Threatened Species of the Northern Territory

Hibiscus brennanii

Conservation status
Australia: Vulnerable
Northern Territory: Vulnerable

Photo: K. Brennan

Description

Hibiscus brennanii is an erect woody shrub to 3m tall with pink flowers. Superficially, this species may be difficult to distinguish from many common *Hibiscus*. Diagnostic characters include velvety grey/green foliage, with softly hairy leaves, bracteoles and sepals lacking the prickly hairs of many species. It is considered a short lived perennial.

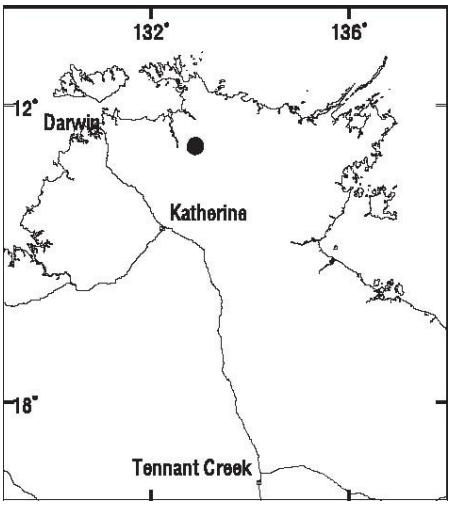
Flowering: Mar – May.

Flower of *Hibiscus brennanii*.
(Photo R. Kerrigan)

Distribution

This species is endemic to the NT. It is restricted to the Mt Brockman outlier of the western Arnhem Land sandstone massif.

Conservation reserves where reported:
Kakadu National Park



Known locations of *Hibiscus brennanii*.

Ecology

Hibiscus brennanii is a putative obligate seeder and grows on sandstone cliffs, in gullies and on broken sandstone. Individuals are recorded growing with *Symplectrodia lanosa*, *Pandanus basedowii*, *Micraira pungens* and *Eriachne spp*. with *Acacia* sp. Baroalba and *A. scorpulorum*.

Conservation assessment

Although the Arnhem Land and Kakadu escarpment is remote and difficult to access, this species is considered adequately surveyed as a relatively high proportion of herbarium collections come from the Arnhem

Land/Kakadu area. The number of collections recorded from the quarter degree grid cell where this taxon is found is 4386 plant records.

This species was first collected in 1987 and type material collected by 1990. The extent of occurrence and likely area of occupancy of this species is 1.5 km^2. The estimated total population size for this population is 441 mature individuals (Kerrigan 2003, 2004).

This species is classified as **Vulnerable** (under criteria D1+2) based on:

- a population size estimated to be <1000 individuals; and
- a restricted area of occupancy estimated to be approximately 2 km^2 (Kerrigan 2004).

Threatening processes

Hibiscus species are often considered 'fire weeds', regenerating strongly after wildfire. However, Russell-Smith *et al.* (1998, 2002) suggested that in some cases current fire regimes are affecting obligate seeders in sandstone heath communities and inappropriate fire regimes are a potential threat to this species.

Unfortunately the generation time for this species has not been assessed and 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. With such a small population size and limited distribution the species is vulnerable to inappropriate fire regimes and stochastic events.

Conservation objectives and management

Research into the biology of the species is required, to record fecundity, phenology, reproductive success, seed bank longevity, germination requirements and response of seeds and adults to fire. An established monitoring program reported that in 2004 there were a substantial number of seedlings and juveniles (Kerrigan 2004). Further monitoring of these seedlings in the short term is recommended to determine establishment rate for this species and time to reach reproductive maturity.

Complied by

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References

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