

Action Statement

Flora and Fauna Guarantee Act 1988

No. 165

Shelford Leek-orchid *Prasophyllum fosteri*

Description and distribution

The Shelford Leek-orchid *Prasophyllum fosteri* D.L. Jones is endemic to Victoria, occurring in the Shelford-Mt Mercer area within the Victorian Volcanic Plain Bioregion, where known only from the type locality (Jones 2000). It is likely to have been formerly more widespread on the western basalt plains in Victoria, prior to agricultural clearing. Fewer than 20 plants are known in the wild, in one population. Former abundance or number of populations not known but likely to have been more abundant across its former range. The Shelford Leek-orchid is not reserved, occurring on a roadside managed by the Shire of Golden Plains.



Shelford Leek-orchid *Prasophyllum fosteri*

Habitat

The Shelford Leek-orchid occurs in open species rich native grassland dominated by *Themeda triandra* with perennial herbs and lilies on poorly drained red-brown soil derived from basalt. Critical habitat has not been determined but fire or other disturbance such as slashing is highly likely to promote flowering.

Conservation status

National conservation status

The Shelford Leek-orchid has not been listed under the Commonwealth **Environment Protection and Biodiversity Conservation Act 1999**.

An assessment using the IUCN Criteria has been undertaken. The Shelford Leek-orchid was assessed as 'Critically Endangered'.

Victorian conservation status

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



Distribution in Victoria
(from *Flora Information System*, NRE 2002)

The Shelford Leek-orchid is classified as 'Endangered' in Victoria (DSE 2005).

Decline and threats

Current threats and estimated impact

Weed invasion: High impact – in particular *Phalaris aquatica*, *Romulea rosea*, and *Cuscuta dubia* invasion will occur without regular burning and/or spraying; exacerbated by soil disturbance.

Grazing: Low impact – Sites are not grazed at present and rabbits are scarce.

Inappropriate fire regimes: Low impact at present – sites require fire and are burnt annually.

Site disturbance: Extremely high impact – all sites are on roadsides or rail reserves adjacent to paddocks on private property and are subject to accidental damage from heavy machinery.

Potential threats and estimated risk

Illegal collection: Low risk – no evidence of collection in the past.

Ecology/biology: High risk – conditions for maintenance of pollinator and fungal activity unknown and taxon is particularly vulnerable to extinction owing to extremely small population size.

Other issues

- The Shelford Leek-orchid population is vulnerable to damage from heavy machinery. A Public Authority Management Agreement under the Victorian **Flora and Fauna Guarantee Act 1988** (FFG) is urgently required.
- Fire ecology has been researched and is well understood for Western Basalt Plains Grassland (School of Botany, La Trobe University).
- The Western (Basalt) Plains Grassland where the Shelford Leek-orchid occurs is highly significant and listed as threatened under the Victorian **Flora and Fauna Guarantee Act 1988**. It is vital to continue the current fire regime of annual burning in order to preserve species diversity in vegetation where the Shelford Leek-orchid occurs, to maintain openness and suppress invasive exotic species such as *Phalaris aquatica*, *Romulea rosea* and *Cuscuta dubia*.
- Although the population is very small, recovery actions will focus on in-situ management rather than re-introduction. The site was not burnt for approximately 5 years prior to 2000 and population size is still to be accurately assessed.

Existing conservation measures

- Fire ecology of the has been researched and is well understood in Western Basalt Plains Grassland (School of Botany, La Trobe University).
- A Public Authority Management Agreement (PAMA) is currently being prepared with the Golden Plains Shire, which will include the site (DSE).
- Recent (2000) ecological burn to recover *P. fosteri*.
- Population has been monitored since 2000.
- The known population was visited during recovery plan preparation.

Conservation objectives

Long term objective

That the Shelford 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

Broadscale risk management will include a negotiated PAMA with Local Government managers to undertake annual burning, weed management and protection of sites from damage caused by heavy machinery. Searches will be conducted at similar sites in the region in the spring following annual fuel reduction burning. Populations will be mapped and annual censusing carried out to determine their response to current management. Recovery will be jointly managed by DSE and Golden Plains Shire.

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

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

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

4. Provide information and advice, including maps, regarding the location and management of Shelford Leek-orchid sites to landholders, land managers and other authorities, especially Catchment Management Authorities and local government authorities.

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

5. Incorporate actions to protect, enhance and restore Shelford Leek-orchid habitat into the Corangamite 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: Corangamite Catchment Management Authority

6. Incorporate information regarding the location and management of Shelford Leek-orchid sites into local planning schemes, including environmental significance overlays, and apply the Victorian Planning Provisions so as to protect these sites.

Responsibility: Shire of Golden Plains

7. 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: DSE (Biodiversity & Natural Resources Division, SW Region), land managers, landholders

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

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

9. Undertake or encourage and support research, including the description of life history and evaluation of natural pollination levels and causes of pollinator limitation

Responsibility: DSE (Biodiversity & Natural Resources Division)

10. Increase populations ex-situ. Hand pollinate plants, collect and store seed and determine

seed viability. Collect and store mycorrhizal fungi. 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

11. Develop and implement materials for land manager, landholder and community information, including technical information on in-situ recovery techniques.

Responsibility: DSE (Biodiversity & Natural Resources Division)

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

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

References

- DSE (2005) *Advisory List of Rare or Threatened Plants in Victoria - 2005*. 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.
- Jones, D. L. (2000). Ten new species of *Prasophyllum* R. Br. (Orchidaceae) from South-eastern Australia. *The Orchadian*, 13 (4), 149-173.

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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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