



THREATENED SPECIES LISTING STATEMENT

ORCHID

Superb or cobra greenhood *Pterostylis grandiflora* R. Br. 1810

Status

Tasmanian *Threatened Species Protection Act 1995*

.....rare

Commonwealth *Environment Protection and Biodiversity*

Conservation Act 1999.....Not listed



Les Rubenach



Description

The superb greenhood belongs to a group of orchids commonly known as greenhoods because the dorsal sepal and petals are united to form a predominantly green, hood-like structure that dominates the flower. When triggered by touch, the labellum flips inwards towards the column, trapping any insect inside the flower, thereby aiding pollination as the insect struggles to escape. Greenhoods are deciduous terrestrials that have fleshy tubers, which are replaced annually. At some stage in their life cycle all greenhoods produce a rosette of leaves.

The 3 to 8 rosette leaves of the superb greenhood are bright green and are 7 to 40 mm long and 4 to 20 mm wide. The rosette is absent from flowering plants. The superb greenhood flowers from April to

August and in flower, the plants are 12 to 40 cm tall and have 4 to 8 leaves on a wiry stem. Plants have a solitary erect translucent white flower with green stripes and rich red-brown suffusions. The flower is 28 to 35 mm long and 18 to 22 mm wide. The superb greenhood is also commonly known as the cobra greenhood because the hood resembles the head of a striking cobra. The dorsal sepal on the hood has a curved-down apex that is longer than the flared brown petals. The two lateral sepals tightly embrace the hood and are fused at the base with 40 to 50 mm long free points that extend above the hood. The labellum is red-brown and sharply tapered.

Pterostylis grandiflora is not easily confused with other greenhoods. A taxonomic review of the

greenhoods has split *Pterostylis* into several new genera. This species has been renamed *Diplodium grandiflorum*. Until this change becomes widely accepted, for management purposes the Threatened Species Unit has chosen to continue dealing with this species as part of the *Pterostylis* genus.

Distribution and Habitat

In Tasmania, the superb or cobra greenhood is

restricted to the north-east of the state between the Freycinet and Narawntapu National Parks. It occurs mostly in heathy and shrubby open eucalypt forests and in grassy coastal she-oak woodland on moderately to well drained sandy and loamy soils. It prefers to grow amongst undergrowth on lightly shaded sites. The species also occurs in Queensland, Victoria and New South Wales.

Important Locations

	Locality	1:25,000 mapsheet	Last seen	Area (ha)	Number of mature plants
1	Asbestos Range (possibly 2 sites) Narawntapu National Park/State Forest	Port Sorell	1993	1	Approx. 50 seen
2	Holwell Gorge (possibly 2 sites) Holwell Gorge State Reserve	Beaconsfield	1994	0.001	Approx. 10 seen
3	Lefroy (area west and south of Lefroy)	Bell Bay	1984		
4	Pipers River area	Weymouth	1976		
5	Prospect Private land	Prospect	1938	Possibly extinct	
6	Barbers Bottom/Lilydale Road Private land	Dilston	1944	Possibly extinct	
7	Underwood area	Dilston	1945	Possibly extinct	
8	Third River Private land	Lilydale	1999	0.25	20
9	Lilydale Private land	Lilydale	1973		
10	Brid River (Highfield/Laurella area)	Nabowla/ Lisle	1946		
11	Cameron area Cameron Regional Reserve/State Forest	Gladstone	1970		
12	Golden Ridge (near Trafalgar Flat) State Forest	Brilliant	1986		
13	Apsley River Douglas Apsley National Park	Henry	1990	0.001	at least 10 seen
14	Mount Allen Private land/Douglas Apsley National Park	Seymour	1996	0.001	at least 10 seen
15	St Helens area	St Helens	1945	Possibly extinct	
16	Whalers Rock Whalers Lookout Crown Reserve	Bicheno	1970		
17	Bicheno Crown Land	Bicheno	1996	0.01	10-15 seen
18	Coles Bay area (multiple sites) Coles Bay area	Coles Bay	1990		
19	Saltwater Creek Coles Bay Conservation Area	Coles Bay	mid 80's	0.01	at least 10 seen
20	Lighthouse Road Freycinet National Park	Coles Bay	1992	0.0001	1 seen
21	Isthmus track Freycinet National Park	Coles Bay	1992	0.03 100 m along track	6 seen
22	Wineglass Bay track Freycinet National Park	Coles Bay	1984	0.005	10-15 seen
23	Honeymoon Bay Freycinet National Park	Coles Bay	1976		

