

# NSW Threatened Species Scientific Committee

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## Notice of Preliminary Determination

The NSW Threatened Species Scientific Committee, established under the *Biodiversity Conservation Act 2016* (the Act), has made a Preliminary Determination to support a proposal to list the orchid *Caladenia rileyi* D.L.Jones as an ENDANGERED SPECIES in Part 2 of Schedule 1 of the Act. Listing of Endangered species is provided for by Part 4 of the Act.

### How to make a submission

The NSW TSSC welcomes public involvement in the assessment process and places preliminary determinations on public exhibition on the NSW TSSC pages on the NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) website. This public exhibition provides an opportunity for the public to comment on this preliminary determination as well as provide any additional information that is relevant to the assessment.

Postal submissions regarding this Preliminary Determination may be sent to:

Secretariat  
NSW Threatened Species Scientific Committee  
Locked Bag 5022  
Parramatta NSW 2124.

Email submissions in Microsoft Word or PDF formats to:  
[scientific.committee@environment.nsw.gov.au](mailto:scientific.committee@environment.nsw.gov.au)

Submissions close 17 April 2025

### What happens next?

After considering any submissions received during the public exhibition period the NSW TSSC will make a Final Determination and a notice will be placed on the NSW DCCEEW website to announce the outcome of the assessment. If the Final Determination is to support a listing, then it will be added to the Schedules of the Act when the Final Determination is published on the legislation website. [www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au).

### Privacy information

The information you provide in your submission may be used by the NSW TSSC in the assessment to determine the conservation status and listing or delisting of threatened or extinct species, threatened populations and threatened or collapsed ecological communities or to assess key threatening processes.

The NSW TSSC may be asked to share information on assessments with NSW Government agencies, the Commonwealth Government and other State and Territory governments to collaborate on national threatened species assessments using a common assessment method and to assist in the management of species and ecological communities.

If your submission contains information relevant to the assessment it may be provided to state and territory government agencies and scientific committees as part of this collaboration.

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**If you wish your identity and personal information in your submission to be treated as confidential you must:**

- *request your name be treated as confidential, and*
- *not include any of your personal information in the main text of the submission or attachments so that it can be easily removed.*

Professor Caroline Gross  
Chairperson  
NSW Threatened Species Scientific Committee

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Public Exhibition period: 17/01/2025 – 17/04/2025

## Preliminary Determination

The NSW Threatened Species Scientific Committee, established under the *Biodiversity Conservation Act 2016* (the Act), has made a Preliminary Determination to support a proposal to list the orchid *Caladenia rileyi* D.L.Jones as an ENDANGERED SPECIES in Part 2 of Schedule 1 of the Act. Listing of Endangered species is provided for by Part 4 of the Act.

## Summary of Conservation Assessment

*Caladenia rileyi* D.L.Jones was found to be Endangered in accordance with the following provisions in the *Biodiversity Conservation Regulation 2017*: Clause 4.3(b)(d)(e i,iii) and Clause 4.4(b)(e i,ii A(II)).

The main reasons for this species being eligible are (i) it has highly restricted geographic distribution (EOO is 327 km<sup>2</sup> and AOO is 36 km<sup>2</sup>); (ii) it has low population size (plausibly less than 2 500 mature individuals); (iii) it is severely fragmented and has a small number of threat based locations; (iv) there is a continuing decline in the area, extent and/or quality of habitat and the number of mature individuals due to threats from habitat loss and destruction, forestry activities, herbivory (grazing and browsing), weed incursion, and climate change.

The NSW Threatened Species Scientific Committee has found that:

