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Reviving Tasmania's lowland native grasslands: pathways to conservation

WHAT ARE THEY?

Listed as critically endangered, under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), the lowland native grasslands of Tasmania (LNGT) are one of Tasmania's most threatened and fragmented ecological communities.

Occurring largely as remnant patches in the Midlands, Derwent Valley, east coast and south east of Tasmania, LNGT are concentrated in low rainfall areas with heavy, deep, mineral-rich and fertile soils, and typically absent from rocky, highly infertile sites.

The Midlands region of Central Tasmania has lost over 70 % of its pre-colonial vegetation due to agricultural clearing, and less than 5% of LNGT's original extent is left. Remnants found in this region support many threatened plants and animals – some found nowhere else in the world.

Most intact LNGT is on private property, and only a small fraction of that occurs on land with conservation protection in place. Protecting LNGT currently relies heavily on voluntary conservation measures undertaken by private landholders involved in programs offered through not-for-profit organisations.

Such programs include this NRM North project, the Midlands Conservation Partnership, the Tasmanian Land Conservancy's Land for Wildlife program, or formal conservation covenants.

There are two main sub-communities of LNGT, differentiated by their dominant tussock-forming grass: Lowland *Themeda triandra* (Kangaroo Grass) grassland, and Lowland *Poa labillardierei* (Silver Tussock Grass) grassland. Themeda grassland tends to support a much higher diversity of herbs, lilies and orchids than Poa grassland, where the dominant tussocks can be tall and quite densely packed.

Themeda triandra (kangaroo grass)

Supporting half of Tasmania's premium fine-wool sheep, native grassland grazing produces strong, fine wool due to lower variation in the nutritional

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value of the grasses over the course of a year compared to introduced pasture. LNGT carry fewer sheep per hectare, but require less time and cost inputs such as fertilisers. Sheep grazed on native pasture have fewer worm infestations and require less drenching. Lowland Poa grasslands provide livestock shelter particularly during lambing, and reduce salinisation by accessing water from deep in the soil profile. Themeda grasslands are highly productive in summer months and can provide 'standing hay' if left ungrazed till autumn.

THREATS	IMPACTS	MANAGEMENT ACTIONS
Land clearance and conversion (e.g. cropping, plantation, irrigated pasture)	• Eliminates vegetation and disturbs seedbank • Can increase or create soil erosion • Dams can flood lowland grasslands • Fragmentation and connectivity loss • Loss of habitat and species biodiversity • Commercial tree plantations can outcompete grasslands	• Identify high conservation value remnants, minimise disturbance of these areas and implement buffer zones to maintain connectivity • Ensure maintenance activities and infrastructure development don't have an adverse impact on known remnants • If you are planning to convert land that could contain the LNGT you must seek advice from the Commonwealth's Environment department (EPBC section) • Manage hydrology changes that may impact water table levels and salinity
Pasture improvement, fertiliser and herbicide application	• Herbicides and fertilisers, particularly those high in phosphorous, can degrade or destroy native grasslands • Chemicals can injure species found in grasslands such as frogs and insects • Fertilisers can give exotic species a competitive advantage over natives	• Avoid application of fertilisers in or near native grasslands • Avoid broad scale use of herbicides such as boom spraying • Adopt a combination of weed removal techniques, such as spot spraying, manual removal and burning
Exotic weeds and feral animals	• Weeds may outcompete native plants for water, nutrients and space • Woody weeds lead to further degradation by providing cover for feral animals such as cats, rabbits and deer • Feral herbivores severely impact native grasslands through additional browsing, grazing and excessive soil disturbance	• Develop, and implement long-term management plans for controlling invasive weeds and pests and preventing new introductions and infestations • Remove highly invasive weeds from known grassland sites • Replant or sow local native grassland species • Implement control measures for feral animals i.e. deer and rabbit culling
Heavy grazing	• Leads to severe vegetation degradation, which then require long periods for recovery • Can lead to soil compaction and decrease water infiltration into the soil • Can accelerate weed invasion and soil erosion	• Develop management plans to ensure strategic grazing regimes appropriate for the area, including stock rotation • Spell grazing on native grasslands to prevent excessive grazing and promote healthy growth • Promote native vegetation to improve soil carbon stocks and water retention
Absence of fire	• Minimises species diversity by allowing dominant tussock grasses *to* outcompete wildflowers and short grasses • Reduces the productivity of the grasslands for stock and native animals	• Include strategic ecological fire regimes in management plans • Spell area from stock post fire to promote native vegetation regrowth

MORE INFORMATION?

To learn more about how NRM North are improving Midlands biodiversity or to get involved, visit nrmnorth.org.au or contact NRM North: admin@nrmnorth.org.au or 6333 7777.

For tailored advice on managing LNGT, get in contact with Tasmanian Land Conservancy or Bush Heritage Australia: mcp@tasland.org.au, and refer to the additional resources provided below.

FURTHER READING:

Improving Midlands biodiversity: stewardship and restoration (2024) NRM North.

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Mitchell, M. (2002). Native grasses: An identification handbook for temperate Australia, Landlinks Press.

Threatened Species Scientific Committee. (2009). *Advice to the Minister for the Environment, Heritage and the Arts from the Threatened Species Scientific Committee (the Committee) on an Amendment to the List of Threatened Ecological Communities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).*

Threatened Species Scientific Committee. (2009). *Approved Conservation Advice for Lowland Native Grasslands of Tasmania ecological community.*

Top: Silver tussock - *Poa labillardierei*,

Bottom: Poa grassland