



PLANT

Caladenia argocalla

White Beauty Spider-orchid

| AUS | SA | AMLR | Endemism | Life History |
|-----|----|------|----------|--------------|
| E | E | E | State | Perennial |

Family *ORCHIDACEAE*



Photo: © Joe Quarmby

Conservation Significance

Endemic to SA. The AMLR distribution is part of a limited extant distribution in adjacent regions within SA. Within the AMLR the species' relative area of occupancy is classified as 'Very Restricted'.²

Description

The taxon now described as *Caladenia argocalla* formerly belonged to the *C. patersonii* complex of species (Bates and Weber 1990; Jones 1991). Hirsute, tuberous, terrestrial orchid. Flower stems are hairy like the leaves. Flowers are not perfumed (unlike *C. behrii*) and petals and sepals are long, tapered and curved or drooping with dark red glandular tips.⁵

Distribution and Population

The population is fragmented, occurring at just five disparate locations. Historically recorded on Fleurieu Peninsula but has not been recorded south of Adelaide since 1918. The present north - south range is approx 130 km.

May be extinct at Moppa near Nuriootpa (last seen in 1986), while populations at Mount Beevor and

Kaiser Stuhl CP have declined to fewer than ten plants and are unlikely to be viable.^{3,5}

There are currently thirteen subpopulations known with an estimated population size of between 2000 and 4500 plants recorded in 2006.⁴ The largest populations are outside of the AMLR region in the Clare Hills north of Adelaide, including a reserve population in Spring Gully CP.⁴

Post-1983 AMLR filtered records scattered, occurring near Mt Gawler Forest, Kaiser Stuhl CP, Cromer and near Harrogate.²

Pre-1983 AMLR filtered records show two observations, one on the northern AMLR near Greenock and another near Belair.² The latter record is thought to be misidentified (J Quarmby *pers. comm.* 2009).

Habitat

Occurs in *Eucalyptus macrorhyncha* - *E. leucoxylon* low woodland in Spring Gully CP and *E. leucoxylon* woodland on nearby Hughes Park Road. The native understorey is predominantly herbaceous at both locations. Dominant understorey species at Spring Gully are wallaby grass (*Danthonia* spp.) and *Poa* spp.⁵

Preferred habitat is open grassy woodland on relatively fertile soil, a habitat that is greatly depleted, fragmented and threatened in SA.⁵

Within the AMLR the preferred broad vegetation group is Grassy Woodland.²

Within the AMLR the species' degree of habitat specialisation is classified as 'High'.²

Biology and Ecology

Produces a leaf in April-May, however, it may not produce a leaf or spike every year (DEH 2006a). The number of flowering plants can fluctuate significantly from year to year. Flowers late September to late October. By late October the leaves shrivel and seed capsules develop, dry and dehisce. Average longevity unknown, but assumed to be more than fifteen years.³

Pollination is probably by thynnid wasps and native bees. Will hybridise with *Caladenia behrii*, *C. cardiochila* and *C. tensa*. Some of the resulting hybrids are fertile and will backcross with *C. argocalla*. Progeny of such crosses often have a red tip to the labellum (R. Bates *pers. comm.* 2005).³

Further information:

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<http://www.environment.sa.gov.au/>

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Prepared as part of the Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide and the Mount Lofty Ranges, South Australia 2009 - 2014



Government
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ADELAIDE AND MOUNT LOFTY RANGES SOUTH AUSTRALIA

Threatened Species Profile

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and Heritage

Does not require fire to induce flowering. May be fire sensitive. Population at Mt Beevor was burnt in 2007 and caused the population to decline. Some plants may have been killed.

Aboriginal Significance

Post-1983 records indicate the majority of the AMLR distribution occurs in Peramangk Nation. Also present in Ngadjuri Nation.²

Caladenia spp. tubers are recorded as a traditional Aboriginal food source in the eastern states (Flood 1980).¹

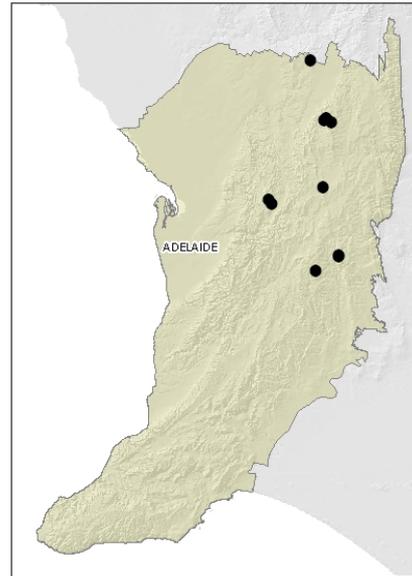
Threats

Continuing threats include habitat degradation and weed invasion, lack of pollination and recruitment, herbivory (by kangaroos, deer, possums, rabbits and hares) and road and track management activities.^{3,5} Threatening weeds include: Gorse, Salvation Jane, Quaking Grass, Blackberry, Briar Rose, Bearded Oat, and other introduced grasses.³ Illegal collection may also be an issue (Bates and Weber 1990).³

Many of the plants that grow in association with *C. argocalla* are known to be susceptible to *Phytophthora*.³ Within the AMLR, approximately half of its known distribution occurs within 2 km of confirmed or suspected *Phytophthora* infestations.

Additional current direct threats have been identified and rated for this species. Refer to the main plan accompanying these profiles.

Regional Distribution



Map based on filtered post-1983 records.² Note, this map does not necessarily represent the actual species' distribution within the AMLR.

References

Note: In some cases original reference sources are not included in this list, however they can be obtained from the reference from which the information has been sourced (the reference cited in superscript).

- 1 Australian National Botanic Gardens (2007). *Aboriginal Plant Use - NSW Southern Tablelands*. Available from <http://www.anbg.gov.au/apu/index.html> (accessed August 2007).
- 2 Department for Environment and Heritage (2007). *Adelaide and Mount Lofty Ranges Regional Recovery Pilot Project Database*. Unpublished data extracted and edited from BDBSA, SA Herbarium (July 2007) and other sources.
- 3 Quarmby, J. P. (2006). *Recovery Plan for Twelve Threatened Orchids in the Lofty Block Region of South Australia 2007 - 2012*. Department for Environment and Heritage, South Australia.
- 4 Quarmby, J. P. (2009). *Draft Recovery Plan for Twelve Threatened Orchids in the Lofty Block Region of South Australia 2007 - 2014*. Department for Environment and Heritage, South Australia.
- 5 Robertson, M. A. and Bickerton, D. (2000). *White Beauty Spider Orchid (Caladenia argocalla) Recovery Plan*. Department for Environment and Heritage, South Australia.

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