



Olearia passerinoides subsp. *passerinoides* Slender Daisy-bush

Taxonomy

Olearia passerinoides subsp. *passerinoides* (Turcz.) Benth.

Current conservation status

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

Proposed conservation status

Vulnerable in Victoria

Criterion B2ab(iii,v)

Species Information

Description and Life History

The taxon is a glabrous, slender shrub to c. 2 m high. Branchlets and leaves viscid. Capitula 11-23 mm diam., terminal, solitary; peduncles to 1 cm long; involucre campanulate, 5-6 mm long; bracts 3-4-seriate, graduating, glabrous, pale but green-tipped, slightly resinous. Ray florets 5-9, white (rarely mauve), ligules 4-6 mm long; disc florets 4-14, mauve or pink. The taxon flowers from February to May (VicFlora 2016).

Generation Length

The generation length of *Olearia passerinoides* subsp. *passerinoides* is estimated to be 25 to 35 years. The taxon recruits sporadically in response to exceptional weather conditions, with an additional recruitment pulse following rare fire events. While its habitat can experience fire, the taxon does not rely on fire as the principal cue for germination of seed in the soil-stored seedbank. Generation time is therefore largely influenced by longevity.

Distribution

The taxon is restricted to north-west Victoria, with historic records towards Little Desert. It also occurs in Western Australia, South Australia, and New South Wales (VicFlora 2016). A record from Bendigo (Jobson 3686) has been redetermined to be *O. teretifolia*.

Habitat

The taxon occurs on mallee woodlands on sandy rises (VicFlora 2016).

Threats

Subpopulations and habitat are considered at risk from increasingly dry conditions from declining rainfall, and the consequent increase in severity and intensity of bushfires.

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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 style="text-align: center;"><i>based on any of the following:</i></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:

Ineligible under Criterion A

The past population reduction does not meet the threshold for eligibility under criterion A2, and the future population reduction does not meet the threshold for eligibility under criterion A3.

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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 Vulnerable

The Area of Occupancy (AoO) across the taxon's range is estimated to be 346 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the Victorian Biodiversity Atlas.

It is estimated to have 9 locations, as there is no single threatening event or suite of threats that can rapidly affect all individuals of the taxon present. It has a continuing decline in (iii) and (v) above as a result of disturbance regimes and the prediction of extreme weather.

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				

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Evidence:

Ineligible under Criterion C

It is inferred that there are 5,000 to 10,000 mature individuals, but the qualifier is too weak. This number is based on the inference that each occurrence has about 100 plants, and there are approximately 100 records. It is more likely that some are far fewer, and others are that are possibly several hundred plants.

Criterion D - Very small or restricted population [Ⓜ]			
[Ⓜ]	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

It is inferred that there are 5,000 to 10,000 mature individuals which exceeds the threshold for criterion D.

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 (2016). Flora of Victoria, Royal Botanic Gardens Victoria: *Olearia passerinoides* subsp. *passerinoides*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/4a1c6d38-4b3a-414b-93d6-2cd1377fdffc>