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Hoffman's spider orchid

Endangered flora of Western Australia

If you think you've seen this plant, please call the Department of Environment and Conservation's (DEC's) Geraldton District on (08) 9921 5955.

Hoffman's spider orchid (*Caladenia hoffmanii*) is named in honour of orchid enthusiast Noel Hoffman, who has contributed greatly to orchid knowledge in Western Australia.

Hoffman's spider orchid is currently listed as rare under the Western Australian *Wildlife Conservation Act 1950* and is ranked as endangered. The species is also listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Hoffman's spider orchid flowers in August to early September, with one to three flowers on each plant. The flowers have a tapering labellum (front lip-like petal) that is white with a deep red tip, a long red marginal fringe and dark red calli (glands) down its centre. The leaves are 10 millimetres wide and 15 centimetres long and the plants grow up to 30 centimetres tall. There are no other spider orchids occurring in the area north of Geraldton that could be easily confused with Hoffman's spider orchid.

Hoffman's spider orchid is thought to attract pollinating insects by sexual deception through a process called pseudo-copulation. Flowers release a scent that mimics a female thynnid wasp, thereby attracting a male wasp. Mistaking it for the female wasp, the male attempts to copulate with the flower, leading to pollination. Once seed capsules develop, several thousand seeds are shed from each capsule, although only a very small number will germinate.

Hoffman's spider orchid grows in a complex relationship with an underground mycorrhizal fungus. Without its presence in the soil, the orchid seed would not germinate and the resulting plant would not reach maturity. This is because the fungus provides nutrients for the orchid plant that it cannot otherwise obtain.



Hoffman's spider orchid. Photo – Andrew Brown

Recovery of a species

DEC is committed to ensuring that critically endangered taxa do not become extinct in the wild. This is done through the preparation of a Recovery Plan or Interim Recovery Plan (IRP), which outline the recovery actions that are required to urgently address those threatening processes most affecting the ongoing survival of the threatened species in the wild and begin the recovery process.

IRPs are prepared by DEC and implemented by regional or district recovery teams consisting of representatives from DEC, Botanic Gardens and Parks Authority, community groups, private landowners, local shires and various government organisations.



Department of
Environment and Conservation

Our environment, our future



Hoffman's spider orchid

E n d a n g e r e d f l o r a o f W e s t e r n A u s t r a l i a



Habitat of Hoffman's spider orchid. Photo – Gemma Phelan

Hoffman's spider orchid is found beneath dense heath, associated with jam (*Acacia acuminata*), large-flowered melaleuca (*Melaleuca megacephala*), pine grevillea (*Grevillea pinaster*) and *Thryptomene* species, on clay loams on rocky hill slopes and near breakaways, and also along drainage lines.

Hoffman's spider orchid has been recorded from 11 populations around Geraldton and Northampton, and historically at the Murchison River in Kalbarri National Park. Plants at the Murchison River area have not been seen for a number of years.

IRPs will be deemed a success if the number of individuals within the population and/or the number of populations have increased.

This project is funded by the Australian and State governments' investment through the Natural Heritage Trust, administered in the Midwest Region by the Northern Agricultural Catchments Council.



Hoffman's spider orchid. Photo – Gemma Phelan

DEC has set up the Geraldton District Threatened Flora Recovery Team to coordinate actions that address the greatest threats to the survival of the species in the wild.

The main threats to Hoffman's spider orchid are feral animals (goats, rabbits and pigs), road works, weed invasion, climate change and inappropriate fire regimes.

The species is currently only known from 11 populations and DEC is keen to know of any others. Ideal conditions for survey are in early spring during wetter years.

If you are unable to contact the District Office, please phone DEC's Species and Communities Branch on (08) 9334 0455.

Recovery actions that have been, or will be, progressively implemented to protect the species include:

- liaison with land managers and landowners;
- seed and mycorrhizal fungi collection and storage;
- surveys for new populations;
- feral animal control;
- long-term protection of habitat;
- promotion of the species within the community;
- ongoing monitoring of population numbers and threats;
- investigation of fire requirements, and development and implementation of a fire management strategy;
- weed control; and
- installation of rare flora markers to ensure road workers in the vicinity of the plants are aware of the species and its significance.