

## *Trichanthodium skirrophorum* Woolly Yellow-heads

### Taxonomy

*Trichanthodium skirrophorum* Sond. & F. Muell.

### Current conservation status

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

### Proposed conservation status

Vulnerable in Victoria

Criterion D2

### Species Information

#### Description and Life History

The taxon is an annual herb 3-35 cm high; branches densely lanate. Leaves lanceolate or linear, 5-30 mm long, 0.5-1.2 mm wide, tomentose, grey-green. Compound heads broadly depressed-ovoid to obloid, 4-12 mm long, 5-15 mm diam., subtended by a general involucre of outer leaf-like bracts and inner hyaline bracts, the longest to c. one-third as long as head but inconspicuous in mature heads; general receptacle transversely ellipsoid, bristly. Capitula 25-200 per compound head; involucral bracts 5-6, outer ones densely hairy at apex, inner 1 or 2 conduplicate, midrib indistinct, glabrous or sparsely hairy at apex. Cypselas 1-1.3 mm long; pappus cup-like, 0.6-1.2 mm long. The taxon flowers from September to November (VicFlora 2019).

#### Generation Length

The generation length of *Trichanthodium skirrophorum* is estimated to be 1 to 10 years. This is based on the annual habit of the taxon and uncertainty as to whether the taxon recruits reliably each season or only in better seasons.

#### Distribution

In Victoria, the taxon is confined to the far north-west. It also occurs in Western Australia, Northern Territory, South Australia, Queensland, and New South Wales (VicFlora 2019).

#### Habitat

The taxon occurs frequently in chenopod shrubland in saline and gypseous soils (VicFlora 2019).

#### Threats

Whilst the outlying occurrences at Lake Tyrrell have undoubtedly suffered significant historic decline in response to habitat loss, browsing, and cropping, most occurrences are on public land, including reserves, for which current or future threats are difficult to identify with confidence. It is likely that several stands on the Raak Plain have been eliminated historically through gypsum mining.

# Trichanthodium skirrophorum

## Woolly Yellow-heads

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

### 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.

# Trichanthodium skirrophorum

## Woolly Yellow-heads

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:

#### Ineligible under Criterion B

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 6,650 km<sup>2</sup> and the Area of Occupancy (AoO) is estimated to be 60 km<sup>2</sup>, 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>	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 as Data Deficient

There is insufficient evidence to determine the number of mature individuals.

# Trichanthodium skirrophorum

## Woolly Yellow-heads

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 <sup>2</sup> or number of locations < 5

### Evidence:

#### Eligible under Criterion D2 as Vulnerable

The taxon is estimated to be very restricted. The taxon has a restricted distribution, occurring in three locations, such that this restriction makes the taxon capable of becoming Critically Endangered or Extinct within a time frame of one or two generations. This is in response to the impact of the identified long-term threats, notably habitat loss, browsing, and cropping.

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

VicFlora (2019). Flora of Victoria, Royal Botanic Gardens Victoria: *Trichanthodium skirrophorum*. Retrieved from: <https://vicflora.rbg.vic.gov.au/flora/taxon/9f25dfbd-f682-46f1-a9d3-669bac24a9fe>