

Native grassy habitats of the Mount Lofty Ranges



Many of the habitats in the Mount Lofty Ranges at European settlement were native grassy habitats.

Where are the native grassy habitats?

Before European settlement, expanses of grassy woodlands and grassy habitats were found over much of the Mount Lofty Ranges, except for the highest spine of the ranges. Eucalyptus forests occur in the high rainfall and poor soil areas of the Mt Lofty Ranges, while grassy habitats and grassy woodlands grow on the high flat ground, slopes and foothills.

Grassy woodlands in South Australia have been preferentially cleared because they tend to occur on soils well suited to agriculture.

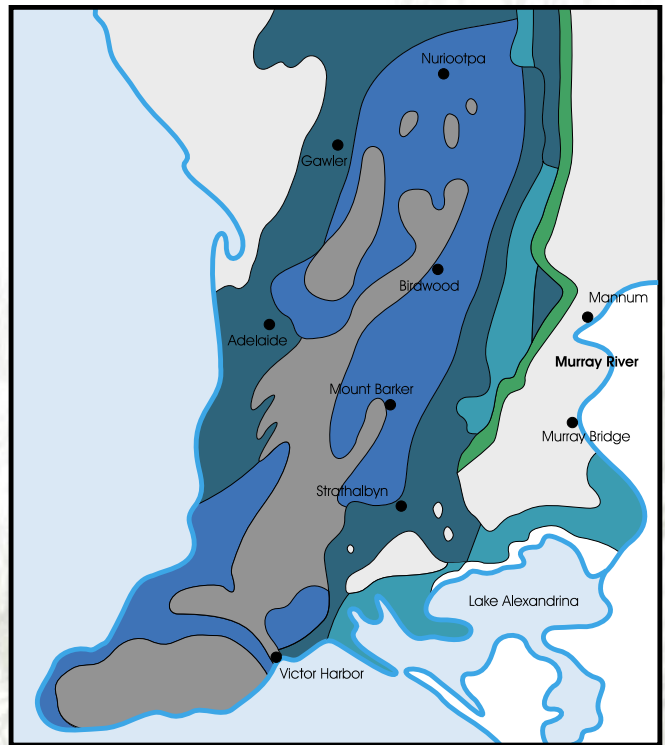
Why are there native grassy habitats?

Soil type, rainfall, underlying rocks, frosts and temperature patterns help explain the historic location of grassy habitats. Semi-regular and quite frequent burning from lightning strikes also set this pattern. Aboriginal people probably played a significant role in creating a mosaic of grasses with careful use of fire, to encourage production of food sources.



David Robertson

Grassy habitats in the Mount Lofty Ranges were widespread



Key

- Grassy woodland with blue gums, red gums, manna gums
- Grassy woodland with grey box, peppermint box and mallee box
- Grassy woodland with drooping sheoaks
- Irongrass grasslands
- Stringybark forest with shrubs
- Mallee

Adapted from Specht, R. L. (1972) *The Vegetation of South Australia*. Government Printer, Adelaide.

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What is a native grassy habitat?

A native grassy habitat has native grasses as a major part of the understorey. These are naturally open looking areas with scattered native trees; sometimes with very few trees at all.

Native grasses can also be found in the understorey of grassy woodlands. The understorey in a grassy habitat consists of a wide variety of native grasses, which usually grow in clumps, bunches or tussocks. The spaces in between the grasses are where spring wildflowers come up from bulbs, tubers and seeds. There are many other low-growing plants. Medium-sized and tall shrubs are often absent, at low densities, or in small scattered groves.

Instead of wattles, ti-trees, banksias, grevilleas, heaths, and other shrubs found in mallee and stringybark forests, grasses and wildflowers such as a variety of lilies, native peas and daisies dominate grassy habitats.

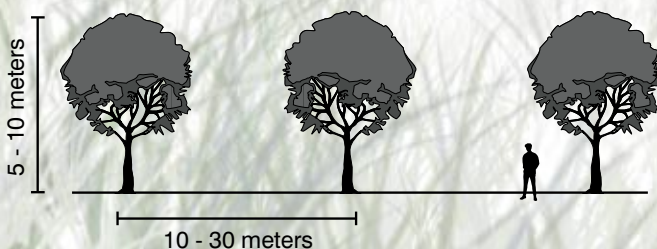
The words 'grassy habitats' also cover a range of pure grassland communities such as Kangaroo Grass Grasslands and Iron Grass Grasslands with no trees.



Rick Davies

Grassy habitats have both grasses and wildflowers. Many are rare or endangered.

Recognising a woodland



Woodlands are generally considered to be areas where the trees are at least 5m tall and they are widely spaced, usually between 10m-30m apart, so that their canopies cast a total shadow across less than 25% of the ground in the middle of the day.

Birds and other wildlife depend on grassy habitats

Grassy habitats are essential habitats for wildlife. The openness of grassy woodlands provide places for native birds that specialise in watching the ground for insects from low tree branches and those which specialise in eating grass seeds. The spaces between grass tussocks are where insects and reptiles move around to feed and breed.



Lynn Pedlar

Woodland birds rely on woodlands to survive. Many species are becoming rare in the Mount Lofty Ranges, as grassy woodlands are now rare. Restless Flycatcher (*Myiagra inquieta*)

Iron Grass habitats on our eastern slopes are nationally valuable

The eastern slopes of the Mount Lofty Ranges have Iron Grass habitats. These are nationally important for conservation, as they occur nowhere else in Australia. The most visible plants are usually either Hard Iron Grass or Scented Iron Grass. Sometimes there are naturally no trees and sometimes there will be scattered Golden Wattles, Christmas Bush and Drooping Sheoak.



