

The Landcare Perspective

The Quarterly Newsletter of the Upper Shoalhaven and Upper Deua Catchments

DECEMBER 2014

Inside this issue:

Update from the President	2
Update from the TLSO	2
Join your local Landcare group	3
B4CC Program Update	4
National Landcare conference reports	8
The battle of the brambles—comment	12
A lesson in landscape process and function—comment	14
Understanding your soil	16
Meet the Champions	18
Results from the Landcare Farm Forestry Trial	21
Letters to the editor	22

Contact: (02) 48422594
upper.shoalhaven@gmail.com
www.uppershoalhavenlandcare.com.au/

‘Sustaining Landcare’ Campaign

By Robert Dulhunty, Chair of Landcare NSW

We are calling for your help in a campaign to support Landcare infrastructure and funding.

Early indications are that the roll out of the National Landcare Program through Local Land Services will not deliver the support Landcare networks need to keep the doors open. On top of that the NSW Government has not indicated its policy and funding intentions for Landcare support beyond June 2015. A State election is looming and political parties are finalising their policies. Action before Christmas could help.

Despite Landcare’s success, our track record, and our 60,000 participants in NSW, Landcare does not receive the core ongoing infrastructure support Landcare needs to operate. Without this infrastructure – including paid staff at the local level – our groups cannot take up funding opportunities and carry out their valuable voluntary effort on behalf of the whole community.

The core funding that supports our volunteer movement has gradually been withdrawn. As volunteers we cannot continue to provide our valuable service on behalf of the community without support. While some funding is provided through the National Landcare Program via Local Land Services this is insufficient to deliver the Federal Government’s

policy for Landcare to be partners in natural resource management. We are currently seeing decisions by Local Land Services in a number of regions that will have serious impacts on Landcare’s ability to operate.

Funding of \$500k per year currently provides for statewide Landcare support by the NSW Government through the Department of Primary Industries, while welcome, is nowhere near the scale required to enable us

to operate effectively and meet the State Government’s policies for community based NRM. There is no indication of the Government’s future plans when this funding concludes in June 2015.

The Sustaining Landcare campaign is an appeal to keep alive the 25 year partnership between Landcare and Government. We need a

coordinated, properly funded Landcare Support Program for NSW. This program must include a network of local Landcare Support Staff.

Landcare NSW is conducting a campaign in the lead up to the 2015 State Election. A campaign kit is available at: https://ap1.salesforce.com/sfc/p/#900000001C4I/a/90000000LIOi/LMk6fDSXpWBvYDya3eLy5Jy_ISFJC0xQZAej4zL6Mxy



Landcare Spot the Difference

Landcare is a hub of diversity. In this issue you’ll notice some different, if not contradictory viewpoints presented. Upper Shoalhaven Landcare Council recognises the value of differing opinions and has therefore included the full spread of articles submitted. We leave it to you to consider all sides of the stories. If you have something to say, please send it in for the Autumn edition.

Incoming President's report

I would like to start off by thanking the outgoing committee members, especially the outgoing Chair, Colin McLean, who did a wonderful job along with a very enthusiastic Secretary, Ben Gleeson. They put in a huge amount of time and energy in setting up a lot of foundation processes for the future.

On 22nd October at the Windellama Hall I was excited to be elected as President of the Upper Shoalhaven Landcare Council along with Richard Stone, Deputy Chair, Sarah Merriman as Secretary and Phil Shoemark as the Treasurer. And it was wonderful to have Ken Moran, from Bungonia area, elected as a committee member.

There are many challenges and opportunities happening at present with the formation of the Local Land Services. The amalgamated bodies of the CMA, LHPA and the DPI, have Ministers that give them directions and the advantage that Landcare can bring to the table is that Landcare's directions (innovations) come from the members, the volunteers, the local community.

I see the skills of Landcare are that we have people from very diverse fields within our community from retired scientists, passionate twitchers, and some very knowledgeable people about plant species and broader landscape function processes. We have the ability to combine all this knowledge and wisdom to assist our LLS partners in their goal of building productive agricultural landscapes - reducing erosion, controlling weed outbreaks and feral pests.

