



supporting landholders with native vegetation

Issue 5 March/April 08

Resilient Landscapes include Farm Forestry

By Louise Maud

Many farmers are proving that it is possible to mix their productive pastures with tree production and their bank balance and the environment are all the better for it.

Farmers in the Inverell, Gunnedah, Armidale and Kentucky districts are taking advantage of funding through the Namoi CMA and the Border Rivers CMA to establish over 250 hectares of engineered woodlands. These are wide spaced plantations established on contour and designed to fit in with the landholders grazing enterprise.

The Taylor family at Kentucky have established many engineered woodlands over the years, covering up to 15% of the paddock with trees and without any loss in livestock carrying capacity.

This is also the experience of several farmers in Victoria who have increased their carrying capacity whilst also increasing the number of trees established on their farms. One well known farmer, Don Jowett (Tree Farmer of the Year) has improved the economics of his farm without harvesting any timber. The Taylor's

are about to start receiving an income from the sale of timber and this will increase as the plantations mature.

In the south east of NSW there is great potential for engineered woodlands to replace the native woodlands that have been reduced over the years. There is scope to use the new trees to link remnant vegetation and importantly, provide valuable shade and shelter for livestock. A recent trip to Dalgety highlighted the need livestock have for shelter with many examples of cattle and sheep crowding under a few old pine trees that had been planted by far-sighted farmers.

Other economic returns can come from using the trees to sequester carbon from the atmosphere. Some carbon trading companies are paying farm foresters between \$35 and \$120 per hectare per year, depending on the growth rates of the trees.

Another important role for the engineered woodlands is to provide corridors for wildlife and for the transfer of genetic material across climatic zones.



For further info contact SE NSW Private Forestry on 64925578 or maud@privateforestry.com

Photo: Example of engineered woodlands linking remnant vegetation, trapping water along contours and increasing livestock productivity.

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Coordinators Column

Well as I write the cooler weather has started to show itself. We love the temperate climate and see this as a chance to get more active! Autumn is a great time to tackle those post summer jobs which were just too hot to do – although it was milder this year. . .

Thanks to Louise Maud for sharing information on Farm Forestry, our cover story this issue. The more native vegetation is linked to productivity increases the easier it is to make the decision and get things done. For a local example of vegetation corridors on a dairy, see our September 07 newsletter (back issues are on our website) where we review a CMN walk on John and Sue O'Briens property.

For those who regularly use local waterways you'll be interested in the page 4 article about the outbreak of *Caulerpa taxifolia*, an invasive marine weed in Wallagoot Lake. Hopefully this outbreak has been caught early enough. Take a good look at the pictures and description so you can report any sightings.

Our first event this year was a bird walk at beautiful Panboola wetlands and it was well attended. There are some exciting activities coming up so make sure you see page 6 and 7 and mark these in your diary.

Finally, if you haven't already started to get your team together for the CMN Treevia afternoon, you'd better get on the phone! Those with good vegetation knowledge are being snapped up so have a think about who will give your team the best advantage. There are great prizes to be won and some fun entertainment for you and the kids. You know we'll also have yummy food and you're welcome to bring an eski to enjoy a couple of drinks if you wish. More about Treevia on page 6.

We look forward to seeing you soon – especially at the Treevia afternoon.

Dan and Vick

Free Book Offer for Your Ideas

The Far South Coast Conservation Management Network supports landholders with native vegetation on their property and caters to all types of vegetation and all types of land holders. The CMN is about you so we'd like to hear how the network can best support you to manage your vegetation.

Have you got something to share? Are you working on a vegetation management project at home that is really successful and you could share your learnings with other members?

Anyone to contribute an article in either of the next three editions (6, 7 or 8) will receive a \$40 book voucher for Candelo Books. Contact us to discuss your ideas.

The FSCCMN is funded by the Southern Rivers Catchment Management Authority.



