Local Flora and Bird Survey Results—Jacinta Christie and Nicole Maher, Murrumbidgee Landcare Inc.

Background to the surveys

As part of the Cross Property Planning (CPP) project, Murrumbidgee Landcare organised a series of 30 flora and fauna surveys to be undertaken by Dr Fiona Christie (University of Melbourne) and Alison Elvin (Natural Capital). The surveys were conducted in September 2013 on the properties of 24 land holders involved in the CPP project.

The aim of the surveys was to provide a snapshot of species diversity on farms throughout the region, and to provide land holders with information about the species found on their properties, along with the implications that may have for their ongoing management.

Survey techniques used

The surveys were conducted on two hectare sites of native vegetation (either remnant or planted) on each property.
Dr Fiona Christie went to each site in the early morning and late afternoon, and recorded all birds seen or heard during a 20 minute period.
Alison Elvin selected a 50 m x 20 m area within each 2 ha site, and recorded and identified all visible flora and fauna within that area. Alison also recorded details about the groundcover (litter, bare ground and presence of mosses and lichens), fallen timber and twigs, the presence of hollow-bearing trees and logs, general soil type, aspect of the site, the presence of rocky outcrops or boulders, and land use activities on the site (both current and past).

Kyeamba survey results

Six properties (seven sites) were surveyed – three along Big Springs Road, two near Ladysmith along Tumbarumba road, and one higher-up along Keajura Road. Each of the properties had either large areas of intact remnant communities, or older revegetation corridors alongside old-growth Eucalypts. Every site has permanent water nearby, and was connected across the property to other sites or mature paddock trees.

5 of the 7 Threatened woodland bird species were recorded at five of the seven sites – the Brown Tree Creeper, Scarlet Robin, Crested Shrike Tit, Varied Sitella and the Grey Crowned Babbler. Six of these sites were either Dry Sclerophyll Forests merging with BGGW, or BGGW. All these large remnant sites had a high number of bird species overall, a high number of small woodland birds currently in decline, and a relatively high to very high floristic diversity with the threatened plant species Woolly Ragwort found at one site.

Superb Parrots, another Threatened bird species, were recorded in a sixth site dominated by River Red Gums in and along a watercourse. After the last major floods, the owners noticed seedling Bottlebrush (*Callistemon pallidus*) near the creek crossing, so they have carefully placed an exclusion fence around them and hope they grow, reproduce and eventually spread. Regrowth River Red Gums are also growing within the fence-line.

Tiger Orchid flowering

Native 'Egg & Bacon' pea plant

Fencing to exclude stock from seedling Bottlebrush

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THE KYEAMBA VALLEY LANDCARE GROUP

KYEAMBA VALLEY LANDCARE NEWSLETTER - Winter 2014

Message from the Chairman

Peter Lawson - Chairman KVLG

We hope that you are still getting some enjoyment form what is our 8th newsletter in this format. Congratulations must go to Mardi Pillow for the excellent job she does editing and keeping the contributing writers to task. In this issue, the feature article is on Jerry and Chris Garner, and explores what it is they love about living where they live, some of their interesting discoveries and what challenges they have in front of them.

As far as the season goes, who really knows what lies ahead? The Bureau of Meteorology have recently slightly reduced the likelihood of an El Nino to about 50 percent in their predictions, while a long range forecaster is rumoured to be saying it will be a wet spring. Here is hoping for the latter but possibly plan for the former and enjoy what we have at present which is a wonderful autumn / winter to date. Even within our catchment area the rainfall had varied with some areas still having run very little water into dams and other areas where all the dams are full. We hope it works out to be a year to remember for all the right reasons.

Our major project this year is the Environmental Trust funded "Slow the Flow" - Erosion control project. This will be targeting low cost repairs and rehabilitation of some erosion sites that can then be replicated across the landscape. We will have a number of field days showing what structures or plantings could be used and 'how to' build them. They are all designed to be fairly simple and cost-effective, and should enable us to address smaller sites before they become the size and scale of some of the deeply eroded gullies and streams within the valley. Even for these deeper gullies there will hopefully be knowledge to be gained towards slowing the water down and reducing the erosive impact. We look forward to your involvement in this project.
We are looking for expressions of interest for anyone who is interested in doing some works. If you would like to take part, please read Cam Wilson's project selection guidelines within this newsletter and email your interest to Mardi Pillow (mpillow@bigpond.com), preferably having taken and attached a few photos of the proposed site.

