



## **Community Network News**

*Mid Loddon-CMN & West Marong, Upper Spring Creek, Ravenswood Valley,  
Nuggetty, Baringhup, Eddington, Kangderaar/Murphy Creeks Landcare  
Groups & other community friends*



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### **MEETINGS & EVENTS- 2013/14**

**Upper Spring Creek Landcare Group** meeting will be held at 7.30pm Tuesday 8<sup>th</sup> October at the Lockwood South School (2<sup>nd</sup> Tuesday monthly). Meeting agenda: an update on the Curlew project and information on how we can all work together to provide food for our planned captive breeding curlews. Also discussing future management planning for the Happy Jack Reserve.

**West Marong Landcare Group** meeting will be held at 8.00pm Tuesday 15<sup>th</sup> October (3<sup>rd</sup> Tuesday, bi-monthly) at the Woodstock Hall.

**Presenters Andrew Whitlock with support from Christian Bannan**

The official delivery of the spring satellite image biomass maps by Andrew Whitlock from Precision Ag. including trials site results from across all project areas to be viewed and interpreted.

A summary of all 2013 soil test results will be available in hard copy with Christian available to lead discussions and answer questions

Technology has once again been upgraded for our farmer's benefit, with the current Spring biomass satellite images taken on the 2<sup>nd</sup> September currently being delivered as Internet links via email. Any associated problems can be discussed and solved at this meeting.

Technology training workshops will also be discussed. These will be delivered to small groups to allow time for one on one advice.

**Baringhup Landcare Group** meets second Thursday of every second month at the Baringhup Hall Supper Room. The next meeting 7.30pm, 10<sup>th</sup> October - **Presenters Andrew Whitlock & Christian Bannan**

The official delivery of the spring satellite image biomass maps by Andrew Whitlock from Precision Ag. Trials site results from across all project areas will be viewed and interpreted.

A summary of all 2013 soil test results will be available in hard copy with Christian available to lead discussions and answer questions

Technology has once again been upgraded for our farmer's benefit, with the current Spring biomass satellite images taken on the 2<sup>nd</sup> September currently being delivered as Internet links via email. Any associated problems can be discussed and solved at this meeting. The pH maps have also been emailed or posted.

Future technology training workshops will also be discussed. These will be delivered to small groups to allow time for one on one advice.

**Ravenswood Valley Landcare Group**- meets last Wednesday of every second month. Next meeting 27<sup>th</sup> November.

**Eddington Landcare Group**- meet in the Red Gum Forest as notified (note signed entrance gate).

**Pasture & Grazing Field Day** will be held on **Wednesday 16<sup>th</sup> October**, Presenter – **James Whale** from MS & A. Commencing at 9.00am at Col Jennings, Jennings Road farm at Baringhup and then travelling on to arrive at 11.30am at Rob Pollocks cell grazing site at Morses Road (east side of Northlands Road) Derby. At the Jennings farm we will be looking at a recently planted Lucerne paddock and discuss soil conditions and possible types of future rotational grazing.

At the Pollock farm we will be looking at the cell grazing site, the progression of paddock layout and infrastructure required and current production successes.

Morning tea will be provided. Please bring your own lunch. Tea/coffee will be provided.

**November 5<sup>th</sup> - 8<sup>th</sup>**

Eighth National Stipa Native Grasslands Conference- 'Potential of native grasses', Murray Bridge

This conference will be a combination of scientific knowledge and practical demonstrations that will allow you to go home and immediately start regenerating perennial grasslands on your farm or property. You will learn how to assess if profitable regeneration of native grasses will suit your farm or a section of your farm. The combination of speakers will put in context the incredible importance of fully functioning native grasslands to provide food and biodiversity benefits. The field work will ensure that you will never be able to walk across the land without noticing the state of the ecosystem function, as well as simple corrective actions to restore the health of your property.

**Advance notice - Soil Matters Conference in Bendigo**

**March 24<sup>th</sup> – 27<sup>th</sup> 2014**

‘Soil Change Matters’ an international workshop concerned with the scientific investigation of changes in soil and their effect on critical soil functions and ecosystem services.

The workshop is hosted by the [Victorian Department of Environment and Primary Industries](#), and supported by [Soil Science Australia](#) and the following Working Groups of the [International Union of Soil Sciences](#) - Global Soil Change, Soil Monitoring, [Proximal Soil Sensing](#), and [Digital Soil Mapping](#).