Panboola Bird Walk February 08

Do you know your Clamorous Reed Warbler from your Australian Hobby? Well there's plenty of birdo's out there twitching to tell us which one is a migratory water bird and which is a raptor.

Recently 21 people joined in a bird walk at Panboola Wetlands. Robyn Kesby, a Ranger from NSW National Parks and Wildlife Service led the walk along with Di Waldron. Both Robyn and Di are members of the Far South Coast Birdwatchers and live locally so we were lucky to share in their wealth of knowledge on local bird life.

Robyn explained various methods of bird surveying. Not all the group thought of themselves as serious 'twitchers' but together they were able to list 42 birds during the easy 3 hour walk.

"Knowing about birdlife on your property allows you to better understand the role of your native vegetation", said Robyn. "On this walk we've seen habitat types such as fresh and saltwater wetlands, grassland and farmland. Supporting a variety of habitats on your property encourages a wider range of birds."

"The key to good bird surveying at your place is consistency. Choose a similar time of day and the same route to do regular bird observations. Take a pen and paper and record what you see. There are some excellent books available to help identify species. After a while you might start to see patterns."

Robyn asked that the group be on the lookout for the Indian Myna. This area is known to have very few sightings of this aggressive introduced bird. If you do see any, contact the Far South Coast Bird Birdwatchers on 6495 7390 so they can arrange to trap and remove them.

Panboola wetlands are a wonderful walking space even for those who aren't on the lookout for birds. There are excellent walking and cycle paths, suitable for all levels of walking as well as wheelchairs and prams.

The Far South Coast Birdwatchers have produced a complete bird list for the Bega Valley Shire as well as information on the three bird routes you can drive along. All of these documents can be downloaded from our website

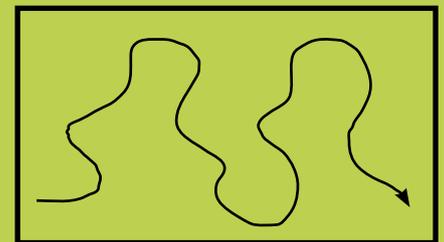
www.fscmn.com.au



Bird Survey Methods

A variety of survey methods exist for the study of bird populations and movements. Recording can be by site or by call. Below is a brief description of some of the most common methods:

Area Search. This method involves searching a set area and recording data only from within the pre-defined search zone. The area is usually covered by walking a route which is entirely flexible. This type of survey is the cornerstone of the Atlas search methodology, where 2 Ha is searched over 20 minutes.



Transects. A transect is a straight line that is walked by an observer who records data as they move along the transect. In this method the observer cannot wander off the transect. Transects are often marked with colour flagging tape, or they may be along a compass bearing. Typically, transects are conducted on foot, but in some cases they can also be conducted by vehicle.



Rolling Bird Survey. In this method, observers stop at a series of survey points (often separated by equal distances). A set time period is spent at the site before moving on to the next survey point.



More detailed information about bird survey methods can be found with the bird walk review on the CMN website.

www.fscmn.com.au

Mass Weed Eradication

Almost all of us who have native vegetation have some sort of weed problem. Sometimes it's persistent weeds that just pop up every now and then. Then there are those that dominate a hill side or river bank.

These issues probably grew over a long time thus should be treated as long term projects to rectify. For example eradicating a gully full of blackberry is quite achievable within a manageable time frame with the right approach. It won't happen in a season.

We've outlined a few points to help you on a path towards reducing that weed scourge.

- * Develop a strategy for the particular weed with short and long term targets
- * Get advice from local experts such as Bega Valley Shire Council weeds officers, Far South Coast Landcare, Southern Rivers Catchment Management Authority or search the web for info
- * Consider that large areas of weeds may also provide habitat for local wildlife. Plant in and around with appropriated fast growing natives to establish alternative habitat before and during the process of removing large areas of weeds
- * Work first in areas where there is native resilience (established plants or a potential seed source in the ground) to help with recovery after disturbance
- * Think about when is the best time to attack that particular species, ie main growth period, before seed set etc
- * Ask your neighbours or friends if and how they've dealt with similar issues
- * If you don't do anything it may get bigger and infest other areas on your property

Invasive Seaweed in Wallagoot Lake

In 2007 a patch of *Caulerpa taxifolia* (invasive marine seaweed) was discovered in Wallagoot Lake about 500 metres from Bournda Environmental Education Centre (EEC).

