

Flora & Fauna Guarantee Action Statement

#12

This Action Statement was first published in 1992 and remains current. This version has been prepared for web publication. It retains the original text of the action statement, although contact information, the distribution map and the illustration may have been updated.

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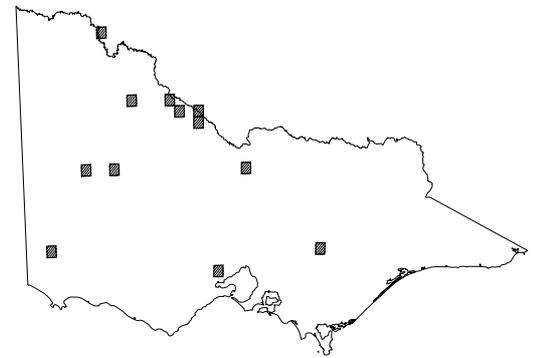
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Stiff Groundsel *Senecio behrianus*



Stiff Groundsel (*Senecio behrianus*)



Distribution in Victoria (DSE 2002)

Description and Distribution

Senecio behrianus (Sonder and F. Muell ex Sonder) is an erect, short, woolly perennial forb or subshrub, usually 15 to 25 cm high. The leaves are alternate, linear, about 25 mm long (the upper ones smaller), entire or with sparse teeth, with the margins rolled under. Flowerheads are yellow, with 6 to 8 mm long 'petals' and a yellow centre, borne in loose clusters at the ends of the stems. Seeds are dark brown, flattened, 1 to 2 mm long, hairless or downy, and crowned with a tuft of numerous feathery bristles. Flowering occurs during most of the year. The Stiff Groundsel is known from only one population, along about 200 m of road reserve and adjacent channel bank on private land near Corop. This site is within a modified Freshwater Marsh dominated by Cumbungi (*Typha* spp) and Lignum (*Muehlenbeckia cunninghamii*). The wetland still retains its seasonal flooding regime. Previous collections indicate that the taxon

was widespread but localised within the Murray-Darling system, except for one occurrence along the Glenelg River in Victoria. The taxonomy of the Stiff Groundsel is quite well documented, but its ecology is not well understood, with the only information coming from vague herbarium references. These descriptions mention 'Murray flats', 'banks of the Murray' and 'swampy soil'.

Conservation Status

Current status

Briggs & Leigh (1988)	Extinct in Australia
Gullan <i>et al.</i> (1990)	Extinct in Victoria

This species is listed on Schedule 2 of the *Flora and Fauna Guarantee Act 1988* (Threatened). The status should now be amended to Endangered in Victoria and Australia.

Reasons for Conservation Status

Briggs & Leigh (1988) presumed Stiff Groundsel to be extinct in Australia, as it had not been collected since 1925 despite extensive searching at previous collecting localities. In May 1991, a population of the Stiff Groundsel was discovered near Corop (Davies in press).

The only known records for South Australia are three sheets housed in the National Herbarium of Victoria which all date back to the 1840s and 1850s. Two undated specimens are recorded for New South Wales. In Victoria it is known from only five collections—Casterton (1915), Swan Hill (1892 & 1916), Koondrook (1915) and Lake Charm (1925).

At the newly discovered site, the total population is estimated to be between 100 and 1000 plants, but there is evidence that many of the plants are linked by a woody rhizome and the total number of genetically different individuals may be considerably less.

The only known population is very small and subject to a number of threats, including road and channel maintenance. The population may contain insufficient numbers and genetic variability to ensure its long-term survival. The land on which it grows is not adequately reserved (road reserve and private land).

The final recommendations of the Scientific Advisory Committee determined that the Stiff Groundsel is:

- extremely rare in terms of both abundance and distribution;
- in a demonstrable state of decline which is likely to lead to extinction; and
- significantly prone to future threats which are likely to lead to extinction.

Major Conservation Objective

To protect existing plants and encourage natural regeneration and to establish at least three new colonies in more suitable and secure areas within the district surrounding the current population.

Management Issues

Ecological Issues Specific to the Taxon

The long-term viability of the population is unknown because the population size is small and the plants are genetically isolated. There is little sign of fertile seed being produced and the plants may in fact be derived from only a few parents. However, seed collected by the National Herbarium in Melbourne has been successfully germinated and four individuals are in cultivation.

The population is in a very precarious position on a road reserve and adjacent channel bank and could conceivably be eliminated by natural disasters or man-made alterations. The main threats are road works (e.g. grading, spraying, burning or clearing drains); channel maintenance, since about half of the population occurs on a channel bank on private land; and grazing of the roadside and private land. There is evidence that the species is palatable and may be sensitive to trampling; it is not growing in any areas where there is heavy grazing.

