



THREATENED SPECIES LISTING STATEMENT

ORCHID

Lindley's spider orchid

Caladenia lindleyana (Rchb.f.) M.A.Clem. & D.L.Jones, Austral. Orchid Res. 1: 27 (1989)

Status

Tasmanian *Threatened Species Protection Act 1995*

.....endangered

Commonwealth *Environment Protection and Biodiversity*

Conservation Act 1999.....Critically Endangered



Les Rubenach



Description

Lindley's spider orchid belongs to the genus *Caladenia*. All species are deciduous and die back after flowering to small subterranean tubers enclosed by a fibrous sheath or tunic. Plants have a single narrow basal leaf that appears above ground in late autumn or early winter following rains. The flowers have a labellum (lip) which is hinged at the base and bears rows of conspicuous, variously shaped and coloured calli on the upper surface. The labellum margins often also bear calli or may be deeply lobed or toothed. Members of this genus have hairs on most above-ground organs.

Spider orchids have large flowers with long, tapered or filamentous segments. They are mostly

pollinated by male thynnine wasps that attempt to mate with the labellum. The wasps are attracted by the scents resembling pheromones of the female wasps that are produced by glands on the flowers. A few spider orchids may also be pollinated by native bees.

Caladenia lindleyana flowers from November to January and in flower, the plants are 12 to 35 cm tall with a wiry stalk bearing one or two flowers. The flower is about 45 mm across and is greenish yellow suffused with reddish hues. It has darker, slender tail-like extensions. The dorsal sepal is 25 to 40 mm long and 2.5 to 3 mm wide, the lateral (lowermost) sepals are 25 to 40 mm long and 2.5 to 3 mm wide and the petals are 20 to 25 mm long and

1.5 mm wide. The labellum is cream with dark red stripes and suffusions. It has a maroon apex and dark red calli. The column behind the labellum is greenish. The leaf of Lindley's spider orchid is hairy and is 6 to 11 cm long and 3 to 5 mm wide.

Lindley's spider orchid was previously regarded as a variety of *Caladenia patersonii* but it can be distinguished from this species by its smaller flowers and narrower tail-like extensions.

Caladenia lindleyana was previously known as *Arachnorchis lindleyana*.

Distribution and Habitat

Lindley's spider orchid is endemic to Tasmania and is now known only from a few localities in a 58 square kilometre area in the central north and northern Midlands. It occupies only a few square metres in total. It is found in open eucalypt forest and woodland.

Important Locations

Locality	1:25,000 mapsheet	Year last seen	Area (ha)	Number
Conara Private land	Conara	1985		few
Cleveland Diprose Lagoon Nature Reserve	Cleveland	1997	0.0001	1
Near Underwood -1 or 2 sites Private land	Dilston	1985		few
Circular Head	Stanley	1838	extinct	0

Threats, Limiting Factors and Management Issues

Lindley's spider orchid appears to have undergone a dramatic decline. It is a species of grassy/heathy open eucalypt forest, a habitat that has suffered greatly from agricultural practices such as clearing, application of fertilisers, overgrazing and overburning. Extensive searches in recent years have failed to locate the species in numerous bush remnants where it could be expected to occur.

As well as the risk of accidental damage associated with such small populations, Lindley's spider orchid continues to be at risk from land clearing, application of fertilisers to improve bush grazing, overgrazing and inappropriate fire regimes.

Conservation Assessment

Population Estimate

The available knowledge is that the 3 or 4 known populations of Lindley's spider orchid each involve a few plants only with only a single plant known from the Diprose Lagoon Nature Reserve. The latter plant was last seen in 1997 despite subsequent searches. Likewise, plants in the other populations have not been seen since 1985. In recent years, numerous searches have been made for the species in suitable remnants where it may be expected to occur.

Reservation Status

Lindley's spider orchid occurs in the Diprose Lagoon Nature Reserve though only one plant is known from this reserve.

Assessment Criteria

Lindley's spider orchid meets the criteria for listing as endangered on the Tasmanian *Threatened Species Protection Act 1995* because

- there are less than 250 mature individuals in total
- it is severely restricted, extending over an area of less than 500 square kilometres and occupying less than 10 hectares
- it occurs in 5 or less populations
- there is a continuing decline

It qualifies as Critically Endangered using the 1994 IUCN (World Conservation Union) Red List criteria.

Recovery Program

Objectives

- prevent the loss or degradation of known populations
- increase the number of known populations through survey

Existing Management

Management guidelines have been prepared for Lindley's spider orchid (Ziegeler 1997). Lindley's spider orchid was included in a project to manage

and recover Tasmanian grassland orchids. This included survey work in 1998 -1999.

Actions Needed

- pursue management options with landowners/managers to protect populations of the Lindley's spider orchid against possible changes in land use that would be detrimental to the species
- monitor known populations for threats and declines
- establish a mechanism to ensure management intervention when required
- further survey

Information Needed

- determine whether there are any more populations in existence

Management Advice

For the land owner/land manager

- consider temporary fencing to protect plants from being trampled, taking care to ensure that sites do not become overgrown
- slash, graze or burn in order to keep the habitat open, taking care to time actions to allow plants to disperse seed
- do not apply fertilisers
- do not overgraze
- consider some form of long-term protection, e.g. private nature reserve, management agreement, covenant, etc.

For everyone

- search for new populations from November to January when the plants are in flower
- help us to monitor known populations, particularly at flowering time

Further Information

Contact details: Threatened Species Section, Department of Primary Industries and Water, GPO Box 44 Hobart Tasmania Australia 7001. Ph (03) 6233 6556 fax (03) 6233 3477.

Specialist Advice: Hans Wapstra, Vegetation Section, Department of Primary Industries, Water and Environment

Source Material

References

Jones, D. Wapstra, H., Tonelli, P. and Harris, S. 1999. *The Orchids of Tasmania*. Melbourne University Press.

Jones, D.L. 1998. Contributions to Tasmanian Orchidology –2: A Taxonomic Review of *Caladenia* R. Br. in Tasmania, *Australian Orchid Research* 3: 16-60.

Jones, D.L., Clements, M.A., Sharma, I. and Mackenzie, A. 2001. A new classification of *Caladenia* R.Br. (Orchidaceae), *The Orchadian* 13: 389-412.

Ziegeler, D. 1997. *A recovery plan and management guidelines for threatened orchids in Tasmanian forests*. Report to the Tasmanian Regional Forest Agreement Environment and Heritage Technical Committee.

Statement Prepared: January 2001 (name updated 2003 and 2006)

Prepared by: Wendy Potts and Hans Wapstra

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Permit: It is an offence to collect, possess or disturb this species unless under permit.