

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

Approved Conservation Advice for
***Kennedia glabrata* (Northcliffe Kennedia)**

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved.

Description

Kennedia glabrata, Family Fabaceae, also known as Northcliffe Kennedia, is a prostrate creeper with glossy leaves. The leaves have three leaflets with wavy margins and the inflorescence is held on an erect stalk, up to 15 cm long, with leaf-like bracts at the base. Five to eight flowers, each about 1.2 cm long, are in a cluster (umbel) at or near the apex of the stalk. The flowers are orangey-pink to scarlet red with a yellow throat. The pods are light brown and up to 2.5 cm long (Hopper et al., 1990; Brown et al., 1998).

Conservation Status

Northcliffe Kennedia 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, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). The species is also listed as rare flora under the *Wildlife Conservation Act 1950* (Western Australia) and on the *Wildlife Conservation (Rare Flora) Notice 2006(2)* (Western Australia).

Distribution and Habitat

Northcliffe Kennedia occurs in scattered locations along the south coast of Western Australia from Northcliffe to east of Esperance, within the South Coast (Western Australia) Natural Resource Management Region. It inhabits shallow pockets of soil on granite outcrops, in association with mosses and herbs (Robinson & Coates, 1995; Brown et al., 1998).

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

Threats

The main identified threats to Northcliffe Kennedia include introduced weed species (mainly annuals), grazing pressure, disturbance from feral pigs (*Sus scrofa*) and dieback caused by *Phytophthora cinnamomi*.

The main potential threats to Northcliffe Kennedia include fire and trampling. Fire kills plants, but stimulates germination of seeds, so it is important that fire regimes are conducted at frequencies that allow new plants a chance to reproduce and add their seed to the soil-stored seed bank. In addition, the known populations of Northcliff Kennedia occur around the summit of a hill used as a tourist lookout, making it susceptible to trampling by visitors (Robinson & Coates, 1995; Hearn et al., 2004; WA CALM, 2005).

Research Priorities

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

- Design and implement a monitoring program, and
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of Northcliffe Kennedia.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Manage threats to areas of vegetation that contain populations/occurrences of Northcliffe Kennedia, including recreation activities that may result in vegetation loss, soil compaction and loss of water infiltration. This increases water run-off and hence the potential for erosion.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Northcliffe Kennedia.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Invasive Weeds

- Develop and implement a management plan for the control of invasive annual weed species in the local region.

Trampling, Browsing or Grazing

- Develop and implement a management plan for the control and eradication of feral pigs in the local region.

Fire

- Develop and implement a suitable fire management strategy for Northcliffe Kennedia.
- Identify appropriate intensity and interval of fire to promote seed germination.
- Provide maps of known occurrences to local and state rural fire services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Diseases, Fungi and Parasites

- Implement appropriate management actions and hygiene protocols recommended in the Threat Abatement Plan for Dieback Caused by the Root-rot Fungus *Phytophthora cinnamomi* (EA, 2001) to protect known sites from outbreaks of dieback.

Conservation Information

- Raise awareness of Northcliffe Kennedia 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.

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of Northcliffe Kennedia.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Control access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use at known sites.

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- Protect populations of the listed species through the development of conservation agreements and/or covenants.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to Northcliffe Kennedia, using appropriate methods.
- Manage sites to prevent the introduction of invasive weeds, which could become a threat to Northcliffe Kennedia, using appropriate methods.

Trampling, Browsing or Grazing

- Prevent grazing and trampling pressure at known sites on leased crown land through exclusion fencing or other barriers.
- Control introduced pests such as feral pigs to manage threats at known sites.

Fire

- Implement an appropriate fire management regime for local populations.

Diseases, Fungi and Parasites

- Implement suitable hygiene protocols to protect known populations from further outbreaks of dieback caused by *Phytophthora cinnamomi*.
- If appropriate, implement management actions to minimise the adverse impacts of existing *Phytophthora cinnamomi* infestations on Northcliffe Kennedia.

This list does not necessarily encompass all actions that may be of benefit to Northcliffe Kennedia, 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

- Threat Abatement Plan for Dieback Caused by the Root-rot Fungus *Phytophthora cinnamomi* (EA, 2001),
- Shannon and D'Entrecasteaux National Park: Draft Management Plan (WA CALM, 2005), and
- Threat Abatement Plan for Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs (DEH, 2005).

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

Information Sources:

Brown, A, Thomson-Dans, C & Marchant, N (eds), 1998, *Western Australia's Threatened Flora*, Dept. of Conservation and Land Management, Western Australia.

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Hearn, R, Williams, K, & Comer, S, 2004, 'Warren (WAR – Warren)' in May, JE & McKenzie, NL (eds) *A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002*, Department of Conservation and Land Management, Kensington, Western Australia, pp. 637–655, viewed 17 December 2007, <http://www.naturebase.net/pdf/science/bio_audit/warren_p637-655.pdf>.

Hopper, SD, vanLeeuwen, S, Brown, AP, & Patrick, SJ, (eds), 1990, *Western Australia's Endangered Flora and other plants under consideration for declaration*, Department of Conservation and Land Management, Western Australia.

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Robinson, CJ, & Coates, DJ, 1995, *Declared Rare and Poorly Known Flora in the Albany District*, Australian Nature Conservation Agency, Canberra, ACT & Department of Conservation and Land Management, Como, Western Australia.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia - Second Edition*, Australian Network for Plant Conservation, Canberra

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