Kind regards, ***Peter Lawson***

"SLOW THE FLOW"
KVLG Erosion Control Site Selection Guidelines
By Cam Wilson

NSW GOVERNMENT — NSW Environmental TRUST

As a result of land management practices since the time of European settlement, most properties will have numerous degraded sites. The following is a basic guide to help you to choose and prioritise sites which may be appropriate for the Kyeamba Landcare Erosion Control Project.

Firstly, you want the most bang for your buck (or time as is the case for most of the techniques which will be adopted).

A top priority is to **protect valuable parts of the landscape**, such as where headcuts or bend-erosion threaten:

1. Farm Infrastructure
2. Good soils and high production zones
3. High value biodiversity (wetlands and pools, multi layered forest, etc)

Another high priority is to **repair or enhance zones of high value**. Past degradation has often resulted in the draining and dehydration of the land adjacent to erosion gullies (ie floodplains which generally contain some of the better soils on the property). Works can help to raise the bed of the channel in targeted locations to rehydrate these productive zones, whether for enhanced livestock or biodiversity goals.

Continued on Page 4

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The Kyeamba Valley Landcare Group is grateful for the support of the BEYOND BANK in printing their newsletters

A SILVER LINING AT SILVER SPRINGS
By Bundle Lawson. Photos Christine Garner

When Jerry and Chris Garner purchased the 422 hectare Silver Springs in January 2011, it had been owned by Greening Australia for the previous seven years.
During that period, a conservation agreement was written into the title ensuring the property will never be developed in a manner detrimental to its substantial native flora and fauna. This has meant the Garners have had to be very sympathetic and open to trialing different methods as they renew pastures and address weeds, pests and degradation issues on their property.

Back To Work
It has been a great challenge for the Garners to return Silver Springs to a working property whilst maintaining the environment that so favours the diverse native flora and fauna.
"We have been running a small herd of weaner steers as well as merino ewes with first cross lambs at foot," Chris said.
"The steers have recently been sold and a fresh herd will be purchased in time, and the lambs will soon go the same way.
"As fences are replaced and more paddocks made stock proof, the plan is to progressively renew native pastures until rotational grazing can sustain an optimal herd/flock size, which is yet to be determined."

Main Challenges
According to Chris, much of the farm infrastructure is in need of repair or replacement, so this has been another priority area for the couple.
"But we have found ourselves literally working from the ground up to correct soil acidity in our shallow, sandy loams, eradicate annual broadleaf weeds and address rabbit numbers. This seems to be totally occupying our waking hours," Chris said.
"At the top of our wish list is to see Silver Springs rabbit-free in the near future, as it would seem these pests have caused most of the degradation on this property in the recent past.
"A flow on from that would be successful stabilisation and rectification of gully erosion sites on the property, and the establishment of more diverse pastures to enable us to grow out the weaner steers through a yearly cycle."

The Up Side
While weeds, pests and land degradation are certainly keeping the Garners busy, the native flora and fauna on the property makes all the hard work worthwhile.
"The delight in walking through the Silver Springs native woodland areas and looking down to find yourself standing in a swathe of mixed orchids, milkmaids and chocolate lilies all in

Chocolate Lily (Dichopogon strictus)

View of Silver Springs' landscape

glorious flower is hard to compare with anything outside national parks and botanical gardens," Chris said.
"Discovering the rare Wooly Ragwort at three separate sites on the property has also been amazing, as was the surprising discovery of the Native Cherry, with grass trees nearby.
"The small woodland birds such as robins, wrens and thorne bills are colourful, chirpy and great protectors of the vegetable garden, while the Sacred Kingfisher and the Rainbow Bee Eater add interest around the farm dams.
"In the most densely treed areas, the Spotted Pardolote, Golden Whistler and Rufus Whistler are common features, while Wedge-tailed Eagles nest on the ridge line. In total, more than 50 different species of bird have been identified on Silver Springs since 2011.

