



## *Olearia suffruticosa* Clustered Daisy-bush

### Taxonomy

*Olearia suffruticosa* D.A. Cooke

### 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 B1ab(iii,v)+2ab(iii,v); C1

### Species Information

#### Description and Life History

The taxon is a glabrous, slightly resinous subshrub to 70 cm high, many-branched from base (probably dying back annually). Leaves alternate, sessile, subappressed to stems, linear, 3-14(-24) mm long, 0.5-1 mm wide; upper surface channelled; lower surface convex, obscurely glandular. Capitula 14-20 mm diam., solitary and terminal on fine upper branches, forming a loose corymb or panicle; involucre c. hemispherical, c. 3 mm long; bracts 2-3-seriate, graduating, glandular, glabrous except for short cilia at the (often purplish) apex. Ray florets 12-20, white or pink, ligules 7-8 mm long; disc florets 16-28, yellow or pink. Cypsela terete, obscurely ribbed, c. 1 mm long, sericeous; pappus bristles c. 2 mm long, pink. The taxon flowers from February to May (VicFlora 2017).

#### Generation Length

The generation length of *Olearia suffruticosa* is estimated to be 10 to 30 years. The taxon is a low suckering shrub that is able to resprout. It is assumed that it is an obligate seed regenerator in its habitat where most taxa include resprouting ability as well as seed recruitment. It is inferred that the taxon has low seed banking in the soil, with a relatively short seed viability, around 5-10 years maximum.

#### Distribution

The taxon is restricted in Victoria to lowland swamps near Glenisla, Casterton, and Dergholm. The taxon also occurs in South Australia and New South Wales (VicFlora 2017).

#### Habitat

The taxon occurs in damp depressions, often in *Melaleuca* shrublands (VicFlora, 2017).

#### Threats

The taxon is a habitat specialist at risk from climatic drying of wet heath habitat, which is also threatened by increased fire frequency. It is potentially most at risk from repeat fire at short intervals.

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

## Evidence:

### Eligible under Criterion A2 as Vulnerable

The population reduction over the past 30 to 90 years is inferred to be 30 to 40%, based on (c) above.

The taxon is apparently very specialised in relation to habitat and it is naturally quite rare. However, there is some indication of potential habitat loss near Dergholm and Glenisla due to land clearing.

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

### Eligible under Criterion A3 as Vulnerable

The population reduction over the next 30 to 90 years is projected to be 25 to 35%, based on (c) above.

Future decline is based on the potential of drying of the very specialised habitat and possible increases in fire frequency that are likely to decrease the quality of the habitat, along with reproductive output.

### Eligible under Criterion A4 as Vulnerable

The population reduction over any 30 to 90 year period, including both past and future, is inferred to be 30 to 40%, based on (c) above. The causes of reduction may not have ceased, be understood or be reversible.

# *Olearia suffruticosa* Clustered Daisy-bush

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 <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
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 Endangered

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 2,406 km<sup>2</sup>, based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented, as plants are restricted to a few isolated populations and there is a very low probability of recolonisation if a population becomes extinct.

It is estimated to have 1 location, and has a continuing decline in (iii) and (v) above based on the current and projected impact of the identified threats, including increased drought, drying, and potential burning of habitat.

### Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 36 km<sup>2</sup>, based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA.

As above, the taxon is severely fragmented, has 1 location, and has a continuing decline in (iii) and (v) above.

# Olearia suffruticosa

## Clustered Daisy-bush

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 C1 as Endangered

It is estimated that there are 1,000 to 1,500 mature individuals, and there is estimated to be a continuing decline of 15 to 30% within two generations.

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 <sup>2</sup> or number of locations ≤ 5

### Evidence:

#### Eligible under criterion D as Vulnerable

It is estimated that there are 1,000 to 1,500 individuals, and the taxon is estimated to be very restricted.

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.



*Olearia suffruticosa*  
Clustered Daisy-bush

VicFlora (2017). Flora of Victoria, Royal Botanic Gardens Victoria: *Olearia suffruticosa*. Retrieved from:  
<https://vicflora.rbg.vic.gov.au/flora/taxon/6a60d7fc-62a6-4814-bc78-7bf99dcbe091>