

Action Statement

Flora and Fauna Guarantee Act 1988

No. 164

Red Cross Spider-orchid *Caladenia cruciformis*

Distribution

The Red Cross Spider-orchid *Caladenia cruciformis* (D.L. Jones) D.L. Jones & M.A. Clem. is endemic to Victoria, occurring in the Stuart Mill area of the Victorian Goldfields Bioregion. Fewer than 150 plants are known in the wild, in three populations. The Red Cross Spider-orchid is reserved at Dalyenong Flora and Fauna Reserve and Stuart Mill Flora and Fauna Reserve. These sites are managed by Parks Victoria (Central Region). The Red Cross Spider-orchid also occurs on private property.

Habitat

Occurs in *Eucalyptus leucoxylon* - *Eucalyptus microcarpa* - *Eucalyptus goniocalyx* or *Eucalyptus macrorhyncha* and occasionally *Eucalyptus tricarpa* low open forest or woodland with a heathy understorey typically dominated by *Calytrix tetragona*, *Brachyloma ciliata*, *Astroloma conostephioides*, *Astroloma humifusum*, *Hibbertia* sp. and *Leucopogon virgatus* on well drained grey-brown sandy loam. Critical habitat has not been determined but currently occupies undisturbed, long unburnt forest at present, where litter has accumulated.

Conservation status

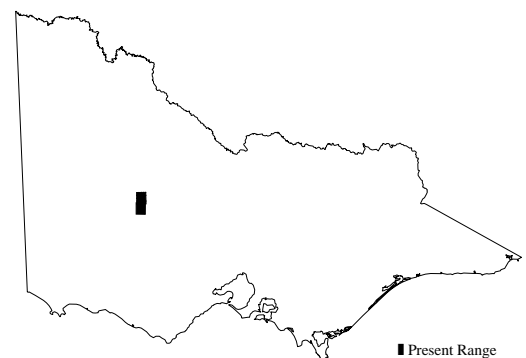
National conservation status

The Red Cross Spider-orchid has not been listed as endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 .

An assessment using the IUCN Criteria has not yet been undertaken.



Red Cross Spider-orchid *Caladenia cruciformis*
(Photo: Geoffrey Car)



Distribution in Victoria (DSE 2004)

Victorian conservation status

The Red Cross Spider-orchid has been listed as threatened under the **Flora and Fauna Guarantee Act 1988**.

The Red Cross Spider-orchid is classified as 'endangered' in Victoria (DSE 2003).

Decline and threats

Current and potential threats with estimated risk

Current threats

Weed invasion

Low at all sites.

Grazing

Moderate to high - macropods and rabbits.

Inappropriate fire regimes

Low - sites are long unburnt but response to fire is not known.

Site disturbance

Moderate - one site on private property may be vulnerable to damage by farm machinery.

Potential threats

Illegal collection

Moderate - no evidence of collection in the past; but may be sought by collectors.

Other disturbance

High - increased grazing pressure from over abundant macropods may occur in the future; trampling by visitors to the sites will damage plants.

Other issues

- *C. cruciformis* 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 conservation (ANOS conservation group).
- Putative hybrids with *C. sp. aff. venusta* have been recorded and need determination.
- The response of *C. cruciformis* to fire is not known, fire should be excluded indefinitely.
- Current levels of grazing pressure need to be assessed and fencing extended to protect habitat where required.

Existing conservation measures

- Searches in immediate vicinity since 1999.
- Monitoring of 2 populations in 2001.
- Hand pollination at 1 site.

- Trial caging at one site.
- Sites was visited during preparation of the recovery plan.

Conservation objectives

Long term objective

That the Red Cross Spider-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 surveyed to determine population sizes and habitat requirements and to provide ecological knowledge necessary for management. Broadscale risk management will include fire planning, protection of populations from grazing and prevention of accidental damage, negotiating with landowner to conserve one population on private property, and maintenance of site confidentiality. The population will be managed to promote seedling recruitment, using fine-scale habitat management techniques. Populations will be re-stocked using seed from cultivated plants. Recovery will be jointly managed by NRE and PV. Involvement from ANOS conservation group 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, NW 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. 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 Red Cross Spider-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 Red Cross Spider-orchid habitat into the North Central 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: North Central Catchment Management Authority

6. Incorporate information regarding the location and management of Red Cross Spider-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 and implement strategies to control threats and identify disturbance regimes to promote regeneration and recruitment for key populations and their habitat on public and private land.

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

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

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

9. 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)

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: Parks Victoria, DSE (Biodiversity & Natural Resources Division, NW 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 was 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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