I look forward to hearing ideas and advice from our local groups on how we can build the new partnership with

our LLS partners and of course continue to hear the innovations in successful tree planting, weed control, building our soil biodiversity that the Upper Shoalhaven Landcare groups are famous for.

In the New Year the committee is planning to sit down and pull together the information that was gained from the workshops held in July 2014 conducted by Su Wild River. The Local Landcare Groups gave us some fairly frank observations about how Landcare has worked in the past, what they felt was their role and goals and what we should be looking at in the future. We intend to build on this and are looking at asking a convenor to come in and facilitate a workshop that will pull all this information together to set goals for one, five and fifty years.

I see my role as President to continue to show the value to government departments, funding bodies, the community and politicians of the successful model of Landcare that brings all the diversity of human needs and wants and can add to the biodiversity of the landscape and improve the resilience of our agricultural productivity in an holistic manner.

Finally, I have just signed a new contract for Su Wild River for another six months.

We are very lucky to have such a skilled and capable person as Landcare's Support officer.

Martin Royds,

10 December 2014



Update from the Temporary Landcare Support Officer

This week marks the end of my first two contracts as the USLC Temporary Landcare Support Officer. And what a busy nine months its been. I've worked on eleven grant proposals with nearly as many groups. I've organised and taken part in a bunch of events. And I've seen many



local Landcare successes including rehabilitated creeks, hydrated landscapes, rich soils and pastures, biodiversity protection and healthy crops and stock. I'm also meeting more and

more of you inspired and inspiring Landcare heroes from our district.

You may have heard that in October, I was given the award as the "Certified Environmental Practitioner of the year" for Australia, and New Zealand. The award recognises advocacy for the environment profession, mentoring of environment practitioners and more. Naturally, I have met many marvellous practitioners during my 24 years as an environmental professional, and worked on some excellent projects with brilliant teams. But my work so far in this local Landcare movement rates as highly as any other environmental experience I've had to date. I look forward to continuing my steep learning curve with the good folk of Landcare whose wisdom, teamwork, dedication and resilience are profoundly improving our local landscapes.

