

Argentipallium dealbatum Silver Everlasting

Taxonomy

Argentipallium dealbatum (Labill.) Paul G. Wilson

Current conservation status

Categorised as Rare in the 2014 Advisory list of rare or threatened flora (DEPI 2014).

Proposed conservation status

Endangered in Victoria

Criteria A2bc; B2ab(i,ii,iii,iv,v)

Species Information

Description and Life History

The taxon is a tufted, rhizomatous perennial, branched only at base, to c. 35 cm high; branches silvery from matted cottony hairs. Leaves c. oblanceolate to lanceolate, 1-4 cm long, 1-6 mm wide, commonly acute, upper surface green, glabrous or sparsely cottony, lower surface with dense whitish hairs, margins sometimes undulate. Capitula solitary, broadly-campanulate to hemispherical, to c. 3.5 cm diam.; outer bracts papery, yellow-brown, intermediate bracts with a white or reddish or purplish lamina, inner bracts with short claws and a white, opaque lamina, 10-18 mm long; outer florets female, inner florets bisexual. The taxon flowers from November to January (VicFlora 2019).

Generation Length

The generation length of *Argentipallium dealbatum* is estimated to be 20 to 40 years. This is based on a plausible longevity of 20 years, a plausible pre-settlement fire interval in the 20 to 40 year range, and the likelihood that episodic fire-induced mass recruitment greatly exceeds the proportion of recruitment responding continuously to small scale soil disturbances.

Distribution

The taxon has a disjunct distribution, and subpopulations occur in south-west Victoria (Portland-Digby areas) and in South Gippsland (Cape Liptrap to Yarram) (VicFlora 2019).

Habitat

The taxon occurs in coastal heathland in sandy soils, sometimes at margins of ephemeral wetlands in damp heath.

Threats

Apart from records at Cape Patterson in 2001, this taxon has not been recorded in Victoria since the 1980s. It is unclear if this absence is due to the lack of survey work, a lack of germination stimulus (e.g. it might need a fire to germinate), or some other threatening process such as plant disease or grazing/disturbance by feral animals, such as Hog Deer and pigs. Further work is required to determine if this taxon is still present in soil seed banks, or is locally extinct.

Attempts to relocate this taxon in Kentbruck Heath in 2016 and 2018 were unsuccessful. A record from Tasmania indicates mass recruitment following a fire (MEL 1617655), so it is highly likely that this taxon may require fire or

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disturbance for germination. The suppression of fire, and land clearing for housing and agriculture, particularly in eastern Victoria, are likely to be major threats.

IUCN Criteria

Criterion A. Population size reduction. Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4			
	Critically Endangered	Endangered	Vulnerable
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3, A4	≥ 80%	≥ 50%	≥ 30%
<p>A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.</p> <p>A2 Population reduction observed, estimated, inferred or suspected in the past where the causes of the reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p>A3 Population reduction, projected or suspected to be met in the future (up to a maximum of 100 years) [(a) cannot be used for A3]</p> <p>A4 An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p>			
<p>based on any of the following:</p> <ul style="list-style-type: none"> (a) direct observation [except A3] (b) an index of abundance appropriate to the taxon (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites 			

Evidence:

Eligible under Criterion A2 as Endangered

The population reduction over the past 60 to 120 years is estimated to be 30 to 50%, based on (b) and (c) above.

Past decline is estimated based on land clearing, particularly around Port Welshpool and sites in eastern Victoria which are now largely cleared for agriculture or settlements. This figure may be considerably larger if many of the sites recorded from the 1980s are now locally extinct.

The causes of the reduction may not have ceased, be understood or be reversible.

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Criterion B. Geographic range in the form of either B1 (extent of occurrence) and/or B2 (area of occupancy)			
	Critically Endangered Very restricted	Endangered Restricted	Vulnerable Limited
B1. Extent of occurrence (EOO)	< 100 km ²	< 5,000 km ²	< 20,000 km ²
B2. Area of occupancy (AOO)	< 10 km ²	< 500 km ²	< 2,000 km ²
AND at least 2 of the following 3 conditions:			
(a) Severely fragmented OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals			

Evidence:

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 56 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented naturally at the landscape scale. Geographically isolated stands occur at separations typically exceeding the dispersal range of the taxon, making recolonisation highly unlikely following localised extinction.

It is estimated to have 2 locations and has a continuing decline in (i), (ii), (iii), (iv) and (v) above, based on the current and projected impact of the identified threats.

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Criterion C. Small Population size and decline				
		Critically Endangered	Endangered	Vulnerable
Number of mature individuals		< 250	< 2,500	< 10,000
AND at least one of C1 or C2				
C1	An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future):	25% in 3 years or 1 generation (whichever is longer)	20% in 5 years or 2 generations (whichever is longer)	10% in 10 years or 3 generations (whichever is longer)
C2	An observed, estimated, projected or inferred continuing decline AND least 1 of the following 3 conditions:			
(a)	(i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
	(ii) % of mature individuals in one subpopulation =	90 – 100%	95 – 100%	100%
(b)	Extreme fluctuations in the number of mature individuals			

Evidence:

Ineligible under Criterion C as Data Deficient

There is insufficient evidence to determine the number of mature individuals.

Criterion D. Very small or restricted populations				
		Critically Endangered	Endangered	Vulnerable
Number of mature individuals (observed or estimated)		< 50	< 250	< 1,000
D2. Only applies to the VU category Restricted area of occupancy or number of locations with a plausible future threat that could drive the species to critically endangered or Extinct in a very short time.		-	-	D2. Typically: AoO < 20 km ² or number of locations ≤ 5

Evidence:

Ineligible under Criterion D as Data Deficient

There is insufficient evidence to determine the number of mature individuals.

Criterion E (Quantitative Analysis) was not addressed as the taxon does not have a detailed Population Viability Analysis.

References

DEPI (2014). *Advisory list of rare or threatened plants in Victoria - 2014*. Department of Environment and Primary Industries, Melbourne.

VicFlora (2019). Flora of Victoria, Royal Botanic Gardens Victoria: *Argentipallium dealbatum*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/4de378b9-40d6-418c-8c54-c4913c613e30>