

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

Approved Conservation Advice for
Zieria floydii

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

Description

Zieria floydii, Family Rutaceae, is an erect shrub to 2 m high with warty stems and covered in small star-shaped hairs. Leaves have a petiole 4–6 mm long, and are divided into three leaflets which are about 17–25 mm long and 2.5–3.5 mm wide. Each inflorescence contains 21–77 conspicuous creamy-white flowers each about 4 mm diameter, which are borne during late spring (November) (Armstrong, 2002). Mature fruit are unknown but are most likely on the plant during summer.

Conservation Status

Zieria floydii 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 endangered under the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Zieria floydii is known from Guy Fawkes National Park (NP) on the NSW far north coast at Bees Nest Trig and Boundary Creek, and from a coastal population at Chaelundi State Forest, in the State's upper north-east (Peacock, 1996). Population sizes are not known (Briggs & Leigh, 1996). The species occurs on the fringe of dry rainforest (*Grevillea robusta*-*Dendrocnide excelsa* association) in hilly country (Harden, 1991; Armstrong, 2002), or in dry rainforest, subtropical rainforest, wet sclerophyll forest and heath, at varied altitudes on variable geology and soils (Steenbeeke, 1998). Associated vegetation includes *Phelbalium squamulosum* subsp. *verrucosum* and *Myoporum montanum* (Armstrong, 2002).

This species occurs within the Northern Rivers Natural Resource Management Region of NSW (DECC, 2005a).

The distribution of this species overlaps with the "White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland" EPBC Act-listed threatened ecological community.

Threats

The main identified threats to *Z. floydii* are inappropriate fire regimes, grazing by feral goats (*Capra hircus*), and clearing of habitat (NSW NPWS 2003; DECC, 2005a). The species is at risk because populations are small and restricted in range (NSW NPWS, 2003).

Research Priorities

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

- Design and implement a monitoring program.
- Investigate ecology and germination of the species (DECC, 2005b).
- Research the species response to disturbance and fire (DECC, 2005b).

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- Undertake survey work in suitable habitat or potential habitat to locate any additional populations/occurrences, particularly the edges of dry forest in areas of potential habitat in the Guy Fawkes River NP (DECC, 2005b).

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of *Zieria floydii*.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Manage threats to areas of vegetation that contain populations/occurrences of *Zieria floydii*.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure if additional populations are located on private land.

Trampling, Browsing or Grazing

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

Fire

- Develop and implement a suitable fire management strategy for *Zieria floydii*. There is a risk of population decline with short intervals between fires (less than 10 years) or very long intervals (more than 25 years) (NSW NPWS, 2003).
- 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 *Zieria floydii* within the local community.

Enable Recovery of Additional Sites and/or Populations

- 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.
- Undertake appropriate seed collection and storage or ex-situ vegetative propagation material for future planting.
- Undertake seed germination and propagation trials to enhance likelihood of successful establishment.
- Maintain ex-situ populations in appropriate botanic gardens, regional gardens or nurseries (DECC, 2005).

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of *Zieria floydii*.

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 changed land use at known sites.

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Trampling, Browsing or Grazing

- Manage known sites in reserve areas to exclude grazing animals, particularly feral goats, through exclusion fencing or other barriers if possible.

Fire

- Implement an appropriate fire management regime for local populations, ensuring that the regime is based on an appropriate intensity and interval of fire to promote seed germination and/or vegetative propagation (DECC, 2005b).

This list does not necessarily encompass all actions that may be of benefit to *Zieria floydii*, 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 Competition and Land Degradation by Feral Goats (EA, 1999),
- Guy Fawkes River National Park, Nature Reserve and State Conservation Area Draft Plan of Management (NSW NPWS, 2006a),
- Guy Fawkes River Reserves Fire Management Strategy (NSW NPWS, 2006b),
- Guy Fawkes National Park Horse Management Plan (DEC, 2006), and
- Private Native Forestry Code of Practice for Northern NSW (DECC, 2007).

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

Information Sources:

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