Thanks for having me,

Su Wild-River

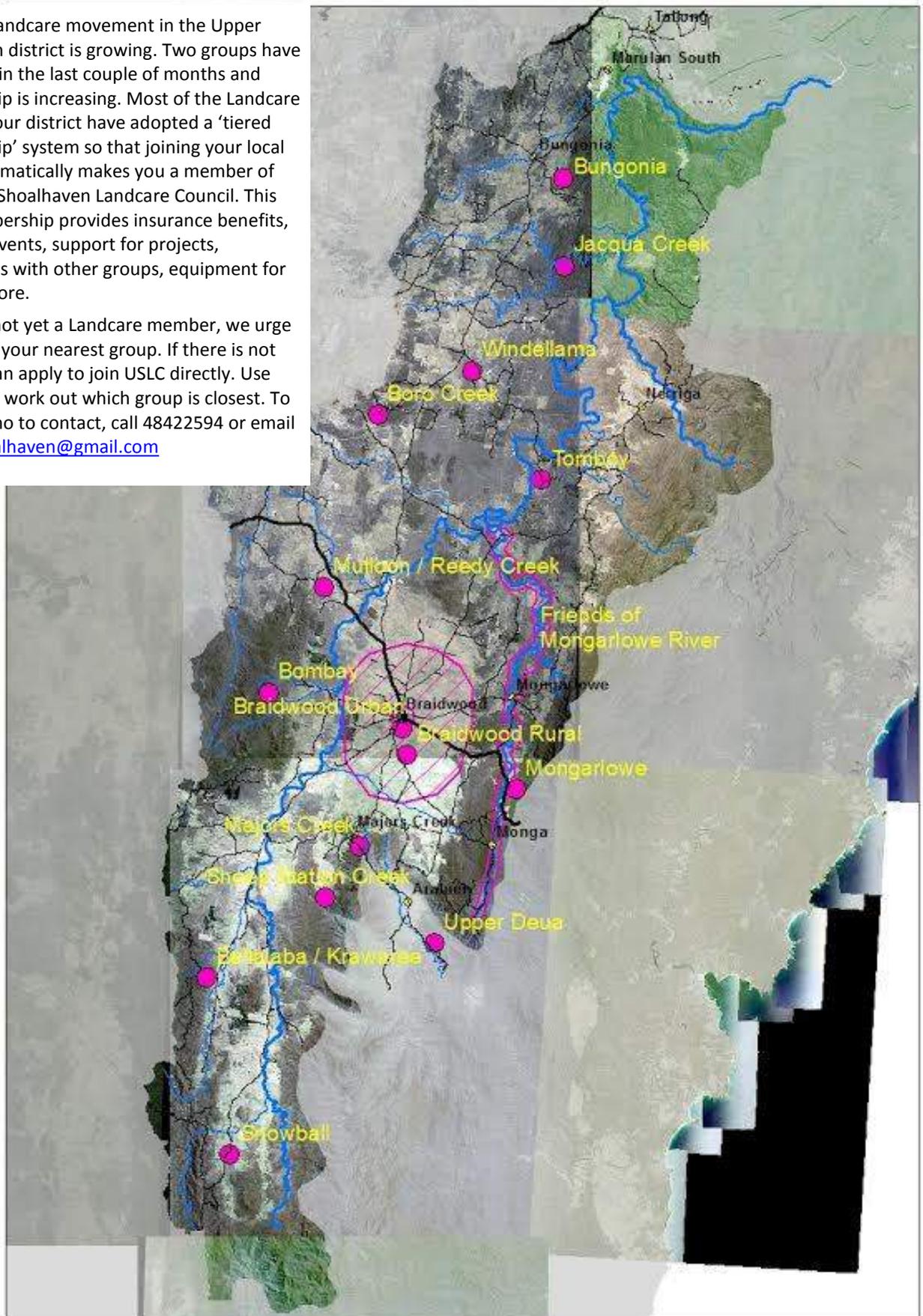
upper.shoalhaven@gmail.com

Ph 48422594

Join your local Landcare Group!

The local Landcare movement in the Upper Shoalhaven district is growing. Two groups have started up in the last couple of months and membership is increasing. Most of the Landcare Groups in our district have adopted a 'tiered membership' system so that joining your local group automatically makes you a member of the Upper Shoalhaven Landcare Council. This joint membership provides insurance benefits, access to events, support for projects, connections with other groups, equipment for hire and more.

If you are not yet a Landcare member, we urge you to join your nearest group. If there is not one, you can apply to join USLC directly. Use the map to work out which group is closest. To find out who to contact, call 48422594 or email upper.shoalhaven@gmail.com



B4CC Biodiversity Program Update

By Felicity Sturgiss, Biodiversity Program Manager

0427 11 101 felicity.sturgiss@lls.nsw.gov.au

We are now well into stage 5 of the biodiversity program, and are very busily working on a number of pretty interesting projects.

The restoration element of the program involves working with landholders to protect areas with strong and existing natural values. So far we have invested in the management and monitoring of a 27ha block of remnant vegetation on a property at Kain and a 4ha off stream lagoon at Farrington on the Shoalhaven River. Current (stage 5) work includes developing a further 2 restoration projects in the Bombay area. Stage 6 will again re-focus on the revegetation element of the program, with a suite of proposals to assess from landholders predominantly in the Braidwood Granites.

Throughout the last 3-4 weeks, the initial vegetation monitoring for new projects and annual follow-up assessments for existing projects have been taking place.

We have made some interesting finds.

The hollow shown in the *Eucalyptus rossi* (Scribbly Gum) tree below has some downy feathers draped at its entrance. A large, mostly in-tact shell was also found nearby. The size of



the egg and the size of the hollow suggest a large owl - maybe even *Ninox strenua* the Powerful Owl. A vegetation and fauna monitoring program is being set up at this site.



