

Threatened Species of the Northern Territory

Schoenus centralis Latz (CYPERACEAE)

Conservation status

Australia: Not listed

Northern Territory: Vulnerable



Photo: D. Albrecht

Description

Schoenus centralis is a densely tufted annual sedge to about 30 cm high. The leaves are grass-like, to about 40 cm long and 3 mm wide. Flowering stems bare clusters of 4-6-flowered spikelets. Perianth segments are absent. The fruit are 1.1-1.5 mm long, and 3-horned, with each of the three ridges shortly produced at the summit into a small rounded projection.

Flowering: any month of the year if adequate moisture

Distribution

Schoenus centralis is known in the Northern Territory (NT) from two sites in central arid NT (Holtze 2010). The type was collected on Napperby Station in the north-east of the Great Sandy Desert Bioregion and a subsequent collection made from near Talipata Gorge in the far west of the MacDonnell Ranges Bioregion. These two NT populations are ca 130 km apart. The species is also known from a solitary site (Rawlinson Range) in Western Australia (Rye 1997) some 365 km south-west of Talipata Gorge. While the species has also been recorded from

Queensland and New South Wales, the identity of these subpopulations is currently under review (J. Bruhl pers. comm.) and it is conceivable that they will be separated from *Schoenus centralis sensu stricto*.

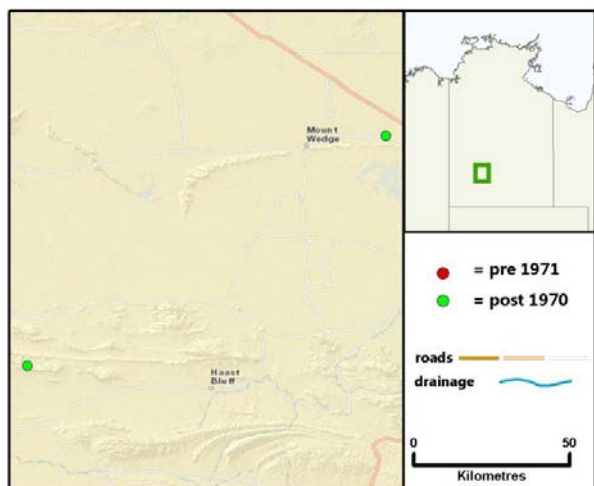
Notes accompanying the 1975 collection from Napperby Station indicate that the species was infrequent at the site. There is no accurate GPS location for the Napperby population and four hours' searching in appropriate habitat and in reasonable seasonal conditions in 1997, failed to relocate the population. The original 1984 collection from near Talipata Gorge indicates that *Schoenus centralis* was rare at the site. The species was relocated in 2010 at this site though only five plants were found, despite excellent survey conditions.

There exists only a very low probability of finding further populations. Most of the springs in the West MacDonnell Ranges and near Mt Edward that could potentially harbour *Schoenus centralis* have now been surveyed without locating further subpopulations. This encompasses all currently known potential habitat. The species' habitat is the seepage zone where water issues from the bottom of a cliff. This

specialised habitat is neither readily mappable nor predictable from map data sources.

Conservation reserves where reported:

None



Known locations of *Schoenus centralis*

Ecology

Schoenus centralis occurs around sheltered seepage areas or springs associated with range systems. At the type locality it was recorded as occurring in a seepage area with *Melaleuca glomerata*, growing in gravelly sand at the base of quartzite hill. At the site near Talipata Gorge it grows in skeletal soil in a sheltered drip zone/seepage area at the cliff base of a quartzite hill with *Adiantum hispidulum*, *Lindsaea ensifolia*, *Melaleuca pauciflora* and *Trema tomentosa*. Interestingly, the presence of the species appears to be associated with periods of high rainfall.

The sheltered seepage zones and spring niches where *S. centralis* has been found are specialised habitats that are distributed very sparsely through the central Australian ranges.

Conservation assessment

Schoenus centralis is classified in the NT as **Vulnerable** (under criterion D2) based on:

- restricted to a very small area (<20 km²);

- with fewer than five locations; and
- plausible threats from invasive weeds and disturbance by feral animals and livestock, such that the species is capable of becoming Critically Endangered or even Extinct in a very short time period.

Threatening processes

Like many wetland plants *Schoenus centralis* could be threatened by competition from Couch Grass (*Cynodon dactylon*) (Duguid et al 2005). Grazing and trampling by horses and cattle are also potential threats as springs provide focal points for intensive activity of these animals. Prolonged drought leading to springs drying up would also put increased stress on the small known populations.

Conservation objectives and management

Further species-specific targeted survey work in suitable habitat and favourable conditions is required near Mt Palmer and on Napperby Station. Monitoring plots should be established if a sizable population is located so that data can be gathered on recruitment events, changes in population structure over time, and impact of weeds and stock. Stock-exclusion fencing may be necessary if there is evidence that horses or cattle are impacting on populations. Similarly weed control work will be required, particularly if Couch Grass is found in the vicinity of populations.

Compiled by

David Albrecht

Peter Latz

John Westaway

[updated December 2012]

References

- Duguid, A., Barnetson, J., Clifford, B., Pavey, C., Albrecht, D., Risler, J. and McNellie, M. (2005). *Wetlands in the arid Northern Territory*. A report to the Australian Government Department of the Environment and Heritage on the inventory and significance of wetlands in the arid NT. Northern Territory Government Department of Natural Resources, Environment and the Arts, Alice Springs.
- HOLTZE 2010. Northern Territory Herbarium (DNA) collections database.