

Approved Conservation Advice  
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

**Approved Conservation Advice for**  
***Hibiscus brennanii***

This Conservation Advice has been developed based on the best available information at the time this Conservation Advice was approved; this includes existing plans, records or management prescriptions for this species.

**Description**

*Hibiscus brennanii*, Family Malvaceae, is an erect, woody, short-lived perennial shrub growing up to 3 m tall, with pink flowers. It has velvety, grey-green foliage and softly hairy leaves, lacking the prickly hairs of many other *Hibiscus* species. *Hibiscus brennanii* flowers from March to May (TSSC, 2006a; Woinarski et al., 2007).

**Conservation Status**

*Hibiscus brennanii* is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, in 2006, the Minister considered the Threatened Species Scientific Committee's (TSSC) advice under section 189 of the EPBC Act and amended the list under section 184 to include *Hibiscus brennanii*. The TSSC determined that this species met criterion 4 of their eligibility criteria (TSSC, 2006a). The species is also listed as vulnerable under the *Territory Parks and Wildlife Conservation Act 2000* (Northern Territory).

**Distribution and Habitat**

*Hibiscus brennanii* occurs only in the Northern Territory, where it is known from one population on the Mount Brockman outlier of the western Arnhem Land sandstone massif, growing on sandstone cliffs, gullies and broken sandstone (Woinarski et al., 2007). The extent of occurrence and likely area of occupancy of this species is 1.5 km<sup>2</sup>, with an estimated population size of about 440 individuals (Woinarski et al., 2007). A monitoring program showed that in 2004 there were a substantial number of seedling and juvenile plants (Woinarski et al., 2007). *Hibiscus brennanii* is conserved within Kakadu National Park (Briggs & Leigh, 1996; Woinarski et al., 2007). This species occurs within the Northern Territory Natural Resource Management Region.

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological communities.

**Threats**

The main potential threats to *Hibiscus brennanii* include inappropriate fire regimes as too frequent fire depletes the soil seed bank (TSSC, 2006a). The small population size and limited distribution of *H. brennanii* make the species vulnerable to inappropriate fire regimes and stochastic events (Woinarski et al., 2007).

**Research Priorities**

Research priorities that would inform future regional and local priority actions include:

- Research the biology of the species, investigating its fecundity, phenology, reproductive success, seed bank longevity, germination requirements and response of seeds and adults to fire (Woinarski et al., 2007).
- Monitor seedling plants to determine recruitment rate and time to reach reproductive maturity (Woinarski et al., 2007).

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- Continue to monitor trends in population numbers (TSSC, 2006b).
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.

### **Regional and Local Priority Actions**

The following priority recovery and threat abatement actions can be done to support the recovery of *Hibiscus brennanii*.

#### **Habitat Loss, Disturbance and Modification**

- Continue to monitor known populations (TSSC, 2006b).
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Manage threats to areas of vegetation that contain populations of *Hibiscus brennanii*.
- Ensure maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where *H. brennanii* occurs do not adversely impact on known populations.
- Control access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use at known sites.

#### **Fire**

- Develop and implement a suitable fire management strategy for *H. brennanii*.

#### **Conservation Information**

- Raise awareness of *H. brennanii* within the local community.

#### **Enable Recovery of Additional Sites and/or Populations**

- Undertake appropriate seed collection and storage.
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This list does not necessarily encompass all actions that may be of benefit to *H. brennanii*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

### **Existing Plans/Management Prescriptions that are Relevant to the Species**

- Kakadu National Park Management Plan (KBM & DNP, 2007), and
- Arnhemland Plateau Draft Fire Management Plan (KNP, 2007).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

### **Information Sources:**

Briggs, JD & Leigh, JH 1996, *Rare or Threatened Australian Plants*, Centre for Plant Biodiversity Research, CSIRO Division of Plant Industry, Canberra, ACT.

Kakadu Board of Management & Director of National Parks (KBM & DNP) 2007, *Kakadu National Park Management Plan 2007-2014*, Director of National Parks, Parks Australia North, Darwin.

Kakadu National Park (KNP) 2007, *Arnhemland Plateau Draft Fire Management Plan*, Kakadu National Park, CRC for Tropical Savannas Management.

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Threatened Species Scientific Committee (TSSC) 2006a, *Commonwealth Listing Advice on Hibiscus brennanii*, Department of the Environment, Water, Heritage and the Arts, viewed 17 June 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/pubs/hibiscus-brennanii-listing.pdf>>.

Threatened Species Scientific Committee (TSSC) 2006b, *Commonwealth Conservation Advice on Hibiscus brennanii*, Department of the Environment, Water, Heritage and the Arts.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2<sup>nd</sup> ed.), Australian Network for Plant Conservation, Canberra.

Woinarski, J, Pavey, C, Kerrigan, R, Cowie, I, & Ward, S (Eds), 2007, *Lost from our landscape: threatened species of the Northern Territory*, Northern Territory Government, Darwin.