clearing. Plants within the Sheoaks and Brisbane Ranges National Park areas have been

severely grazed by kangaroos and wallabies. Populations are also threatened by erosion, road works, weed competition, rubbish dumping, herbicide use, residential development and Cinnamon Fungus (*Phytophthora cinnamomi*) infection. Fruit damage due to insect predation is common and normal low seed-set also poses a threat to populations (Bartley *pers. comm.*).

The existing populations are isolated and very small and this may affect genetic vigour. The Velvet Daisy-bush is at most risk through its extremely slow growth rate, variable seed production, low seed viability (Smith 2002) and small dispersal range. The response of populations to fire is not understood and will need to be investigated to enable suitable management regimes to be adopted. The location of many populations along roadsides poses problems to the plants' ability to reproduce due to the thin linear nature of road reserves and the potential of the soil and ground being disturbed through road works. As sites in the Brisbane Ranges National Park and Steiglitz Historic Park are isolated competition by weed species is of minimal threat.

The Velvet Daisy-bush occurs with other rare plants in the Brisbane Ranges National Park and surrounds and tends to be located in intact vegetation. As most populations are in areas largely devoid of human or animal disturbance, survival rates appears to be high.

Management and conservation of the species may have positive benefits for these other plants through the prevention of clearing and increased weed control. Fauna may also receive benefits through the protection of habitat.

The protection of the Velvet Daisy-bush on roadsides may result in the protection of remnant native vegetation with which the species is associated.

### Existing conservation measures

- Monitoring surveys for Velvet Daisy-bush have been completed around the Point Addis area. Further surveys around the Geelong area have been undertaken and a number of new populations have been recorded.
- Attempts have been made to purchase land containing populations of the species around the Brisbane Ranges National Park.
- Twenty-nine cutting-grown plants were planted in a Bushland Reserve approximately 9 kilometres south-east of Wedderburn in September 2001. By March 2002, only nine plants remain despite careful watering by local field naturalists.
- The community around Steiglitz Historic Park and the Brisbane Ranges National Park have

been involved in workshops to discuss the significance of the Velvet Daisy-bush in the area.

- Botanic Guardians projects have been undertaken by the Friend of Brisbane Ranges for the Brisbane Ranges National Park and Steiglitz Historic Park sites. Angair Inc. have undertaken surveys at Point Addis.
- The species is being successfully propagated by Judy Locke (Parks Victoria) and vegetatively propagated plants from two of the Brisbane Ranges populations are held by the Royal Botanic Gardens Melbourne. Plants have also been propagated from cuttings of a single specimen near Wedderburn by Marilyn Sprague (Goldfields Revegetation), and more recently by Frances Cincotta (Newstead Natives).
- A study of the morphological and genetic variation of the taxon has been undertaken (Smith 2000).

### **Conservation objectives**

#### **Long term objective**

To ensure that the Velvet Daisy-bush can survive, flourish and retain its potential for evolutionary development in the wild.

#### **Objectives of this Action Statement**

1. Prevent further loss of populations of the Velvet Daisy-bush
2. Facilitate the natural regeneration of Velvet Daisy Bush
3. Protect the existing populations, by managing the identified threatening processes, and restoring degraded areas where possible
4. Identify the threatening processes for each population

#### **Intended Management Action**

The intended management actions listed below are further elaborated in DSE's Actions for Biodiversity Conservation (ABC) system. Detailed information about the actions and locations, including priorities, is held in this system and will be provided annually to land managers and other authorities.

#### **Survey and assessment**

1. Conduct surveys in suitable habitat in the vicinity of known populations of Velvet Daisy-bush during the flowering period.  
*Responsibility: DSE Port Phillip Region, SW Region, NW Region*
2. Assess habitat condition and threats at all sites and determine specific management actions.

*Responsibility: DSE Port Phillip Region, SW Region, NW Region*

#### **Planning**

3. Provide information on the distribution and management requirements of Velvet Daisy-bush to land managers, Catchment Management Authorities and relevant local government authorities for inclusion in the Regional Catchment Strategy and local planning schemes.

*Responsibility: DSE Port Phillip Region, SW Region, NW Region*

4. Incorporate actions to protect, enhance and restore Velvet Daisy-bush habitat into Regional Catchment Strategies or subordinate strategies via Biodiversity Action Plans. Implement these actions, according to priority, as resources become available, in conjunction with other agencies, community groups and landholders.

*Responsibility: Corangamite, Port Phillip and Goulburn Broken Catchment Management Authorities*

5. Incorporate locations of Velvet Daisy-bush populations and their core habitat into relevant local planning schemes and environmental significance overlays and apply planning provisions to ensure their protection.

*Responsibility: Shires*

6. Incorporate Velvet Daisy-bush locations and management requirements into plans for relevant parks and reserves: Brisbane Ranges National Park, Ironbark Basin Reserve and Steiglitz Historical Park.

*Responsibility: Parks Victoria*

#### **Liaison**

7. Advise landholders whose land contains or adjoins Velvet Daisy-bush populations of its presence and provide them with information on its protection, including options for long-term protection and incentives.

*Responsibility: DSE Port Phillip Region, SW Region, NW Region*

#### **Community involvement**

8. Continue to involve community groups and students in projects to conserve Velvet Daisy-bush.

*Responsibility: DSE Port Phillip Region, SW Region, NW Region*

#### **Research and Monitoring**

9. Monitor all populations regularly using DSE's VROTPop system.

*Responsibility: DSE Port Phillip Region, SW Region, NW Region*

10. Support research work undertaken by University of Melbourne on the cultivation of

*Olearia pannosa* and the effects of Cinnamon fungus.

*Responsibility:* DSE Biodiversity & Natural Resources Division

#### Habitat protection

11. Erect 'Significant Roadside Vegetation' signs on all road reserves with significant populations of the Velvet Daisy-bush

*Responsibility:* DSE Port Phillip Region, SW Region, NW Region

12. Implement specific management actions for individual sites once determined and as required.

*Responsibility:* DSE Port Phillip Region, SW Region, NW Region

#### References

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Further information can be obtained from Department of Sustainability and Environment Customer Service Centre on 136 186.

Flora and Fauna Guarantee Action Statements are available from the Department of Sustainability and Environment website: <http://www.dse.vic.gov.au>

This Action Statement has been prepared under section 19 of the Flora and Fauna Guarantee Act 1988 under delegation from Professor Lyndsay Neilson, Secretary, Department of Sustainability and Environment, September 2003.

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