

Threatened species of the Northern Territory

Hibiscus cravenii

Conservation status

Australia: Vulnerable

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976

Description

This species is a shrub to 1.5 m. Its stems are densely hairy, hairs stellate, yellowish or yellow-brown. The flower is Hibiscus-like with unbranched style, petals mauve, turning blue when dry, with intense maroon spot on basal third¹.

Flowering: June, July, October and December.

Fruiting: June, October and December.

Distribution

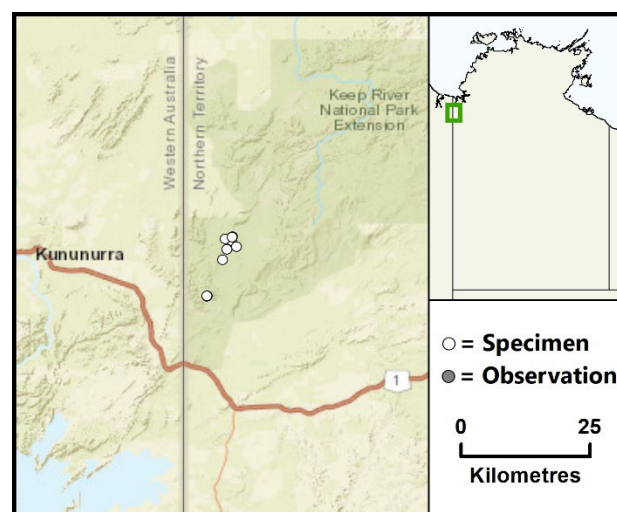
This species is endemic to the Northern Territory (NT), where it is known only from Keep River National Park, at six localities around the base of the escarpment in the Jarnarm area and north-west of Gurrandalng.

Survey of known localities and survey for new occurrences by J. Egan in 1995 reported approximately 120 individuals from three localities associated with the Kelly's Knob sandstone within Keep River NP. Further surveys have located three more sites. The species was not found on any other geological formations in the area nor on the Kelly's Knob sandstone within Hidden Valley, Western Australia².



Credit: I.D. Cowie

NT conservation reserves where reported: Keep River National Park.



Caption: Known locations of *Hibiscus cravenii* in the NT (nrmaps.nt.gov.au)

Ecology

Very little is known about the ecology of this species. It is recorded growing in sandy soils at the base of sandstone escarpments and to be scarce on sandstone scree slopes.

No juveniles were observed in the stands surveyed in 1995. The stands were even-aged and even-sized (1.5-2 m)².

The Gurrandalng locality first collected by I. Cowie in 1998 and re-visited in 2000 had only recently been severely burnt and no individuals were observed, although burnt stems could have been overlooked. The same locality revisited in 2001 resulted in 200-300 individuals recorded for the area. Also, some adults had a relatively woody base suggesting some individuals had re-sprouted after fire. Occurrences at Jarnarm appeared to grow in habitat that is frequently burnt (R. Kerrigan *pers. obs.*) and the number of plants was estimated at around 500 mature individuals. All sites are exposed to frequent fires.

monsoonal northern Australia: frequency, interval, patchiness. *Biological Conservation* 104, 91-107.,

Threatening processes

Inappropriate fire regimes are a potential threat to this species^{2,3,4}. Although some evidence exists to suggest this species may rebound after fire, fluctuations in the number of mature individuals at a site may occur. The potential for frequent fire events to kill individuals before reproductive maturity has not been evaluated. Similarly, seed bank stores, seed longevity and germination and establishment requirements are unknown.

Conservation objectives and management

Further research is required on the population dynamics of this taxon, the extent of its range, the impact of fire and other potential threatening processes. This research should be associated with an ongoing monitoring program to assess plant persistence and response to disturbance.

References

¹ Fryxell, P.A. 1987. Three new species (from Australia and Venezuela) and three new names (of Mexican plants) in the Malvaceae. *Systematic Botany* 12, 277.

² Egan, J.L. 1996. *Assessment of "Poorly Known" (ROTAP Category K or k) Plant Taxa in the Northern Territory*. Australian Nature Conservation Agency Endangered Species Program. Project No. 490. Final Report. (Parks and Wildlife Commission of the NT, Darwin.)

³ Russell-Smith, J., Ryan, P.G., Klessa, D., Waight, G., and Harwood, R.K. 1998. Fire regimes, fire-sensitive vegetation and fire management of the sandstone Arnhem Plateau, monsoonal northern Australia. *Journal of Applied Ecology* 35, 829-846.

⁴ Russell-Smith, J., Ryan, P.G., and Cheal, D.C. 2002. Fire regimes and the conservation of sandstone heath in