Amazing animals
The Garners have also been monitoring the animal activity on Silver Springs, with both encouraging and a few worrying observations.
"A healthy population of echidna regularly ramble through and are especially evident after rain," Chris said.
"The Swamp Wallaby population is stable and one by one they visit the house in summer to drink from their very own watering point.

"The Eastern Grey Kangaroo is a daily sight in family groups of 7-10 or more alarmingly, large mobs o

f 30-50.
Recently wombat activity has also become more noticeable, with some previously abandoned holes being re-established and territory marked out.
"A variety of reptiles, both large and small, are often spotted, including Eastern long necked turtles in the dams and both lace and sand monitors.
"There is the general complement of lizards and snakes, with the small Dwyer's Snake seen out and about in colder months.
"The identification of a native python on Silver Springs has been elusive to date, but two separate sighting by neighbours within meters of the property boundary are encouraging.

Simple strategies
To help maintain this favoured environment for native flora & fauna, the Garners are concentrating on trying to eradicate rabbits, feral cats, foxes and invasive plants from Silver

Wooly Rag Wort (Senecio garlandii)
Endangered or Just Rare? By Christine Garner

Reading through the Conservation agreement for Silver Springs when we first purchased the property I was interested to discover the mention of a rare native plant on the endangered flora list. There seemed to be very little information and even fewer images of Senecio garlandii.
I was determined to find this plant.

Everywhere we drove or walked I stopped to investigate all manner of plants, taking photos and sniffing the crushed leaves in the hope of finding its aromatic odour (not that I knew what it smelt like!).

Finding an article written by Dr Geoff Burrows from CSU informed me that Woolly Ragwort has a very specific geographical range. It is only found in the region spanning from the hills around Trungly Hall north of Temora, south to Albury and west to The Rock.

Within this small region it will be found growing on the eastern and southern slopes of rocky granite outcrops at about five hundred metres above sea level.

The plant is a daisy like yellow flowering shrub to 1M high and has large green/grey leaves that have a downy underside. The stem is also covered with the same fine down giving rise to its common name(Woolly Ragwort). Nothing I stumbled upon seemed to fit this description!

Eventually I came across one lonely specimen in exactly the position described, about two hundred metres below our house. This is the plant noted by Alison Elvin in the recent survey carried out by KVLG. It doesn't appear to be palatable to cattle or sheep but is reasonably soft so can be easily trampled.

I collected and germinated some seed from this plant and am pleased to say it is growing happily in the rockery at my front door.

But, surely there must be more!

So the search continues every time I'm out and about. To date I have found one other solitary specimen in a relatively inaccessible spot(safe from the hooves of sheep and cattle) and a colony of about 25 plants at various stages in the life cycle, again well off the beaten track. A neighbour has said it is quite common in similar locations on Gelston Park and while walking at The Rock last year I found myself surrounded by a large area of knee high leafy shrubbery about

a hectare in size and looking out of place in such dry rocky surroundings. This is probably the most documented patch of Wooly Ragwort in existence and is monitored by scientists from the Royal Botanical Gardens as well as CSU.

I note it has recently been delisted from the Commonwealth EPBC Act (14/12/2013) but remains listed in NSW as vulnerable (Threatened Species Conservation Act 1999). It's delisting has resulted from the population being considered secure and mostly found in protected reserves.

I have some anecdotal evidence that it is poisonous to stock when they graze on it in desperation for something to sustain them. In my reading I have not discovered any studies carried out to indicate the niche Wooly Ragwort occupies in the ecology of its habitat. I have, however, noticed some leaves affected by what I would assume to be a leaf eating insect, but have not seen this grazer in action.
Perhaps there is a PhD to be researched by a student of Botany interested in a rare but not so endangered native plant.

References:
Burrows, G.E. (Johnstone Centre, Charles Sturt University, PO Box 588, Wagga Wagga 2678, email: gburrows@csu.edu.au) 2001. An assessment of the conservation status of Senecio garlandii, in the Central and South Western Slopes, New South Wales. Cunninghamia 7(1): 65–76.
Department of the Environment (2014). Senecio garlandii in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Tue, 29 Jul 2014 13:52:33 +1000

The Murrumbidgee Landcare cross-property planning project is supported through funding from the Australian Government's Clean Energy Future Biodiversity Fund and the NSW Government's Environmental Trust.