Above is a *Euastacus claytoni* specimen found in Bombay Creek. Most of the other streams and the main channel of the Shoalhaven River now only have *Cherax destructor* (the Yabby, a smooth crayfish) which is an innovative and capable crawler that has made it here from the other side of the great divide. Previously, spiny crayfish like the one above which are much slower growing, inhabited many of the streams and rivers east of the divide, with a wide variety of different species evolving in different catchments.

Below is one of our researchers taking a close up of Red-anther wallaby grass (*Joycea pallida* formally *Austrodanthonia pallida*) with its anthers out, in early December. Red-anther wallaby grass is a good indicator of light soils. Its hardiness offers good protection against erosion. It is a perennial tussock up to 1.8m tall.



Upper Shoalhaven Landcare



B4CC Biodiversity Program Update

Bossiaea bombayensis is a listed vulnerable species in NSW. Its only known distribution is the Shoalhaven River valley between Warri and Bombay, about 10 km west of Braidwood. The image here (below left) is possibly a *B. bombayensis*, however at this stage it could possibly be a *B. fragrans*, *milesiae*, *bracteosa* or *Bossiaea grayi* all of which occur on the same stretch of river. We will let you know when we do.



Above right is an orchid of the *Stegostyla* sp photographed in the upper reaches of Bombay Creek - Nov, 2014.

Callitris endlicheri - the Black Cypress-pine - is a smaller tree than



the White Cypress-pine. The timber is reported by the DPI to be less durable than its famous cousin. This species inhabits many shallow soiled rocky areas along the Shoalhaven River in the Bombay area.

This soil profile to the right was spotted in the upper reaches of the Jerrabutgulla Creek catchment. Heavy recent rain chewed out this small drainage line under a dam to give this excellent soil profile view.



Other areas of research:

Dieback investigations

It has been noted over the last couple of years that some species of Eucalypt seem to be dying at various ages. Notably - *Eucalyptus viminalis* and *Eucalyptus pauciflora*. Scientists in the Monaro region are noticing this decline as well and are questioning whether this loss of trees is something out of the ordinary (ie/not old age) If you have noticed what seems an unusual death of a number of trees in your area please give me a ring on 48422594.

Aquatic Biodiversity Research

Stage two of the aquatic biodiversity survey on the Shoalhaven river took place in November. The photo overleaf shows young *Eustacus claytoni* discovered in the Bombay area as well as other site along the Tallaganda range .

I was very pleased to have Dr Hugh Jones with us who is a Malacologist (one who studies bivalves). Hugh identified three species of Shoalhaven River mussels while he was here. The mussels pictured over page (three in the hand) are the freshwater mussel called

The Landcare Perspective

Page 6

B4CC Biodiversity Program Update



Hyridella drapeta. Their range is in South-eastern Australian rivers and streams from the Brisbane River to Gellibrand River in Victoria. They appear absent from all streams south of the Shoalhaven until the Mitchell River (Bairnsdale) where they reappear.

The other two species of bivalve identified by Hugh are:

Corbicula australis (basket shells) – Veneroida Family. These have continental distribution, occurring in flowing streams and disturbance-prone sandy habitats.

Alathyria profuga (freshwater mussels) - Hyriidae Family.

These are found only in the Shoalhaven, Hunter, Karuah and Manning drainages. Typically, they are restricted to the larger, permanent streams.



Above is the only picture I got of *Corbicula australis* which are the small yellow mussels near the pen. In the plastic lid are four *Hyridella drapeta*.



The *Alathyria profuga* is a mussel that many of us are most familiar with. The picture above is of a *profuga* collected in 1910 in the Hunter River and beautifully labelled by hand in the old style.

Should you have any bivalves at your place or know of any clumps (mobs?) please let me know so we can pass on the information to Dr Hugh Jones when he comes back to the Shoalhaven again.

