BASIC PRINCIPLES: BOX-GUM GRASSY WOODLAND MANAGEMENT

DAIRY FARMERS TAKE TIME OUT TO PLAY WILDFLOWER ‘SNAP’

WOODLANDS ‘DETECTIVE’ AT WORK ACROSS REGION

“SNEAKING A STITCH” WOODLANDS WEAVING FILM PREMIERE

DO’S & DON’T’S: BOX-GUM GRASSY WOODLANDS SOCIAL RESEARCH:
COMPARING GRASSY WOODLANDS TO THE GREAT BARRIER REEF

PROTECTING WHAT’S LEFT: BULOKE & WEEPING MYALL WOODLANDS
EXTINCTION NO MATCH FOR EXTENSION: OPEN SUMMER GRASS
REDISCOVERY: DRYLAND SHEEP AND CROPPING FARMERS
EXERCISING PATIENCE
THANK YOU
FOR HELPING TO PROTECT ONE OF AUSTRALIA’S MOST THREATENED ECOSYSTEMS.

Your commitment and hard work is contributing to a much bigger picture:

• Since 2009 people involved in the Threatened Grassy Woodlands project funded by the Australian Government’s ‘Caring for our Country’ have helped to conserve and better manage more than 3300 hectares of White Box, Yellow Box, Blakely’s Red Gum Woodland, Weeping Myall and Buloke Woodlands in our region.

• The Australian National University is monitoring biodiversity on 830 grassy woodland sites across Queensland, NSW, the ACT and Victoria. Forty biodiversity monitoring sites established in north east Victoria are an important part of a broader program that aims to inform and improve future grassy woodland management in Australia.

We know that it takes hard work and commitment to protect these special ecosystems. You may have erected new fences, set up alternative watering points, planted out new areas or found new ways to manage grazing on your property.

This publication has been designed to support your ongoing journey. We hope that you find it both a useful resource and a source of inspiration.

Thanks you for your energy, enthusiasm and ongoing management of Threatened Grassy Woodlands on your property.

Best wishes from,
The Threatened Grassy Woodlands project team.

DID YOU KNOW?

• Of the 3300 hectares of threatened grassy woodlands being funded for improved management, over 900 hectares are now permanently protected under conservation covenants.

• Threatened grassy woodlands consist of deep rooted perennials which can help prevent and reduce dry land salinity by minimising the amount of water entering the water table. With intact groundcover, they minimise soil loss and subsequent erosion problems by slowing the flow of water, allowing it to infiltrate the soil.

• Threatened Grassy Woodlands are nationally important because they provide much of the seed used to revegetate farmland and other modified areas, protect stock, crops and pasture from heat, cold and wind and can provide high intensity, short duration grazing opportunities. They are also essential for the survival of rare and threatened species such as the Superb Parrot, Regent Honeyeater, the Swift Parrot and Squirrel Gliders.

• Our local Threatened Grassy Woodlands project is running across three catchment regions (Murray, North East and Goulburn Broken), which combined, cover an area of 79,056 km².
1. Know your objectives, and keep them simple.
2. Manage for patchiness
   a. Manage for diversity
   b. Use a diversity of management.
3. Observe before you act, take notes and adapt what you do – forever.
4. Use the precautionary principle but don’t let lack of knowledge paralyse you. Consider Principle 5.
5. When trying new approaches, test a small patch first (this is the ‘hair colour and carpet cleaner’ principle)
   a. This principle does not apply to whole of patch activities such as retaining standing timber and bush rocks, no fertiliser and no cultivation.
6. Restore the basics before attempting to restore the details
   a. E.g. Establish native perennials that can reduce nitrate levels before adding or working with forbs or rare species. But see Principle 8.c.
7. Get the soil nutrient levels right
   a. Keep soil carbon levels high – perennials are better
   b. Keep soil nitrogen and phosphorus levels low – mine it or lock it up in natives.
8. Maintain ground cover
   a. Don’t create opportunities for weed invasion
   b. Replace what you remove – when taking weeds out develop a strategy for getting natives back, but
   c. Some bare ground is needed to allow native forbs to establish.
10. Minimise edge effects – for example, create a buffer or lower inputs in adjacent paddocks.
11. Keep the nutrient and water cycles across your whole property in mind.
12. Use only locally indigenous or locally adapted species for plantings.
13. Use herbicide sparingly (see Principles 2 and 8).
14. Seek advice, read widely and discuss your ideas with other grassy woodland managers.
15. Quick fixes’ often fail – quickly.


