



**ACT**  
Government

Environment and  
Sustainable Development

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## The Canberra spider orchid – an endangered species

The Canberra spider orchid (*Arachnorchis actensis*) is found only in the ACT, and in only three places — in small areas of Mount Majura, Mount Ainslie and the Majura Valley.

The orchid was declared endangered by the ACT Fauna and Flora Committee in April 2005 and as critically endangered by the Australian Government in June 2005.

The Canberra spider orchid lives among a ground cover of grasses, small plants and low shrubs. Populations are found where the grassy woodland transitions into forest, about 645–745 metres above sea-level.

Rarely growing taller than 9 cm, this terrestrial (ground) orchid grows as single plants or in small groups. It does not flower every year and when it does, usually has only a single flower, up to 2 cm in diameter. Flowers are greenish with reddish-crimson lines and suffusions.

The plant has an underground tuber that puts out a leaf after good rains in late autumn or early winter. It flowers from late September to mid October, after which it dies down and remains dormant over summer. It is thought the flower is pollinated by a species of wasp. A soil fungus (a mycorrhizal fungal host) is needed for seeds to germinate and for adult plants to receive adequate carbon and nutrients.

### Conservation threats

The main threats include:

- weed invasion and herbicides
- excessive grazing and disturbance by eastern grey kangaroos and rabbits
- soil pathogens that cause diseases that may directly affect the orchids or indirectly affect them by changing their habitat
- inadvertent damage by people.

Potential threats that need more investigation include:

- effect of shade from growing bushes and trees
- the role of fire, which may stimulate flowering or damage the plants.



### Conservation actions

Because there are so few known locations of the orchid, it is critical to protect them if the plants are to survive and the species recover. Fortunately, all populations are in the Canberra Nature Park and on Australian Government Department of Defence land, where the orchids are monitored and managed for their protection.



Following the orchid's listing as an endangered species, the ACT Government prepared a five-year recovery plan (2010-2015) that focuses on:

- gaining better information about the species and
- protecting, managing and maintaining the orchids and their surrounding ecological community.

The largest site, on Mount Majura, has been fenced to keep out kangaroos, rabbits and people. Some flowering plants have been caged to reduce the risk of damage by birds and lizards.

Conditions are monitored and maintained or improved as required; for example, undergrowth pruned. Extensive rabbit control efforts on Mount Majura and Mount Ainslie Reserves by the Parks and Conservation Service and volunteers has reduced threats from rabbits.

Three plants on Mount Ainslie were hand pollinated in 2011 and the seed given to the Australian National Botanic Gardens seed bank.

The populations on ACT land are monitored and counted each flowering season, and ecologists, researchers and rangers keep an eye out for new populations nearby and in other woodland areas.

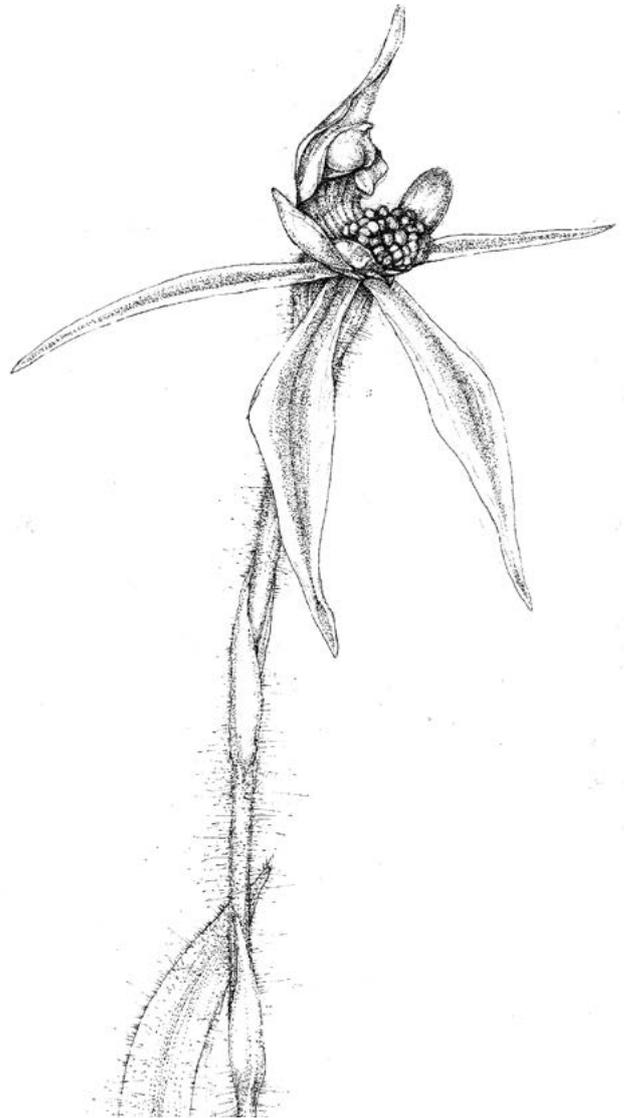
Research has identified the mycorrhizal fungus associated with this species as *Sebacina vermifera* and that there is little genetic difference between Mount Majura populations.

## Current status

It is difficult to determine whether the total population is growing or declining given that different numbers of plants flower each year depending on the weather and other conditions. However, there are signs the population is reasonably healthy and recovery actions are having an effect. For example:

- In 2010, over 100 plants were seen on Mount Ainslie and Mount Majura in areas where none, or very few, plants had been seen for several years. It is thought drought and rabbit grazing contributed to the lack of flowers.
- Since 2009, plants have been seen in areas they hadn't been seen in before, or for many years.
- The cages appear to have reduced predation significantly, allowing the caged flowers to be pollinated and new seeds to disperse.

The recovery plan will be reviewed/updated and continued if the species is still considered to be endangered in 2015.



## More information

- [www.environment.act.gov.au](http://www.environment.act.gov.au)
- Action Plan 31: [http://www.environment.act.gov.au/\\_data/assets/pdf\\_file/0020/257510/Canberra\\_Spider\\_Orchid\\_Action\\_Plan\\_-\\_Combined.pdf](http://www.environment.act.gov.au/_data/assets/pdf_file/0020/257510/Canberra_Spider_Orchid_Action_Plan_-_Combined.pdf)
- Recovery plan: <http://www.environment.gov.au/biodiversity/threatened/publications/recovery/pubs/caladenia-actensis.pdf>
- Australian Government environment protection and biodiversity conservation: <http://www.environment.gov.au/epbc/protect/species-communities.html>

## Contact

- [environment@act.gov.au](mailto:environment@act.gov.au) or Canberra Connect 13 22 81

## Acknowledgements

Drawing by J. Pratt and photo by D.Rouse