



THREATENED SPECIES LISTING STATEMENT

ORCHID

Pretty leek orchid

Prasophyllum pulchellum D. L. Jones 1998

Status

Tasmanian *Threatened Species Protection Act 1995*

.....Endangered

Commonwealth *Environment Protection and Biodiversity*

Conservation Act 1999.....Critically Endangered



Hans & Annie Wapstra



Description

Pretty 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 pretty leek orchid is mid-green with a purplish red base, the free part about 10 cm long. It flowers in late October and November and in flower, the plants are 12 to 30 cm tall. They have 3 to 12 flowers in a narrow, loose spike 4 to 12 cm long. The ovary is green. The flowers are slightly fragrant, 5.5 to 7 mm long and 5.5 to 7 mm wide and have light reddish brown sepals and petals, with pale margins on the petals, and a cream to whitish labellum. The flowers do not open widely. The lateral sepals are not united. The petals are 5 to 6 mm long and 1.5 mm wide. The labellum is recurved at right angles near the middle, the apex touching the sepals or protruding through them. It has irregularly crinkled margins. The callus on the labellum is shiny and dark green at the base and

1

cream towards the apex that is notched. It extends just beyond the bend on the labellum.

Prasophyllum pulchellum can be distinguished from *Prasophyllum truncatum* by its flower colour, and less abruptly recurved labellum.

Distribution and Habitat

Pretty leek orchid is endemic to Tasmania and is known from widely scattered coastal localities in the north and south of the state. It occurs in dense low sedgy heath with pockets of paperbark or tea-tree on poorly to moderately drained sandy or peaty loam. Populations of the pretty leek orchid are small and compact and occupy an area less than 0.3 hectares in total.

Important Locations

Locality	1:25,000 mapsheet	Year last seen	Area (ha)	Number
Labillardiere Peninsula South Bruny National Park	Cloudy	1994	0.04	50
Deephole Bay, Southport Lagoon Private land	Leprena	1994	0.01	5 to 10
Ida Bay Ida Bay State Reserve	Leprena	1996	0.01	15
Near Squeaking Point Private land	Port Sorell	1998	0.25	50
Road to Bluff Hill Point Arthur-Pieman Conservation Area	Bluff	1998	0.01	few
Tasman Peninsula	Taranna	1961	possibly extinct	

Threats, Limiting Factors and Management Issues

The site at Squeaking Point is on private land in a rural/residential area being subdivided for residential occupation. It is on a block of sedgy/scrubby swamp land up to recently used for cattle and horses. It is one of the last remnants of a historically widespread habitat in this area, now heavily modified by cropping and housing. It is surrounded by roads and occupied land and this population is likely to be lost. Pretty leek orchid needs a regular fire to stimulate emergence and flowering, and inappropriate fire regimes are a concern elsewhere. The most serious concern is that we can say with a reasonable degree of confidence that this species has a very scattered distribution, with colonies containing low numbers of plants in very small patches and a demonstrated absence of the species in large areas of identical habitat nearby. This makes accidental loss of a population a realistic threat.

Conservation Assessment

Population Estimate

There are five known populations of the pretty leek orchid with the possibility of at least one other if an old record from the Tasman Peninsula can be verified. Populations to date are small and compact in area with the two largest populations having only about 50 plants each and the total number of mature individuals estimated to be approximately 130. The flowering of many leek orchids is strongly

dependent on hot summer fires or other disturbance, with large numbers of flowering plants often being produced a year later but few or none in subsequent years. It is therefore difficult to estimate the numbers of plants in populations and finding populations is often a matter of chance. The 5 known colonies were all discovered since 1994. Searches have failed to locate additional populations in apparently suitable habitat in the wider area surrounding the known colonies. However, the wide distribution of the species raises the possibility that some new populations will be found in the future.

Reservation Status

Pretty leek orchid is reserved in the South Bruny National Park and the Ida Bay State Reserve. It also occurs in the Arthur-Pieman Conservation Area.

Assessment Criteria

Pretty 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 occupies 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

Draft management plans have been prepared for the South Bruny National Park and the Arthur-Pieman Conservation Area.

Actions Needed

- pursue management options with landowners/managers to protect populations of pretty leek orchid against possible changes in land use that would be detrimental to the species
- maintain an appropriate burning regime to allow plants to emerge, flower and disperse seed
- 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

- burn habitat if it becomes overgrown, taking care to allow plants to seed before taking action
- consider some form of long-term protection, e.g. private nature reserve, management agreement, covenant, etc.

For everyone

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

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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.