



Pappochroma nitidum Sticky Fleabane

Taxonomy

Pappochroma nitidum (S.J. Forbes) G.L. Nesom

This is similar to, and possibly confused with, *P. bellidioides*.

Synonym: *Erigeron nitidus*.

Current conservation status

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

Proposed conservation status

Vulnerable in Victoria

Criteria A2ce+4ce

Species Information

Description and Life History

The taxon is a shortly rhizomatous herb, resembling *P. bellidioides* in most respects, but leaves are viscid, glabrous or with very few, short, non-glandular hairs mainly confined to margins and nerves. Involucral bracts viscid, ciliate toward apex but otherwise glabrous or with very few non-glandular hairs along midrib. Cypselas like those of *P. bellidioides*. The taxon flowers from December to February (VicFlora 2019).

Generation Length

The generation length of *Pappochroma nitidum* is estimated to be 10 to 40 years. The taxon is a perennial herb with unknown generation length. It is known to respond well to disturbance, including fire, but recruitment is probably not explicitly linked to fire events. Plants have been growing at the Royal Botanic Gardens Victoria for 4 years and are still yet to flower. Therefore, in nursery conditions, the generation time will be much longer than 5 years.

Distribution

In Victoria, the taxon is largely confined to the Bogong High Plains, and was also collected from Mt Hotham, the Dargo High Plains, and the Snowy Range. The taxon also occurs in New South Wales and Australian Capital Territory (VicFlora 2019).

Habitat

The taxon is an occasional component of grassland and open heathland communities (VicFlora 2019).

Threats

Threats to the taxon are unclear. It has been observed to respond well to fire, with recruitment seen after 2003 fires. Likewise, the taxon is probably likely to cope with continued drying because it is not reliant on permeant water or wetlands for survival, and instead it occurs in grassland and open heaths, sometimes on exposed rocky sites. Grazing by feral animals may see a reduction in plants, but this is possibly only a minor threat.

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>	<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>
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Evidence:

Eligible under Criterion A2 as Vulnerable

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

Past decline is based on the likely impacts of cattle grazing in alpine areas, in particular the Dargo and Bogong High Plains.

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

Eligible under Criterion A4 as Vulnerable

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

It is unclear if threats are likely to result in significant future decline in population size or any other demographic parameter.

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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:

Ineligible under Criterion B

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 1,605 km² and the Area of Occupancy (AoO) is estimated to be 216 km², but other thresholds under this criterion have not been met.

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 <u>C1</u> or <u>C2</u>				
<u>C1</u>	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)
<u>C2</u>	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

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It is inferred that there are 4,000 to 6,000 mature individuals, but other thresholds under this criterion have not been met.

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 4,000 to 6,000 mature individuals, which exceeds the thresholds 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 (2019). Flora of Victoria, Royal Botanic Gardens Victoria: *Pappochroma nitidum*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/5ac1d348-c0c4-40e4-889b-cf11fabcb15b>