



Landcare
Junee Area
Network

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Network

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JALN meeting dates are published in the monthly Murrumbidgee Landcare e-news.



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Junee Area Landcare Network

JALN Newsletter

Summer 2014

Message from the Chair of Junee Area Landcare Network By Skye Bellamy

Hello Junee Landcarers

The end of 2013 was busy enough, even without significant winter and spring rainfall. I attended a few meetings with Murrumbidgee CMA, and MLI discussing the restructure into the new Local Land Services. Over time we will see the benefits, or not, of this restructure, at a grass roots level. Will it mean more investment in conservation agriculture? Will it improve landholder accessibility to funding and support for natural resource management in our agricultural enterprises?

The MLI meetings I have attended have proved worthwhile. It has been a relief to know and see that there is a high level of NRM passion behind the wheel in MLI. This drive has ensured the survival of Landcare in the Murrumbidgee. But not just survival; ACTION. For JALN, this action has taken shape in the many ongoing activities; soil biology field days, conservation farming field days, the Cross Property Planning project and the *Revitalisation and Rejuvenation of the Wallacetown Reserve Project*, the list goes on.

It has been a tremendous boost to Landcare regionally, and specifically in the Junee Network to have the opportunity to participate in the Cross Property Planning project. This opportunity would not have been available without the attention we, as a Landcare Network, continue to receive from the NRM enthusiasts at MLI. Funding would never have been available to landholders without first MLI seeking the funds and then having the support and contacts through the JALN to form suitable groups.

Although the likes of the Wallacetown Reserve project is all but finished, Landcare projects and activities never really finish. I for one, and perhaps dragging Tom along with me, am looking forward to another year of planting tree/shrub corridors, fodder trees, excluding stock from a dam, and protecting the frogs in our swamp paddock from stock. I hope you do too! **Landcare is for everyone!**

Future workshops

The Cross Property project is pleased to be able to offer workshops and field days to Junee district landholders in the following areas.

- Summer crop and pasture weed control (late winter-early spring)
- Herbicide resistance and weeds (autumn topic)
- Livestock production from pasture
- Silage and hay production

- Winter crop walk
 - Pastures and grazing
 - Pasture cropping
 - (WOPR) Whole of paddock and Woodland rehabilitation
 - Beneficial insects
- If you are interested in any of these topics please contact: Jacinta Christie on 0431 953 778 or Nicole Maher on 0487 953 776.

This newsletter has been produced by Murrumbidgee Landcare as part of its 'Cross property planning to balance production and biodiversity' projects, assisted with funding from the Australian Government's Clean Energy Future Biodiversity Fund and the NSW Government's Environmental Trust.

What has been happening with the Cross Property Planning project?

By Jacinta Christie, Project Co-ordinator

The Murrumbidgee Landcare Inc. Cross Property Planning project involves 64 landholders across Illabo/Bethungra and Junee, Kyeamba Valley and Tarcutta/Humula of which 35 are in the Illabo/Bethungra and Junee area. The majority of these landholders have had property maps produced and have participated in a baseline survey to determine their current expectations, goals, practices and knowledge in relation to the management of their native vegetation.

Project Officer, Nicole Maher, has been busy with property visits and can assist landholders with funding applications. To date, a third of all landholders have applied and received funding for their on-ground works in areas such as biodiverse plantings, protection and enhancement of existing remnants and invasive species management.

Specific works include fencing out and planting creek lines and eroded gullies, planting tree lines, erosion control, adding trees to existing tree lines, controlling foxes and rabbits, planting scattered paddock trees, fencing off and enhancing existing remnant vegetation patches, fencing and planting around dams and revegetating with understorey in existing remnant vegetation.

In the last few months the Project has offered workshops and training on dung beetles and biological weed control and held a family Night Stalk at Eurongilly. In addition 30 sites—20 of these were within the Illabo/Bethungra and Junee area,- were surveyed for flora and fauna over September and October.

Dung Beetles: The ultimate farm workers!



Throughout July and early August Murrumbidgee Landcare Inc., through the Cross Property Planning project, funded four dung beetle workshops at Humula, Ladysmith, Illabo and Junee, with internationally renowned dung beetle expert John Feehan. John's organisation, SOILCAM, is based in Canberra and co-ordinates the largest collection and redistribution of dung beetles in the world.



During the workshops John highlighted the benefits of dung beetles including; aerating soil, digging through compacted soil, storing soil carbon, deepening the topsoil by slowly cultivating and turning it over to a depth of 300 mm, increasing rainwater penetration and improving groundwater retention, distributing dung nutrients such as nitrogen and phosphorous, in the plant root zone, reducing bush fly and parasite breeding colonies.