Bob Myers

Tussocks of Iron Grass form the basis of grassland habitats on the MLR eastern slopes. Scented Iron Grass.

Grassland remnants are protected

All native grassy habitats are native vegetation even if they have no trees. All native grassy habitats are protected under the *Native Vegetation Act, 1991* from changes in land use and cannot be cleared by such activities as ploughing or burning.

What has happened to our grassy habitats?

Large areas of native grassland and grassy woodlands present in South Australia when European settlers first arrived have now gone.

Much of our grassy habitats have been replaced by intensive cropping, by introduced grasses used for pasture improvement, and by fertiliser application which favours introduced species. Domestic stock which graze for long uninterrupted periods on native grassland often prevent these plants from regenerating. Europeans have also changed the patterns of burning in native grassy habitats, favouring some species over others.

Approximately 2% (10,000 ha of an original estimated 2 million ha) of the native grasslands of south-eastern Australia remain. Most grasslands are either on privately owned grazing properties, or in small areas of public land such as stone and water reserves.

Grassy habitats have conservation value

The conservation values of remnant grasslands and grassy woodlands on private land are increasingly being recognised. Native grassy habitats are just as valuable as rainforests. Many plant and animal species, some endangered, depend almost exclusively on these remnants for habitat.

Public land, stone reserves, old cemeteries, closed roads and roadsides often have patches of grassy habitats in original condition. Many of the rarest grassland species are found only where stock have been traditionally excluded.



Ann Prescott

Grassy woodlands have scattered trees, an open look, and a variety of understorey plants.

Grassy habitats are our heritage

Grassy habitats are important because they:

- are the local natural heritage
- help with the long term survival of woodland birds
- provide habitat for wildflowers and native animals
- are a biological resource for revegetation projects
- help reduce soil erosion, and manage water use, and salinity
- provide all year grazing in native grass pastures

Grassy habitats are relevant to landholders because many properties have areas of native grasses, particularly in the 'rough' country, which are used for grazing.



Millie Nicholls

Native grasses in hilly country can form a good framework for successful grazing in rough country.

Early records describe the grassy habitats

Early explorers and land surveyors to the Mount Lofty Ranges described a landscape dominated by grasslands and grassy woodlands.

"...abundance of wood all the way, yet not so thick that agriculture might be pursued without the trouble of clearing."

Light (1839) A Brief journal of the proceedings of William Light about Adelaide plains

"...the land between the trees, which may be averaged as six or seven per acre, is covered with grass of the richest quality."

Gouger (1838) about the plains of South Australia in 1837



Scented Iron Grass

A tussock of tough narrow blue-green leaves, often with a twist, and with sharp double-pointed tips. White flowers are found low down in the tussock in autumn and winter. The flowers have a strong perfume. Widespread in grasslands.



Hard Iron Grass

The leaves of the Hard Iron Grass are broad green-grey leathery straps. The stiff branched flower stalk is tough and often remains visible at the base of the tussock year round. Unique to South Australia as a dominant plant in grasslands of the eastern MLR.

Drawings used with permission of the author Ann Prescott from Its Blue with Five Petals.



Tim Milne

Help with identification and management advice

Several projects in the Mount Lofty Ranges work with landholders, community groups and local government on native grassy habitats, both to retain their grazing potential and to improve their nature conservation values.

For further information contact:

Management of native grassy habitats for conservation

Native grassy habitats need to be fenced to control grazing pressure. Active or adaptive management such as woody weed removal and exotic grass control will also be needed.

Management of native grassy habitats for grazing

Native grasses occur on private property and are often used as pasture. They are perennial, deep rooted and help reduce soil erosion, and manage water use. By managing the time of grazing, the length of each grazing episode, the 'rest' or spelling period between each grazing episode, and stocking rates, native grasses can be kept in good condition. A cover of a variety of native grasses indicates good management. Demonstration farms in the Mid-north indicate that managing the rest periods can improve native pasture without a drop in income.

Be careful with your revegetation work

Grassy habitats were widespread. Here are some key ideas to consider before you plant.

- Look before you plant – natural regeneration might be more successful.
- Choose the right tree species for your area.
- Plant your trees at least 10m apart.
- If you plant shrubs - plant a few, in small groves, and aim for an open look.
- Widely spaced tubestock is often better than direct seeding.
- Do not spray, scrape, or plough areas with grassy habitat species when planting.



Jo Spencer

Drooping Sheoak and Iron Grass woodlands are a typical "see through" woodland - easy to look through at eye height.

A land of sweeping plains – our very own savannah

Other countries have specific words for grasslands such as the savannah, the pampas, the prairies, the steppes and even the English downs. In Australia, early explorers, writers and settlers often called our grasslands "the plains", as in The Adelaide Plains.

Scientific names used in the text

- Blue Gum (*Eucalyptus leucoxylon*)
- Christmas Bush (*Bursaria spinosa*)
- Drooping Sheoak (*Allocasuarina verticillata*)
- Golden Wattle (*Acacia pycnantha*)
- Grey Box (*Eucalyptus microcarpa*)
- Hard Iron Grass (*Lomandra multiflora var dura*)
- Kangaroo Grass (*Themeda triandra*)
- Mallee Box (*Eucalyptus porosa*)
- Manna Gum (*Eucalyptus viminalis*)
- Peppermint Box (*Eucalyptus odorata*)
- Red Gum (*Eucalyptus camaldulensis*)
- Scented Iron Grass (*Lomandra effusa*)
- Spear Grass (*Austrostipa* spp.)
- Wallaby Grass (*Austrodanthonia* spp.)

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