Threatened Flora: Stiff Groundsel

Flood recovery population status assessments

Biodiversity Flood Recovery Update July 2024

Key Messages

- Stiff Groundsel (*Senecio behrianus)* is a rhizomatous sub-shrub that can grow up to 1 m tall. It is listed as critically endangered in Victoria and federally as endangered. Fewer than ten populations remain, all in Victoria.
- Eight of nine known populations were relocated. Overall plants were in good condition and likely benefited from the high rainfall and flooding.
- Populations are small and lack recruitment. As such a range of management actions will need to be undertaken to ensure Stiff Groundsel survival.

PROJECT SUMMARY

Eight of nine previously known populations of Stiff Groundsel were re-detected.

Overall plants were in good condition and likely benefited from the increased soil moisture from the flooding event and several years of above average rainfall.

The species is rhizomatous making it difficult to determine exact plant numbers, whether recruitment has occurred and if populations are sustainable. However, the lack of juvenile plants suggests these populations may not be self-sustaining into the future.

A range of management actions will need to be undertaken for Stiff Groundsel across its range to ensure survival.

Project background

In October 2022 heavy rainfall and storms occurred throughout Victoria resulting in large-scale flooding. Flooding resulted in immediate changes to floodplains and waterways, introducing threats to rare plants from increased pest plants and animal impacts, biomass levels and habitat alterations. Thus, actions to mitigate risks to key threatened plants vulnerable to impact from flooding are required for recovery.

The ‘Threatened Flora 2022 Flood Recovery’ project aimed to provide essential data on a selection of State and Federal listed threatened plant species and their critical habitat, impacted by the 2022 flood. This project will enable targeting of appropriate management actions to assist survival and recovery. Monitoring data informs conservation outcomes and provides the much-needed feedback loop for reporting on investments and flood recovery.

Monitoring data is critical to inform management.

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Stiff groundsel

Stiff Groundsel (*Senecio behrianus)* is a rhizomatous erect perennial sub-shrub to 1 m tall, with grey-green leaves and small yellow flowers occurring from March to June (VicFlora 2024; Figure 1). The species is state listed as critically endangered (FFG Act 1988) and federally as endangered (EPBC Act 1999).

The species is poorly understood, but it is known to resprout after disturbances, and many of the plants in a population are connected by woody rhizomes. This makes it difficult to identify individuals.

Stiff Groundsel is endemic to southeastern Australia where it was once widespread on the floodplains of the Murray-Darling River system. The species is presumed extinct in South Australia and New South Wales. Only nine populations remain in Victoria of which four are planted.

Assessments

Stiff Groundsel populations occur in water dependent plant communities and have likely been impacted by the food event. In theory flooding should have a positive impact increasing plant growth and reproduction. However, with so few populations remaining it was important to assess key sites post-flood to determine if populations were still present.

Findings

Nine known sites were assessed for populations of Stiff Groundsel: Gunbower State Forest (four populations) and the Carag Crag area (five populations).

- Plants were found at eight sites.
- Plants could not be relocated at one Gunbower site.
- 225 Stiff Groundsel 'plant patches' were recorded. Most of these plants were live and mature.
- Plants were consistently in fair or good condition.
- Only four sites had plants with flowers and flowering rates were very low (≤ 12 flowers per population). Very few plants within a population were observed flowering.
- No evidence of recruitment was found.

Acknowledgements

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Figure 1: Stiff Groundsel in flower (Credit: Rob Dabal)

Flood impacts

Overall, Stiff Groundsel appears to have benefited from the consecutive years of high rainfall and the flood events. This is evident through the number of healthy plants and their good condition. However, data before the flood event is required to confirm this.

Threats and management

A range of threatening processes are operating across Stiff Groundsel sites. Three main threats are consistently impacting populations: grazing (by both native and introduced herbivores), human disturbances (e.g. impacts of off-road vehicles) and weed invasion.

Monitoring data is crucial

Long-term population and demographic data are critical to obtaining a detailed understanding of the biology and requirements of Stiff Groundsel to inform management actions and conservation status.

Further reading

Moxham, C., Dabal, R., Farmilo, B., Muir, A. and Kenny, S. (2024). Threatened flora 2022 flood recovery: assessment outcomes. Arthur Rylah Institute for Environmental Research. Unpublished Report. Department of Energy, Environment and Climate Action, Heidelberg, Victoria.

For further information contact Rob Dabal (Rob.Dabal@deeca.vic.gov.au)

We acknowledge Victorian Traditional Owners and their Elders past and present as the original custodians of Victoria's land and waters and commit to genuinely partnering with them and Victoria's Aboriginal community to progress their aspirations.

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