Top: Cheryl Baldry and John Feehan holding some dung beetles found at Cheryl's property near Illabo

Bottom: Holding a brood ball showing the dung beetle egg.

While animal dung is a nutrient rich resource it can also become a breeding ground for bush flies, buffalo flies (up north) and parasites or can get washed into waterways. With one cow producing around 18 kg dung/day and a sheep around 2.5 kg dung/day, dung beetles have an important role to play in breaking down and distributing valuable nutrients and interrupting the breeding cycle of flies and parasites.

John reported that around 14 species of dung beetles are suited to the area, some of which have already become established. A colony of winter-active *Bubas bison* dung beetles, not currently found in the area, were released at the Humula workshop. John also told the enthusiastic landholders that the keys to maximising the benefits of dung beetles, include having large enough beetle populations of the right species, and to ensure herbicides and pesticides are not having an impact on dung beetle populations.

John offers a free dung beetle identification service for landholders, and can also sell beetles suitable for your property to ensure maximum beetle activity through different seasons. For more information, check out John's helpful website at <http://dungbeetleexpert.com.au/> or contact John on (02) 62 480 376.

Family Night Stalks & Flora and Fauna Surveys

Free family Night Stalks held in Eurongilly, Humula and Book Book in mid September 2013 were well attended by enthusiastic landholders and their families

The nights were designed to inform landholders about the flora and fauna surveys that were conducted as part of the Cross Property Planning project throughout September and October. The Night Stalks included presentations from Alison Elvin, from Natural Capital who explained how the current flora and fauna surveys will be conducted; Dr Fiona Christie, from the University of Melbourne discussed the equipment used to monitor fauna, including remote sensor cameras; and Mason Crane from the Australian National University discussed results from past surveys in the area.

After dark, Mason led the group in an hour of spot lighting in which ring tailed possums featured prominently, particularly at Book Book.



Left: Dr Fiona Christie explaining how to set up and use the remote sensor camera at Book Book;

Right: Mason Crane (centre) discussing the habitat requirements of sugar gliders to landholders at Humula.

Encouraging beneficial insects by planting native vegetation ?

Insects occurring in crops may be broadly categorised as either harmful or beneficial. Harmful insects (pests) are those that reduce the value of the crop by feeding on plant parts, and are often extremely abundant in agricultural monocultures. This category includes such common insect pests as aphids, thrips and caterpillars. Beneficial insects, by contrast, protect crops from damage by reducing the pest burden. Beneficials are typically predators or parasites of pest insects, including ladybirds, parasitic wasps and predatory beetles, as well as non-insect predators such as spiders. Increasing the number of beneficials relative to the number of pests is one way of increasing crop value.

Many previous studies have employed mixed-cropping or intercropping systems as a means of disrupting insect population dynamics and some have investigated the role of native shelter belts and other non-crop vegetation on the abundance of beneficial insects. Very few, however, have examined the effect of replanting with native vegetation. Planting of native vegetation increases habitat complexity and may act to increase the abundance of agriculturally useful insects in the surrounding area. If so, revegetation may be a simple and environmentally friendly means of improving crop values.

A trial has been established on Bill & Maria Muller's property 'Nunlong' near Illabo to investigate the effect of replanting native vegetation on pest and beneficial insect dynamics. The site selected consists of an existing shelter belt composed of naturally regenerating eucalypts adjacent to a cropping paddock. Two spatially separated areas within this shelter belt have been selected for revegetation, with two adjacent areas left untouched to allow comparison.

Local native species have been used in replanting and were selected to provide year-round flowering, so that insect populations could be sustained even at unfavourable times of the year. Eleven species were planted in each of the two revegetation sites in July 2013, with plans to add further species when conditions are suitable. Species include: *Acacia pycnantha*, *A. paradoxa*, *A. cardiophylla*, *A. lanigera*, *A. genistifolia*, *A. montana*, *A. buxifolia*, *Cassinia longifolia*, *Indigofera australis*, *Eutaxia microphylla* and *Hardenbergia violacea*. Species still to be planted include the summer-flowering herb *Senna barclayana* and several small forbs.



Left: Bill Muller and grandson Charlie inspect the plantings; **Centre:** Phil Bowden, Murrumbidgee Landcare (formerly NSW DPI) installing pit fall traps for insect trapping. **Right:** Sticky and Pitfall traps.

Insect traps for both ground and flying insects have been installed in the shelter belt and the adjacent crop. This arrangement allows for comparison of insect diversity and abundance between untouched parts of the shelter belt and replanted areas, and between the shelter belt and the adjacent crop.