1. *Caladenia rileyi* D.L.Jones (family Orchidaceae) was described by (Jones 2021) as “Leaf linear-lanceolate, 40–100 x 6–8mm. Flower stem 80–250mm tall, wiry, 1–flowered. Flowers 40–50mm across, yellowish-green with red central stripes; sepals and petals with thickish brown clubs 6–25 x 3 mm, petal clubs shorter than sepals. Dorsal sepal erect, 40–55 x 2–3 mm, incurved. Lateral sepals obliquely deflexed, 40–55 x 3–3.5 mm, more or less parallel. Petals obliquely deflexed, 30–40 x 1.5–2mm. Labellum delicately hinged, 17–20 x 18–20 mm, pale green with a white central patch and maroon apex; basal margins with 4–6 pairs of erect comb-teeth to 6mm long; midlobe margins with 5–8 pairs short blunt teeth to apex; tip recurved. Basal calli c.4mm long. Lamina calli to 3mm long, maroon, in 4 crowded rows onto base of maroon patch. Column 12–14 x 5.5–6.5 mm, transparent with pink to red flecks and striae; basal glands obovoid, c.3 mm long, yellow with a reddish basal stalk shiny. Flowers: September to October.”
2. *Caladenia rileyi* is endemic to the southern inland plains of New South Wales (NSW) and is restricted to a small area near the town of Narrandera, at 100-200m elevation (Copeland and Backhouse 2022). The species is currently known to exist in only four subpopulations, all located on crown land. Two of these subpopulations are in state forests, one is a Travelling Stock Reserve (TSR) north of Narrandera, and one is found along a roadside site just east of Narrandera. These four sites are small and isolated patches of habitat (10-55 km apart), separated from one another by cultivated farmland. This species grows in woodland habitats dominated by *Callitris glaucophylla* (white cypress pine), with a sparse understory of grasses and forbs on red-brown sandy soils or sandy clay loams (Jones 2021). *Caladenia rileyi*

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has been recorded in *Callitris glaucophylla* - *Eucalyptus melliodora* (yellow box) woodlands, *Callitris glaucophylla* – *Allocasuarina verticillata* (drooping sheoak) woodlands and woodlands dominated by a mixture of *Callitris glaucophylla*, *E. dwyeri* (Dwyer's red gum) and *Acacia doratoxylon* (currawang) (ALA 2024; G. Robertson *in litt.* Feb 2021).

3. The habitat of this species may occur within 'Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penneplain, Nandewar and Brigalow Belt South Bioregions' an Endangered Ecological Community (EEC) under the NSW BC Act (NSW SC 2011). This EEC most likely corresponds with Plant Community Type (PCT) 'Western Grey Box - White Cypress Pine tall woodland on loam soil on alluvial plains of NSW South Western Slopes Bioregion and Riverina Bioregion (PCT 80). This species may also occur in PCT 'Dwyer's Red Gum - White Cypress Pine - Currawang shrubby woodland mainly in the NSW South Western Slopes Bioregion' (PCT 185), but may not be restricted to these specific PCTs (NSW DPE 2023).
4. The geographic distribution of *Caladenia rileyi* is highly restricted. The area of occupancy (AOO) is estimated to be 36 km<sup>2</sup>, based on nine 2 x 2 km grid cells, the scale recommended for assessing AOO by IUCN (2024). The extent of occurrence (EOO) is estimated to be 327 km<sup>2</sup>. The EOO is based on a minimum convex polygon enclosing all mapped occurrences of the species, the method of assessment recommended by IUCN (2024).
5. There is a low number of mature individuals of *Caladenia rileyi*. In the 2024 season, after favourable flowering conditions, a total of around 856 *C. rileyi* plants were recorded, including 127 plants in flower at the time of the survey. The largest subpopulation, located in a state forest, contained 572 above-ground plants with 108 plants flowering (around 80% of the total flowering plants) (DCCEEW unpubl. data). Due to the much drier winter of 2023 only four flowering plants were recorded at this same site (DCCEEW unpubl. data). Herbivory from native and exotic herbivores has been observed at all sites and levels are considered to be very high at the two state forest subpopulations, suggesting low survival to flowering or seed production (A. Murphy *in litt.* Sept 2024). It is difficult to estimate the current total population size of *C. rileyi* as plants observed flowering in one season that did not reemerge in the following season are not necessarily dead. Some may remain dormant underground, a common ecological strategy observed in orchids with a similar life history (Dixon and Tremblay 2009). Emergent numbers fluctuate primarily due to rain and soil moisture, and the underground population is probably capable of persisting for some years without emergence (Dixon and Tremblay 2009). However, given the season in 2024 was considered a year with favourable conditions for flowering, in which only 127 flowering plants were recorded, some of which may not produce seeds due to abortion or herbivory, the total number of mature individuals of *C. rileyi* is unlikely to exceed 1000, and is likely somewhat fewer. Similarly, the largest subpopulation of the species plausibly contains less than 250 mature individuals.

