

# THREATENED SPECIES LISTING STATEMENT



ORCHID

**Robust leek orchid**

*Prasophyllum robustum* M. A. Clem. & D. L. Jones 1989

## Status

Tasmanian *Threatened Species Protection Act 1995*

.....endangered

Commonwealth *Environment Protection and Biodiversity*

*Conservation Act 1999*.....Critically Endangered



Peter Tonelli



## Description

Robust leek orchid belongs to a group of orchids commonly known as leek orchids because the erect hollow leaf has some resemblance to that of a leek. *Prasophyllum* species are deciduous terrestrials with small, fleshy, round or oval tubers and a few fleshy, irregular roots. Most species are dormant over summer and autumn and begin growth in early winter. The single leaf is reddish at the base as opposed to green as in onion orchids (*Microtis*). The flower spike emerges through the side of the leaf above the middle, with the portion of leaf above the point of emergence being free and often withered by the time the flowers open. The flower spike bears many flowers that are held upside-down and are often fragrant. The labellum, often with prominent wavy or frilly margins, produces quantities of nectar on which a wide range of

insects feed. Some of these, particularly native bees, wasps and beetles, are effective pollinators.

The leaf of the robust leek orchid is dark green with a red to purple base, the free part 10 to 20 cm long. It flowers in November and December and in flower, the plants are 40 to 110 cm tall. They have 15 to 30 flowers in a loose spike 15 to 25 cm long. The ovary is shiny green. The flowers are 15 to 20 mm long and 15 to 20 mm wide and have greenish brown to brownish sepals with 3 to 5 dark brown markings prominent on the lowermost sepal, whitish petals with a brown median band and a white labellum. The lateral sepals are not united and are very widely divergent. The petals are 10 to 11 mm long and 2.5 mm wide and are widely spreading. The labellum is sharply curved back on itself near the middle, the apex curved back through the lateral sepals. It has irregularly crinkled

margins. The fleshy green callus on the labellum has a shallowly notched apex and extends to the bend on the labellum.

*Prasophyllum robustum* is part of the *Prasophyllum patens/truncatum* complex. It can be confused with another member of this complex, *Prasophyllum stellatum*, but can be distinguished from this species by its wider petals, labellum apex that curves back through the lateral sepals and callus that only extends to the bend in the labellum. It can also be distinguished from *Prasophyllum stellatum* by its lowland distribution and earlier flowering time.

## Important Locations

Locality	1:25,000 mapsheet	Year last seen	Area (ha)	Number
Dooleys Hill, Latrobe Private land	Latrobe	1998	0.1	50
Smithton	Smithton	1940	extinct	0

## Threats, Limiting Factors and Management Issues

The only known extant population of the robust leek orchid is on private land. The owners are aware of the significance of the block of land, and the needs of the orchid in particular, and have been successfully managing the land for some years. Management has included patch burning which has served to keep the habitat open and may have stimulated flowering. The area surrounding this private block of land has been largely cleared and converted to housing or pasture for horses. The habitat is shrubby and grassy *Eucalyptus amygdalina* forest on basalt and is being investigated for a possible covenant under the Regional Forest Agreement as little of this habitat remains following extensive clearing in the past for agricultural activities. Until some formal arrangement is agreed upon, the threat of the population being cleared continues to apply.

## Conservation Assessment

### Population Estimate

There is only one known extant population of the robust leek orchid. It consists of about 50 mature individuals. Although the species may be stimulated by fire, it does not entirely depend on fire to produce flowers, giving confidence to the population estimate. There is little potential habitat remaining following extensive clearing in the past of forest on basalt for agriculture, and it is unlikely that many if any new populations remain to be found.

### Reservation Status

The robust leek orchid is not reserved.

*Prasophyllum robustum* was previously known as *Prasophyllum patens* var. *robustum* and had not been collected since the early 1900's. It was presumed extinct until rediscovered at Latrobe in 1995.

## Distribution and Habitat

Robust leek orchid is endemic to Tasmania and is now known only from a 0.1 hectare area at one location at Latrobe. It occurs in grassy and shrubby *Eucalyptus amygdalina* forest on well-drained brown loam derived from basalt.

## Assessment Criteria

Robust leek 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 qualifies as Critically Endangered using the 1994 IUCN (World Conservation Union) Red List criteria for the same reason.

## Recovery Program

Robust leek orchid was included in a recovery plan for threatened forest orchids (Ziegeler 1997). This plan has not been implemented.

### 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 the robust leek orchid (Ziegeler 1997).

### Actions Needed

- pursue management options with landowners/managers to protect populations of the robust leek orchid against possible changes in land use that would be detrimental to the species

- monitor the known population 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 alter current management if the population is thriving
- management may include some grazing (e.g. horses) and fire to ensure the habitat remains open
- consider some form of long-term protection, e.g. private nature reserve, management agreement, covenant, etc.

#### For everyone

- search for new populations in November and December 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 –6: A Taxonomic Review of *Prasophyllum* R. Br. in Tasmania, *Australian Orchid Research* 3: 94-134.

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.

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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.