

Grey Box-Buloke Grassy Woodlands

A nationally threatened vegetation community found in the Goulburn Broken

About this fact sheet

This fact sheet addresses the following questions regarding the vegetation community, Grey Box – Buloke Grassy Woodland:

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

Community Description

Grey Box and Buloke Grassy Woodlands are open woodlands of the Riverina and Murray Darling Depression Bioregions. They are typically found on clay-loam soils, in areas with < 600 mm p.a. of rainfall, which are seasonally inundated but rarely flooded for long periods.

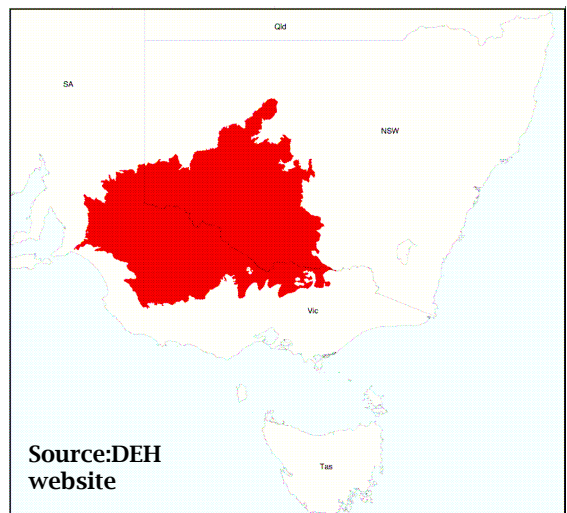
Grey Box (dominant species) and Buloke are the most common overstorey species, however other trees such as River Red Gum, Yellow Box, White Box and White-Cypress Pine may occur. Buloke may not always be present in a particular patch, but will occur in the neighbourhood as individuals or dense stands.

The understorey is open and grassy, typically consisting of native grasses and herbs such as lillies, daisies and saltbushes (chenopods). Shrubs are sparse and typically include Wattles, Sweet Bursaria and Cassinia.



Photo: Gaye Furphy

Wunghnu Bushland Reserve a high value site of Grey Box and Buloke Grassy Woodland vegetation.



Source:DEH website

Buloke Woodlands of the Riverina and Murray Darling Depression Bioregions are shown in red on the map above.

This community largely equates to the *Plains Woodland* Ecological Vegetation Class (EVC) in the North East. The presence of chenopods with the dominant overstorey species distinguishes this EVC from Plains Grassy Woodland.

Distribution

Grey Box-Buloke Grassy Woodlands are found in the Goulburn Broken on the non-flooding plains. In areas including Murchison, Violet Town, Nagambie, Katamatite, Nathalia and Numurkah. Key sites include the Balmattum Grassy Woodland Reserve, Wunghnu Bushland Reserve, Yielma Bushland Reserve, and the Broken-Boosey State Park.

Progressive clearing, additional threats from pest plants and animals, and changing agricultural practices from grazing to cropping have seen this community decline in extent and condition.

This decline is compounded by a lack of conservation reserves. Estimates suggest that less than 1% of the former distribution currently exist.

Grey Box-Buloke Grassy Woodlands

Protection Measures

In addition to the normal vegetation clearing controls of the Victorian Planning Provisions (VPP's), the special conservation values of Grey Box-Buloke Grassy Woodlands are recognised in State and Federal Government Legislation.

Flora and Fauna Guarantee (FFG) Act 1988

Grey Box-Buloke Grassy Woodlands are listed as **threatened** under 'Schedule 2 - Threatened Ecological Community'.

An FFG listing means there are a number of actions that must be taken including the preparation of an Action Statement. It also means there are additional powers, which can be utilised to protect this community. In particular, all flora in the community is declared **protected flora** and as such, controls exist over the taking, trading, keeping, moving or processing of plants on public not private land (see *Protected Flora License* or *Permit*).

Environment Protection and Biodiversity Conservation (EPBC) Act 2000

The community Grey Box and Buloke Grassy Woodlands are recognised nationally as part of the larger 'Buloke Woodlands of the Riverina and Murray Darling Depression Bioregions'. Grey Box-Buloke Grassy Woodlands are listed as endangered under 'Part 3 - Endangered Ecological Community'.

An EPBC listing recognises the conservation status of the community at a national level. If an action is likely to have a significant impact as defined in the Act, then it must be referred to the Minister for a decision. This means that a Commonwealth assessment and approval process may be triggered (see *EPBC Permit*).



Photo: Gaye Furphy

Buloke (*Allocasuarina luehmannii*) is listed as depleted under the Flora and Fauna Guarantee (FFG) Act 1988.



Photo: Gaye Furphy

Tree Goanna at Wunghnu Bushland Reserve is rare in Victoria.

