Conservation of high rainfall (>600 mm) grasslands and grassy woodlands in production systems

Draft issue

Grassy woodlands were the most common vegetation type in the Adelaide and Mount Lofty Ranges (AMLR) region at the time of European settlement, covering almost 50 per cent of the region. Higher rainfall grassy woodlands were present on the eastern side of the spine of the ranges in alluvial valley slopes and flats.

Since settlement over 90 per cent of the grassy woodlands in the region have been cleared as the fertile soils on which these woodlands are found were favoured by settlers for agricultural pursuits such as cereal and vegetable cropping, livestock grazing, and exotic pasture improvement (Informing biodiversity conservation for Adelaide and Mount Lofty Ranges region of Australia: priorities strategies and targets, 2010, Department for Environment and Heritage).

The situation today

Today, remnant high rainfall grassy woodlands are poorly represented in the protected area network and remnants in good condition are uncommon in the region.

Most remnants are now in a degraded condition with reduced tree recruitment, loss of most of the flora and fauna species and high weed loads. Unlike the shrub-dominated vegetation types, the invasion of woody weeds into grassy woodland dramatically alters the structure of the habitat and results in woodland fauna species being at a high risk of being displaced.

Because high rainfall grassy woodlands have been extensively cleared and are under-represented in the conservation network, even grassy woodlands remnants in "fair" condition are a conservation priority (Informing biodiversity conservation for Adelaide and Mount Lofty Ranges region of Australia: priorities strategies and targets, 2010, Department for Environment and Heritage).

Why grassy woodlands are important

High rainfall grassy woodlands provide habitat for many threatened plants and animals. Woodland birds, such as the Diamond Firetail (State V), Black-chinned Honeyeater (State V), Restless Flycatcher (State R) and Crested Shrike-tit (State R) are now rarely found in the Central Hills.

This area is also home to numerous declining species especially the Chestnut-rumped Thornbill, Southern Whiteface, Jacky Winter, Hooded Robin and Brown Treecreeper (Informing biodiversity conservation for Adelaide and Mount Lofty Ranges region of Australia: priorities strategies and targets, 2010, Department for Environment and Heritage).

These birds use the high rainfall grassy woodlands as primary habitat, but also use the heathy forests and woodlands when the food resources are available. The loss of these species due to the lack of grassy woodland habitat will also have an impact on the ecology of the heathy areas (Abley, A. 2017. Personal Comm.).

Current usage of the landscape

The current management of this high rainfall grassy woodland area is mostly agricultural with livestock grazing being the primary land use. Grazing paddocks are dominated by introduced pasture but also have scattered remnant mature eucalypts.

These ‘paddock trees’ are extremely valuable natural features of the agricultural grassy woodland landscape. They are ‘keystone structures’ because their contribution to the environment as habitat and the biodiversity they support is disproportionately big compared to the small area they occupy in the landscape. Because of this high value, when we lose paddock trees we tend to see negative shifts in the local ecology. Essentially we lose species that are still using keystone paddock trees as habitat.

A tree crisis

Across the agricultural zones of Australia it is often mentioned that we are facing a tree regeneration crisis. In the Adelaide Hills, under conventional grazing management, thousands of hectares (approximately half of the region) currently supporting tens of thousands of trees will likely be treeless a few decades from now.

Although large-scale clearance has stopped, tree cover continues to be threatened by the ongoing decline of mature trees due to death and their lack of regeneration. In the absence of natural regeneration, their disappearance is only a matter of time. The obstacles that prevent natural regeneration are usually grazing pressure, excessive nutrients from fertilizer application, and a concentration of livestock manure and soil compaction around the mature remnant trees.

In addition, the fallen debris created by paddock trees is an incredibly valuable biodiversity magnet. Fallen timber is one of the biggest determining factors for the number of woodland bird species on a farm, in fact, a survey of bird activity in...
Victoria observed 9 times more birds on farms with fallen timber and debris on the ground than without (Antos, M.J., et al, 2008). Unfortunately due to community concern around bushfire risk and the value these hardwood trees have as firewood, the vast majority of fallen timber is 'cleaned up'.

**Subregions affected by the issue**

- Central Hills
- Fleurieu Peninsula
- Northern Hills

**Conceptual models related to the issue**

- Building capacity of natural resources managers
- Sustainable primary production
- Terrestrial landscape health

Read about regional conceptual models at:


**What are these draft issues?**

The information in this document relates to a list of draft issues that are impacting on the natural resources of the region.

The issues list has been developed based on information collected during a regional planning process, and a range of projects that the Adelaide and Mount Lofty Ranges Natural Resources Management Board has undertaken.

New issues are added to the list as they become apparent, and as issues are addressed by projects they drop off the list. As the issues are constantly evolving, the information in this document may no longer be relevant. Check the current list for the most up-to-date issues:


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