DAIRY FARMERS TAKE TIME OUT TO PLAY WILDFLOWER ‘SNAP’

North east Victorian dairy farmers, Wayne and Gwen Furze are a resilient couple. Over the last decade, they have endured three bushfires, prolonged periods of drought and major structural changes in the dairy industry.

“At the height of the drought in 2006 we were only two to three weeks away from ‘pulling the pin,’ said Wayne. “It was a pretty grim time.”

Despite these pressures, Wayne and Gwen continued to protect native trees and grasses on ‘Carinya’. A 75 hectare block that Wayne brought from his neighbour in 1988 has been a focal point.

“The block was previously used for cattle grazing but we’ve always kept about 20ha as native pasture and never fertilised or seeded it,” said Wayne. “We occasionally crash graze it but we’ve always recognised it was a special area that is worth protecting.”

Wayne and Gwen first heard about the Threatened Grassy Woodlands project at an agricultural expo at Tallangatta.

They successfully applied for funding assistance through the project and have since erected almost two kilometres of fencing to exclude stock and will soon plant out more than 2,500 trees.

Now home to kangaroo and wallaby grasses, and stands of yellow box, white box and red stringybark, their ‘special area’ is filled with a host of native wildflowers each Spring.

“I love taking a plant guide book with me and playing ‘snap’ when I identify different plant species,’ said Gwen.

“A few months ago we were walking through the block with Matt Looby from DSE and found a Blue Devil native herb. It was such a thrill, especially to find out it wasn’t a noxious weed.”

In the wake of record breaking rains in late 2010 and early 2011, ‘Carinya’ is covered in lush pasture and the future looks much brighter for Wayne and Gwen Furze.

“There’s always some challenge on the horizon and we still have the farming business to run,” said Wayne. “We’ll always make time to wander around our trees and appreciate the beauty that surrounds us though.”

TOP: Gwen Furze with her poddy calves. Photo: Mary Munro.
BOTTOM: Wayne and Gwen Furze look at native species on their property. Photo: Mary-Anne Scully.
Australian National University (ANU) Ecologist, Dr Damian Michael, is monitoring 40 farms and roadside crown land reserves across the region for the presence or absence of birds, reptiles, vegetation and arboreal marsupials, such as Squirrel Gliders.

As part of the Threatened Grassy Woodlands project, private landholders are working with ANU to develop a long term biodiversity baseline monitoring program.

According to Dr Michael, the monitoring program has the potential to make a substantial contribution to grassy woodland conservation and biodiversity management in Australia.

“The data gathered will provide a baseline against which future biodiversity changes can be monitored,” he said.

The information being collected from the sites is also contributing to a nationally significant woodlands biodiversity monitoring program established by Professor David Lindenmayer at ANU. This larger program spans eastern and south-eastern Australia.

Over the past twelve months, Dr Damian Michael has been collecting information from Woodlands sites in a range of areas, including Barnawartha, Talgarno, Chiltern and Dookie.

The project was designed to answer short-term questions such as what are the relative biodiversity values of sites under different management regimes in Box-Gum Grassy Woodlands and Buloke Woodlands.

