

# Northern Plains Grassland

A nationally threatened vegetation community in the Goulburn Broken

## About this fact sheet

This fact sheet attempts to address the following questions regarding the vegetation community, Northern Plains Grassland:

- What is it?
- Where is it?
- Why is it important?
- How can I protect and manage it?

## Community Description

Northern Plains Grassland (NPGL) is a distinct variant of plains grassland, which are naturally treeless. If trees or large shrubs are present, then it is uncommon. They are a diverse community, consisting of native grasses and herbs. The community is floristically very rich and may contain up to 30 native plant species per 100 m<sup>2</sup> (Foreman P 1996).

Northern Plains Grasslands are distinct from other grasslands such as the Western Basalt Plains Grasslands, in that they typically contain saltbush (Chenopod) species, including members of the Maireana and Einadia genus. This suggests close links with the vegetation communities of the semi-arid and arid interior of Australia.

'Derived' grasslands are areas of former woodland vegetation, which have been cleared. While these areas may be important because they provide grassland habitat they are not natural grasslands according to the strict legislative definitions.



Red Swainson-pea (*Swainsona plagiotropis*), a species listed as endangered in Victoria and nationally vulnerable, is found in quality Northern Plains Grasslands.



**Terrick Terrick National Park contains the largest reserved area of Northern Plains Grassland in Victoria.**

## Distribution

Northern Plains Grassland was once widespread across the flat to undulating plains of the Victorian Riverina and across the border into New South Wales. Today its distribution is severely restricted and it commonly occurs, as small remnants on roadsides, along railway lines, miscellaneous areas of public land and on private property. Wherever disturbance has been kept to a minimum including limited use of fertilisers.

NPGL occurs on alluvial sediments, in areas that are not regularly flooded. Soils are generally loams to clay loams that are often poorly drained. The average annual rainfall is between 375-550 mm per year. The community is largely found in the North Central region of Victoria, near Patho, Mitiamo and Bael Bael. However there are isolated occurrences in the Goulburn Broken region around Echuca, Tongala, Kyabram, Numurkah and Corop. Key sites include Naringaningalook (Naring) Grassland, Numurkah Rifle Range, Odea's Rd, Tungamah Roadsides and Deviation Rd Corop.

Estimates suggests that approximately 5,374 ha may have occurred in the Goulburn Broken and and of this a mere 17 ha exists today ie. Less than 0.3% of its former distribution.

# Northern Plains Grassland



Photo: Gave Murphy

**Blue Devil (*Eryngium ovinum*)** is an attractive perennial herb found in Northern Plains Grasslands. This species is protected under the FFG Act as 'protected flora' because it is commonly associated with the listed community.

## Protection Measures

Northern Plains Grassland is one of five lowland temperate grassland communities collectively listed as **threatened** under Victoria's Flora and Fauna Guarantee (FFG) Act 1998 (Craigie and Moorrees 2003).

An FFG listing means there are a number of actions, which must be taken eg. An 'Action Statement' must be prepared for this community. It also means there are additional powers, which can be used to protect this community. In particular, all flora which is part of this community is declared **protected flora** and as such no plants can be taken, traded, kept, moved or processed on public land but not private land without a permit.

The community is not listed under the Environment Protection and Biodiversity Conservation (EPBC) Act 2000, as yet. However a nomination to the Federal Government is currently being considered for the community (Murray Valley Grassland of the Riverina Bioregion) as **critically endangered**.

The conservation status of the Ecological Vegetation Class (EVC) - Plains Grassland in the Goulburn Broken, Victorian Riverina Bioregion is **endangered**.

## Flora and fauna

Few flora appear to be truly endemic or confined to this community, rather they occur across grasslands and grassy woodlands of South-Eastern Australia (McDougall and Kirkpatrick 1994).

Commonly occurring species include Wallaby Grasses (*Austrodanthonia* spp.), Spear Grasses (*Austrostipa* spp.), Spider Grasses (*Enteropogon* spp.), Windmill Grass (*Chloris truncata*), Rigid Panic (*Whalleya proluta*), Darling Peas (*Swainsona* sp.), Lambtails (*Ptilotus* spp.), Daisies (*Brachyscome* spp., *Vittadinia* spp., *Leptorhynchos* spp., *Calocephalus* spp.) and Saltbushes (*Einadia* sp., *Maireana* spp.).

Some examples of threatened flora found in this community include Red Swainson-pea (*Swainsona plagiotropis*), Murray Swainson-pea (*Swainsona murrayana*) and Woolly Buttons (*Leptorhynchos panaetioides*).

Some examples of threatened fauna found in this community include Plains-wanderer (*Pedionomus torquatus*), Striped Legless Lizard (*Delmar impar*), and Hooded Scaly-foot (*Pygopus nigriceps*). The Plains-wanderer in particular has become a flagship species for this vegetation community.



Photo: Tom Wheller

**Female Plains-wanderer (*Pedionomus torquatus*)** a bird species listed as **vulnerable** in Victoria, is found almost exclusively in Northern Plains Grassland vegetation.



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## Threats

Northern Plains Grassland vegetation is subject to a number of threatening processes, many common to other grasslands and grassy woodlands. These are summarised as below.