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6. Little is known of the specific details of the biology of *Caladenia rileyi* however it is believed to be very similar to other spider orchids. *Caladenia* species are deciduous and die back to a dormant, fleshy tuber over summer (NSW DEC 2004; Dixon and Tremblay 2009). In *Caladenia*, tubers are generally replaced annually by a single daughter tuber on a vertical dropper, but few species appear to reproduce vegetatively by this means (Jones 2021). The tuber sprouts following sufficient late autumn/winter rains, with a single leaf developing above ground. Once the leaf is fully extended, a single flower may be produced. *C. callitrophila* flowers in September to October if conditions are suitable and flowers persist for about a month depending on the seasonal conditions (NSW DEC 2004; Copeland and Backhouse 2022). The prominent calli on the labellum of *C. callitrophila* suggest that is likely pollinated by nectar-foraging thynnid wasps (Reiter *et al.* 2019).
7. Plants produce tiny dust-like seeds that disperse on wind currents (Dixon and Tremblay 2009), however as the plants usually grow under a dense woodland canopy, most seeds likely fall within just a few metres of the plant, indicating significant barriers to widespread dispersal, especially in fragmented populations (Machon *et al.* 2002; Brzosko *et al.* 2017). Seeds are short-lived in the soil seedbank as per other Orchidaceae, often lasting only one or two seasons (NSW DEC 2004; Dixon and Tremblay 2009). Successful germination requires sufficient moisture, adequate temperatures (usually 15-20°C) and the presence of a suitable mycorrhizal fungal symbiont at the soil surface (Batty *et al.* 2001; Ramsay and Dixon 2003; Dixon and Tremblay 2009).
8. The generation length of this species is not known but is likely to be similar to other species of *Caladenia*. While the time from seed germination to flowering for *Caladenia* species is largely unknown under natural habitat conditions, ex situ plants have been observed to flower 2-3 years after germination (Swarts 2007). Based on data for closely related *Caladenia* species, these e -situ plants likely live for at least 10-20 years (Swarts 2007, NSW DEC 2004).
9. The current main threats to *Caladenia rileyi* are from habitat clearing fragmentation, herbivory pressure, weed incursion, recreational activities and reduced reproductive output due to the effects of a changing climate. Clearing of woodlands dominated by *Callitris glaucophylla* (white cypress pine), *Eucalyptus melliodora* (yellow box) and *E. microcarpa* (grey box) has been extensive in the region, with an estimated loss of over 80% (Moore 1953; NSW DEC 2004; Thompson and Eldridge 2005; NSW DPE 2023). Most of the remaining vegetation has been, and continues to be, heavily modified due to a combination of grazing by domestic livestock, browsing by non-native and native animals, forestry activities, weed incursion and altered fire regimes. Currently in the south-west slopes-Riverina region, *C. glaucophylla* woodlands occur in highly fragmented remnants, with many managed as formal forestry reserves and such woodlands are very poorly represented in protected areas (Thompson and Eldridge 2005; NSW DPE 2023). One of the state forest sites has been impacted by gravel extraction with areas that now contain little topsoil or organic matter (Backhouse 2020; A. Murphy *in litt.* Sept 2024) The removal and degradation of this vegetation type has very likely had a significant impact on the distribution of *C. rileyi*. 'Clearing of native vegetation' is listed as a key threatening process (KTP) under the *Biodiversity Conservation Act 2016* (BC Act).

