PLANT

Diuris brevifolia — Short-leaf Donkey-orchid

AUS	SA	AMLR	Endemism	Life History
-	E	E	State	Perennial

Family *ORCHIDACEAE*

Photo: © Tony Robinson

Conservation Significance

Endemic to SA. The AMLR distribution is disjunct, isolated from other extant occurrences within SA. Within the AMLR the species' relative area of occupancy is classified as 'Very Restricted'.[4]

Has suffered a massive decline in recent years.[2] Currently being considered for listing under EPBC Act (J. Quarmby *pers. comm*. 2009).

Description

Leaves two to eight, short, narrow and twisted in an erect tuft. Stem is slender, almost wiry, to 40 cm tall. Flowers two to five, relatively large, buttercup yellow; petals 15 mm long, on a distinct brown stalk. Flowers hardly scented.[2,7]

Distribution and Population

Only occurs in the AMLR (south of Adelaide) and on western Kangaroo Island.[2,7]

Prior to the mid 1980s considered quite common in the southern AMLR, though there were concerns about the viability of many smaller sub-populations.[3,5,6]

Post-1983 AMLR filtered records on Fleurieu Peninsula with isolated records at Kuitpo, near Ashbourne, Tea Tree Swamp, Inman Valley and Second Valley Forest areas.[4]

Large populations were discovered at Mt Bold in 2007 and 2008 (J. Quarmby *pers. comm*. 2009).

Pre-1983 AMLR filtered records suggest it was once more widely distributed, from Onkaparinga River CP, around Mount Compass and north of Mount Bold, to southern Fleurieu Peninsula at Deep Creek CP and Tunkalilla.[4]

Habitat

Most frequently occurs at the edges of ephemeral swamps, or river flats, and on river valley and ridge slopes which are prone to waterlogging.[3] Grows among shrubs in dense stunted forest and low heath in moist to wet soils; sometimes on swamp margins.[7]

Recorded habitats:

- under *Eucalyptus cosmophylla* open-forest and woodland with understoreys dominated by *Xanthorrhoea semiplana, Ixodia achillaeoides, Leptospermum myrsinoides* and *Schoenus* sp., or *Melaleuca gibbosa* (*Eucalyptus baxteri* occasionally co-dominant in this association)
- swamps, in *Leptospermum* sp. low shrubland and open-heath[3]
- *Eucalyptus viminalis* woodland and low woodland
- mature *Pinus radiata* plantations[3]
- Hindmarsh Valley Reservoir in damp heathland on clay loams, growing near *Lobelia rhombifolia*, *Stylidium graminifolium* and *Leptospermum continentale.*

Within the AMLR the preferred broad vegetation groups are Heathy Woodland, Wetland, and Riparian.[4]

Within the AMLR the species' degree of habitat specialisation is classified as 'High'.[4]

Biology and Ecology

Flowers from late October to December.[2] Flowers require pollination by native bees.[3] Readily reproduces both asexually and sexually, producing several new tubers each year and seeds germinate readily.[3]

Fire stimulated.[3] Forms large, sometimes congested colonies which can be spectacular after fire, but generally only a small proportion of plants flower.[2]

Readily grown from tubers.[3] Used in the breeding of hybrids and a natural hybrid with *Diuris orientis* is occasionally seen.[2]

Further information:
Biodiversity Conservation Unit, Adelaide Region
Phone: (61 8) 8336 0901 Fax: (61 8) 8336 0999
http://www.environment.sa.gov.au/

Government of South Australia

Prepared as part of the Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide and the Mount Lofty Ranges, South Australia 2009 - 2014

Aboriginal Significance

Post-1983 records indicate the AMLR distribution occurs in southern Kaurna, Ngarrindjeri and Peramangk Nations.[4]

Diuris spp. are used as a traditional food by Aboriginal people in NSW. The tubers are eaten raw or cooked (Fraser and McJannett 1993; Gott 1995).[1]

Threats

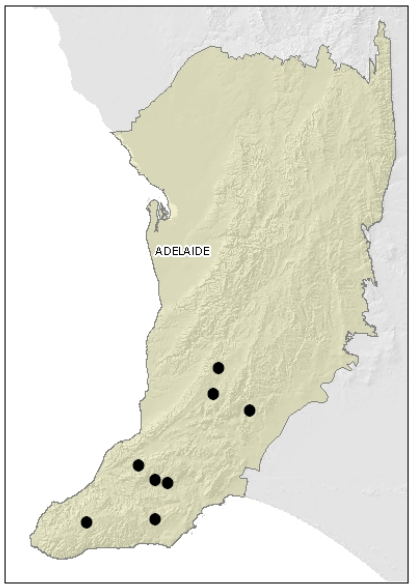
Threats include:

- grazing, forestry operations, general incompatible site management (e.g. cultivating rather than slashing of firebreaks), weed invasion[3]
- *Phytophthora* is a potential but unconfirmed threat[6]
- lack of fire (J. Quarmby *pers. comm*. 2009).

Within the AMLR, approximately half of known distribution occurs within 2 km of confirmed or suspected *Phytophthora* infestations.[4]

Additional current direct threats have been identified and rated for this species. Refer to the main plan accompanying these profiles.

Regional Distribution



Map based on filtered post-1983 records.[4] Note, this map does not necessarily represent the actual species' distribution within the AMLR.

References

Note: In some cases original reference sources are not included in this list, however they can be obtained from the reference from which the information has been sourced (the reference cited in superscript).

1 Australian National Botanic Gardens (2007). *Aboriginal Plant Use - NSW Southern Tablelands*. Available from http://www.anbg.gov.au/apu/index.html (accessed August 2007).

2 Bates, R. J., ed. (2007). *South Australian Native Orchids. Electronic version, August 2007*. Native Orchid Society of South Australia.

3 Davies, R. J.-P. (1986). *Threatened Plant Species of the Mount Lofty Ranges and Kangaroo Island Regions of South Australia*. Conservation Council of South Australia Inc., Adelaide.

4 Department for Environment and Heritage (2007). *Adelaide and Mount Lofty Ranges Regional Recovery Pilot Project Database*. Unpublished data extracted and edited from BDBSA, SA Herbarium (July 2007) and other sources.

5 Department for Environment and Heritage (2007). *State Herbarium of South Australia Database*. Unpublished data, extracted October 2007.

6 Department for Environment and Heritage (2007). *Wetlands Inventory Database of South Australia*. Unpublished data, extracted October 2007.

7 Jones, D. L. (2006). *A complete guide to native orchids of Australia including the island territories*. New Holland Publishers, Australia.

Further information:
Biodiversity Conservation Unit, Adelaide Region
Phone: (61 8) 8336 0901 Fax: (61 8) 8336 0999
http://www.environment.sa.gov.au/

Government of South Australia

Prepared as part of the Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide and the Mount Lofty Ranges, South Australia 2009 - 2014