RODENATOR DEMO DAY @ SILVER SPRINGS
By Jerry Garner

On Friday May 30th, Jerry & Christine Garner hosted the demonstration of a Radenator R3, used to blast rabbit warrens. Using a controlled mixture of LPG and oxygen that is injected into the rabbit burrows and tunnels. A built-in, self contained ignition system then ignites the mixture, creating an underground shockwave and concussion that instantly destroys burrows and collapses tunnels. The Rodenator R3 is a humane solution for pest elimination and is both fast and effective at burrow blasting and collapsing tunnels and they remove your rabbit pest problems virtually instantly!

The demonstration was conducted by Phil Sansom, Director of Jensan Farm Services, Ballarat, who is the Australian distributor of the unit.

Eight locals and a couple from Jindabyne, met Phil at the 'Silver Springs' shearing shed before heading off to find a suitable warren. Jerry had a warren that had been covered by a large blackberry bush, it had been poisoned 12 months earlier and burnt to expose the large warren with multiple entry holes.

Like other methods of warren destruction, you need to establish how extensive the warren is and seal the entry/exit openings. This was done with a smoker made by Phil using a Stihl 2stroke leaf blower that drips baby oil onto the hot exhaust causing white smoke. The smoke is piped into the leaf blower air stream and into the warren. The entries were sealed with soil, shovelled by eager onlookers until all the holes stopped smoking. The smoker was removed and the Rodenator R3 unit was inserted into the hole, with 20 metres of hose leading back to the gas bottles on Phil's Ute.
The unit was started and the gas mix was timed for 5 minutes before the ignition cord is pulled to stop the gas flow and then the ignition button is pushed to ignite the gas, resulting in quiet a large bang!

Eager volunteers help seal the rabbit holes before detonation!

The Rodenator At Work

Cross Property Planning Project Update
By Jacinta Christie, Project Co-ordinator, Murrumbidgee Landcare Inc.

The Murrumbidgee Landcare Inc. Cross-property Planning Project is still going strong with 64 landholders involved across Kyeamba Valley, Tarcutta/Humula, and Illabo/Bethungra/Junee.

Approximately fifty-five percent of landholders have applied and received funding for their on-ground works in the following areas: biodiverse plantings, protection and enhancement of existing remnants and invasive species management.

Hot and dry conditions over spring and summer last year meant that many of the landholders who managed to complete planting last year had reduced survival rates. These landholders have been supplied with additional funds to purchase replacement trees and shrubs this year.

Workshops and training still continued to be offered through the project with a Soil Biology Workshop being offered in Spring this year (see notice).

FREE Soil Biology Workshop (Including 2 free soil tests)
Murrumbidgee Landcare Inc , Cross Property Planning project in conjunction with Local Land Service, Riverina would like to invite you to participate in a soil biology workshop in your local area this spring.
The workshop will provide you with techniques to identify and monitor soil biological health, provide management options to encourage soil biota and build soil organic matter on your property and examine the significant role of soil biota for sustainable production. Participants are entitled to two free chemical soil tests with the results from these tests used to discuss the collations between chemical soil test results and soil biological health.
Other activities at the workshop include: litter trays, microscopes to identify different soil organisms, and demonstration of practical on-farm tests.

If you are interesting in participating please contact **Jacinta Christie, Murrumbidgee Landcare Inc, email** jchristie@mli.org.au **or phone 0431 953 778.**

A SILVER LINING AT SILVER SPRINGS—*Continued*

The Garners have also noticed fallow deer are becoming more prevalent, not just on Silver Springs but throughout the valley.
This gives further reason for the Garners to fence off areas specifically known to be important habitat or that have been recently replanted to exclude stock.
"A recent initiative through LLS will allow us to halve the cost of fencing an area of steep country on the northern side of the ridge line," Chris said.
"This land is not well suited to grazing, but the real benefit will be seen once the rabbits are also removed from this paddock.
"Fallen timber is left where it falls, rather than being heaped up to form a home for rabbits and foxes, and standing dead trees are not removed along the wooded ridge lines.
"We have been using a triple disc seeder to increase the diversity of plants in degraded paddocks currently full of Patterson's Curse, sorrel, crane's bill and rock fern.
"This machine can be maneuvered through rocky patches, barely leaving any evidence of having broken the surface.
"This initial stage of reinstating sustainable native pastures will hopefully encourage the spread of kangaroo grass, weeping grass and common wheat grass. They are seen only in random patches on the property at present, despite dominating the understory in the past."

