



PLANT

Psilotum nudum

Skeleton Fork-fern

AUS	SA	AMLR	Endemism	Life History
-	E	E	-	Perennial

Family *PSILOACEAE*



Photo: © Peter Lang

Conservation Significance

In SA, the distribution is confined within the AMLR, disjunct from the remaining extant distribution in other States. Within the AMLR the species' relative area of occupancy is classified as 'Extremely Restricted'. Relative to all AMLR extant species, the species' taxonomic uniqueness is classified as 'Very High'.²

Description

Low-growing fern devoid of any roots or true leaves. Branched rhizomes under soil surface, forked green photosynthetic stems above which bear small scale-like appendages.⁵ Aerial stems are yellow-green, much-branched towards the tips.¹

Distribution and Population

Also occurs in NSW, QLD, VIC, WA and NT.¹ In SA it was only known from the AMLR, at Mount Bold Water Reserve, covering a small area. Approximately 50 living plants. Remnants of dead aerial shoots also present.³

The entire population of plants at Mount Bold Water Reserve was removed by the Seed Conservation

Centre and are now held in captivity due to fears of rock destabilisation and habitat modification causing further decline (J. Quarmby *pers. comm.* 2009). A propagation program is being implemented and plants will be reintroduced in the future (J. Quarmby *pers. comm.* 2009).

There are no pre-1983 records.²

Habitat

Occurs on seeping rock faces.⁴ At Mount Bold Reservoir plants occurred in crevice just above head height (near high water mark in winter), growing under an overhang of rock on vertical rock face.³

Type of rock substrate may be a limiting factor in distribution (T. Jury *pers. comm.*).

Within the AMLR the preferred broad vegetation group is Riparian.²

Within the AMLR the species' degree of habitat specialisation is classified as 'Very High'.²

Biology and Ecology

Primitive system of absorbing nutrients and water through rhizomes is inefficient so the plant forms a relationship with a mycorrhizal fungus.⁵

Aboriginal Significance

Post-1983 records indicate the entire AMLR distribution occurs in Peramangk Nation (bordering Kaurna Nation).

Threats

Proposed increase in the storage capacity of Mount Bold Reservoir posed a significant threat (D. Duval *pers. comm.*).

Within the AMLR, the majority of known distribution occurred within 2 km of confirmed or suspected *Phytophthora* infestations.²

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

Further information:

Biodiversity Conservation Unit, Adelaide Region
Phone: (61 8) 8336 0901 Fax: (61 8) 8336 0999
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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



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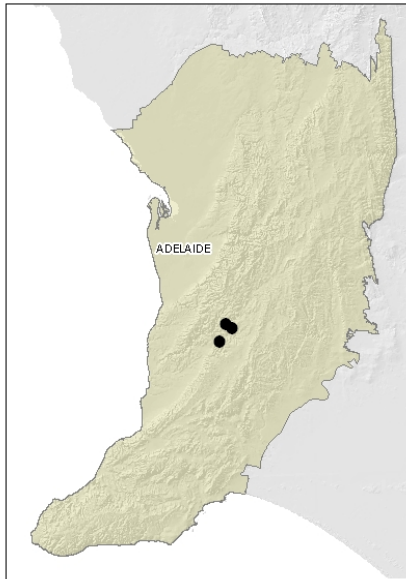


ADELAIDE AND MOUNT LOFTY RANGES SOUTH AUSTRALIA

Threatened Species Profile

Department
for Environment
and Heritage

Regional Distribution



Map based on filtered post-1983 records.² 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 Botanic Gardens Trust (1993). *PlantNET - The Plant Information Network System of Botanic Gardens Trust*. Available from <http://plantnet.rbgsyd.nsw.gov.au> (accessed September 2007).

2 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.

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

4 Department for Environment and Heritage. (2007). Summary of two Wetland Threatened Flora Workshops (unpublished spreadsheet).

5 Dimech, A. (2004). *Psilotum nudum: A throwback to the plant kingdom's earliest days*. Melbourne. Available from <http://www.adonline.id.au/plantevol/pnudum.htm> (accessed October 2007).

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