Little data is available concerning the general ecology of the taxon, such as its dependence on flooding and reasons for its apparent site-specificity over such a large area in south-eastern Australia. Changes to management of the area (for example, altering drainage patterns or upgrading roads) could have a serious effect on population longevity.

Given the habitat preferences of the remnant population, the taxon could occur throughout the surrounding district and beyond. Additional searching could conceivably uncover further remnant populations.

Social and Economic Issues

Achieving the conservation objectives is unlikely to raise major social and economic issues. At this stage the precise location must be kept secret because vandalism is considered a real threat in this area. The idea of fencing with signposting has been discussed, but it could defeat its purpose by attracting attention. The plant is quite inconspicuous and easily confused with a number of other more ubiquitous co-existent *Senecio* species, and this should provide all the protection from vandalism necessary in the short term.

Protecting the population may involve some modification of community drainage schemes to ensure that the site is not adversely affected.

Where the Stiff Groundsel grows on private land, voluntary agreement on the exclusion of grazing will be sought. The area involved is very small (less than 1 ha) and of little productive use, so such exclusion would mean a negligible loss of grazing land and productivity for the landowner in question.

Management Action

Previous Management Action

- Until recently there has been little management with respect to this taxon.
- After discovery of the taxon, the issue of conservation and stock exclusion was discussed with the land owner, who was clearly willing to cooperate. Although fencing along the roadside has been rejected as possibly counter-productive, discrete fencing within the property is being considered to keep stock away from the population in the drier months of the year.
- The local shire has been given the location of the site, so they can avoid any impact from routine seasonal management of roadsides.
- Seed collected from the site during May 1991 is being propagated at the Royal Botanic Gardens in Melbourne. Cuttings were relatively unsuccessful. Any future ex-situ

conservation programs will be more successful using seed rather than vegetative material.

- DCE staff involved with the environmental assessment of the proposed community drainage scheme for the area have carried out some extension work with local property owners. They used an information poster, and geared the work towards locating additional populations. This program will need following up.

Intended Management Action

Monitoring

- Monitor the extent and health of the original, plus any new populations, at least once each year.

Liaison

- Liaise with local council to protect the population on the road reserve.
- Liaise with the landholder with the Stiff Groundsel on his property to look at ways of protecting the plants.
- Continue the extension program with surrounding property owners with the aim of finding further populations.

Propagation

- Make limited quantities of plant material (seed) available to the Royal Botanic Gardens for propagation.
- Over the next three years, establish at least three new populations in suitable areas of public land that will provide appropriate habitat within the Bendigo region.
- This will necessitate a (DCE) detailed study of surrounding public land reserves and an ex-situ conservation program and schedule developed in conjunction with the Royal Botanic Gardens in Melbourne.

Research

Encourage work into the ecological requirements and reproductive biology of the species. Make limited quantities of seed or cutting material available to the appropriate persons to foster this research. Protection of original populations Appropriately fence the original and any newly established or discovered populations to prevent accidental or deliberate disturbance or destruction of Stiff Groundsel.

Critical Habitat

The critical habitat of the species will be determined and include the appropriate reestablishment sites (Bendigo Region within two years).

Other Desirable Management Actions

Continue to search across the historically recorded range of the Stiff Groundsel. If other populations are found, they will increase the genetic resource of the species and could be used in a breeding program to create healthier and more genetically diverse populations.

Subsequent discoveries would also contribute further to the ecological understanding of the taxon.

Legislative Powers Operating

Legislation

Flora and Fauna Guarantee Act 1988: provides for protected flora controls and the protection of critical habitat if so designated.

Planning and Environment Act 1987: provides, through the State section of all planning schemes, protection of native vegetation.

Licence/Permit Conditions

A permit to collect the Stiff Groundsel seed or any vegetative material will only be given for work which is in accordance with the conservation objectives.

Consultation and Community Participation

DCE will consult with the local shire to ensure the protection of the populations on the road reserve, and with the adjacent landholders to foster conservation of the taxon on private land.

Implementation, Evaluation and Review

The Flora and Fauna Guarantee Officer for the Bendigo Region of DCE will be responsible for co-ordinating the implementation of this Action Statement and annual monitoring of the effectiveness of actions taken. The Action Statement will be reviewed in 1997.

Contacts

Management

Ron Davies, Flora and Fauna Guarantee Officer, Bendigo Region, DCE.

Taxonomy

David Albrecht, National Herbarium, Melbourne.

Biology

Bob Parsons, Botany Department, La Trobe University, Bundoora

Neville Scarlett, Botany Department, La Trobe University.

Compilers

Noel Schoknecht & Paul Foreman

Further information

Further information can be obtained from Department of Sustainability and Environment Customer Service Centre on 136 186.

Flora and Fauna Guarantee Action Statements are available from the Department of Sustainability and Environment website:
<http://www.dse.vic.gov.au>

References

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