Threats, Limiting Factors and Management Issues

The superb or cobra greenhood has small populations in the Freycinet, Douglas Apsley and Narawntapu National Parks as well as a number of other reserves offering varying levels of protection. The species has also been recorded from a variety of localities scattered across the northeast of Tasmania on private and public land. It is likely that there are other, as yet, undiscovered populations in the more remote areas of the northeast of the state.

Observations suggest that the superb greenhood grows as scattered individuals or in small colonies. Therefore individual populations are at risk from environmental stochasticity or decline due to normal fluctuations in the environment. Some populations, particularly those that have not been seen for over 50 years, may now be extinct due to land clearance and alteration for agricultural, urban and coastal development.

In many cases the exact locations of populations of the superb greenhood are unknown. Consequently, until populations can be accurately mapped and landowners and managers advised, individual populations are at risk from inadvertent use of detrimental management practices and urban, coastal and agricultural development.

Flowering is adversely affected by fire until shady undergrowth is re-established. An increase in fire frequency is likely to have an adverse impact on populations.

Conservation Assessment

Population Estimate

Over 20 populations have been recorded for the superb or cobra greenhood. Some may now be extinct, as they have not been seen for over 50 years. Orchid enthusiasts indicate that populations are generally small with about 50 plants seen in the largest population in the Asbestos Range. However information on the size and area occupied by populations is incomplete. Further survey is required to confirm the full extent of the distribution.

Reservation Status

The superb greenhood has populations within the Freycinet, Douglas Apsley and Narawntapu National Parks. Populations can also be found in a number of other reserves that offer varying levels of protection.

Assessment Criteria

The superb or cobra greenhood meets the criteria for listing as rare on the Tasmanian *Threatened Species Protection Act 1995* because:

- it occupies less than 20 10×10km Australian Metric Grid squares
- it occurs in very small and localised populations
- it is at risk of becoming vulnerable from further declines due to agricultural, urban and coastal development
- it occupies less than 50 ha
- there are less than 10,000 individuals
- no population has more than 1,000 individuals.

Recovery Program

Objectives

- prevent the loss or degradation of known populations
- increase the number of known populations through verification of records and further survey

Existing Management

The superb or cobra greenhood is included in a project to manage and recover threatened Tasmanian orchids. The project commenced early 2002. The Narawntapu, Douglas-Apsley and Freycinet National Parks are managed according to management plans that address threatened species issues.

Actions Needed

- pursue management options with landowners/managers to protect populations of superb greenhood against changes in land use that would be detrimental to the species
- confirm the location of populations where locality information is inaccurate
- determine the size and area occupied by populations with accurate locality descriptions
- 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
- determine the location, size and area occupied by populations where current data is incomplete

Management Advice

For the land owner/land manager

- management agreement, covenant and private nature reserve, are options that can provide long term protection for orchid habitat and other remnant vegetation
- avoid application of herbicides and fertilisers in the vicinity of orchid populations
- avoid ploughing in the vicinity of orchid populations

For everyone

- search for new populations in open heathy eucalypt forest and grassy coastal she-oak woodland from April to August 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.

Jones, D.L. 1998. Contributions to Tasmanian Orchidology –7: A Taxonomic Review of *Pterostylis* R.Br. in Tasmania, *Australian Orchid Research* 3: 135-177.

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Prepared by: Aaron Dalgleish, 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.