C. taxifolia is a bright green invasive seaweed that has been found in thirteen estuaries in NSW including seven south coast estuaries. Once it is in an estuary it is virtually impossible to eradicate.

C. taxifolia has rapid growth and may out-compete and smother native flora such as seagrass which is ecologically important as recruitment, nursery and refuge sites for many species of native fish and invertebrates. All species of *Caulerpa* (including those native to NSW) produce toxic substances (caulerpenynes). These act as deterrents against many epiphytes and herbivores (eg. sea slugs, abalone and sea urchins), thus limiting grazing which might otherwise reduce the biomass of the weed.

As far as we know the incidence of *C. taxifolia* in Wallagoot is restricted to a small patch, located near Scotts Bay. The site is surrounded by a netting exclusion zone marked by 4 yellow buoys. The shallow waters at Wallagoot are ideal for salting, one of the few known effective treatments. Salting work was carried out by the NSW Department of Primary Industry (DPI), Aquatic Biosecurity Unit in October 2007.

The salting in 2007 largely destroyed *C. taxifolia* but unfortunately a recent survey of the site conducted by Bournda



EEC staff showed that it is still present. There is an urgent need to conduct further surveys to establish whether other patches of *C. taxifolia* are present in Wallagoot. Obviously other waterways could also be at risk of contamination so locals need to be aware of it and be vigilant in reporting any occurrences to DPI Aquatic Biosecurity Unit on 02 4916 3877 or aquatic.pests@dpi.nsw.gov.au

If anyone is interested in being part of the ongoing project to eliminate *C. taxifolia* from Wallagoot, please contact Doug Reckord at Bournda EEC on 64945009 or douglas.reckord@det.nsw.edu.au

What's on the Ground?

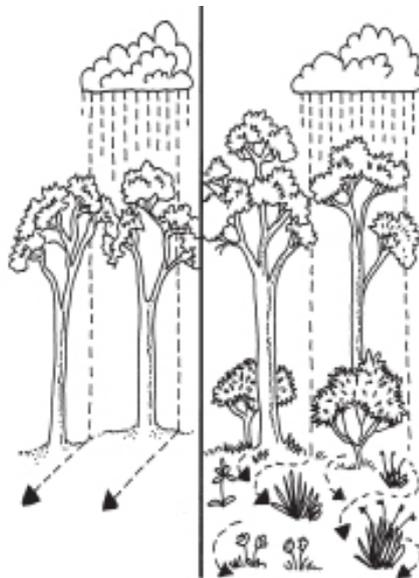
Often we focus our vegetation planning and resources on the canopy and shrub layers and forget about the importance of the ground layer. Sure there is the grasses and herbs that grow low to the ground but what else is there to consider about way down there.

Logs, rocks, leaf litter, soil-surface lichens and mosses, patchy low vegetation and open spaces are examples of important ground layer components in forest and woodland vegetation. Next time you are wandering through any healthy vegetation community, if you're lucky enough it's on your property, spend some time looking at the diversity of habitat on the ground. Being careful not to disturb the habitat, check out what is under a rock or hiding in a log. Count how many different ground dwelling plants and mosses there are or have a play in the leaf litter to see what you find. Most likely you'll be amazed at the diversity and activity that goes on under your feet!

Ground-layer components provide shelter, refuge and living space for a myriad of small animals such as skinks, spiders, centipedes, cockroaches, beetles and ants. In turn, these are the food of larger animals and so the ground layer provides a foraging area for mammals, insectivorous birds and various reptiles. Many of these predators also use hollow logs, rocks or dense vegetation, as shelter and breeding sites. The provision of ground-layer components can be assisted by deliberately adding logs and rocks to revegetated areas, by planting indigenous ground-cover plants, and by allowing fallen branches and timber to accumulate over time.

