

Threatened Species Assessment

Pomaderris andromedifolia subsp. *andromedifolia* Andromeda Pomaderris

Taxonomy

Pomaderris andromedifolia subsp. *andromedifolia* A. Cunn.

The taxon is one of the 2 subspecies of *P. andromedifolia*, the other being subsp. *confusa*. Both have been recorded from Victoria.

Current conservation status

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

Proposed conservation status

Endangered in Victoria

Criteria B1ab(v)+2ab(v); C2a(i)

Species Information

Description and Life History

The taxon is a shrub 1–3 m high; branchlets rusty-pubescent. Leaves narrow-ovate, ovate, narrow-elliptic or elliptic, 8–45 mm long, 4–15 mm wide, acute, upper surface glabrous, lower surface with moderately dense to dense, straight, appressed or subappressed simple hairs, often with a silky sheen, secondary veins apparent; stipules 2–4 mm long, deciduous, but commonly persisting for several nodes below growing point. Inflorescences terminal, compact, 1–4 cm long, 1–3 cm wide; bracts deciduous. Flowers bright yellow, externally with moderately dense simple hairs; pedicels 1.5–3 mm long; hypanthium 1–1.5 mm long; sepals 2–2.5 mm long, deciduous; petals spatulate, 1.5–2.5 mm long; ovary virtually inferior, summit simple-pubescent, style branched in middle third. Operculum membranous, c. half as long as mericarp. Flowers September–November (VicFlora 2017).

The taxon is a perennial shrub, and there is probably some fire pulsed recruitment and episodic recruitment in favourable seasons, with fires relatively rare in rocky microsites. The *Pomaderris* genus is an obligate seeder.

Generation Length

The generation length of *Pomaderris andromedifolia* subsp. *andromedifolia* is suspected to be 8 to 20 years, however there is insufficient field observation to support an estimate of generation length with any confidence.

Distribution

The taxon is known to occur near the Snowy River in eastern Victoria, in the eastern part of New South Wales, and in south-eastern Queensland.

Habitat

The taxon is known to inhabit mostly dry, rocky open woodland, open forest, or shrubland.



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Threats

A possible threat to the taxon is a low to moderate risk of increased fires due to climate change, however sites are not particularly fire-prone owing to their rocky nature. Virtually all known sites are relatively remote and included in national parks.

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 B1 as Endangered

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 3,257 km², based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented as there is no capacity for long-distance dispersal, and therefore no realistic capacity for recolonisation in the event of local extinction.

It is inferred to have 1 location, and has a continuing decline in (v) above as a result of inappropriate fire regimes. The frequency and intensity of bushfires is likely to increase in a warming and drying climate.

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 32 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 1 location, and has a continuing decline in (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 200 to 1,000 mature individuals, which is based on monitoring of the known populations.

The number of mature individuals is projected to continue to decline due to the risk of increased fires, 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: AaO: < 20 km ² or number of locations ≤ 5

Evidence:

Eligible under Criterion D as Endangered

It is estimated that there are 200 to 1,000 mature individuals.



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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.

VicFlora (2017). Flora of Victoria, Royal Botanic Gardens Victoria: *Pomaderris andromedifolia* subsp. *andromedifolia*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/47f536ef-100e-40e1-a27c-a542aed9ac68>