The workshop is designed to bring together practitioners in policy, science and management to address the questions –

- What is changing in soil?
- Why does it matter (impact, extent, critical thresholds, system collapse) or does it? Who cares and who pays?
- How do we measure change and are we monitoring important changes?
- How fast are changes occurring and expected to occur?
- Should anything be done about these changes - science understanding, technical ability to measure and monitor change, policies for intervention or prevention

**Project Updates:**

***Save our Curlews***

The project promotional event with the Landcare Award presentation has been postponed until the week of the 21<sup>st</sup> October when the construction of the Curlew display pen will take place. Further information on the exact date will be emailed.

***Shelbourne Nature Conservation Reserve Restoration Project:***

The previous thinning trial areas of the forest at the edge of the Newbridge road are already providing a glimpse of what we can achieve with a full scale restoration of large areas. The reserve will be fenced in the near future although the area will still be accessible by foot at any point along the roadside.

***Farming for Sustainable Soils Project:***

**Important news to note –**

The Partnership formed for this project with the North Central Catchment Management Authority has been suspended due to some unresolved issues with the project’s continuation and delivery methods planned for our Network’s southern groups.

Alternative plans for funding aimed at continuing the project in a slightly different form and

including all Network groups, will be discussed at the Baringhup/Nuggetty Landcare Groups combined meeting on the 10<sup>th</sup> October and the West Marong Group’s meeting on the 15<sup>th</sup> October -(note events page)

**Gardner Homes Sponsored Planting event**



Photo – Greg

You will notice that some of the planters pictured are not employed by G J Gardner Homes as some of our local landcarers turned up to help out. Thanks to Rob Pollock, Irene Puntton Howard Hepburn & Geoff Gill, and of course Greg Ralton who prepared the site with Glenda joining in to provide food for the BBQ. The photo below shows there is still planting life left in some of our mature aged landcarers. Recognise the hat?

The following is a reprint from a Bendigo Advertiser story. Representatives from GJ Gardner Homes planted over 500 trees at a Woodstock West property earlier this month as part of their agreement to plant 15 trees for every house they built.

The native trees were sourced from Eaglehawk's Neangar Nursery. Gardner Homes' are working with the environmental organisation Fifteen Trees to reduce their carbon footprint.

GJ Gardner Homes Bendigo sales and marketing assistant Reanna Barnett said it was satisfying to put their mark on the land.

"It was freezing cold but luckily the rain held off," she said. "The property owners were very appreciate of our efforts and invited us back in 12 months to check on the progress of the trees planted. "I believe they will still be standing there in 200 years time."



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### Spring— a time to tread carefully -

Spring is here and with the season comes the awakening of all sorts of native fauna that have been slumbering in warm spots during the colder months.

Brown snakes are already being reported as being on the move with quite a few being sighted locally. The lizards are also out looking for food.



Photo- Deirdre

### Native Shrubs flowering in our local bush and gardens.

Indigofera is a genus of about 700 species of which about 30 are found in Australia. The most commonly encountered species is *Indigofera australis* which is a beautiful purple pea flowered open erect spreading shrub to 2.5 m high with

long slender stiff stems.

The name *Indigofera* is derived from Neo-Latin for "bearing Indigo". Indigo is a purple dye originally obtained from some *Indigofera* species. The specific epithet *australis* comes from Latin, meaning southern, referring to the geographical distribution of the species



### *An important story from Declan McDonald that builds on our FSS Project's soil investigations*

"I will take the opportunity to share my experience of attending a seminar held last Monday (23<sup>rd</sup>) in the new Agribio facility in Bundoora. The presentation was given by Dr. George Lazarovits, Director A&L Biologicals, London, Ontario, Canada. He was visiting as part of a collaboration looking at biological control of potato scab.

It was the initial assertion of his talk that got me excited. He pointed out that in the race to produce enough food to feed the estimated 9-11 billion people over the next 50 years, many commentators have dismissed the potential of soil to meet the increase in production claiming that the required increase will largely be driven by genetics.