Ground-layer components are also essential to the natural function of ecosystems. Ground vegetation

and leaf litter trap rainfall and assist its infiltration into the ground, help prevent soil loss through erosion and contribute to soil formation. Leaf litter and associated fungi, bacteria and small invertebrates are involved in the decomposition of dead organic material and the recycling of nutrients.



Some of the processes that impact the quality of the ground layer are clearing or 'tidying up', over collection of fallen timber for fire wood and spread of exotic weeds that dominate or overwhelm the ground dwelling vegetation. Probably the most degrading processes to affect the ground layer however is intensive grazing by livestock. Depletion of the structure and diversity of the vegetation combined with the removal of fallen timber and leaf litter for pasture, are the most noticeable impacts of grazing. Other effects include soil compaction and increase in water runoff.

Case Study

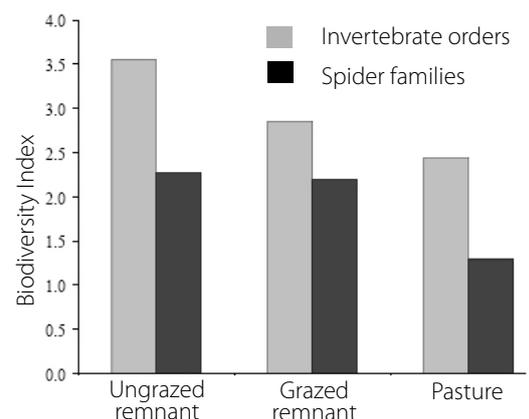
A study conducted in northern Victoria compared the invertebrate fauna collected by pitfall trapping across five sites in each of three habitat types - ungrazed forest remnants, grazed forest remnants and grazed pasture.

Over 10,000 invertebrates from 26 orders were collected during the study. The diversity and species richness per site were highest in the ungrazed forest and significantly lower in pasture. In terms of sheer numbers of individuals, pasture sites yielded the highest number of invertebrates, the ungrazed forest sites the lowest, with grazed forest intermediate. The ungrazed woodland sites supported a higher diversity of invertebrates than the pasture sites.

All catches were dominated by ants and, to a lesser extent, spiders and beetles. Grasshoppers and earwigs were also extremely abundant on the pasture sites. Many of the less abundant groups (e.g. scorpions, millipedes, centipedes, and cockroaches) were most numerous in ungrazed forest and lowest in pasture.

In summary, the ungrazed forest was occupied by invertebrate groups that, although having fewer individuals, represented many orders. On the other hand, those from grazed forest and pasture sites had a larger number of individuals but had experienced a loss of diversity.

'When litter is good...The importance of the forest ground-layer'. *Brown, Bromham & Bennett, 1999*



CMN

There's nothing trivial about native vegetation.... or is there?

TREEVIA



What to expect

- Heaps of prizes
- Great entertainment
- Games for the kids
- Delicious nibbles and snacks
- It's all FREE

A hilarious trivia afternoon for landholders who want to learn more about native vegetation

The CMN has been supporting landholders for a year now and it's time we all celebrated

Sunday 6th April

1:30pm - 5pm

Kianinny Resort

Tathra

BYOG and eski



How to book your table

- Tables can be booked by locality, with friends or join a mixed table.
- Teams can be from 4 to 8 members
- Call or email us and book your table
- If you don't have a table, you can join in a mixed table and earn bonus points



Try your knowledge

- Q1. What local family has a Scarlet, Flame and Rose?
- Q2. Jersey Cudweed. Is it a native or a weed?
- Q3. Which Landcare Ambassador was also Darth Vader's stepfather?

answers on page 7.



