

Action Statement

Flora and Fauna Guarantee Act 1988

No. 163

Pomonal Leek-orchid *Prasophyllum subbisectum*

Distribution

The Pomonal Leek-orchid *Prasophyllum subbisectum* Nicholls is endemic to Victoria, occurring in the Stawell area within the Goldfields Bioregion. It was formerly known from near Pomonal. Fewer than 75 plants are known in the wild, in three populations. It is likely to have been naturally rare but more common prior to landscape scale disturbance from gold exploration and mining. The Pomonal Leek-orchid is reserved at Deep Lead Nature Conservation Reserve and at Three Jacks Flora Reserve, both managed by Parks Victoria (PV)(Victoria West Region).

Habitat

Occurs in open forest dominated by *Eucalyptus ciliatum*, and *Calytrix tetragona* or *E. leucoxylon* - *E. goniocalyx* open forest on well drained sandy loam. Critical habitat has not been determined but may require disturbance.

Conservation status

National conservation status

The Pomonal Leek-orchid has been listed as endangered under the Commonwealth **Environment Protection and Biodiversity Conservation Act 1999**.

An assessment using the IUCN Criteria has not been undertaken.

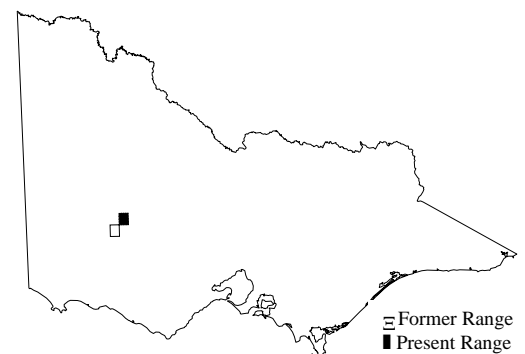
Victorian conservation status

The Pomonal Leek-orchid has been listed as threatened under the **Flora and Fauna Guarantee Act 1988**.

The Pomonal Leek-orchid is considered 'endangered' in Victoria (DSE 2003).



Pomonal Leek-orchid *Prasophyllum subbisectum*
(Photo: John Eichler)



Distribution in Victoria (DSE 2004)

Decline and threats

Current and potential threats with estimated risk

Current threats

Weed invasion

Low - weeds are scarce at sites.

Grazing

High - macropods and rabbits are common at all sites.

Inappropriate fire regimes

Low at present - sites are long unburnt and fire risk is low; otherwise unknown..

Site disturbance

Moderate at Deep Lead - sites may be vulnerable to disturbance by illegal gold prospecting.

Potential threats

Illegal collection

Low - no evidence of collection in the past.

Ecology/biology

High - conditions for seed recruitment and maintenance of pollinator and fungal activity unknown; increased extinction risk due to small population sizes.

Other issues

- *P. subbisectum* populations are vulnerable to damage from trampling and site confidentiality is vital. Involvement from non government organisations and individuals will be limited to a small number of individuals with a proven track record in its conservation (ANOS conservation group, Stawell Field Naturalists Club).
- One population at Deep Lead FFR is close to tracks and vulnerable to damage from recreational vehicles.
- Kangaroo numbers at both reserves require assessment particularly in relation to loss of ground flora and soil disturbance. Further searches may prove more fruitful after protective measures have been implemented.

Existing conservation measures

- Monitoring at two sites by Stawell Field Naturalists.
- Searches conducted annually by Stawell Field Naturalists and in 2001 by Centre for Plant Biodiversity Research, Canberra.
- All sites were visited during recovery plan preparation.

Conservation objectives

Long term objective

That the Pomonal Leek-orchid can survive, flourish and retain its potential for evolutionary development in the wild.

Objectives of this Action Statement

1. Improve knowledge of population sizes, trends and habitat requirements.
2. Protect sites and manage habitat.
3. Maintain and/or increase existing population sizes

Overall approach

Known populations will be monitored. Risk management in the short term will include protection of populations from grazing and gold prospecting, and maintenance of site confidentiality. Populations will be managed to promote seedling recruitment, using fine-scale habitat management techniques and re-stocked using seed from cultivated plants. Recovery will be jointly managed by DSE and PV. Involvement from Stawell Field Naturalists will continue.

Intended management actions

The intended management actions listed below are further elaborated in DSE's Actions for Biodiversity Conservation database. Detailed information about the actions and locations, including priorities, is held in this system and will be provided annually to land managers and other authorities.

1. Determine current conservation status by acquiring baseline population data.

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, SW Region)

2. Measure population trends and responses against recovery actions. Conduct annual censusing of populations, collate, analyse and report on census data and re-prioritise and adjust recovery actions and/or threat management

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, SW Region)

3. Determine habitat requirements of key populations. Conduct surveys, identify ecological correlates of populations and prepare habitat descriptions.

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, SW Region)

4. Incorporate actions to protect, enhance and restore Pomonal Leek-orchid habitat into the Wimmera Regional Catchment Strategy or its

subordinate strategies via Biodiversity Action Plans. Implement these actions, according to priority, as resources become available, in conjunction with other agencies, community groups and landholders.

Responsibility: Wimmera Catchment Management Authority

5. Manage risks to populations. Identify and implement strategies to control threats and identify disturbance regimes to promote regeneration and recruitment for key populations and their habitat.

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, SW Region), land managers, landholders

6. Promote in-situ recruitment by preparing habitat for seedling recruitment and re-stocking populations with seed.

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, SW Region)

7. Undertake or encourage and support research, including the following:
 - Describe life history
 - Evaluate natural pollination levels and causes of pollinator limitation
 - Determine the effects of artificial pollination on growth survival and reproduction
 - Determine spatial distribution of mycorrhizal fungi
 - Determine optimal conditions for growth of mycorrhizal fungi in-situ

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division)

8. Increase populations ex-situ. Hand pollinate plants at Deep Lead and Three Jacks. Collect and store seed, determine seed viability and collect and store mycorrhizal fungi from the Three Jacks population. Establish and maintain cultivated populations and record such collections in a database of threatened orchid taxa in cultivation.

Responsibility: DSE (Biodiversity & Natural Resources Division), Royal Botanic Gardens

9. Involve community groups in recovery actions where appropriate and provide support under the Botanic Guardians scheme.

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, SW Region)

References

- DSE (2003) *Advisory List of Rare or Threatened Plants in Victoria - 2003*. Department of Sustainability and Environment: East Melbourne. (available on the DSE web site)
- DSE (2004) *Flora Information System* (electronic flora database). Department of Sustainability and Environment: Melbourne.

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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>

This Action Statement has been prepared under section 19 of the Flora and Fauna Guarantee Act 1988 under delegation from Chloe Munro, Secretary, Department of Natural Resources and Environment, October 2002.

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