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10. Forestry operations can threaten *Caladenia rileyi* by disturbing its habitat and disrupting its lifecycle, especially if conducted at inappropriate times or disturbing soil in areas where the plants occur. Logging practices, in particular, may pose a direct threat through physical damage from treefall, soil compaction, log dumps, and harvesting machinery. They can also indirectly threaten the species by facilitating the incursion of weeds following soil disturbance or opening of the canopy (NSW DEC 2004). Half of the *C. rileyi* subpopulations occur in state forests and are found growing among regrowth white cypress pine. Thinning of these young stands of white cypress, to reduce competition and encourage faster growth, may be detrimental to populations of *C. rileyi*, again, either by direct physical damage or by promoting herbaceous competitors (NSW DEC 2004).
11. The impacts of herbivores, which includes both the consumption of vegetation, as well as the trampling and habitat destruction by domestic, feral and native herbivores, has the capacity to eliminate mature plants and/or disrupt reproductive processes resulting in a decrease in population numbers (NSW DEC 2004). The threat from herbivory to this species is considered very high. Large quantities of herbivore scats were observed in the state forests sites in September 2024 (A. Murphy *in litt.* Sept 2024). The leaves and flower stems of *Caladenia* spp. are palatable and evidence of grazing by native and introduced vertebrate herbivores (including macropods, goats (*Capra hircus*), sheep (*Ovis aries*) and cattle (*Bos taurus*)) is frequently observed in areas accessible to these animals. Additionally, the tubers may be preyed upon by animals such as, rabbits (*Oryctolagus cuniculus*), white-winged choughs (*Corcorax melanorhamphos*) or pigs (*Sus scrofa*) (NSW DEC 2004; G. Robertson *in litt.* June 2024). Domestic livestock, particularly sheep and cattle, can also damage the habitat through pugging in wet conditions. The orchid's vulnerability to soil disturbance is increased by the positioning of the collar, its primary nutrient transfer organ, at the soil surface via the mycorrhizal associations (Dixon and Tremblay 2009). Grazing may also negatively impact the plants that pollinators rely on, or the soils where female wasps build their nests (NSW DEC 2004). 'Competition and grazing by the feral European Rabbit, *Oryctolagus cuniculus*', 'Predation, habitat degradation, competition and disease transmission by Feral Pigs, *Sus scrofa*' and 'Competition and habitat degradation by Feral Goats, *Capra hircus*' are listed as a KTPs under the BC Act.
12. There are a number of introduced weed species that occur near *Caladenia rileyi* subpopulations and in the surrounding forests. These weeds can result in overshadowing and soil moisture depletion, reducing resources available for flower emergence and fruit development in the orchid. Pasture weeds like *Echium* spp., *Bartsia trixago*, *Brassica* spp. and *Trifolium* spp. have high coverage in some areas where the orchid is found. In addition, annual grasses such as *Avena* spp., *Lolium* spp., *Bromus* spp., and *Vulpia* spp. are present in all the forests where this species has been recorded and where dense, appear to competitively exclude the terrestrial orchids (G. Robertson *in litt.* Feb 2021). 'Invasion of native plant communities by exotic perennial grasses' is listed as a KTP under the BC Act.
13. *Caladenia rileyi* relies on late autumn and winter rains to trigger emergence and flowering. Decreases in this seasonal rainfall as a consequence of climate change are likely to make the habitat less suitable, reducing reproductive output for the

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species. In addition, the projected hotter temperatures and increase in drought frequency, severity and duration may result in a reduced flowering period for *Caladenia* species (NSW DEC 2004) and may also disrupt the critical overlap between orchid flowering times and pollinator activity, further compromising reproductive success (Brown *et al.* 2008). Furthermore, the thynnid wasp pollinators of *Caladenia* species are parasitoids of scarabaeid larvae in soil. Climate change, either increased drought or increased rainfall, may negatively affect the availability of scarab larvae (Frew 2016) and therefore abundance of pollinators. The highly specialized biotic relationships (with pollinators and mycorrhizal fungi) and limited reproductive resilience of *Caladenia* orchids, as evidenced by their low annual seedling recruitment, severely constrain the species' ability to migrate to new, climatically suitable sites, especially in highly fragmented landscapes. Consequently, climate change poses a significant threat to the long-term survival of the species (Dixon and Tremblay 2009). 'Anthropogenic Climate Change' is listed as a KTP under the BC Act.

14. Recreational activities including horse riding, mountain biking, motorbike riding, off-road vehicle use and camping, can cause destruction of, and physical damage to plants (e.g. trampling, crushing, uprooting); soil compaction; soil disturbance, affecting soil moisture and encouraging the establishment of weeds (DEH 2009). Populations of this species on public land close to roads, tracks, and walking trails tend to be more susceptible to these threats (Ecology Australia 2017). Over collection of plants or flowers may pose some risk to this species (NSW DEC 2004; A. Murphy *in litt.* Sept 2024).
15. *Caladenia rileyi* D.L.Jones is not eligible to be listed as a Critically endangered species.
16. *Caladenia rileyi* D.L.Jones is eligible to be listed as an Endangered species as, in the opinion of the NSW Threatened Species Scientific Committee, it is facing a very high risk of extinction in Australia in the near future as determined in accordance with the following criteria as prescribed by the *Biodiversity Conservation Regulation 2017*:

## **Assessment against *Biodiversity Conservation Regulation 2017* criteria**

The Clauses used for assessment are listed below for reference.

### **Overall Assessment Outcome:**

*Caladenia rileyi* was found to be Endangered under Clause 4.3(b)(d)(e i,iii) and Clause 4.4(b)(e i,ii A(II)).

