

Pomaderris pauciflora Mountain Pomaderris

Taxonomy

Pomaderris pauciflora N.A. Wakef.

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 A3ce+4ce

Species Information

Description and Life History

The taxon is a shrub 1-3 m high; branchlets with dense stellate hairs (sometimes with scattered simple hairs). Leaves narrow-elliptic to obovate, 5-20(-30) mm long, 2-8(-15) mm wide, obtuse, margins recurved, upper surface hispid with simple hairs, secondary veins strongly impressed, lower surface greyish with pale stellate hairs and scattered, longer, rusty, simple or stellate hairs; stipules 2-4 mm long, deciduous. Cymes of inflorescences not or barely exceeding subtending leaves; bracts deciduous or weakly persistent. Flowers cream, externally whitish stellate-pubescent with scattered rusty simple hairs; pedicels 0.5-2.5 mm long; hypanthium 0.7-1 mm long; sepals 1.2-2 mm long, deciduous; petals absent; disc absent; ovary virtually inferior, summit simple-pubescent, style branched in middle third. Operculum membranous, c. three-quarters as long as mericarp. Flowers October-November (VicFlora 2018).

Generation Length

The generation length of *Pomaderris pauciflora* is estimated to be 15 to 40 years. This is based on the longevity of closely related taxa (e.g., *P. paniculosa* subsp. *paniculosa* and *P. oraria*), and relatively low fire frequency, in the order of 50 years, in the vegetation in which it occurs. Its longevity is plausibly 50 years or more and plants are expected to become reproductive after about 4 years.

Distribution

The taxon occurs in East Gippsland, from Brumby Point east to the New South Wales border near Genoa, at Boundary Creek near Wulgulmerang, Tubbut area, upper Genoa River, and Wangarabell. It also occurs in New South Wales.

Habitat

The taxon generally occurs on shallow soils, on rocky sites from ca. 1,300 m (Brumby Pt) to ca. 100 m (Wangarabell). It usually occurs near watercourses (not necessarily riparian) or otherwise wetter sites (e.g., soaks) and generally not in particularly fire-prone sites.

Threats

The taxon is threatened by the drying of sites and has no capacity to recolonise riverbanks nearer new, lower water levels. It is also threatened from browsing by deer which was noted near Tubbut as a severe impact. Habitat loss is

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not considered a particular threat as all known sites and habitats are in areas unattractive to agriculture/silviculture. It is possible that there may be minor losses along Deddick-Bonang Rd.

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> <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 Endangered

The population reduction over the next 45 to 100 years is suspected to be 40 to 50%, based on (c) and (e) above.

It is threatened by the drying of sites, its incapacity to migrate to wetter sites, as well as continued browsing and seedbank depletion by Sambar Deer (*Rusa unicolor*).

Eligible under Criterion A4 as Endangered

The population reduction over any 45 to 120 year period, including both past and future (up to 100 years in the future), is estimated to be 0 to 50%, based on (c) and (e) above. The causes of reduction may not have ceased, be understood or be reversible.

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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 1,200 km² and the Area of Occupancy (AoO) is estimated to be 36 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

It is estimated that there are 500 to 2,000 individuals, but other thresholds have not been met.

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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:

Eligible under criterion D as Vulnerable

It is estimated that there are 500 to 2,000 individuals, based on a number of known sites (assume maybe 50% of actual sites - up to 20 subpopulations) and typical subpopulation size (around 30, up to c. 100 plants per subpopulation).

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
- VicFlora (2018). Flora of Victoria, Royal Botanic Gardens Victoria: *Pomaderris pauciflora*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/364cdbf3-366e-4801-bea8-685ddeda4a1d>