



Olearia picridifolia Rasp Daisy-bush

Taxonomy

Olearia picridifolia (F. Muell.) Benth.

Current conservation status

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

Proposed conservation status

Endangered in Victoria

Criteria A2ce+4ce; B2ab(i,ii,iii,iv,v); C2a(i)

Species Information

Description and Life History

The taxon is a low, spreading shrub to c. 0.5 m high; branchlets and leaves lightly to rather densely strigose-hairy. Leaves alternate, subsessile, narrowly obovate or narrowly elliptic, 10-65 mm long; 1-9 mm wide, concolorous, green or grey-green. Capitula 20-25 mm diam., axillary and/or terminal, solitary or in few-flowered corymbs; peduncles bracteate, mostly 15-85 mm long; involucre c. hemispherical, 5.5-8 mm long; bracts 3-4-seriate, subequal, green, pilose. Ray florets c. 20-30, blue, mauve or white, ligules 12-13 mm long; disc florets c. 40-80, yellow. Cypselas narrowly obovoid, 2.5-3.5 mm long, 6-10-ribbed, glabrous; pappus pale, 4-5 mm long. The taxon flowers from August to November (VicFlora 2017).

It has been reported as requiring fire for regeneration in South Australia (SA Seedbank 2018).

Generation Length

The generation length of *Olearia picridifolia* is estimated to be 25 to 40 years. The taxon recruits sporadically in response to exceptional weather conditions with an additional recruitment pulse following rare fire events. The taxon's habitat can experience fire, but 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 (between 25 and 40 years).

It is suspected that seeds survive in the seedbank in sandier habitats, where seed tends to become buried more easily by mobile sand, contributing to a larger and more persistent seedbank.

Distribution

In Victoria, the taxon is restricted to the north-west in the Serviceton, Lake Albacutya, and Murrayville areas. It also occurs in Western Australia and South Australia (VicFlora 2017).

Habitat

The taxon occurs in low dune-mallee communities, swampy depressions with *Melaleuca*, and sandhills with Mallee eucalypts (VicFlora 2017).

Threats

The taxon is threatened by grazing by native and introduced animals, including goats and rabbits. Climatic drying is likely to impact its survival and recruitment, and past land clearing is likely to have had major impacts on the plants. In addition, changes to fire frequency may reduce regeneration (SA Seedbank 2018).

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> <p>(a) direct observation [except A3]</p> <p>(b) an index of abundance appropriate to the taxon</p> <p>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</p> <p>(d) actual or potential levels of exploitation</p> <p>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</p>			

Evidence:

Eligible under Criterion A2 as Endangered

The population reduction over the past 75 to 120 years is estimated to be 50%, based on (c) and (e) above.

Past decline is based on land clearing estimates, with around 50% of the habitat lost to land clearing.

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

Eligible under Criterion A3 as Vulnerable

The population reduction over the next 75 to 100 years is projected to be 30 to 35%, based on (c) and (e) above.

Future decline is based on the effects of climatic drying, along with grazing pressure from reduced native vegetation and introduced animals.

Eligible under Criterion A4 as Endangered

The population reduction over any 75 to 120 year period, including both past and future (up to 100 years in the future), is estimated to be 30 to 50%, based on (c) and (e) above. The causes of reduction may not have ceased, be understood or be reversible.

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 B1 as Vulnerable

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 18 km², based accepted, post-1970 records in the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented considering its limited dispersal ability, the barriers to dispersal, and lack of habitat separating the subpopulations.

It is estimated to have 3 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. The habitat is now greatly reduced, fragmented, in poor condition due to weeds and introduced animals, and it is subject to extreme weather conditions.

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 18 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA.

As above, the taxon is severely fragmented, has 3 locations, and has a continuing decline in (i), (ii), (iii), (iv) and (v) above.

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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:

Eligible under Criterion C2 as Endangered

It is estimated that there are 250 to 400 mature individuals. All recent records indicate that there are small plant numbers in populations, with 'only a few plants seen' (MEL 559431), and VBA records give cover abundance as '+'. There are only 4 recent records, although there are likely to be more, and 5 extant populations, each with 50 plants. Therefore, 250 plants is offered as a minimum.

The number of mature individuals is estimated to continue to decline based on the current and projected impact of the identified threats, and the number of mature individuals in each subpopulation is less than 250.

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:

Eligible under criterion D as Vulnerable

It is estimated that there are 250 to 400 individuals, and the taxon is estimated to be very restricted.



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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.

SA Seedbank (2018). Seeds of South Australia: *Olearia picridifolia*. Retrieved from: <https://spapps.environment.sa.gov.au/SeedsOfSA/speciesinformation.html?rid=3117>

VicFlora (2017). Flora of Victoria, Royal Botanic Gardens Victoria: *Olearia picridifolia*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/41b725f5-9bfa-44b4-bc8c-2bef916bb0fb>