

Threatened species of the Northern Territory

Luisia corrugata

(previously *L. teretifolia*)

Conservation status

Australia: Not listed

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976

Description

Luisia corrugata is an epiphytic orchid forming straggly clumps of slender, wiry, erect or semi-pendulous stems to 30 cm long. There are two to ten leaves per stem, 15 cm x 5 mm, cylindrical in cross section. The flowers are about 10 mm across, green with a dark burgundy labellum or lip.

Taxonomic revision¹ has identified the taxon in the Northern Territory as *L. corrugata*.

Flowering: February, November–December.

Fruiting: November.

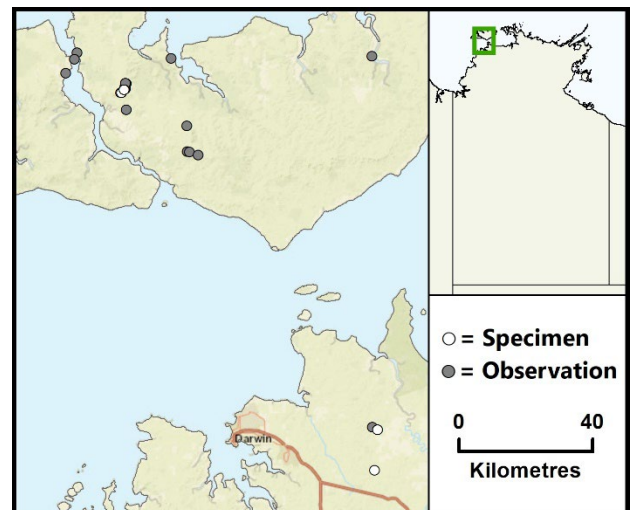
Distribution

This species appears to be endemic to the Northern Territory (NT)². It is known from approximately 11 localities, nine from Melville Island and two on the mainland (Bankers Jungle and Crocodile Creek in Black Jungle Conservation Reserve).

NT conservation reserves where reported: Black Jungle Conservation Reserve.



Credit: K.G. Brennan



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

Ecology

Within the NT, this species has been collected from the margins of monsoon rainforests. It appears to prefer situations of relatively bright light on emergent trees or forest margins and often occurs on trees that have scaly bark. It may be associated with other epiphytes (e.g. *Dendrobium affine* and *Drynaria quercifolia*); hosts include *Sterculia quadrifida*, *Barringtonia acutangula*, *Canarium australianum* and *Vitex* spp.

Threatening processes

The species is susceptible to stochastic events such as cyclones. The indirect impacts of changes in land-use adjacent to rainforest patches supporting the species are unquantified.

There is very little information available on the abundance of this species. As an epiphyte with terete leaves, it is recorded as growing in tangled clumps and the number of individuals is difficult to assess. This species does not usually grow high up on trees and is considered readily identifiable (D. Jones *pers. comm.*).

It has been recorded at 18 separate rainforest patches^{3,4,5}. Targeted surveys of rainforest patches on the north-eastern part of Bathurst Island in 2014 recorded a single additional patch in which the species was confirmed to occur. No individuals were seen during surveys of both the Bankers Jungle and Crocodile Creek localities in 2003 with surveys of Bankers Jungle in 2018 identifying one additional locality within the patch.

Conservation objectives and management

A Recovery Plan for the threatened plant species of the Tiwi Islands was released in 2008 and many of its actions have been implemented⁶. Research into the status of the populations and further survey are required. Live material has been lodged at Darwin Botanic Gardens.

Commercial availability of this species may relieve any harvesting pressure on wild populations. A monitoring program should be

established for at least some representative sites to assess demographic change and impacts of threats.

References

- ¹ Jones, D.L. 2006a. Miscellaneous new species of Australian Orchidaceae. *Australian Orchid Research* 5, 84-85
- ² Jones, D.L. 2006b. *A complete guide to the native orchids of Australia including the island territories*. Reed New Holland: Sydney.
- ³ Russell-Smith, J. 1991. Classification, species richness, and environmental relations of monsoon rain forest in northern Australia. *Journal of Vegetation Science* 2, 259-278.
- ⁴ 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.)
- ⁵ Stokeld, D., Leiper, I., Cuff, N., Cowie, I., Lewis, D., and Einoder, L. 2020. *Mapping the Future project - Gunn Point Biodiversity Assessment of the Gunn Point Area*. Technical Report 4/2020, Department of Environment and Natural Resources, Darwin, NT.
- ⁶ 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.)