Utricularia dunstaniae

Conservation status
Australia: Not listed
Northern Territory: Vulnerable

Photo: K. Brennan

Description

Utricularia dunstaniae is a small, annual, terrestrial bladderwort. The inflorescence is erect, solitary, 6–15 cm. The flowers are apparently always solitary. The corolla is yellowish, the lower lobes two with erect filiform appendages 1.5–4 cm long.

Flowering: March–May.

Distribution

This species is an Australian endemic, known from Western Australia (in the Mitchell Plateau) and the Northern Territory (NT). In the NT, it is known from nine collections: these include a single collection from "near Jabiru at the foot of the Arnhem Land Escarpment" (Taylor 1989), one collection from "24 miles S of Darwin" (the McMinns Lagoon area) in 1965, three collections from the Howard River floodplain (including the type collection), and one collection from the Adelaide River floodplain. New subpopulations have recently been recorded from Cobourg Peninsula, near Murgenella and near Finniss River.

Conservation reserves where reported:
Garig Gunak Barlu National Park and Kakadu National Park.
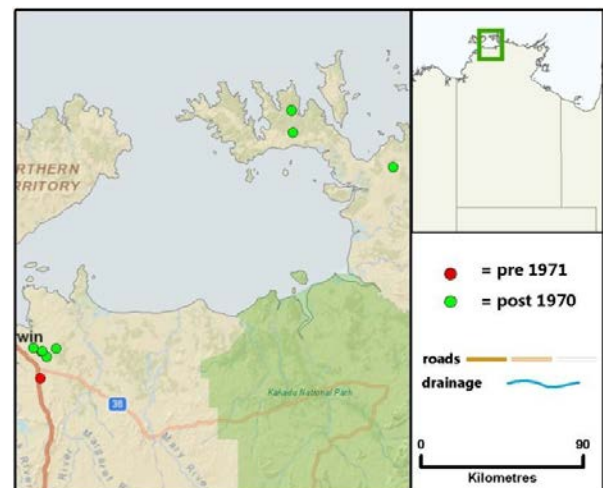
Known locations of *Utricularia dunstaniae*

Ecology

The species grows in wet sand, often in shallow water, in *Melaleuca nervosa* woodland or *Verticordia* shrubland. It occurs in slightly wetter micro-habitats than other sympatric *Utricularia* species, frequently where water is percolating from the ground. Populations appear to be small and very localised.

Conservation assessment

This species is currently known from only seven localities despite extensive surveys 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 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. Three populations are estimated to have around 50 individuals each. The „24 mile" population has not been relocated and is apparently locally extinct.

This species qualifies as **Vulnerable** (under criteria B2ab(iii); C2a(i), D1 + 2) based on:

- an estimated population size of <1 000 mature individuals;
- area of occupancy <2 000 km^2;
- an inferred decline in area and extent and quality of habitat; and
- an inferred decline in numbers of mature individuals.

Threatening processes

Three of the seven known localities are susceptible to disturbance from sandmining, quadbike and motorbike activity, subdivision and potential changes to hydrology (Cowie 2002).

Sand sheets in the Howard River Floodplain have been identified as an extractive mineral resource and a very high proportion of this habitat is likely to be affected by sand mining (Price *et al.* 2005).

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.

Complied by

Raelee Kerrigan
Ian Cowie
[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.)

Price, O., Milne, D., and Tynan, C. (2005). Poor recovery of woody vegetation on sand and gravel mines in the Darwin region of the Northern Territory. *Ecological Management and Restoration* **6**, 118-123.

Taylor, P. (1989). *The Genus Utricularia: a taxonomic monograph*. Kew Bulletin Series XIV. (Her Majesty"s Stationery Office, London.)