For the first sampling period, 24 pitfall traps were installed in a grid pattern in the remnant verge and the adjacent cropping paddock. Initial insect samples were collected in mid-October and these are currently being analysed. Many pest species were recorded and several – including mites, thrips and lucerne fleas – were found to be extremely abundant. Thrip populations increased conspicuously further into the crop, suggesting that the more complex habitat provided by the shelter belt is unsuitable for their survival. Several beneficial species were also recorded in large numbers. Parasitic wasps were by far the most abundant of these, though hoverflies and lynx spiders were also reasonably common.

Silverleaf Nightshade Project

Murrumbidgee Landcare and NSW Primary Industries have a new collaborative project funded by Meat and Livestock Australia (MLA) which will target the perennial summer weed Silverleaf Nightshade across Queensland, NSW, Victoria, SA and WA.

Silverleaf Nightshade (*Solanum Spp*) is an introduced weed that can dominate pastures and cropping areas. It is difficult to control by conventional means as it reproduces from both seed and root fragments. Recent research has shown that a systematic approach using a dual action control over the growing season- spring to autumn, is needed.

Previous work has shown the extent of the problem, the species involved and how to give control. This project will utilise the existing Landcare networks and farmer groups to build local knowledge and capacity and to foster the adoption of the research by farm communities. Large scale demonstrations carried out by local farmers will compare current research with the standard farmer practices. A series of workshops and field days complimented by media articles is planned to raise awareness of the problem and to get wider adoption of best practices.

Project officer Phil Bowden from Cootamundra will be looking for demonstration sites within the Murrumbidgee catchment area and will present workshops throughout the region to raise awareness of the problem and the best practices to control this weed. Further information will be made available through the Landcare network. If your group would like a workshop on SLN control contact Phil on: 0427 201 946 or email: weeds@mli.org.au



Biological Weed Management



In conjunction with the Dung Beetle workshops in Illabo/Bethungra and Junee, Barry Sampson from WeedBiocontrol spoke about the biological weed control agents that are now available for weed species such as Paterson's curse, thistles, St John's wort, Horehound and Blackberries. He discussed their introduction into Australia; identification in the field and the types of damage they can cause. He explained that they are not a cure but part of an overall management strategy and take time to be effective.

He detailed the success of the biological control of Paterson's curse and the six control agents; leaf mining moth; crown weevil, root weevil, flea beetle, flower beetle and a stem borer. Barry has bio-control agents available for sale subject to their seasonal availability.

www.weedbiocontrol.com.au.



Top: Barry demonstrating the use of the sweep net to capture insects for identification

Left: Barry speaking to landholders at the Illabo workshop

Right: Crown weevil attacking Paterson's curse

Junee Area Landcare Network and Cross Property Planning project Christmas Party

Landholders and their families gathered on Wednesday 18 December 2013 at the Illabo pub for a combined Junee Area Landcare Network (JALN) and Cross Property project Christmas Party. The night was very enjoyable and gave everyone the chance to catch up and reflect on a busy 2013. Alison Elvin from Natural Capital also spoke about the results from the extensive flora and bird survey that was conducted across 18 properties in the region.



A summary of results is included in the newsletter and a full copy of the report is available on the Murrumbidgee Landcare website:

www.murrumbidgeelandcare.asn.au

Left: Alison Elvin discussing results from the recent flora and bird surveys conducted in the area.

Cross Property Panning (CCP) project – Summary of Results from the flora and bird Surveys

In August and September 2013, the CCP project funded Dr Fiona Christie, University of Melbourne and Alison Elvin, Natural Capital to conduct 30 fauna and bird surveys across the project areas—Humula, Kyeamba Valley, Illabo/Bethungra and Junee.

The aim of this survey was to identify which species of birds and fauna are currently in the landscape, how canopy vegetation type (age, size of remnant, species) influences diversity and provide some directions on how to increase biodiversity across the project areas.

Overall, 5 major vegetation communities were recorded –

Grey Box Grassy Woodlands, Box Gum Grassy Woodlands (BGGW), Dry Sclerophyll forests (usually dominated by Red Stringybark and Mugga Ironbark), River Red Gum Forests (along waterways), and re-vegetation areas. Although White Cypress Pines grew strongly in some sites, they were an integrated part of a White-Box BGGW.

Within these vegetation communities there were:

- Over 90 different species of birds - including 3 species of exotic birds and 7 species of threatened birds; Superb Parrots, Varied Sittella, Flame Robin, Scarlet Robin, Brown Treecreeper, Grey Crowned Babblers and Diamond Firetail.
- 154 species of native plants and 34 species of exotic plants, including noxious woody weeds.
- Threatened ecological communities with varying levels of disturbance- Inland Grey Box tall grassy woodland communities – 3 farms- Box-Gum Grassy Woodland communities, especially White and Yellow Box -9 farms

One of the most interesting findings was that the larger and more ecologically intact the vegetation remnant and the closer it was to other similar remnants, the higher the total number of bird species including threatened bird species lived there. Small insectivorous and nectarivorous woodland birds that are currently declining in the South West slopes and tablelands tended to dominate the suite of bird species recorded in these remnants.

