

Action Statement

Flora and Fauna Guarantee Act 1988

No. 156

Metallic Sun-orchid

Thelymitra epipactoides

Distribution

In Victoria, the Metallic Sun-orchid *Thelymitra epipactoides* F. Muell. is **widespread** in coastal and hinterland areas west of Bairnsdale and extending well inland in the west (Backhouse and Jeanes 1995), but discontinuous with scattered populations throughout its range. Between 500 and 3,000 plants occur in the wild in eight main populations in Victoria. Metallic Sun-orchid is likely to have formerly numbered many thousands of plants in Victoria and South Australia prior to habitat destruction. In Victoria, Metallic Sun-orchid is reserved at Blond Bay State Game Reserve, Bay of Islands Coastal Park; Port Campbell National Park; Gippsland Lakes Coastal Park; Lake Mundi Game Reserve; Coastal Park; Kiata Flora Reserve. It has also been recorded from Grampians NP (Vict.) but has not recently been seen there.

Habitat

The Metallic Sun-orchid grows primarily in mesic coastal heathlands, grasslands and woodlands, but also found in drier inland heathlands, open forests and woodlands. Substrates may be moist or dry sandy loams or loamy sands. Critical habitat has not been determined but likely to require open conditions, which may be created by soil disturbance or fire, for recruitment.

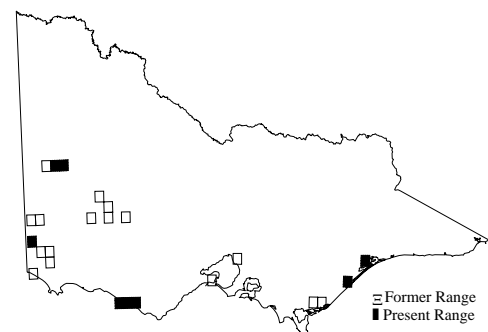
Conservation status

National conservation status

The Metallic Sun-orchid has been listed as endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.



Metallic Sun-orchid *Thelymitra epipactoides*
(Photo: John Eichler)



Distribution in Victoria (DSE 2004)

An assessment using the IUCN Criteria has been undertaken and the Metallic Sun-orchid has been determined to be endangered.

Victorian conservation status

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

The Metallic Sun-orchid is considered 'endangered' in Victoria (DSE 2003).

Decline and threats

See Table 1. (Page 4)

Other issues

- *T. epipactoides* has not been seen at Billywing Road, Grampians NP for a number of years but is likely to be recoverable with restoration of an appropriate fire regime.
- Population sizes tend to fluctuate, but most populations appear to respond well to disturbance.
- A considerable amount of demographic census data exist for both eastern and western populations.
- Analysis of existing Victorian census data is urgently required to evaluate the response of the population to management activities in the last 10 years and so that existing management strategies can be assessed.
- An assessment of the current size and extent of populations in South Australia is urgently required.

Existing conservation measures

- Research into ecology and pollination biology (Calder *et al.* 1989; Cropper and Calder 1990).
- Demographic censusing at Golden Beach and Port Campbell NP since 1991.
- Population sizes for most Victorian sites are included on VrotPop threatened flora database.
- Regular ecological burning carried out at Golden Beach.
- All Victorian sites were visited during Action Statement preparation.

Conservation objectives

Long term objective

That the Metallic Sun-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

Risk management will include identifying appropriate disturbance regimes and management strategies to promote recruitment. Upgrading or modification of site protection is required at 2 sites. Analysis of existing census data from eastern and western Victoria will be used as a basis for management in addition to ecological surveys. Baseline information is required in SA. Involvement from volunteers will be encouraged.

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, Gippsland and SW Regions)

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, Gippsland and SW Regions)

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, Gippsland and SW Regions)

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

Responsibility: DSE (Biodiversity & Natural Resources Division, Gippsland and SW Regions)

5. Incorporate actions to protect, enhance and restore Metallic Sun-orchid habitat into relevant Regional Catchment Strategies or their 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: Catchment Management Authorities

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

Responsibility: local government authorities

7. Manage risks to populations. Identify threats and implement strategies to control them. Identify disturbance regimes to promote regeneration and recruitment.

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, Gippsland and SW Regions)

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

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, Gippsland and SW Regions)

9. 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, Gippsland and SW Regions), Parks Victoria

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

Responsibility: Parks Victoria, DSE (Biodiversity & Natural Resources Division, Gippsland and SW Regions)

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.

Compiled by Dr Fiona Coates, Arthur Rylah Institute, Department of Sustainability and Environment

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 Professor Lyndsay Neilson, Secretary, Department of Sustainability and Environment, September 2003.

© The State of Victoria, Department of Sustainability and Environment, 2003

Published by the Department of Sustainability and Environment, Victoria. 8 Nicholson Street, East Melbourne, Victoria 3002 Australia

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

ISSN 1448-9902

Decline and threats – Table 1

Current threats	Estimated risk
Weed invasion	Low in Vic, sites are generally in good condition.
Grazing	Low at most sites. <i>T. epipactoides</i> appears able to withstand moderate grazing pressure. High at Blond Bay GR - excessive browsing has significantly modified vegetation
Inappropriate fire regimes	Low at most extant sites but may have been more common where sites were burnt regularly in the past (eg. Billywing Rd., Grampians NP).
Site disturbance	Generally low at present. <i>T. epipactoides</i> requires open bare ground created by disturbance for recruitment. However, populations at Port Campbell NP are close to roads and occupy sites that have been subject to development proposals. Most other sites are protected and populations well known.
Potential threats	Estimated risk
Illegal collection	Low - no evidence of collection in the past.
Herbicide spraying and site disturbance	Low in Vic.
Woody shrub invasion	Moderate at Golden Beach and Gippsland Lakes CP - invasion of coastal shrubs may occur in the absence of fire or grazing.