Use the Force,
phone or email.
RSVP by 28th March
6492 5558 or info@fscmn.com.au

**Earn
bonus points
for your table**

Book by 14th March
or
Join in a mixed table

Regeneration or Revegetation ?

Firstly let's define the difference before we talk about where either should or could be used.

Regeneration refers to the natural process by which plants replace or re-establish themselves. Natural germination processes will select plants suited to the conditions. It generally requires minimal disturbance to the site and is focused on creating the right conditions for re-establishment to occur. Activities may be fencing areas from livestock, weeding out competitive exotics, thinning regrowth or reintroducing fire.

Revegetation refers to the physical replanting of vegetation. Typically this is planting seedlings but could also involve direct seeding. Using seed collected from the local area is best for revegetation as these will have inbuilt mechanisms for survival.

Regeneration works best where the site is not extensively degraded and is more cost effective than planting. Revegetation however has that 'instant' improvement factor i.e. today there are new plants, yesterday there wasn't. Revegetation is often used because of this but in the long term regeneration, if approached sensibly, will cost less and have the better outcome. Your choice however to use either or even both methods also depends on personal factors such as time available, time frame, finances, knowledge and skills.

Different vegetation communities have different resilience capacity, in other words will regenerate at different rates. This capacity has developed over millennia of having to recover from natural disturbances. It is important to realize that it is often hidden under the ground, in the form of buried seeds or suppressed rootstocks. This natural resilience means that native vegetation usually has at least some capacity to recover from human damage.

So the key is to look at what might trigger your remnant's resilience before rushing in with an unsuitable treatment. Working with this resilience produces best results, but if it is depleted, planting or direct seeding can be keys to trigger natural processes.

Bush Regeneration Field Day

There's quite a lot to understand about bush regeneration, in particular the principles and background theory. There is more to it than just removing weeds.

Many of you use the regeneration method on your property so the CMN plans to hold a number of practical field days looking at regeneration methods. If you are interested let us know if a weekday, Saturday or Sunday suits you best. Details are yet to be finalised but we are looking at some stage towards the end of the year. As always our events include top notch catering and good coffee!

Upcoming Events

Endangered Grassy Ecosystems Walk and Talk. 19th April. 9:30-4pm

The CMN has teamed up with the Friends of Grasslands (FoG) to visit three grassland ecosystems in the Bega Valley. FoG is a Canberra/Monaro based group and are travelling to the Valley to experience our grasslands first hand.

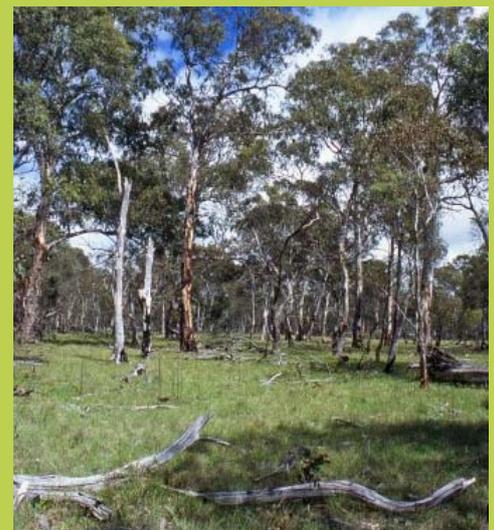
There are two main grassland communities in the Valley, Bega and Candelo Dry Grass Forest both of which are listed as Endangered Communities under the Threatened Species Conservation Act.

This walk and talk will cover the history of dry grass forest and some of the management issues involved in protecting and preserving them.

Starting at Brogo and finishing close to Bega the day will take a leisurely pace with morning tea and lunch provided.

RSVP is essential by 14th April.

Contact Dan and Vick on 6492 5558 or info@fscmn.com.au



Treevia answers from page 6

A1 The Robin family of birds has the Scarlet Robin, Flame Robin and Rose Robin.

A2. Jersey Cudweed is a native to most of Australia

A3. Jack Thomson played Cliegg Lars in Star Wars Episode II