Across the more fertile areas where Box Gum Grassy Woodland (BGGW) has been mostly cleared for farming, the remaining vegetation remnants have less understorey and tend to be dominated by exotic grass and weed species. These sites often recorded a high total number of bird species, BUT few of these species were the declining insectivorous woodland birds. Instead, opportunistic and ‘generalist’ bird species dominated. These birds adapt well to the agricultural matrix surrounding them, and their numbers are not declining.

Interestingly the threatened Superb Parrot was recorded, in both BGGW and River Red Gum sites where sufficient tree hollows and flowering eucalypts were available, irrespective of the overall diversity of flora and structure.

The shape, age and connectivity of re-vegetation areas also affected the suite of bird species living there. Long, linear sites not inter-connected with larger remnants recorded the most common birds, some exotic species, and many Noisy Miners (an aggressive native bird that out-competes woodland birds for territory).

Generally those vegetation communities with the least floristic diversity and medium to low structural complexity had plentiful Noisy Miners and exotic birds such as Starlings and Sparrows. These bird species tend to prevent the declining, and often threatened, species of woodland birds from establishing their territories in these sites.

Many of the landholders whose properties were surveyed are making significant efforts to link their remnant and re-vegetation areas with other remnants and mature paddock trees. By making these linkages throughout their own property and across into neighbouring farms these producers have helped to increase overall landscape connectivity without adversely impacting their productivity. Many are also conserving tree hollows, leaving dead trees standing and not disturbing fallen timber within their remnants which provides critical habitat for local animal species.



Meet Nicole Maher- Landcare Project Of- ficer



With a background in sustainable agriculture and natural resource management Nicole worked in technical and research roles before coming to Murrumbidgee Landcare in 2010 to work as the Regional Landcare Facilitator.

Since returning from maternity leave in July 2013, Nicole has worked as a Project Officer on the Cross Property Planning project.

In this role Nicole works with landholders to help them design and implement on-ground works, and apply for funding to complete these works. She also helps to organise regular field days and workshops in the region relating to the project.

Landholders involved in the Cross Property project are welcome to contact Nicole with any questions about the project, including on-ground works, funding, or requests for future workshop topics.

Phone: 0487 953 776

Email: nma-her@murrumbidgeelandcare.asn.au

Spy (Remote Wildlife) Cameras Available

The Cross Property Planning project has recently purchased three remote wildlife cameras, which will soon be available for landholders to remotely monitor the presence and behaviour of mammals in their farm environments.

The infra-red cameras are simple to set-up in a location of interest, where they can record images of any animal which comes to investigate the bait attractant. Two types of bait are generally used (at different times), one to attract herbivorous or omnivorous species (e.g. rodents, marsupial mice, bandicoots, wallabies) and one to attract carnivores (e.g. quolls, cats, foxes). The camera can then be collected and recordings downloaded to a computer and species identified.

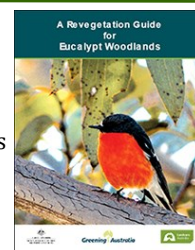
The cameras are available for use by the three cross property groups and can be circulated amongst properties. Each camera can hold between 50 000– 70 000 images so they can be used for a number of months before needing to be cleared. Please contact Jacinta Christie on 0431 953 778 if you are interested in using a camera on your property.



Left: Dr Fiona Christie from the University of Melbourne setting up a remote wildlife camera and bait station at the Humula Night Stalk; **Right:** The types of images you could capture around your property.

A Revegetation Guide for Eucalypt Woodlands

Greening Australia has developed a series of 'how-to' guides to support the successful implementation of significant revegetation and restoration programs being delivered around the country in the next few years. These guides will help project managers keen to refresh their knowledge of restoration practices, or guide those new to the sector on what risks to consider. Download the guide from www.greeningaustralia.org.au



QuestaBird on Google play

QuestaBird is a free outdoor adventure game where players compete by photographing birds in the wild. Join quests, earn gold, buy supplies, gain levels, build your collection - and help document and protect Australia's biodiversity!

Real Data -See which birds are more easily spotted in your location at the current time of year. Submit a new sighting to earn gold. The amount you earn is based on the rarity and distribution of the birds in your location. Use your gold to buy equipment, increase your quests, win rewards and gain new levels.

Help Protect Australia's Biodiversity-Works across all of Australia, with location, date and time recorded with each new sighting. Your sightings, meanwhile, are not only stored locally, but they will become part of Australia's national database to help record and protect biodiversity.

QuestaBird (beta version) is now available on Google play for a free download.