



## *Coprosma moorei* Turquoise Coprosma

### Taxonomy

*Coprosma moorei* F. Muell. ex Rodway

### 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(i,ii,iii,iv,v)

### Species Information

#### Description and Life History

Prostrate subshrub, glabrous; stems filiform, 5-15 cm long, much-branched at distal ends, rooting at basal nodes. Leaves ovate to lanceolate, mostly 3-5 mm long and 1-2.5 mm wide, slightly concave, sharply acute, surfaces glossy and glabrous, margins flat; petiole to c. 1 mm long and fused to the one opposite; stipules not or barely differentiated from the petiolar sheath. Flowers sessile, bisexual, solitary, terminal on short branchlets; calyx 1-1.5 mm long, lobes triangular; corolla campanulate, 2-3 mm long, lobes c. as long as tube; style 2-branched. Drupe globose, 4-6 mm diam., blue. Flowers December-January (VicFlora no date).

#### Generation Length

The generation length of *Coprosma moorei* is inferred to be 30 to 50 years. DELWP's vital attribute database suggests that *C. moorei* regenerates after fire by seeds, but not immediately after, a trait consistent with the vegetation type being rarely burnt. It then resprouts from protected buds. It requires 2 years to reach reproductive maturity, lives for 10-50 years as medium-lived perennial, and has seeds that last 50+ years in the soil.

Given fire occurred historically perhaps once or twice a century, most plants are likely to reach old age between recruitment events. Therefore, average age is likely to be at the older end of the scale, perhaps around 40 years.

#### Distribution

In Victoria, the taxon is located on the Baw Baw Plateau, Lake Mountain, Snowy Range, Mount Buffalo and Bogong High Plains, near Mt Mackay (Jeanes 1999).

#### Habitat

In Victoria, the taxon is confined to high altitude, moist peaty heaths, and *Sphagnum* bogs (Jeanes 1999). It is located in the Victorian Alps bioregion (VicFlora no date).

#### Threats

Subpopulations and habitat of the taxon are considered at risk from disturbance, weed invasion, and increasingly dry conditions from declining rainfall and the consequent increase in severity and intensity of bushfires. There is no evidence that it is preferentially grazed by cattle or hares, and in Tasmania, in a drier habitat, it remained at a reasonably high frequency in grazed sites (Kirkpatrick and Bridle 1999). However, its wet habitat in Victoria makes

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it vulnerable to loss of habitat through trampling by feral horses on the Bogong High Plains, and deer in all locations. Cattle no longer graze within its range, and the increasing impacts of feral horses and deer across some of its range might be countered to a slight extent in some areas by recovery from cattle grazing, but no data has been found to inform the trends.

### 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"> <li>(a) direct observation [except A3]</li> <li>(b) an index of abundance appropriate to the taxon</li> <li>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</li> <li>(d) actual or potential levels of exploitation</li> <li>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</li> </ul>			

### Evidence:

#### Ineligible under Criterion A

The population reduction for this taxon is below the threshold for eligibility under criterion A.

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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 <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
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 7,658 km<sup>2</sup>, based on accepted, post-1970 records in the Victorian Biodiversity Atlas (VBA).

The taxon is estimated to be severely fragmented based on dispersal ability of the taxon, the barriers, and the lack of habitat separating them. This is of most concern for small outlying subpopulations that are already marginal with respect to habitat. If these subpopulations were lost, there would be little or no opportunity to recolonise.

It is estimated to have 5 locations, and has a continuing decline in (i), (ii), (iii), (iv) and (v) above, based on the impacts of disturbance, weed invasion and increasingly dry conditions from declining rainfall and a consequent increase in the severity and intensity of bushfires. Additionally, trampling and/or grazing by feral horses and deer are also likely to impact on populations, particularly, those where the habitat is already marginal are likely to be impacted earliest.

#### Eligible under Criterion B2 as Endangered

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

As above, the taxon is severely fragmented, has 5 locations, and has a continuing decline in (i), (ii), (iii), (iv) 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 inferred that there are 10,000 to 20,000 mature individuals, which exceeds the thresholds for criterion C.

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 <sup>2</sup> 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.

Jeanes, J.A. (1999). Rubiaceae. In N.G. Walsh and T.J. Entwisle (Eds.), *Flora of Victoria Vol. 4, Cornaceae to Asteraceae*. Melbourne: Inkata Press.



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Kirkpatrick, J.B., and Bridle, K.L. (1999). Comparative Effects of Stock and Wild Vertebrate Herbivore Grazing on Treeless Subalpine Vegetation, Eastern Central Plateau, Tasmania. *Australian Journal of Botany* 47, 817-834.

VicFlora (no date). Flora of Victoria, Royal Botanic Gardens Victoria: *Coprosma moorei*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/8c576eae-9620-4cc8-b13f-8f2df43e3175>