Integrated approach
For each of the pest and weed problems encountered, the Garners are integrating different measures at particular stages of the pest life cycle. It is hoped this approach will at least reduce numbers to a point that their impact is negligible and at best remove the pest or weed completely from Silver Springs.
"Spraying blackberries using a PTO tank and hose reel has achieved good results

Kangaroo Grass (Themada Australis)

when done while the plants are in a strong growing stage during spring and summer, before flowering," Chris said.
"This is followed up in winter by burning the dead bushes, removing shelter for rabbit and fox holes.
"Rabbits are baited with 1080 in late summer when they are hungry for fresh food. We laid 14 km of baited trails in 2013.
"Warrens that are in structurally sensitive areas (creek and dam banks, as well as gully walls) will be treated with Fumitoxin this year.
"In addition, the destruction of warrens and their inhabitance will occur with concussive force technology provided by recently purchased Rodenator equipment. This equipment will enable warrens in close proximity to rocky outcrops to be collapsed with minimal impact to soil structure.
"At present, Patterson's Curse is being heavily impacted by the insects that have been introduced to attack both leaf and stem. Later in the year it is hoped the roots of these plants will also fall prey to insect activity. Some spot spraying will be undertaken if needed as spring approaches.

Earth works
According to Chris, the gully erosion present on Silver Springs has largely been the result of heavy rain during the spring of 2010 and the autumn of 2012.
"Some of the damage that did not occur in waterways will be hopefully rectified by earthworks over the next 12 months.
"An active head wall site below a dam wall in a water course is of immediate concern and we will be seeking guidance with its stabilisation."
"At this stage the flow to the head wall has been slowed with runs of couch turf set perpendicular to the flow.
"The dam above the active site is now full so we are about to see if the turf will slow the flow enough to allow the overflow to escape through the pipes installed in the wall of the overflow bank. The next stage is to decide on a method to stabilise the head wall of the gully!"

Local knowledge
Chris is quick to point out that it has been of great value to be able to discuss these erosion issues with neighbours, KVLG members and LLS staff in the hope of using the most effective techniques with the least negative impact.
"The value of attending workshops and field days facilitated by LLS and Landcare cannot be under estimated and has provided Silver Springs with some funding to proceed with strategies to deal with ongoing issues.
"Working as a community with a common cause, to protect the integrity and sustainability of the valley, is providing us individually with encouragement and support in our drive to improve Silver Springs."

Congratulations to Nicole and Ed Maher on the birth of their baby girl, Alani.

Marion Benjamin from MLi wrote "*Baby Alani arrived a week early but happy and healthy. Mum and baby doing great. Alani is a little sister to Tahlia.*"

"SLOW THE FLOW" - KVLG Erosion Control Site Selection Guidelines—*Continued*

In other sites on the property, downstream watercourses can be enhanced by **stabilising active erosion**. Where headcuts or bend erosion are sending large volumes of sediment downstream, this can have adverse impacts on riparian systems below.

The erosion stabilising techniques chosen for the project will use a combination of a variety of locally available materials (rock, earth, logs, brush, woody weeds) in conjunction with vegetation (both native & exotic). Once the principles are learnt, these techniques can be scaled up, however so that the funding can go as far as possible, we suggest choosing modest sites for the current project. The **photographs on the following pages provide a variety of examples** of the sort of sites you may choose.

Information to gather for each potential site:

- Photos of each potential site, looking:
  - ◊ At the erosion face
  - ◊ Upstream
  - ◊ Downstream
- Approximate height & width of feature (headcut, bend erosion, gully, etc)
- Approximate catchment area.
- Mark the site on an aerial photo (Google Earth, G' Maps, or a scanned annotated photo)

If you are interested in participating in this project please email Mardi Pillow (mpillow@bigpond.com) with details and photos of your site.

Small gullies like this which threaten access can easily be halted with simple works.

Various techniques can help re-vegetate large scalds and areas of sheet erosion.

A rill beside a farm road. Works can stabilise and stop further damage to infrastructure.

