Threatened species of the Northern Territory

Sandover lilly

Typhonium sp. Sandover

Conservation status

Australia: Not listed
Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable
Territory Parks and Wildlife Conservation Act 1976

Credit: D. Albrecht

Description

Typhonium sp. Sandover is a perennial herb that dies back to an underground corm. The leaves are large and arrow-shaped. The complex inflorescence is foul-smelling and subtended by a large spathe with a dark purple blade and swollen green tubular lower portion. The long sterile spadix and male flowers emerge from the lower tubular portion of the spathe, whilst the female flowers remain enclosed.

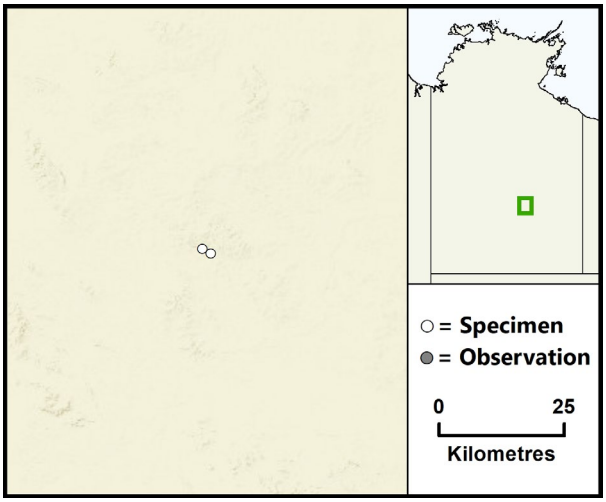
Typhonium sp. Sandover is unique in possessing the short and dorsiventrally flattened (rather than terete) sterile organs and pollen ornamentation (Matt Barrett pers. comm.).

Flowering: April (wild) and September (cultivated).

Distribution

Typhonium sp. Sandover is endemic to the Northern Territory (NT) where it is known only from one location, Lherepwerle Waterhole on the Angarapa ALT, in the Burt Bioregion. It occurs on the banks of the waterhole and downstream along the creekline. Its habitat is a River Red Gum woodland with a densely vegetated, species-rich understorey.

Associated species include *Themeda triandra*, *Ipomoea racemigera*, *Alternanthera nana*, *Eragrostis cumingii* and *Eulalia aurea*[1]. *Typhonium* sp. Sandover was first collected in 1965 and identified as *T. alismifolium*. The population was relocated in 2010 with the assistance of traditional owners and the Central Land Council. The population is very small but variable – the 2010 survey recorded 12 plants and a follow-up survey in 2016 recorded 60 (A. Vinter pers. comm.).



Caption: Known locations of the Sandover lilly in the NT (nrmaps.nt.gov.au)

A similar habitat, several kilometres away, was surveyed in 2010 for *Typhonium* without success. Although there has been limited searches for the species, it is conspicuous and distinctive (albeit only when conditions are suitable), and traditional owners who were very familiar with the species were not aware of other populations. A pattern of short-range endemism is common in the genus in NT. The western section of the land trust where the *Typhonium* occurs is not a highly sampled area, and there remains an element of data deficiency with the possibility of further subpopulations being located.

NT conservation reserves where reported: None

Ecology

Typhonium are geophytic, seasonally dormant plants that emerge from underground storage organs either annually or in response to good seasonal conditions. The life history of the Sandover Lily is not well known with incomplete knowledge of its longevity and reproduction in the wild. It is dormant during dry conditions and emerges only after significant rainfall. *Typhonium* sp. Sandover reproduces vegetatively via new corms. Recruitment from seed also occurs but is apparently common (M. Barrett pers. com.). This species has been propagated from corms at the Alice Springs Desert Park. This work has shown that the rate of corm growth and reproduction is far slower in *Typhonium* Sandover than in *Typhonium alismifoilum*. Plants failed to thrive in potted plants in sunny positions implying a preference for shaded habitat. Flowers were observed to last only a few days with multiple flowering events occurring during the summer months (Steve Priestley pers. comm. 2021).

Threatening processes

The species is susceptible to grazing impacts and displacement by Couch Grass (*Cynodon dactylon*) and Buffel Grass (*Cenchrus ciliata*)[1]. The site is also subject to human disturbance given that it is used for recreation after good rainfall when there is water for swimming.

Conservation objectives and management

The site was fenced by the Anmatyere Rangers in 2016 to limit stock access. Four monitoring plots have been established and Buffel control is being trialled within the plots and on the banks of the Lherepwerl waterhole. Areas upstream and downstream of the known population have been surveyed, with no new stands having been recorded (A. Vinter pers. comm.).

The efficacy of grass control and stock management should be monitored through time and the approach adapted as required. Population counts should be conducted as often as possible after good rainfall events. Further research on propagation methods and life-history attributes should be undertaken. Population dynamics (recruitment and mortality) should be monitored at the site.

References

[1] 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.