

Summary: *Ceratocephala pungens*

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Introduction

Ceratocephala pungens is a critically threatened plant species, now on the brink of extinction in Otago, with its main stronghold in Central Otago and smaller populations in the Mackenzie Basin.

This species presents significant challenges for conservation due to:

- High inter-annual variability in population size.
- Cryptic nature, being very seasonal and only visible for only 1-2 months each year.
- Likely presence on private and leasehold land, but poorly mapped and low survey coverage.
- Lack of comprehensive monitoring and historical data.
- Recent habitat loss and disappearance of several populations.
- Scattered, low-density populations on non-public conservation land, under constant risk.
- No ex-situ holdings or expertise.

Ceratocephala pungens is arguably the most difficult native plant in Otago to understand in terms of distribution and population dynamics. Management needs remain unclear and require expert input. Central Otago is the key refuge for the species, while upper Waitaki populations are less secure and poorly documented.

Critical needs include:

- Consistent monitoring of known populations.
- Collation of historical and current data.
- Comprehensive mapping of locations.
- Protection from habitat loss and weed invasion.

Current Census (November 2025)

Wild populations: Extremely difficult to assess. Estimated at 250–500 plants in an average year, but numbers can reach thousands in good years. These figures are unreliable; several years of consistent census are needed for confidence. There is a considerable amount of previously known and potential habitat that has not been recently (or ever) surveyed, although this is reducing rapidly. Populations fluctuate widely year to year at the same site depending on conditions.

Ex-situ populations: None.

Additional Notes

Several sites in the Mackenzie Basin (Twizel) also support the species. The Grampians site is likely the largest (thousands of plants about 20 years ago) but is now reduced to a few hundred, based on a partial count in 2024. Other sites had small populations and have not been checked recently.

Table of Known Populations *

Location	Type	Number	Notes
Bannockburn Sluicings Historic Reserve	Wild	est. several hundred plants, up to several thousand in good year.	Best known population. Observed - Spring 2020, 18 sites with many 50-100 plants. Spring 2023, resurvey of all 18 sites, 5 no plants, 3 sites < 5 plants, new site found 50-100 plants. Spring 2024, good numbers, several thousand plants, new sites found. Spring 2025, checked, good numbers but not available yet.
Bendigo, west of old Welshtown	Wild	20+? (used to be several hundred+)	Observed Spring early to mid 2000's, 400m ² area. Bioweb records on Public Conservation Land (PCL) searched 2024, none found but approx. 20 found on Bendigo covenant near PCL.
Rocky Point, Bendigo	Wild	c. 150 plants	Known from Wildlands survey December 2024, publicly available report (RMA).
Matangi Station	Wild	Several plants?	Crown Pastoral Lease - Observed Spring 2022; 3 observed Spring 2023. 2024 1 plant.
Springvale Scientific Reserve	Wild	est. 20-50 plants	Observed Spring 2023 & 2025.
Chapman Road Scientific Reserve	Wild	Several plants?	Observed Spring 2022. Other old known sites checked but none found Spring 2023.
Conroys Road roadside – Road Reserve	Wild	Usually a few plants, 2024 c. 700 plants	Observed Spring 2022. 2024 c. 700 plants.
Cairnmuir Mountains: summit ridge above Lake Dunstan	Wild	10 plants	Observed Spring 2022.
Cluden Station	Wild	Present but unknown	Observed 2023 but non-PCL and data unavailable.
Omeo Gully Track, Blackman Road	Wild	Unknown	Previously known population of < 20 plants, not checked for several (many?) years.
Olrig; adjacent to OCRT	Wild	0 plants	Previous dense and extensive population, most habitat now gone to grass but some remains, checked Spring 2023 twice but none found.
Cairnmuir Mountains: 4WD track just above Lake Dunstan	Wild	0 plants	Previously known population of < 10 plants, not checked for several (many?) years. Checked Spring 2023 but none found.
Blue Butterfly Lane-Tor Hill Drive, Conroys Road, Alexandra	Extinct	0 plants	Private land - Presumed extinct, lost to development.
Flat Top Hill Conservation Area, Alexandra	Extinct	0 plants	Presumed extinct, monitored decline, outcompeted by thyme and rank grass due to DOC herbivore control.

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Kokonga; adjacent to OCRT	Extinct	0 plants	Previous strong population, habitat now gone to grass, checked Spring 2023 twice but none found. Presumed extinct.
Galloway; adjacent to Otago Central Rail Trail (OCRT)	Extinct	0 plants	Previous known population, habitat now gone, checked Spring 2023 twice but none found. Presumed extinct.
Parkburn Quarry, Lowburn	Extinct	Unknown	Previously known population where habitat has been cleared, presumed extinct.

* Based on information presented at Central Otago Threatened Plants Workshop held 19-20 May 2025 and additional information updated November 2025.



Photos – Richard Ewans – 2024, Bannockburn Sluicings Historic Reserve.