

THREATENED SPECIES LISTING STATEMENT



ORCHID

Small tongue orchid

Cryptostylis leptochila F. Muell. ex Benth. 1873

Status

Tasmanian *Threatened Species Protection Act 1995*

.....endangered

Commonwealth *Environment Protection and Biodiversity*

Conservation Act 1999.....Not listed



Colin Spry



Description

The small tongue orchid belongs to a group of orchids commonly known as tongue orchids because the labellum resembles a tongue. *Cryptostylis* species are evergreen terrestrials that grow in small, spreading clumps. They lack tubers but instead have thick, fleshy spreading roots that develop from small crowns bearing stalked, erect, leathery leaves. Apart from limited vegetative increase, these orchids rely mainly on seed for their dispersal.

The upside-down flowers of *Cryptostylis* species are borne on tall stems and are dominated by a large labellum with minute glandular hairs covering the surface. Other flower parts are slender and inconspicuous. All Australian species are pollinated by a single species of wasp (*Lissopimpla excelsa*) when the males attempt to mate with the labellum. The male wasps are attracted by the scent and

appearance of the labellum that mimics the scent, shape and colour of the female wasp.

The leaves of the small tongue orchid are solitary or in small groups and are held stiffly erect. They are leathery, dark green on the upper surface and brownish purple to purple beneath and are 6 to 12 cm long and 30 to 40 mm wide on 40 to 60 mm long stalks. The species flowers from November to March, with 9 to 12 flowers on a stiff stem that is 25 to 40 cm tall. The labellum projects forward then curves back abruptly with inrolled margins and an apex that is often reflexed. When flattened it is 18 to 20 mm long and 5 mm wide. The labellum is dark brownish purple and softly hairy, appearing furry, with a thick raised central longitudinal plate (often discontinuous), flanked on either side by an irregular row of domed shiny black calli. Other flower parts are stiffly spreading with inrolled margins and are green to whitish and 15 to 22 mm

long and 2 to 4 mm wide. They consist of a downcurved dorsal sepal, two widely divergent lateral sepals and two curved, widely spreading petals.

Cryptostylis leptochila is a distinctive species not easily confused with *Cryptostylis subulata*, the other *Cryptostylis* species that occurs in Tasmania.

Distribution and Habitat

In Tasmania, the small tongue orchid is known from several sites in the Darling Range and

southwest of Logan Lagoon on Flinders Island. It extends over 74 square kilometres and occupies less than 15 hectares in total. Also occurring on the mainland in Victoria, New South Wales and Queensland, the species only just makes it into Tasmania. Small tongue orchid is found in open eucalypt forest with a paperbark and tea-tree shrubby understorey and in heathland on clay loams.

Important Locations

	Locality	1:25,000 mapsheet	Year last seen	Area (ha)	Number of mature plants
1	Memana Road Darling Range Conservation Area	Leventhorpe	2001	2	about 200
2	Furneaux Pistol Club Crown land	Leventhorpe	1994	<0.5	30+
3	Haulands Gap Crown land	Leventhorpe	1994	10+	200+
4	Southwest of Logan Lagoon Private land	Logan	2000	1	about 100

Threats, Limiting Factors and Management Issues

The small tongue orchid is not represented in a secure reserve and is threatened by farming practices, forest clearing and inappropriate burning. In Tasmania, the species has a limited distribution and is at risk from chance events. Its occurrence on Flinders Island can be regarded as an outlier of the Victorian distribution and the species is not likely to occur in mainland Tasmania or elsewhere on Flinders Island as the island has been well surveyed for its orchids.

The small tongue orchid is sensitive to burning as it does not have underground tubers. Fires occur frequently in its habitat on Flinders Island. Colonies may take a few years to recover from hot summer fires and as the species mainly relies on seed for propagation, a quick succession of fires can pose a serious threat to populations.

The largest population at Memana Road was seriously damaged in 1999 when top soil was scraped off in order to limit growth beneath electricity wires and to improve drainage. A population of *Gompholobium ecostatum*, another endangered species at this site, was also seriously damaged. The small population on land leased by the pistol club is in remnant scrub surrounded by improved pasture with cattle having occasional access. This population is threatened by application

of fertilisers, improved drainage and trampling by cattle.

The population southwest of Logan Lagoon occurs on private land where many orchids are thriving in response to regular slashing.

Conservation Assessment

Population Estimate

There are 4 extant populations of the small tongue orchid in Tasmania. The total number of mature individuals has been estimated to be less than 600 with about 200 in each of the two largest populations. As the Tasmanian occurrence is considered to be an outlier of the Victorian distribution, the species is unlikely to be found on mainland Tasmania. It is also unlikely to be found elsewhere on Flinders Island as the island has been well surveyed for orchids and these orchids tend to flower every year.

Reservation Status

Small tongue orchid is poorly reserved. It is afforded some protection by its occurrence in the Darling Range Conservation Area.

Assessment Criteria

Small tongue orchid meets the criteria for listing as endangered on the Tasmanian *Threatened Species Protection Act 1995* because

- there are less than 2500 mature individuals in total

- no population has more than 250 mature individuals
- it is severely restricted, extending over an area of less than 500 square kilometres and occupying less than 20 hectares
- it occurs in 5 or less populations
- there is a continuing decline

Recovery Program

Objectives

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

Existing Management

Small tongue orchid is included in a project to manage and recover threatened Tasmanian orchids. The project commenced in late 2001.

Actions Needed

- pursue management options with landowners/managers to protect populations of the small tongue orchid against possible changes in land use that would be detrimental to the species
- manage roadside populations to prevent accidental damage with maintenance activities
- 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 slashing or burning if the habitat becomes overgrown, taking care to allow plants to flower and set seed
- prevent fires in quick succession
- do not apply fertilisers

- restrict the possibility of excess trampling by cattle
- if you own land on which small tongue orchid grows, 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 March, 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 and Annie Wapstra, Howden (contact via the Threatened Species Unit)

Source Material

Bibliography

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

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Prepared by: Wendy Potts and Hans Wapstra

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

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

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