Flora and fauna

The flora and fauna of Grey Box-Buloke Grassy Woodlands are typical of many grassy ecosystems across the Northern Plains. As is the case for other grassy ecosystems, many of the flora and fauna species are also threatened. Buloke mistletoe (*Amyema linophylla subsp. Orientale*) which is classified as vulnerable in Victoria is the only specific flora association with this community. No specific fauna associations are yet known.

Some examples of threatened flora found in the project area include: Leafy Templetonia (*Templetonia stenophylla*), Buloke (*Allocasuarina luehmannii*), Waterbush (*Myoporum montanum*) and Woolly Buttons (*Leptorhynchus panaetiodies*).

Some examples of threatened fauna found in the project area include: Tree Goanna (*Varanus varius*), Bush-stone Curlew (*Burhinus magnirostris*), Grey Crowned Babbler (*Pomatostomus temporalis*) and Swift Parrot (*Lathamus discolor*).



Photo: Mike Carter

The Swift Parrot is nationally endangered. Grey Box-Buloke Grassy Woodland is important habitat for this species.

Grey Box-Buloke Grassy Woodlands

Threats

Grey Box-Buloke Grassy Woodlands are subject to a number of threats as discussed below.

- Cultivation

Cultivating the soil removes the vegetation, encourages exotic weeds, and changes the structural diversity and integrity of the site. Once disturbed the grassy woodland is difficult to rehabilitate. Suckering may occur from disturbance around the Buloke tree roots (this technique should be conducted with expert input).

- Clearing

Clearing can occur deliberately via a permit process. Any assessment should have proper regard for the impact of the clearing and the conservation status of this community. Frequently scattered trees die as a result of inadequate protection in the agricultural landscape eg. ringbarking, cropping, burning, irrigation etc.

- Grazing

Light grazing can be beneficial, however overstocking, particularly during Spring/Summer, changes the ecology of the grassy woodland. This can result in increased exotic weeds and annual species, and may contribute to tree dieback, ringbarking and poor regeneration of woody species. This may further contribute to the poor reproductive success of Buloke.

- Timber collection

Fallen timber contributes to habitat for ground dwelling fauna such as the Bush-stone Curlew and Common Dunnart. Removing timber also removes important nutrients from the nutrient cycle, which become available through decomposition.

- Weeds and exotic grasses

Weeds are opportunistic and typically invade disturbed areas, which have been cultivated, overgrazed or fertilised. A number of exotic grasses such as Phalaris and Wild Oats are very invasive and can out-compete and replace native grasses and herbs.

- Habitat fragmentation and size

Most remnants are small in size and highly fragmented in the landscape. This makes them more vulnerable to catastrophic events such as fire and edge effects from neighbouring agricultural land, including fertiliser and herbicide spray drift. The small and highly fragmented nature of patches also contributes to poor regeneration of Buloke.

- Poor regeneration

Buloke requires both female and male individuals, to reproduce. Young plants are an uncommon occurrence in the region and where regeneration does occur it is often inadequate. That is the young plants are not sufficient to replace the adults in time.

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 or on (02) 6274 1111



Photo: Gaye Furphy

Scattered Buloke on private property. Note the lack of native understorey, ringbarking and poor tree health.

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Management

While there is still much to be learnt regarding the best management regimes for Grey Box-Buloke Grassy Woodlands the following general points can be made, to assist decision making.

- **Grazing and fencing**
Grassy Woodlands have evolved with some level of grazing and require a degree of biomass removal to maintain an open understorey. Remnant patches should generally be fenced to control this level of disturbance. If grazing is permitted this should be light and periodic during Summer and Autumn (not Spring or Winter).
- **Revegetation**
Revegetation may be necessary if a component of the community is missing (trees, shrubs etc), the seed bank is depleted or species are not regenerating adequately (eg. Buloke). Care should be taken in selecting the species, provenance and method of establishment, particularly where a relatively undisturbed groundcover exists.
- **A network of remnant patches**
Because of the small and highly fragmented nature of many of the remnant patches, the contribution these sites make collectively as a whole needs to be considered in any decision making. Ideally enlarging and improving the habitat first and then connecting these remnants, via revegetation and enhancement of existing vegetation, will lessen the effects of fragmentation and isolation.
- **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.
- **Signage and identifying sites**
All sites should be adequately signed and identified on relevant Department and Local Government systems, to prevent unintentional misuse and damage to these sites.



African Boxthorn (*Lycium ferocissimum*) is a weed of Grassy Woodlands. It can be removed by cutting and 'painting' the stump with an appropriate herbicide.

Related Information

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

Catchment at: www.gbcma.vic.gov.au

EVC Bioregional Conservation Status information and Biodiversity Action Plans by Bioregion at: www.dse.vic.gov.au under 'Conservation & Environment'.



Australian Government



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