Flora and fauna surveys revealed sightings of:

- Burton’s Snake Lizard near Barnawartha - a species that reaches its geographical limit in North East Victoria;
- Dwyer’s Snake east of Talgarno - representing an easterly range extension in the upper Murray region for this species;
- Two sightings of the Fat-tailed Dunnart near Locksley in the Goulburn Broken catchment. This population is significant as few records exist for this species in this part of the Goulburn Broken catchment.
- Sugar Gliders, Brush-tailed Phascogales and one Koala;
- Over 120 species of birds were recorded. Several are listed as threatened in Victoria under the Flora and Fauna Guarantee Act 1988, including the Australasian Bittern (Cullens Bushland Reserve), a family of the Hooded Robin (Dookie College), a family of the Grey-crowned Babbler (near Longwood) and several locations supporting populations of the Diamond Firetail.

More details about ANU’s biodiversity findings available at: www.necma.vic.gov.au
**“SNEAKING A STITCH”**

**WOODLANDS WEAVING FILM PREMIERE**

In June 2011 Aboriginal elders from Echuca, Deniliquin and Albury Wodonga gathered for a home-grown movie premiere at the Albury Wodonga Aboriginal Health Service.

“Sneaking a stitch” captures the art of traditional weaving and highlights the importance of declining plant species for Aboriginal women who use the plants as a weaving resource material and traditionally an economic resource.

Shot by award-winning Border-based filmmaker, Jacqui Schulz, the film’s development was supported by the North East and Murray Catchment Management Authorities and the Albury Wodonga Aboriginal Health Service. The North East and Murray CMAs have an ongoing commitment to supporting traditional weaving in the Murray River area.

“This film is a great way of helping more women reconnect with their traditional ecological knowledge and skills and to continue sharing with future generations,” said Kaleana Reyland from the Murray CMA.

The film contains important environmental and traditional knowledge messages.

“These are particularly relevant for local Aboriginal youth and anyone interested in natural resource management,” said North East CMA Indigenous Liaison Officer, Mr Richard McTernan.

The weaving project started with the assistance of the Indigo Valley Landcare group. It has grown to include local weavers, weavers from northern Victoria and southern NSW and brought together local councils, health services and educational institutions on board as partner agencies.

**DO’S & DON’TS:**

**BOX-GUM GRASSY WOODLANDS**

**THREATS**

- Clearing, degradation and fragmentation of remnants for agricultural, forestry, infrastructure and residential development.
- Continuous heavy grazing and trampling of remnants by grazing stock, resulting in losses of plant species (simplification of the understorey and ground layer and suppression of over storey), erosion and other soil changes (including increased nutrient status).
- Untimely grazing that does not allow plants to complete their lifecycle and set seed.
- Invasion of remnants by non-native plant species, including noxious weeds, pasture species and environmental weeds.
- Invasion of remnants by feral animals resulting in the loss or modification of habitat.
- Disturbance of remnants during road, rail and infrastructure maintenance and upgrades.
- Removal of timber both dead and alive.
- Collection of on-ground woody debris in the guise of a ‘clean-up’.
- Nutrient increases on the site.
- Bush rock removal.

**ACTIONS**

1. Maintain and improve all existing sites including corridors and landscape linkages, allowing for fauna, pollen and seed dispersal.
2. In sites that are in low to moderate condition the grazing strategy should concentrate on controlling the introduced annual pasture grasses and flat weeds, through relatively short but intensive grazing.
3. In high to moderate condition sites, any grazing strategy should concentrate on maintaining diversity by reducing thatch and maintaining inter-tussock spaces.
4. Undertake weed control (taking care to spray or dig out only target species).
5. Undertake control of feral animals using methods that do not disturb the native plants and animals dependent on the woodland.
6. Minimise disturbance; do not transfer problems from one site to another via contaminated equipment.
7. Retain all dead and live timber including standing and fallen trees. Timber extraction for on farm use should focus on younger solid trees that do not contain habitat hollows.
8. Sticks and leaf litter provide essential foraging and nesting habitats for many fauna species and should be maintained.
9. Prevent fertiliser drift and nutrient run onto the site.
10. Retain and avoid disturbance to all rocks and rock features which provide micro climates and protection for many species.

