THREATENED SPECIES LISTING STATEMENT

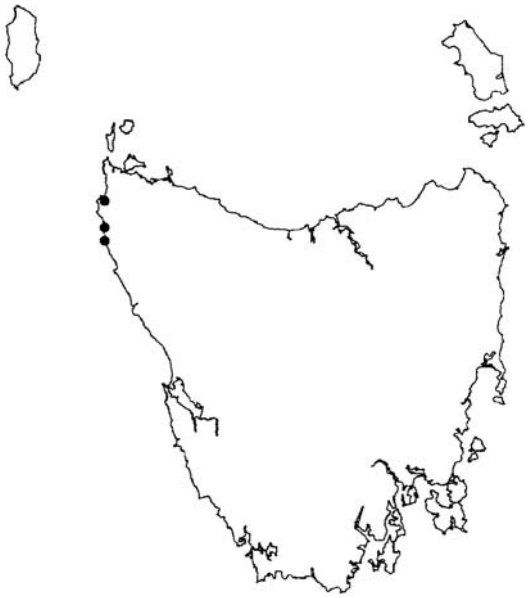
ORCHID **Western leek orchid**

Prasophyllum favonium D. L. Jones 1998

Status

Tasmanian *Threatened Species Protection Act 1995*
……..……..……..……..……endangered
Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*…….....…Critically Endangered

Les Rubenach



Description

Western 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 western leek orchid is pale-green to dark green with a reddish base, the free part 6 to 13 cm long. It flowers in October and November and in flower, the plants are 15 to 35 cm tall. They have 5 to 15 flowers in a condensed spike 3 to 7 cm long. The ovary is green with dark ribs. The flowers are slightly fragrant, 11 to 13 mm long and 5 to 6 mm wide and brownish, with a dark median line on the petals, and a dark purple labellum. The lateral sepals are not united. The petals are 5 to 6 mm long and 1.5 mm wide. The labellum is abruptly recurved at right angles near the middle and most of the upper surface and margins are covered with small elongate papillae. The labellum has wavy to twisted, curled or crumpled margins. The thickened, fleshy, green callus on the labellum is broadly

channelled and covered with small elongate papillae. It extends just beyond the bend on the labellum.

Prasophyllum favonium is one of three recently recognised new species closely related to *Prasophyllum fitzgeraldii* that previously may have been identified in Tasmania as *Prasophyllum rogersii.* It is most similar to *Prasophyllum secutum* but can be distinguished from that species by its shorter flowering spike, larger flowers, and a dark purple labellum.

Distribution and Habitat

Western leek orchid is endemic to Tasmania and is known only from a narrow 30 kilometre stretch between West Point and Sandy Cape in the far north-west of the state. It occurs among shrubs in windswept dense low heathland on moderately drained dark grey to black sandy peaty loam. It occurs in very small patches and occupies only about 0.005 hectares in total.

Important Locations

Locality	1:25,000 mapsheet	Year last seen	Area (ha)	Number
West Point Arthur-Pieman Conservation Area	Marrawah	1999	0.0001	2
Sundown Creek Arthur-Pieman Conservation Area	Sundown	1998	0.0005 to 0.001	3 to 5
Just north of Sardine Creek Arthur-Pieman Conservation Area	Sundown	1998	0.0005 to 0.001	3 to 5
Near Couta Rocks –2 sites Arthur-Pieman Conservation Area	Temma	1998 1988	0.0005 to 0.001 0.0005 to 0.001	3 to 5 3 to 5
Rebecca Creek –2 sites Arthur-Pieman Conservation Area	Temma	1994 1999	0.0005 to 0.001 0.0005 to 0.001	3 to 5 3 to 5

Threats, Limiting Factors and Management Issues

Western leek orchid may be assumed to have had a more widespread distribution in the coastal heathlands of the northern West Coast, but much of the suitable habitat in the area has been converted to agricultural use. If it does occur in remnants of suitable habitat north of Marrawah, ongoing threats include a renewed spate of land clearing and pasture development on Woolnorth and adjacent private property along Harcus River Road to the south. At West Point the habitat seems reasonably safe, as the rocky outcrops with which colonies are associated, tend to remain free of wildfires without becoming overgrown with shrubs to the exclusion of smaller plants. Within the Arthur-Pieman heathlands, cattle agistment poses a potential threat, be it small. The species flowers in the absence of fire, e.g. on rocky outcrops, but is thought to respond well to fire, especially in dense heathland. Inappropriate fire regimes may pose a long-term threat but only if large areas are excluded from burns for periods over 20-30 years.

The main concern about the species is the small number and size of known colonies, and small number of plants involved in each. Such small populations could easily be destroyed by serious and prolonged droughts, or localised events such as animals digging up tubers.

Conservation Assessment

Population Estimate

There are five known localities of the western leek orchid, each with a single population except for Couta Rocks, which may have two. Populations are typically very small with 1 or 2 colonies each consisting of 3 to 5 plants occupying a compact area of only 5 to 10 square metres. The total number of mature individuals has been estimated to be less than 40. As the populations are so small and compact making them difficult to find, it would to reasonable to expect that more colonies will be found. However, extensive searches within the current range and further south over a number of years, by a number of people, have not revealed colonies other than those listed. To the north, little potential habitat remains especially in the Woolnorth area due to agriculture and the chance of finding new populations in that area is low. While the species will flower in the absence of fire, flowering is probably stimulated by summer fires. Surveys of recently burnt heathland may therefore increase the chance of finding additional populations.

Reservation Status

Western leek orchid is not represented in a secure reserve. It is restricted to the Arthur-Pieman Conservation Area.

Assessment Criteria

Western 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.

Recovery Program

Objectives

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

Existing Management

A draft management plan has been prepared for the Arthur-Pieman Conservation Area.

Actions Needed

- pursue management options with landowners/managers to protect populations of western leek orchid against possible changes in land use that would be detrimental to the species
- maintain an appropriate burning regime to prevent heathlands from becoming too dense and to encourage flowering
- establish a mechanism to ensure management intervention when required
- further survey

Information Needed

- determine whether there are any more populations in existence
- determine the optimum fire frequency for the species

Management Advice

For the land owner/land manager

- burn habitat if it becomes overgrown, taking care to allow plants to seed before taking action

For everyone

- search for new populations in October and November, when the plants are in flower, especially in recently burnt areas
- 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.

Statement Prepared: October 2000

Prepared by: Wendy Potts and Hans Wapstra

Review Date: 2005 or as new information is received.

Cite as: Threatened Species Unit 2000. Listing Statement Western leek orchid *Prasophyllum favonium*. Department of Primary Industries, Water and Environment, Tasmania.

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.