Dr Lavarovits' research has suggested that improved understanding of soil ecological processes can greatly increase productivity. His work has highlighted the fact that plant-microbe interactions are more common than previously understood. Interestingly, some of the more common bacteria that have been found include members of the *Rhizobium* genus, well known for their role in biological nitrogen fixation in association with legume roots. In a recent project report, (see feature article below) Dr Lavarovits states: "*Rhizobium*, a soilborne bacterium has evolved a three-component life cycle that includes a free-living phase in soil, a N fixing endosymbiont phase within legume root nodules and a beneficial growth-promoting endo-colonizer phase. This implies that a specific microbial strain can be beneficial to plants by various mechanisms, e.g. biological N fixation, P solubilisation and direct growth promotion by colonizing internal plant tissues and production of plant growth hormones."

Rhizobia are well studied because the phenotype (i.e. presence of nodules) indicated a path of enquiry. Dr Lazarovits suggested that the lack of phenotypic indicators has caused us to miss what are potentially very important ecological processes (i.e. plant-microbe associations) and overlook the possibly ubiquity of such associations that could be managed to greatly increase plant productivity. His research has shown that encouragement of beneficial plant-microbe associations can reduce fertiliser requirements, reduce off-site impacts and improve disease suppression in soils.”

### **Losing our soil diggers is damaging or ecosystems**

Despite once being described as common [mammals have been lost](#) across the Australian landscape over the last 200 years. The impact has been particularly severe on Australia’s digging mammals, including iconic species like echidnas, bilbies and bandicoots. New research shows that the decline is not just bad for mammals, but for Australia’s ecosystems too.

Through introduction of predators, land clearing, and disease, six of the 29 digging mammal species that were present 200 years ago are now extinct. Nearly all the living species show massive range contractions – many are gone from the Australian mainland completely or exist only in predator-proof fenced reserves.

Our new study from Murdoch University, published in *Mammal Review*, has highlighted the relationship between the loss of Australian digging mammals, and ecosystem decline.

### **Why do we need digging mammals?**

Bettongs, potoroos, bilbies, bandicoots, and echidnas are important “ecosystem engineers”. These mammals create disturbances in the form of nose pokes, scratchings, shallow and deep digs, long bull-dozing tracts and complex subterranean burrows.

They might be small, but these mammals punch above their weight. A digging mammal can shift around 1.8-3.6 tonnes of soil per kilogram of body mass in a year. A woylie – a bettong from Western Australia – creates between 20 and 100 diggings per night while foraging, while a southern brown bandicoot can excavate over 3.9 t. Digging mammals improve soil health by turnover and mixing organic matter. Soil turnover brings deep soils and their nutrients to the surface. Their diggings also trap organic matter and other materials, increasing nutrient turnover. They can break through hard soils, which would otherwise be impenetrable to plant seedlings. For

example, wombats burrow through thick layers of very hard soils called [calcrete](#).

They can also improve water infiltration which increases soil moisture. Digging by mammals can provide sites for water to enter soil. For example, echidna foraging pits have twice the water infiltration of undisturbed soils, while bandicoot diggings can be the only site of water infiltration in otherwise water-repellent soils.

Digging mammals spread important [mycorrhizal fungi](#) across the landscape. These fungi help plants to increase their absorption of nutrients and deal with our nutrient-poor Australian soils.

Many of these important symbiotic fungi produce fruiting bodies below ground, and probably rely on digging and mycophagous ([fungus eating](#)) animals to distribute their spores across the landscape. It is likely that the loss of these animals has therefore also indirectly led to loss of some of these critical fungi.

Digging mammals can also reduce the amount of combustible plant material within a landscape, possibly altering fire regimes.

### **What do we do now?**

Before European settlement, when digging mammals were numerous and widely distributed across the Australian landscape, the soil turnover would have been very considerable. The almost total removal of these mammals from the landscape has to be affecting ecosystem function. Despite our study, we still know so little about the long-term effects of losing these significant animals. In Australia, we’re managing ecosystems that have recently seen a massive loss of ecosystem processes, but we don’t yet know the full impact.

For instance, we need to know more about how digging mammals influence fire, how [translocating mammals](#) could improve the environment, and the effect of mammals on fungi and plants.

We hope that the investigation will lead to recognition of the important role that these mammals play in shaping ecosystems, and therefore greater protection for those species that are still existing in the landscape.