Remember: You must be prepared to adapt your management to changing conditions, as we live in the land of drought and flooding rains.
Fencing off the remnant areas from the rest of the paddock allowed us to separate the production areas from the conservation areas. We can now manage both areas more effectively by tailoring the management to suit”, he said.

Over the years David has fenced off most of the large patches of woodlands on his properties.

“The woodland remnants in this area were just skeletons with a few trees. If we don’t actually intervene and protect these remnants they won’t last for much longer,” said David.

With active management of these project sites, natural regeneration of Buloke, Cooba (Acacia salicina) and Weeping Myall, also known as Boree (Acacia pendula), is occurring and the direct seeded shrubs have germinated and are poking out the top of the swards of native grasses.

“We occasionally come out and have barbeques with friends and family in these bush blocks. The kids really enjoy looking at all the wildlife and we appreciate that there are still these areas of bush remaining in the landscape,” said David.
The Upper Murray area can boast about the rediscovery of a thought-to-be-extinct native grass species, “Open Summer-grass” (Digitaria diffusa). The species was considered extinct in Victoria according to the Victorian Plant Census and DSE’s flora advisory list, with the last specimen being collected from near Walwa in 1952.

The species was rediscovered by DSE officer, Matt Looby, on private property near Burrowye in late January 2011. Warm wet conditions over the 2010/2011 summer produced fantastic growth of summer-growing native grasses, and natural regeneration of shrubs and eucalypts in our highly threatened grassy woodland ecosystems.

The identity of the species was confirmed by the National Herbarium of Victoria and several voucher specimens and seed were supplied to the Herbarium.

Further searching across the Burrowye property and other local private land revealed relatively healthy but scattered populations in the Burrowye area. The most westerly location recorded this summer was from private property near Talgarno.

Mr Looby said, “Reassessment of the Open Summer-grass’s Victorian conservation status is an exciting prospect, given the species can no longer be considered extinct!”

**DISCOVERY LOCATION**

**“OPEN SUMMER-GRASS”**
(Digitaria diffusa)

**General Appearance**
A perennial, sprawling grass, to 40 cm tall, with a branched flower head, and small, chaffy flowers attached along the narrow branches, to 7 cm long.

**Leaves**
Linear, to 8 cm x 5 mm, flat, hairless. Ligule hairless, to 2 mm long.

**Flowers**
Spikelets with 2 flowers, one fertile. Glumes 2, one minute, the other to 1.5 mm long hairy. Lemmas to 1.5 mm long, hairy. (Jun)

**Conservation**
[x] Extinct in Victoria.

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Alex and Andrea Graham have been dryland farming in the district for 23 years (sheep and cropping) on 750 hectares.

According to Alex, properties in the district are getting larger and more intensive.

“Farmers are buying up neighbouring blocks, cutting off the house and 40 acres and selling it off to life-stylers,” he said.

Alex and Andrea have committed 163 hectares of hilly Box-Gum less fertile country to the Threatened Grassy Woodland Project.

“We had suitable country to the land use of the project, which fitted well with our farm plan and farming philosophy” said Alex.

“The site is country that lends itself more to conservation than agriculture. We concentrate more on the flatter country for production than the hills.”

An area of the property that used to be weed-filled is now lush native grassland.

Doug Robinson from Trust For Nature visited the property and identified many native species.

“I was surprised in the variety of the plants on the place,” said Alex.

“Even after a few years, the horehound is diminishing as the grasses increase, and even this year we are seeing fewer wild oats.”

Dr Damian Michael from Australian National University is conducting a wildlife research component of the Threatened Grassy Woodlands project on the Grahams’ property.

“We are interested in the bird surveys, and look forward to the reptile results, and feel the ecosystem is showing signs of repairing itself,” said Alex.

The Grahams are passionate about the environment in which they live.

Alex concluded “Be patient, it’s easier to let these native grasses do their work, than spray and spray and spray to leave bare patches...but I wouldn’t advocate not spraying at all, it is a real balancing act.”

Alex Graham stands in a section of Box-Gum Grassy Woodlands country on his property.

Photo: Jim Begley