

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

**Approved Conservation Advice for**  
***Digitaria porrecta* (Finger Panic Grass)**

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**

*Digitaria porrecta*, Family Poaceae, also known as Finger Panic Grass, is a loosely tufted perennial growing to 60 cm tall. It has grey leaves, 2–3 mm wide, with sharp hairs along the middle. Flowers appear in late summer in a cylindrical cluster along a stalk and spread stiffly from the flowering stem, with the lower clusters arranged in a whorl of four to six, each up to 30 cm long. It seeds from March to April but also reproduces vegetatively by dying back to the tussock base, from which it resprouts in summer. As the tussock ages the central portion dies and the resultant ring of plantlets eventually separate and become independent tussocks (Halford, 1995b; Sharp & Simon, 2001; NSW DEC, 2008a).

**Conservation Status**

Finger Panic Grass 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) and listed as rare under the *Nature Conservation Act 1992* (Queensland).

**Distribution and Habitat**

Finger Panic Grass occurs in four disjunct areas extending over 1000 km. In Queensland, it occurs in the Nebo district, south-west of Mackay; the Central Highlands between Springsure and Rolleston; and from Jandowae south to Warwick (41 sites). In NSW, it occurs from Graman and Croppa Creek (near Inverell), south to the Liverpool Plains near Coonabarabran and Werris Creek (33 sites) (BRI, n.d.; Halford, 1995b).

Its population is estimated to be 200 000 individuals with 75% occurring near Premer (approximately 41 500 individuals) and Tambar Springs (114 000 individuals) in NSW. The largest stands in Queensland occur near Dalby (2900 individuals) and Jimbour (5100 individuals) (Halford, 1995b). Most sites are situated on road verges and stock routes surrounded by beef cattle grazing or cultivation (NSW DEC, 2008a). This species occurs within the Border Rivers–Gwydir, Namoi, Central West (NSW), Fitzroy, and Condamine (Queensland) Natural Resource Management Regions.

Finger Panic Grass usually occurs in grasslands on extensive basaltic plains, and in undulating woodlands and open forests with an underlying basaltic geology. It usually occurs on dark and fine textured soils with some degree of seasonal cracking (Leigh et al., 1984; Halford, 1995b). It also persists in disturbed habitats, such as fallow paddocks, but its capability to maintain a viable population is unknown (Halford, 1995b).

In Queensland, it occurs in communities dominated by *Eucalyptus orgadophila* on hills and slopes and *E. tereticornis* and *E. populnea* in drainage lines. Associated grasses and forbs include *Dichanthium sericeum*, *Panicum decompositum*, *Digitaria divaricatissima*, *Aristida leptopoda*, *Boerhavia dominii*, *Mentha satureioides*, *Psoralea tenax*,

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*Rhynchosia minima*, *Panicum queenslandicum*, *Paspalidium globoideum*, *Themeda avenacea*, *Ixiolaena brevicompta*, *Sclerolaena muricata* and *Tribulus micrococcus* (Halford, 1995b).

In NSW, it has been recorded in communities dominated by *Eucalyptus albens* and *Acacia pendula* with common grasses and forbs as for Queensland sites, plus *Austrostipa aristiglumis*, *Enteropogon acicularis*, *Cyperus bifax*, *Hibiscus trionum* and *Neptunia gracilis* (Halford, 1995b).

The distribution of this species overlaps with the following EPBC Act-listed threatened ecological communities:

- Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions,
- Bluegrass (*Dichanthium* spp.) dominant grasslands of the Brigalow Belt Bioregions (North and South),
- Brigalow (*Acacia harpophylla* dominant and co-dominant), and
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

### **Threats**

The main identified threats to Finger Panic Grass are clearing and habitat fragmentation; fire; trampling and grazing by livestock; physical disturbance by machinery; and urban expansion (Leigh et al., 1984, Halford, 1995b; NSW DEC, 2008a).

The main potential threat to Finger Panic Grass is competition from introduced grasses such as Rhodes Grass (*Chloris gayana*) and Liverseed Grass (*Urochloa panicoides*) (Halford, 1995b).

### **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.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.
- Undertake genetic analyses to assess current gene flow (using markers and analyses capable of distinguishing population divergence on an evolutionary timescale, from that which might be due to more recent impacts).

### **Regional Priority Actions**

The following regional priority recovery and threat abatement actions can be done to support the recovery of Finger Panic Grass.

#### **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 chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Finger Panic Grass.

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- Ensure road widening and maintenance (or other infrastructure or development activities) involving substrate disturbance in areas where Finger Panic Grass occurs do not adversely impact on known populations.
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown land and private land investigate inclusion in reserve tenure if possible.

#### Invasive Weeds

- Develop and implement a management plan for the control of invasive weed species, especially Rhodes Grass and Liverseed Grass, in the local region.

#### Trampling, Browsing or Grazing

- Develop and implement a stock management plan for roadside verges and travelling stock routes.

#### Fire

- Develop and implement a suitable fire management strategy for Finger Panic Grass.
- 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 Finger Panic Grass within the local community, particularly among farmers and graziers through local Landcare groups (NSW DEC, 2008a).

#### 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 Finger Panic Grass.

#### Habitat Loss, Disturbance and Modification

- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land.
- Minimise adverse impacts from land use at known sites.

#### Invasive Weeds

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

#### Trampling, Browsing or Grazing

- Where necessary, practise sustainable grazing to maintain native grass ground cover in areas of known and potential habitat (NSW DEC, 2008a).
- Where appropriate manage total grazing pressure at important/significant sites through exclusion fencing or other barriers.

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This list does not necessarily encompass all actions that may be of benefit to Finger Panic Grass, 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**

- NSW Threatened Species: Finger Panic Grass – Priority Actions (NSW DEC, 2008b), and
- *Digitaria porrecta* S.T.Blake (*Poaceae*) – *Draft Recovery Plan* (Halford, 1995a).

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

### **Information Sources:**

BRI no date, Queensland Herbarium Records, Queensland Herbarium, Environmental Protection Authority.

Halford, D 1995a, '*Digitaria porrecta* S.T.Blake (*Poaceae*) – *Draft Recovery Plan*', Queensland Herbarium, Brisbane.

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<<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10222>>.

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Sharp, D & Simon, B 2001, *Ausgrass: Encyclopedia of Australian Grasses*. [Compact Disk (CD)].

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.