Actively eroding outer bed. Works can help vegetation establishment and halt the lateral migration of the channel.

Headcut moving up a 1st order valley. Not a particularly high priority unless infrastructure is threatened, but sediment delivery can be reduced.

A stabilised incised channel in a floodplain setting. Works provide an opportunity to raise the bed and reinstate floodplain connectivity.

Incised channel with stabilised floor higher in the landscape. Works can enhance natural channel filling process and potentially reinstate floodplain connectivity.

Headcut threatening an intact floodplain. If left unchecked, a gully will form through the valley floor which will ultimately dehydrate the surrounding landscape

Actively eroding outer bed. Works can help vegetation establishment and halt the lateral migration of the channel.

WHAT IS LURKING AROUND YOUR PROPERTY AT NIGHT?

The nocturnal and often cryptic behaviour of many Australian mammals often makes it difficult and time consuming to detect their presence in a particular area. Traditional live trapping methods using cage traps and box traps are not only labour intensive but involve significant handling of animals, potentially causing animals a great deal of distress. In more recent years, remote wildlife cameras have become an increasingly popular way to survey fauna as they are able to capture images of a broad range of species.

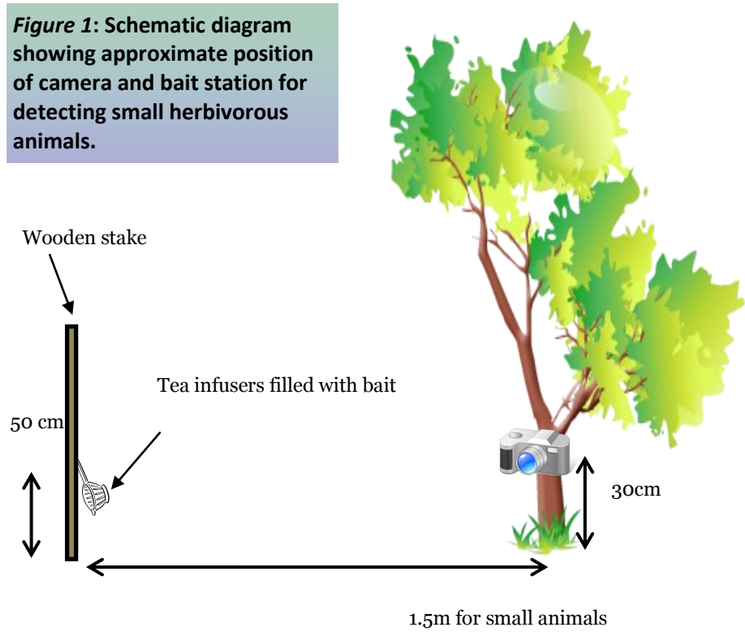
***Figure 2*. (*above*) A mother wombat and her baby and (below) an inquisitive deer inspecting the bait station on Retiefs' property "Winbirra", Ladysmith.**

With the assistance of a remote wildlife camera, local landholders, Lyn and François Retief, found out exactly what was lurking around their property after dark. The infra-red camera, on loan from Murrumbidgee Landcare Inc. through the Cross property planning project, was simply set-up in a location of interest, focused on bait (see figure 1) and left undisturbed for a number of days. The camera then takes photographs of any animal which comes to investigate the bait.

By using the correct bait (at different times!) the Retiefs' could attract both herbivorous and omnivorous species (e.g. rodents, marsupial mice, bandicoots, potoroos) and carnivores (e.g. quolls, cats, foxes). Their suspicions of what lurked in their back paddock at night were confirmed with the camera capturing images of both an adult and baby wombat and a deer (figure 2).

The cameras are available for loan to other Landcare members throughout the catchment. If you are interested in finding out what is lurking around your property at night, please contact Jacinta Christie on 0431 953 778 or

***Figure 1*: Schematic diagram showing approximate position of camera and bait station for detecting small herbivorous animals.**



THE KYEAMBA VALLEY LANDCARE GROUP

The KVLG is endeavouring to compile a nocturnal picture of what is lurking around the valley at night. We would like to encourage as many landholders as possible to borrow the night camera so we can compile a snapshot of what is happening and where.

Please contact Jacinta Christie on 0431 953 778 or jchristie@mli.org.au if you are interested in participating.

thank you!