

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

**Approved Conservation Advice for**  
***Gastrolobium graniticum* (Granite Poison)**

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**

*Gastrolobium graniticum*, Family Papilionaceae / Fabaceae, also known as Granite Poison, is an erect open shrub, growing to 2.5 m tall, with ascending, angular, sparsely to moderately pubescent branchlets. The branches are purple. The petioles, 5–7 mm long, are terete and continuous but not decurrent with the branchlet. The spreading leaves are opposite, 48–62 mm long, 19–32 mm wide, and elliptic to rarely obovate shaped. The leaves have prominently reticulate venation, a rounded apex and slightly undulated margins. The stipules are erect and narrowly triangular to hyaline, and to 2–3 mm long. The inflorescences consist of more than 30 flowers at the ends of branches. The flowers are yellow-orange in colour with a red ring surrounding the yellow centre. The calyx, 6–8 mm long, is hairless and has two upper and three lower lobes, which are all usually curved. The upper lobes, 2–4 mm long, are sometimes straight and united higher than the lower lobes. The lower lobes are triangular and are about 3 mm long. The corollas are reflexed and transversely ovate, growing 13–15 mm long and 15.5–16.5 mm wide, with claws that are 4–5 mm long. Woody pods, 12 mm long, are purplish-black when ripe. Flowering occurs from September to October (Brown et al., 1998; Chandler, 2001).

This species can be distinguished from its close relative, Net-leaved Poison (*Gastrolobium racemosum*), by its ovate leaves attached at the narrower end rather than ovate leaves attached at the broader end (Brown et al., 1998; Chandler, 2001).

**Conservation Status**

Granite Poison is listed as **endangered**. This species is eligible for listing as endangered 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 endangered under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). The species is also listed as declared rare flora under the *Wildlife Conservation Act 1950* (Western Australia).

**Distribution and Habitat**

Granite Poison is endemic to Western Australia and is known from seven populations occurring in the Kalgoorlie and wheat belt regions. Three populations are located on unallocated Crown land, two on a water reserve, one on conservation estate and one on land used for heritage purposes. The total population size is estimated to be over 860 plants. Insufficient data are available to determine the area of occupancy. One population is split into two subpopulations, both located on a conservation estate; one subpopulation remained stable in size at approximately 200 plants in the years 1992 and 1993, while the other subpopulation declined in size from 50 plants in 1992 to 3 plants in 1999. Another population, located on unallocated Crown land, increased in size from 55 plants in 1998 to 200 plants in 2001. The other five populations do not have enough information recorded to be able to determine any population trends. The extent of occurrence for Granite Poison is 10 250 km<sup>2</sup> (DEC, 2008).

Granite Poison is associated with the margins of granite outcrops, especially along drainage lines, on sandy soils in open woodland in association with *Allocasuarina huegeliana*,

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*Acacia lariocalyx* and *Eucalyptus eremophila* (Brown et al. 1998; Chandler et al., 2002). This species occurs within the Avon and Rangelands (Western Australia) Natural Resource Management Regions.

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

### **Threats**

The main identified threat to Granite Poison is a scale-type insect damage that has been observed on plants at two populations (DEC, 2008).

The main potential threats to Granite Poison include disease, inappropriate fire regimes, grazing, invasive weeds, hydrology changes, dam maintenance and recreational activities. An unidentified disease thought to be a type of rust fungi has been suspected to be present at one of the populations. Recreational activities, such as campfires, have also been identified as a potential threat at one population (DEC, 2008).

### **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.
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Identify any diseases that may be present at any of the populations and determine options for control, if required.
- 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 Granite Poison.

#### **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 dam maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where Granite Poison occurs does not adversely impact on known populations.
- Manage any changes to hydrology that may result in changes to water table levels and/or increased run-off, salinity, sedimentation or pollution.
- Manage any disruptions to water flows.
- Investigate formal conservation arrangements, management agreements and/or covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.

#### **Fire**

- Develop and implement a fire management strategy for Granite Poison.
- Identify appropriate intensity and interval of fire for this species.

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16/12/2008

- 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 Granite Poison within the local community. The development and distribution of fact sheets and the organisation of field days may benefit this species.
- Maintain liaisons with private landholders and land managers of land on which populations occur.

#### 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 Granite Poison.

#### Habitat Loss, Disturbance and Modification

- Control access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use at known sites.

#### Trampling, Browsing or Grazing

- Manage known sites to ensure appropriate grazing regimes occur.
- Prevent grazing pressure at priority sites through exclusion fencing or other barriers.

#### Invasive Weeds

- Identify and remove weeds in the local area which could become a threat to Granite Poison using appropriate methods.
- Manage sites to prevent introduction of invasive weeds which could become a threat to the species, using appropriate methods.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Granite Poison.

#### Diseases, Fungi and Parasites

- Identify any diseases (including scale-insect damage) that may be present locally, and implement suitable hygiene protocols and/or control measures to protect populations as necessary.

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

#### **Information Sources:**

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

Chandler, GT, Crisp, MD, Cayzer, LW & Bayer, RJ 2002, 'Monograph of *Gastrolobium* (Fabaceae: Mirbelieae)', *Australian Systematic Botany*, vol. 15, no. 5, pp 638-39.

Department of Environment and Conservation (DEC) 2008, Records held in DEC's Declared Flora Database and rare flora files. Department of Environment and Conservation, Western Australia.

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Chandler, GT 2001, *Systematic Studies in Gastrolobium (Fabaceae: Mirbelieae)*, PhD Thesis, Australian National University, Australia.

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.