Threatened Species Assessment

Platysace ericoides
Heath Platysace

Taxonomy

Platysace ericoides (Sieber ex DC.) C. Norman

This is a variable taxon in need of revision. Victorian plants differ from those of New South Wales and Queensland by having more tuberculate mericarps. Some specimens appear intermediate between *P. ericoides* or *P. lanceolata* (e.g. around Marlo, Stratford, Buchan and Bairnsdale) and comprehensive collections are needed (VicFlora 2019).

Current conservation status

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

Proposed conservation status

Endangered in Victoria

Criterion B2ab(iii,v)

Species Information

Description and Life History

The taxon is a weakly erect, diffuse subshrub to 50 cm high; stems scabrous to hispid. Leaves linear to narrowly oblong or narrowly elliptic, 5-30 mm long, 0.5-2.5 mm wide, acute, shortly mucronate, hispid, base attenuate; petiole to 0.5 mm long. Umbels 5-22 mm diam.; peduncle 5-15(-50) mm long; rays 3-10, 1.5-2.5(-11) mm long; bracts narrow-elliptic, to 2.5 mm long; bracteoles linear, to 1.5 mm long; umbellules 2-8(-15)-flowered. Petals white or cream. Fruit c. 2 mm long and wide, furrowed at rib, slightly tuberculate between ribs, smooth at mericarp junction. Flowers August-December (VicFlora 2021).

Generation Length

The generation length of *Platysace ericoides* is estimated to be 10 to 20 years. No information on its longevity was located, so this estimation is based on the taxon presuming to reach reproductive maturity within a couple of years, and being capable of re-sprouting following fire. It is a diffuse sub-shrub of drier forests. A longevity of 15-25 years is suspected in the absence of better information.

Distribution

In Victoria the taxon is confined to the coastal plain and foothills mostly between Moe and Orbost (VicFlora 2021).

Habitat

The taxon is usually found in dry forest, often with shallow, rocky soils (VicFlora 2021).

Threats

Threats to the taxon may include climate change (decreased rainfall, failed recruitment/reproduction due to drought conditions), weed invasion, structural changes to the vegetation due to increased fire frequency, and browsing by feral herbivores (notably deer) and possibly macropods. The subshrub *P. stephensonii* is included by the NSW Scientific Committee (2019) in a list of populations of taxa which are not threatened, but could become threatened by grazing and environmental degradation caused by feral deer.

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%

A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.

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.

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*]

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.

based on any of the following:

(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

There is insufficient evidence to determine whether there has been or will be a reduction in population sufficient to meet any threshold for Criterion A.

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 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
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 11,008 km², based on accepted, post-1970 records in the Victorian Biodiversity Atlas (VBA).

The taxon is inferred to be severely fragmented as it is known from a range of widely dispersed localities.

It is suspected to have 2 locations, and has a continuing decline in (iii) and (v) above based on the impacts of the identified threats, such as climate change, weed invasion, increased fire frequency, and browsing by feral herbivores.

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 236 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 2 locations, and has a continuing decline in (iii) and (v) above.

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 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 km2 or number of locations ≤·5

Evidence:

Eligible under criterion D2 as Vulnerable

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. Retrieved from: https://www.environment.vic.gov.au/__data/assets/pdf_file/0021/50448/Advisory-List-of-Rare-or-Threatened-Plants-in-Victoria-2014.pdf

NSW Scientific Committee (2019). *Herbivory and environmental degradation caused by feral deer - key threatening process listing.* NSW Scientific Committee - final determination.

VicFlora (2021). Flora of Victoria, Royal Botanic Gardens Victoria: *Platysace ericoides*. Retrieved from: https://vicflora.rbg.vic.gov.au/flora/taxon/1e625976-3791-4e34-9c5a-fac6bfdc2f6f