

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

Approved Conservation Advice for
Germainia capitata

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

Germainia capitata, Family Poaceae, is a perennial, tufted grass to 90 cm tall. Leaf blades are 7–38 cm long and 3–9 mm wide, with rough margins. The inflorescence is single and erect, 2–3.5 cm long and bearing 3–7 fertile spikelets (groups of florets). The lowest glume (bract) of each spikelet is 8–11 mm long and 3-nerved. The long leaves, single inflorescence and large lower glume distinguish this species (Chaianan, 1972; Sharp & Simon, 2002).

Conservation Status

Germainia capitata 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). It is also listed as vulnerable under the *Nature Conservation Act 1992* (Queensland).

Distribution and Habitat

Germainia capitata occurs in Australia at two disjunct localities north of Bundaberg and Torres Strait. This species also extends to Papua New Guinea, Malaya, Thailand, Vietnam, and China (Sharp & Simon, 2002). North of Bundaberg, this species occurs near the Town of 1770 and Agnes Water (Queensland Herbarium, 2008). In this area, one population occurs in Eurimbula National Park and most of the other populations occur in areas of remnant vegetation (Environmental Protection Agency, 2008) as defined under the *Vegetation Management Act 1999* (Queensland) and are therefore currently protected from broad-scale clearing.

Germainia capitata grows in open *Eucalyptus* spp. and *Melaleuca* spp. woodland where it is often found in patches or clumps on sandy soils, often in seasonally inundated areas (Sharp & Simon, 2002; Queensland Herbarium, 2008). In Torres Strait, this species occurs in similar habitat on Moa and Badu Islands (Queensland Herbarium, 2008). This species occurs within the Burnett Mary and Torres Strait (Queensland) Natural Resource Management Regions.

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

Threats

The main potential threats to *G. capitata* include threats to *Melaleuca* wetland habitat such as land clearing; agricultural practices; inappropriate fire regimes; invasive weeds, particularly exotic grasses; and modification of water flows (Joyce, 2005).

Research Priorities

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

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.

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- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes, especially fire and weeds.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Regional and Local Priority Actions

The following regional and local priority recovery and threat abatement actions can be done to support the recovery of *G. capitata*.

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.
- Identify populations of high conservation priority.
- Ensure activities involving substrate or vegetation disturbance in or near areas where *G. capitata* occurs do not adversely impact on known populations.
- Manage any changes to hydrology that may adversely affect this species' wetland habitat.
- Manage any disruptions to water flows.
- Minimise adverse impacts from land use at known sites.
- Investigate further 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 exotic grasses.
- Identify and remove weeds in the local area, which could become a threat to *G. capitata*, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the species, using appropriate methods.
- Ensure chemicals and other mechanisms used to eradicate weeds do not have a significant adverse impact on *G. capitata*.

Fire

- Develop and implement a suitable fire management strategy for *G. capitata*.
- Identify appropriate intensity and interval of fire to promote seed germination and/or vegetation regeneration.
- 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.

Conservation information

- Raise awareness of *G. capitata* in 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 *G. capitata*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

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Existing Plans/Management Prescriptions that are Relevant to the Species

- Protected areas in the Agnes Water/1770 area (South East Queensland biogeographic region): management plan (QPWS, 1998).

This prescription was current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

Chaianan, C 1972, 'A Revision of *Germainia*, *Balansa* & *Poitrasson* (Gramineae)', *Thai Forest Bulletin* (Botany), vol. 6, pp. 29–47.

Environmental Protection Agency 2008, *Copy of the certified regional ecosystem map for the purpose of the Vegetation Management Act 1999*, online RE Maps, Environmental Protection Agency, Brisbane, viewed 27 May 2008, <<http://www.epa.qld.gov.au/REMAP>>.

Joyce, K 2005, 'Coastal Melaleuca Swamp Wetlands, Wetland Management Profile', Environmental Protection Agency, viewed 27 May 2008, <http://www.epa.qld.gov.au/publications/p01780aa.pdf/Coastal_melaleuca_swamp_wetlands.pdf>.

Queensland Herbarium 2008, specimen label information, viewed 8 May 2008.

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Sharp, D & Simon, BK 2002, *AusGrass: Grasses of Australia*, ABRS Identification Series, interactive CD ROM, ABRS/CSIRO Publishing, Melbourne.

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