### **Clause 4.2 – Reduction in population size of species (Equivalent to IUCN criterion A)**

**Assessment Outcome: Data Deficient**

<b>(1) - The species has undergone or is likely to undergo within a time frame appropriate to the life cycle and habitat characteristics of the taxon:</b>			
	(a)	for critically endangered species	a very large reduction in population size, or

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	(b)	for endangered species	a large reduction in population size, or
	(c)	for vulnerable species	a moderate reduction in population size.
<b>(2) - The determination of that criteria is to be based on any of the following:</b>			
	(a)	direct observation,	
	(b)	an index of abundance appropriate to the taxon,	
	(c)	a decline in the geographic distribution or habitat quality,	
	(d)	the actual or potential levels of exploitation of the species,	
	(e)	the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.	

### **Clause 4.3 - Restricted geographic distribution of species and other conditions (Equivalent to IUCN criterion B)**

**Assessment Outcome: Endangered under Clause 4.3(b)(d)(e i,iii)**

<b>The geographic distribution of the species is:</b>			
	(a)	for critically endangered species	very highly restricted, or
	(b)	for endangered species	highly restricted, or
	(c)	for vulnerable species	moderately restricted,
<b>and at least 2 of the following 3 conditions apply:</b>			
	(d)	the population or habitat of the species is severely fragmented or nearly all the mature individuals of the species occur within a small number of locations,	
	(e)	there is a projected or continuing decline in any of the following:	
		(i)	an index of abundance appropriate to the taxon,
		(ii)	the geographic distribution of the species,
		(iii)	habitat area, extent or quality,
		(iv)	the number of locations in which the species occurs or of populations of the species,
	(f)	extreme fluctuations occur in any of the following:	
		(i)	an index of abundance appropriate to the taxon,
		(ii)	the geographic distribution of the species,
		(iii)	the number of locations in which the species occur or of populations of the species.

### **Clause 4.4 - Low numbers of mature individuals of species and other conditions**

**(Equivalent to IUCN criterion C)**

**Assessment Outcome: Endangered under Clause 4.4(b)(e i,ii A(II))**

<b>The estimated total number of mature individuals of the species is:</b>			
	(a)	for critically endangered species	very low, or
	(b)	for endangered species	low, or
	(c)	for vulnerable species	moderately low,



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<b>and either of the following 2 conditions apply:</b>			
	(d)	a continuing decline in the number of mature individuals that is (according to an index of abundance appropriate to the species):	
		(i)	for critically endangered species      very large, or
		(ii)	for endangered species                      large, or
		(iii)	for vulnerable species                      moderate,
	(e)	both of the following apply:	
		(i)	a continuing decline in the number of mature individuals (according to an index of abundance appropriate to the species), and
		(ii)	at least one of the following applies:
		(A)	the number of individuals in each population of the species is:
			(I)      for critically endangered species      extremely low, or
			(II)     for endangered species                      very low, or
			(III)    for vulnerable species                      low,
		(B)	all or nearly all mature individuals of the species occur within one population,
		(C)	extreme fluctuations occur in an index of abundance appropriate to the species.

**Clause 4.5 - Low total numbers of mature individuals of species  
(Equivalent to IUCN criterion D)  
Assessment Outcome: Vulnerable**

<b>The total number of mature individuals of the species is:</b>		
	(a)	for critically endangered species      extremely low, or
	(b)	for endangered species                      very low, or
	(c)	for vulnerable species                      low.

**Clause 4.6 - Quantitative analysis of extinction probability  
(Equivalent to IUCN criterion E)  
Assessment Outcome: Data Deficient**

<b>The probability of extinction of the species is estimated to be:</b>		
	(a)	for critically endangered species      extremely high, or
	(b)	for endangered species                      very high, or
	(c)	for vulnerable species                      high.

**Clause 4.7 - Very highly restricted geographic distribution of species–  
vulnerable species  
(Equivalent to IUCN criterion D2)  
Assessment Outcome: Vulnerable**

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For vulnerable species,	the geographic distribution of the species or the number of locations of the species is very highly restricted such that the species is prone to the effects of human activities or stochastic events within a very short time period.
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Professor Caroline Gross  
Chairperson  
NSW Threatened Species Scientific Committee

**Supporting Documentation:**

Bray C (2024) Conservation Assessment of *Caladenia rileyi* D.L.Jones (Orchidaceae).  
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## References