- Loss of vegetation by soil disturbance and fertilizers.

Cultivating or ploughing the soil removes vegetation, encourages exotic weeds, and changes the structural diversity and integrity of the site (permanently). Nutrients also become more readily available leading to a flush of annual grasses and weeds. A shift away from grazing towards cropping is further compounding this threat.

- Loss of vegetation through inappropriate grazing

While light grazing can be beneficial, overstocking is not and favors exotic grasses and annual weeds. Equally the total absence of grazing as a disturbance regime, threatens some grasslands as perennial native grasses can out compete the small native herbs which grow in the spaces (inter-tussock) between the native grasses.

- Invasion by exotic weeds

Exotic weeds are opportunistic and typically invade disturbed areas (ploughed, overgrazed, or fertilised). A number of exotic grasses such as Phalaris and Wild Oats are also very invasive and can out compete native species.

- Habitat fragmentation and size

Most remnants are small in size and highly fragmented in the landscape. This makes them very vulnerable to random events and accidental activities such as fire and roadside vandalism. Edge effects from neighboring agricultural land including fertiliser and herbicide spray drift, are also problems in these small and linear reserves.



Photo: Gaye Furphy

Ploughing destroys Northern Plains Grassland vegetation. Sites such as this at O'Deas Rd, do not self regenerate quickly and are very difficult to rehabilitate once disturbed.

## Clearing Controls

Since 1989 a planning permit is required, should you propose to *remove, destroy or lop* native vegetation. This applies to clearing all native vegetation including trees, shrubs, groundcovers and grasses, unless an exemption exists.

Before removing any native vegetation, please consult a Planning Officer from your Local Government Authority or discuss your plans with a regional office of the DSE.

## Protected Flora Licence or Permit

Protected flora are native plants or communities of native plants that have legal protection under the FFG Act 1988. This includes all plants which belong to communities listed as threatened under the Act.

If you are proposing works or other activities on public land which might kill, injure or disturb protected native plants you must obtain a *Protected Flora Licence* or *Permit*. Application forms can be obtained from DSE Regional Offices or by calling the Customer Service Centre on 136 186.

## EPBC Assessments

If you are proposing works which may have a *significant impact* as defined by the EPBC Act 2000, you should contact the Department of Environment and Heritage (DEH).

Further information regarding the EPBC Act and making a referral can be obtained by contacting [www.deh.gov.au/epbc](http://www.deh.gov.au/epbc) or on (02) 6274 1111



Photo: Gaye Furphy

Spring time display of native groundcovers (Lemon beautyheads and Pink Bindweed) on a roadside remnant.

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## Management

While there is still much to be learnt regarding the best management regimes for Northern Plains Grasslands the following general points can be made, to assist decision making.

- A network of remnants  
Because these grassland sites are small and highly fragmented, management decisions need to consider the contribution these sites make as part of the whole community.
- Adaptive management  
If good quality remnants exist (and are not further degrading), this is likely due to prior management practices. Changes to this management should be made with caution and closely monitored eg. Photo points and scientific trials.
- Grazing and fencing  
Northern Plains Grasslands are adapted to grazing and require a degree of disturbance (fire or grazing) to maintain plant species diversity and inter-tussock spaces. Fencing enables the grazing intensity and duration to be monitored and prevents uncontrolled access to areas. In general conservative rotational stocking regimes which graze between Mid-Summer and Winter, allowing seed to set and removing stock when soils are wet to prevent pugging, are not likely to degrade conservation values present.
- No fertiliser and no till  
Under no circumstances should fertilisers be applied nor ploughing, grading, excavation or any other form of soil disturbance. The resulting changes in the ecology and functioning of the grassland are near irreversible.
- Mowing  
The effects of mowing are less understood on Northern Plains Grasslands, than Western Basalt Grasslands. If mowing is necessary for fire prevention for example, then the grass should not be mown below 10 cm in height and all cut grass should be removed from the site. Burning and mowing, is generally more preferable to random spraying with chemical herbicides.

- Signage and identifying sites  
All sites should be adequately signed on site and recorded on relevant Department and Local Government systems, to prevent unintentional misuse and damage to these sites. Training for roadside managers is also essential.
- Revegetation  
Where the conservation of a site is secure, revegetation with grassland species, which may be rare, and or no longer present at the site is appropriate. However under no circumstances should species, which would not normally be found in Northern Plains Grasslands, including trees and some shrubs be planted. Care should be taken when selecting plant species and planning establishment techniques. **This will require expert input.**
- Weed management  
The strategies for managing weeds are threefold. Control those weeds, which can be easily removed with little disturbance to native species (ie. Boxthorn, Prickly Pear). Manipulate the differences in growth conditions between native and exotic such as crash graze in Autumn/Winter or an early Spring burn to reduce annual weed species. Utilise adaptive management principles such as monitoring change, trialing techniques and implementing what works.

### Related Information

*Managing your patch of bush - EVC descriptions and Revegetation Guide for the Goulburn Broken*

Catchment at: [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

*EVC Bioregional Conservation Status information and Biodiversity Action Plans by Bioregion at: [www.dse.vic.gov.au](http://www.dse.vic.gov.au) under 'Conservation & Environment'.*



Australian Government



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