

Threatened Species of the Northern Territory

Utricularia singeriana

Conservation status

Australia: Not listed

Northern Territory: Vulnerable



Photo: I. Cowie

Description

Utricularia singeriana is a small to medium-sized, terrestrial bladderwort. The inflorescence is erect, solitary, and simple. The flower is purple, the outer surface sometimes bronzed. The lower lip is 6-11 mm long, 17-19 mm wide, the upper lip is 9-12 mm long, with the lips held almost parallel to the ground. The spur similar in length to the lower lip and is held almost appressed to it.

Flowering: March to May.

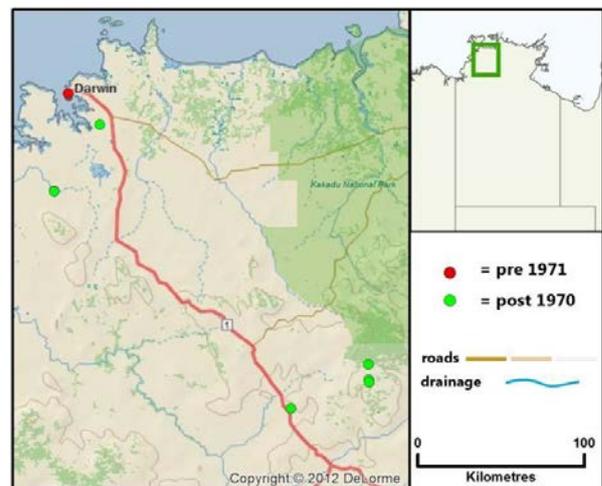
Fruiting: May.

Distribution

This species is a Northern Territory (NT) endemic. It was previously regarded as occurring in Western Australia but recent research shows that the only Western Australian specimen was misidentified and the species is endemic to NT (Taylor, 1989; Cowie 2010). In the NT, it was recorded early last century from "four miles northeast of Port Darwin" and more recently from the Edith River area and Marrawal Plateau (Upper Fergusson River area). Additional subpopulations were located near the Finniss River in May 2010 and in the greater Darwin

area in May 2011 (K. Brennan, *pers. comm.*; B. Stuckey *pers. comm.*).

Conservation reserves where reported:
Nitmiluk National Park.



Known locations of *Utricularia singeriana*

Ecology

The species occurs on the margins of wet sandy flats and swamps with short relatively open grasses and sedges (C. Michell *pers. comm.*; Holtze 2011). Dominant associated plants include *Eriachne burkittii*, *Sorghum* spp., *Pseudopogonatherum* spp. and sedges.

Conservation assessment

This species is currently known from five NT localities with the Port Darwin population believed to be no longer in existence (Cowie, 2010). Anecdotal evidence from the locality near Edith River gives a population estimate in the hundreds, with several hundred individuals counted in Upper Fergusson River area of Nitmiluk National Park (C. Michell *pers. comm.*; R. Kerrigan & I. Cowie *unpubl. data*). It was estimated that over 15 000 plants existed in a c. 500 m x 20 m transect in the Darwin rural subpopulation (B. Stuckey *pers. comm.*). The Finniss River subpopulation extended over an area of c. 50 m x 5 m and consisted of a few dozen flowering stems (I. Cowie *unpubl. data*). The species was not located in surveys of *Utricularia*-rich habitat in the Darwin-Litchfield- western Kakadu area over the period 2000-3 (Cowie 2002; I. Cowie *unpubl. data*). In addition, a number of other *Utricularia*-specific surveys have been carried out in the NT (with Darwin Herbarium staff and the world authority on the group, P. Taylor). However, as much apparently suitable habitat within the extent of occurrence remains unsurveyed, it is likely that additional, undiscovered subpopulations exist. On experience to date, these are not likely to be numerous.

In the NT, the species qualifies as **Vulnerable** (under criteria B2ab(ii,iii,iv,v) + D2) based on:

- Area of occupancy <20 km²; and
- number of locations less than five; and
- continuing decline in area of occupancy, area, extent and or quality of habitat, number of locations or subpopulations, and number of mature individuals.

Threatening processes

The Darwin Rural subpopulation (by far the largest known) is within the area proposed for development for the new township of

Weddell to the south of Darwin. Even if the species is not directly affected by the development, alterations to hydrology and weed invasion are highly likely to threaten this subpopulation in the longer term.

With a relatively small population size, small area of occupancy and restricted distribution the population is also susceptible to stochastic events. At other locations, the species may be affected by trampling by feral animals and changes in hydrology precipitated by erosion due to the affects of feral animals. While there was evidence of feral animal activity and erosion of the stream at Upper Fergusson River, the effect on *U. singeriana* was not clear.

Conservation objectives and management

Habitat protection at the known localities is required to maintain the status of the species.

Research priorities are to:

- i. provide a more detailed assessment of its distribution, habitat requirements and population size; and
- ii. provide an assessment of the factors limiting distribution, and/or threats to its survival.

Further survey may yield additional populations. A monitoring program should be established.

Compiled by

Ian Cowie
Raelee Kerrigan
[updated December 2012]

References

- Cowie, I. (2002). *Preliminary report on a survey of Utricularia (Lentibulariaceae) in the Howard River- Shoal Bay area*. Unpublished report. (Parks and Wildlife Commission of the Northern Territory, Palmerston.)
- Cowie, I.D. (2010). Notes on the identity, distribution and conservation status of the threatened plant species *Utricularia singeriana* F. Muell. (Lentibulariaceae). *The Beagle, Records of the Museum and Art Galleries of the Northern Territory* 26, 119-121.
- Taylor, P. (1989). *The Genus Utricularia: a taxonomic monograph*. Kew Bulletin Series XIV. (Her Majesty's Stationery Office, London.)