

Threatened species of the Northern Territory

Thrixspermum congestum

Conservation status

Australia: Not Listed

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976



Credit: D.T.Liddle

Description

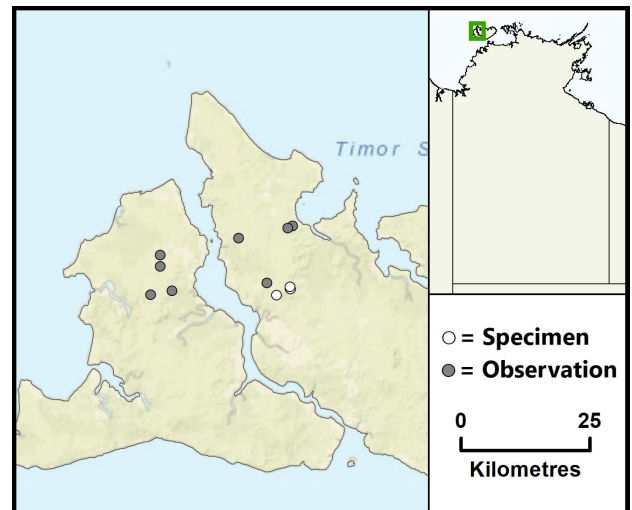
Thrixspermum congestum is an epiphytic orchid forming small clumps. The stems are sparsely branched, flattened to 15 cm long. There are 6-15 leaves per plant, leathery, often yellowish green. The inflorescence grows to 10 cm long, and is erect and wiry. The flowers open together, are about 15 mm across, cream or white, and fragrant. The flowers last about one day and are produced in sporadic groups.

Flowering: February.

Distribution

This species is known from Queensland, the Northern Territory (NT) and New Guinea¹. In the Northern Territory, there are specimen records from only two localities, on Melville Island, with unvouchered records from a further six sites (four from Bathurst Is and two from Melville Is)^{2,3}.

NT conservation reserves where reported: None.



Caption: Known locations of *Thrixspermum congestum* in the NT (nrmmaps.nt.gov.au)

Ecology

This species grows in lowland rainforests and also on mangroves. It is usually found in humid, airy situations, often in exposed positions on small branches.

Threatening processes

It shares similar threats to other plant species restricted to evergreen, spring-fed rainforest on the Tiwi Islands. As an epiphyte with a small population and restricted distribution, this species is susceptible to stochastic events, in particular cyclones. In common with other wet rainforest species, it is likely to be vulnerable to the indirect effects of land use intensification mooted for some parts of its range. These effects include lowered ground water levels and reduced discharge of springs with a consequent drying out of its wet rainforest habitat. This may also result in loss of habitat though a mixture of grassy weed invasion of forest margins and increased fire. As an orchid, pressure from horticultural collectors may be a threat.

Its limited distribution has been established through extensive surveys on the Tiwi Island between 1998-2014 and its rainforest habitat has been well sampled^{2,3,4,5}, providing some confidence that its apparent restriction is accurate. However, there is an element of data deficiency with this species as flowers are recorded as lasting only approximately 10 hours and plants epiphytic plants in tall trees may be difficult to locate.

Conservation objectives and management

A Recovery Plan for the threatened plants of the Tiwi Islands was released in 2007, and many actions have been implemented^{3,6}.

Research into the status and extent of the population, and the impacts of possible threatening factors, is required. A monitoring program should be established for at least representative localities.

Living material has been collected for the Darwin Botanic Gardens. Availability of stock commercially may protect species from horticultural harvesting and stochastic events.

References

- ¹ Jones, D. L. 1988. *Native Orchids of Australia*. (Reed, Sydney.)
- ² Liddle, D.T. and Elliott, L.P. 2008. Tiwi Island threatened plants 2006 to 2008: field survey, population monitoring including establishment of a program to investigate the impact of pigs, and weed control. Report to Natural Resource Management Board (NT), NHT Project 2005/142, Northern Territory Government Department of Natural Resources, Environment, The Arts and Sport, Palmerston.
- ³ Woinarski, J., Brennan, K., Cowie, I., Kerrigan, R., and Hempel, C. 2003. *Biodiversity conservation on the Tiwi islands, Northern Territory. Part 1. Plants and environments*. 144 pp. (Department of Infrastructure Planning and Environment, Darwin.)
- ⁴ Russell-Smith, J. 1991. Classification, species richness, and environmental relations of monsoon rain forest in northern Australia. *Journal of Vegetation Science* 2, 259-278.
- ⁵ Liddle, D.T., Russell-Smith, J., Brock, J., Leach, G.J., and Connors, G.T. 1994. *Atlas of the vascular rainforest plants of the Northern Territory*. Flora of Australia Supplementary Series No. 3. (ABRS, Canberra.)
- ⁶ Fensham, R.J., and Woinarski, J.C.Z. 1992. *Yawulama: the ecology and conservation of monsoon forest on the Tiwi Islands, Northern Territory*. Report to DASET. (Conservation Commission of the Northern Territory, Darwin.)