- ALA (Atlas of Living Australia) (2024). <https://www.ala.org.au/> (accessed April 2024).
- Batty AL, Dixon KW, Brundrett MC, Sivasithamparam K (2001) Constraints to symbiotic germination of terrestrial orchid seed in a mediterranean bushland. *New Phytologist* **152**, 511–52.
- Brown AP, Dundas P, Dixon KW, Hopper SD (2008) 'An illustrated guide to the orchids of Western Australia.' (University of Western Australia Press: Perth)
- Brzosko E, Ostrowiecka B, Katowicz J, Bolesta M, Gromotowicz A, Gromotowicz M, Orzechowska A, Orzolek J, Wojdalska M (2017) Seed dispersal in six species of terrestrial orchids in Biebrza National Park (NE Poland). *Acta Societatis Botanicorum Poloniae*, 86(3).
- Copeland LM, Backhouse GN (2022) 'Guide to native orchids of NSW and ACT.' (CSIRO Publishing: Clayton South, Victoria)
- Dixon K and Tremblay RL (2009) Biology and natural history of *Caladenia*. *Australian Journal of Botany* **57**, 247–258.
- Ecology Australia (2001) Results of surveys for the nationally endangered *Caladenia arenaria* (Sand-hill Spider-orchid) in the Riverina, New South Wales, September–October 2000. Unpublished report by GW Carr for New South Wales National Parks and Wildlife Service, Western Region Office.
- Frew A (2016) How the soil environment affects root feeding scarabs with particular emphasis on the canegrub. PhD Thesis, Western Sydney University, Australia. <https://researchdirect.westernsydney.edu.au/islandora/object/uws%3A41122>
- IUCN (2012) IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK. <https://portals.iucn.org/library/sites/library/files/documents/RL-2001-001-2nd.pdf>
- IUCN Standards and Petitions Subcommittee (2024) Guidelines for Using the IUCN Red List Categories and Criteria. Version 16. [https://nc.iucnredlist.org/redlist/content/attachment\\_files/RedListGuidelines.pdf](https://nc.iucnredlist.org/redlist/content/attachment_files/RedListGuidelines.pdf)
- Jones D (2021) 'A complete guide to native orchids of Australia: Third Edition.' (New Holland Publishers: Australia).
- Machon N, Bardin P, Mazer SJ, Moret J, Godelle B, Austerlitz F (2002) Relationship in genetic structure and seed and pollen dispersal in the endangered orchid *Spiranthes spiralis*. *New Phytologist* **157**, 677–687.
- Moore CWE (1953) The vegetation of the south-eastern Riverina, New South Wales 1: the climax communities. *Australian Journal of Botany* **1**, 485-547.
- NSW DEC (Department of Environment and Conservation) (2004) *Caladenia arenaria* Fitzg. Recovery Plan. NSW Department of Environment and Conservation. Hurstville.
- NSW DPE (Department of Planning and Environment) (2023) Updating BioNet plant community types: PCT master list C2.0 (2023), NSW Department of Planning and Environment, Parramatta. Available at <https://www.environment.nsw.gov.au/>

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</media/OEH/Corporate-Site/Documents/BioNet/Updating-BioNet-PCTs-PCT-MasterlistC2-0-230379.pdf> (accessed 1 August 2024)

NSW SC (Scientific Committee) (2011) Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penneplain, Nandewar and Brigalow Belt South Bioregions - Determination to make a minor amendment to Part 3 of Schedule 1 of the Threatened Species Conservation Act. NSW Scientific Committee for the NSW Biodiversity Conservation Act. Available at: <https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/nsw-threatened-species-scientific-committee/determinations/final-determinations/2011-2012/inland-grey-box-woodland-in-the-riverina-minor-amendment-determination> (accessed 1 August 2024)

Ramsay M, Dixon KW (2003) Propagation science, recovery and translocation of terrestrial orchids. In 'Orchid conservation'. (Eds KW Dixon, SP Kell, RL Barrett, PJ Cribb) pp. 25–42. (Natural History Publications: Kota Kinabalu, Sabah, Malaysia)

Reiter N, Bohman B, Freestone M, Brown G, Phillips R (2019) Pollination by nectar-foraging thynnine wasps in the endangered *Caladenia arenaria* and *Caladenia concolor* (Orchidaceae). *Australian Journal of Botany* **67**, 490–500.

Swarts ND (2007) 'Integrated conservation of the rare and endangered terrestrial orchid *Caladenia huegelii* H.G.Reichb.' PhD Thesis, The University of Western Australia, Perth.

Thompson WA, Eldridge DJ (2005) White cypress pine (*Callitris glaucophylla*): a review of its role in landscape and ecological processes in eastern Australia. *Australian Journal of Botany* **53**, 555-570.