

Pomaderris apetala subsp. *apetala* Grampians Pomaderris

Taxonomy

Pomaderris apetala subsp. *apetala* Labill.

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(i,iii,v)+2ab(i,iii,v)

Species Information

Description and Life History

Shrub or tree 2-15 m high; branchlets greyish (rarely rusty) stellate-pubescent. Leaves narrow-ovate or ovate, mostly 40-110 mm long, 20-30 mm wide, acute (rarely obtuse), finally glabrous above, or occasionally sparsely stellate-pubescent, smooth or wrinkled, secondary (and usually tertiary) veins apparent, lower surface greyish with dense sessile stellate hairs; margins minutely serrate; stipules 4-8 mm long, deciduous. Inflorescence paniculate, c. pyramidal, 5-25 cm long, 3-13 cm wide; bracts deciduous. Flowers cream or greenish, externally densely stellate-pubescent; pedicels 1-5 mm long; hypanthium c. 1 mm long; sepals 1.5-2 mm long, persistent; petals absent; ovary virtually inferior, the summit stellate-pubescent, style branched in middle third. Operculum membranous, occupying most of inner face, or indistinct and mericarp dehiscent via a ventral or marginal slit. Flowers Oct.-Nov.

Generation Length

The generation length of *Pomaderris apetala* subsp. *apetala* is inferred to be 20 to 40 years. There is insufficient field observation to support an estimate of generation length with any confidence. However, it is suspected that the generation length for the genus is between 10 and 50 years.

Distribution

The taxon occurs in the Grampians in Victoria, and in Tasmania, where it is abundant.

Habitat

The taxon is common in moist to wet forests of the Grampians, habitats that are occupied elsewhere in the state by *P. aspera* (which is apparently absent from the Grampians).

Threats

The taxon's habitat has a history of forestry operations. This threat no longer applies as nearly all of the likely habitat occurs within the CAR reserve system, including parks and reserves and special protection zones.

It is threatened by increases in numbers of browsing herbivores (e.g. wallabies, deer), by climate change-induced drying and warming, and possibility of increased fire frequency and intensity.

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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:

Eligible under Criterion A3 as Vulnerable

The population reduction over the next 60 to 100 years is suspected to be 5 to 50% (midpoint 30%), based on (c) above.

This is based on projected climate change (increased temperatures, severe droughts and altered fire regimes) and associated impacts on populations and habitat.

Eligible under Criterion A4 as Vulnerable

The population reduction over any 60 to 120 year period, including both past and future (up to 100 years in the future), is estimated to be 5 to 50% (midpoint 30%), based on (c) above.

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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 954 km², based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA).

It is estimated to have five locations, as it occurs in widely separate part of the Grampians, and although the threats are thr same for each subpopulation, they are unlikely to occur at the same time.

It has a continuing decline in (i), (iii) and (v) above, due to the identified threats.

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 80 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA.

As above, it has five locations and a continuing decline in (i), (iii) 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:

Ineligible under Criterion C

It is suspected that there are 500 to 5,000 mature individuals, but other thresholds under this criterion have not been met.

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 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)



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VicFlora (2019). Flora of Victoria, Royal Botanic Gardens Victoria: *Pomaderris apetala*. Retrieved from:
<https://vicflora.rbg.vic.gov.au/flora/taxon/71feb487-d9c2-46a3-b90d-a180a17d5889>