

THREATENED SPECIES LISTING STATEMENT



ORCHID **Black-tipped spider orchid**
Caladenia anthracina D.L.Jones, Austral. Orchid Res. 3: 21 (1998)

Status

Tasmanian *Threatened Species Protection Act 1995*

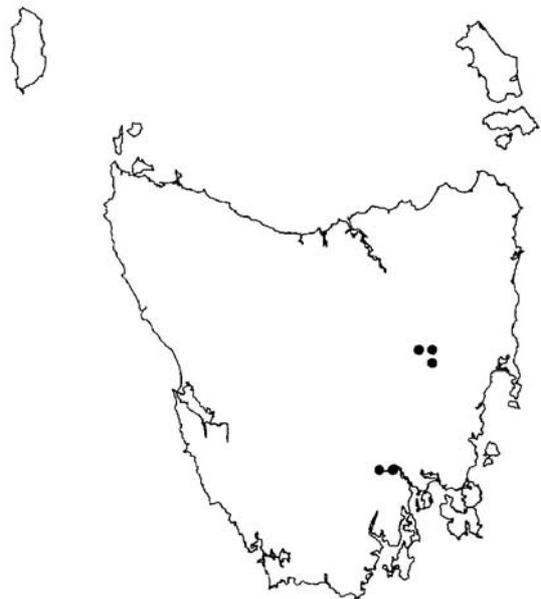
.....endangered

Commonwealth *Environment Protection and Biodiversity*

Conservation Act 1999.....Critically Endangered



Hans & Annie Wapstra



Description

Black-tipped 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 anthracina flowers from late September to early November and in flower, the plants are 10 to 20 cm tall with a wiry and densely hairy stalk bearing a single flower. The flower is 45 to 65 mm across and is white to cream with pale reddish lines and prominent black tail-like extensions. The dorsal sepal is 35 to 55 mm long and 2 to 3 mm wide, the lateral (lowermost) sepals are 35 to 55 mm long and 3.5 to 5 mm wide and the petals are 35 to 45 mm long and 2 to 3 mm wide. The labellum is white to cream with dark reddish purple calli and the column behind the labellum is translucent with reddish markings. The leaf of the black-tipped spider orchid

is densely hairy with a purple blotched base and is 5 to 12 cm long and 3 to 7 mm wide.

Caladenia anthracina is part of the *Caladenia patersonii* complex and can be confused with *Caladenia dienema* and *Caladenia patersonii*. It can be distinguished from these species by its narrower flowers with more stiffly spreading petals and lateral sepals and narrower tail-like extensions. *Caladenia dienema* has dark, usually reddish flowers. *Caladenia patersonii* is taller in stature

with larger flowers. *Caladenia anthracina* was previously known as *Arachnorchis anthracina*.

Distribution and Habitat

Black-tipped spider orchid is endemic to Tasmania and is now confined to a 27 square kilometre area in the Midlands, occupying a total of about 2 hectares in total. It occurs in grassy woodland with silver wattle and bracken on well-drained sandy soil.

Important Locations

Locality	1:25,000 mapsheet	Year last seen	Area (ha)	Number
West of Campbell Town -2 sites Private land	Jacobs	1996	0.25	30
Campbell Town Golf Course Private land	Campbell Town	1996	0.25	25
Northeast of Ross Private land	Ross	1995	1.5	25
East of Ross Private land	Ross	1995	0.0008	10
Granton	New Norfolk	1920	presumed extinct	
New Norfolk	New Norfolk	1842	presumed extinct	

Threats, Limiting Factors and Management Issues

Black-tipped spider orchid is now confined to four populations and all occur on private land in the Midlands. The Campbell Town Golf Course population is the only population subject to protection from a covenant and management agreement. The species is likely to have declined due to agricultural development. Its woodland habitat is disjointed and is subject to further decline from the impact from agricultural activities such as nutrient enrichment, overgrazing and trampling in sandy sites especially in periods of drought, and inappropriate fire frequency. One site west of Campbell Town is already heavily infested with bracken. None of the colonies have much hope of expanding due to being surrounded by unsuitable habitat and the likelihood of finding new populations is low as most potential habitat has been lost to agriculture. Black-tipped spider orchid occurs in colonies that are extremely restricted in extent and number of plants. This makes the risk of accidental loss a reality. The extremely small population east of Ross is currently protected from trampling by wire netting.

Conservation Assessment

Population Estimate

There are only 4 known extant populations of the black-tipped spider orchid with a total of approximately 100 mature individuals. The largest population occurs in two patches about 800 m apart and consists of approximately 30 individuals in total. As much of the potential habitat of the black-tipped spider orchid has been lost due to agricultural development, it is not very likely that new populations will be found. Extensive surveys of likely habitats in the Midlands in 1999 have been unsuccessful in locating new colonies.

Reservation Status

The black-tipped spider orchid is not reserved.

Assessment Criteria

Black-tipped 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

Black-tipped spider orchid was included in a project to manage and recover Tasmanian grassland orchids. Survey work was carried out in 1998 -1999. The Campbell Town Golf Course is subject to a covenant and a management plan that address the needs of the species.

Actions Needed

- pursue management options with landowners/managers to protect populations of the black-tipped 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

- do not overgraze, particularly in sandy sites and in drought years, to protect plants from being trampled
- 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 plough or fertilise potential grassland habitat
- implement recommendations in the management plan for the Campbell Town Golf Course
- consider some form of long-term protection, e.g. private nature reserve, management agreement, covenant, etc.

For everyone

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

Further Information

Contact details: Threatened Species Unit, Department of Primary Industries, Water and Environment, 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.

Nicholson, R. 2000. *Rarities in the rough. Playing golf amongst rare and endangered plants. Management plan for the Campbell Town Golf Course*. Department of Primary Industries, Water and Environment, Tasmania.

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Prepared by: Wendy Potts and Hans Wapstra

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View: <http://www.dpiw.tas.gov.au>

& follow the links to Natural Environment, Threatened Species, List of Threatened Species.

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