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Williams' 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

If you think you have seen this plant, please call the Department of Environment and Conservation's Great Southern District on (08) 9881 9200.

Collectively known as spider or fairy orchids *Caladenia* is a large, mainly Australian genus with 112 species found in the south-west of Western Australia. *Caladenia williamsiae* (commonly known as Williams' spider orchid) is one of the most recently named species in this genus.

Judy Williams, a keen nature enthusiast and flora volunteer, discovered Williams' spider orchid in an area of open wandoo woodland on a nature reserve in the Brookton area in 1999. The new species was subsequently named by Steve Hopper and Andrew Brown in recognition of Ms Williams' flora conservation work.

Since its initial discovery, the orchid has been recorded in three more locations. It was noted that all new subpopulations occurred on the top of lateritic ridges, growing in yellow brown sandy loam with gravel in a dense shrubland of myrtle, low mallee *Eucalyptus*, scrub sheoak and *Dryandra*, rather than the downslope open woodland site of the original discovery. All records of the species are from the same nature reserve and a number of annual surveys have failed to discover Williams' spider orchid beyond this very small range.

Caladenia williamsiae is a relatively small plant growing up to 20 cm high with between one and three small greenish-yellow and red flowers. These grow three cm across and are distinguished by their distinctive small sepaline clubs. The species also has a distinctive short, broad, purple backed leaf that is seven to nine cm long by 15 to 18 mm wide and unlike any others in the genus. Flowering is between August and early September.

The species is not closely related to any other but has some features that place it distantly in the *Caladenia longiclavata* complex. It differs from these because of its smaller flowers, stiffly held petals and sepals, small dark coloured clubs, relatively short, broad leaf and more inland distribution.

The species is found over a geographic range of only two kilometres, in a nature reserve near Brookton. Plants can be found growing in *Dryandra* heath fringed by open *Eucalyptus* woodland on laterite ridge areas and slopes. The soil is characterised by yellow brown sandy loam with gravel over laterite.

Williams' spider orchid has an underground potato-like tuber from which it resprouts in autumn following a summer dormancy. Its flowers can be seen between August and early September. Given the flower shape and clubbed sepals, it is presumed that these flowers are insect pollinated, possibly by thynnid wasps, but very little else is known about its biology.

Williams' spider orchid was declared as Rare Flora in 2004 and ranked as Critically Endangered (CR) in the same year due to the small number of mature individuals known. The department has set up a District Threatened Flora Recovery Team to coordinate recovery actions that will address the greatest threats affecting the survival of this species in the wild (see overleaf).



A close up of the Williams' spider orchid flower. This species is very small reaching no more than 20cm in height. Photo – Andrew Brown

Recovery of a Species



DEC is committed to ensuring that threatened taxa do not become extinct in the wild. This is done through the preparation of an Interim Recovery Plan (IRP) that outlines the recovery actions required to urgently address those threatening processes most affecting the ongoing survival of threatened taxa 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, the Botanic Gardens and Parks Authority, community groups, private landowners, local shires and various government organisations.

Williams' spider orchid

Williams' spider orchid is only known from four subpopulations in the same nature reserve and we are eager to know of any others.

If you are unable to contact the district office on the above number, please phone the Department of Environment and Conservation's Species and Communities Branch on (08) 9334 0422.

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

Protection from current threats: this includes weed control, installing markers, notifying land managers to ensure accidental damage does not occur, conducting further surveys and regular monitoring of the health of populations.

Protection from future threats: this includes researching the biology and ecology of the species, collecting and storing seed, protecting plants from grazing, conducting further surveys, developing a fire management strategy, ensuring that relevant authorities, landowners and departmental personnel are aware of the species and the need to protect it, and that all are familiar with the threats identified during regular monitoring.



Williams' Spider Orchid has a short, broad purple backed leaf that is seven to nine cm long by 15 to 18 mm wide. Photo – Andrew Brown

IRPs will be deemed a success if essential recovery actions have been implemented and identified threatening processes have been removed within three years of their adoption under the EPBC Act.



Judy Williams (right) and WA Native Orchid Study and Conservation Group (WANOSCG) volunteers searching for *Caladenia williamsiae* in its typical habitat. Photo – Andrew Brown



Department of
Environment and Conservation



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