Local Species Lists

Part of the biodiversity program is to develop a set of species lists that are particularly relevant to the Upper Shoalhaven and Upper Deua. So far, we have created local

Best Field Guide Harold Cogger's Reptiles and Amphibians of Australia. 2014. 7th edition
CSIRO Publishing

Reptiles which may occur in the upper Shoalhaven and upper Deua

Family	Common Name	Taxonomic Name
Chelidae – Turtles	Eastern Long-necked Turtle	<i>Chelodina lonicollis</i>
Diplodactylidae – Austral Geckos	Lesueur's Velvet Gecko	<i>Amalosia lesueurii</i>
	Wood Gecko	<i>Diplodactylus vittatus</i>
Pygopodidae – Legless Lizards	Pink-tailed Legless Lizard	<i>Aprasia parapuchella</i>
	Many-lined Delma	<i>Delma impar</i>
	Patternless Delma	<i>Delma inornata</i>
	Burton's Snake-Lizard	<i>Lialis butonis</i>
	Common Scaly-foot	<i>Pygopus lepidopodus</i>

B4CC Biodiversity Program Update

lists for the birds, reptiles, orchids and frogs of the region. To take a look go to the biodiversity website which is being built at www.uppershoalhavenlandcare.com.au/biodiversity/

History of Landcare Projects

We have been working very hard to get the full 20 years of Landcare history into an easy access database - which is a challenging job. Much of the Landcare work over the years was recorded in paper copy, floppy disc, in now inaccessible databases, and filed and stored in various areas depending on the decade. The four filing cabinets full of files and many numerous A4 folders and photos are starting to resemble an ordered 'library' - its an ongoing process. Thanks to James and Ben for their excellent work on this.

Vertebrate pest control

The B4CC program took on a contractor for a short period to monitor vertebrate pests and set pig traps at certain sites that are either on, or within a small radius of our



Biodiversity project sites. While we have had signs of pigs and foxes (of course) they have eluded the traps. The next big idea on the table is to set a bounty. While it may never work given all the complexities, we are fleshing out the issues and will make some serious decisions about a trial run in the new year. Watch this space and kids - get your ferrets ready!

Species Sightings Database

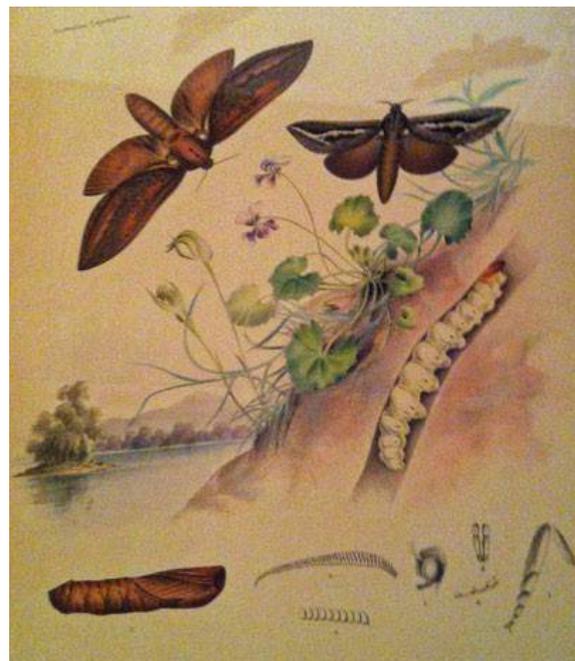
This system has been set up to help us identify what species of plant or animal you have seen. It's a very easy tool. Take

a photo of your quarry, note the date time and location, and go to our website (or google: Shoalhaven Biodiversity Sighting) or just email us at usudsightings@gmail.com (USUD is the Upper Shoalhaven Upper Deua). We have also received audio recordings of birds and frogs and done our best to verify them. There are some great recordings of local frogs on our website - the most common species you will hear in the USUD are *Limnodynastes dumerili*: The Pobblebonk or Banjo Frog, *Crinia Signifera*: The Common Eastern Froglet , and *Limnodynastes peroni* the Striped Marsh Frog as well as *Litoria verreauxii* the Whistling Tree Frog.

<http://www.uppershoalhavenlandcare.com.au/biodiversity/>

Scientific illustrators wanted

Over the coming months - the Biodiversity program would like to publish some small, local and beautifully illustrated little books of local species. If you have a penchant for gorgeous scientific illustrations and are not deterred by almost non-existent payment, please get in touch. Also, if art and science are your thing - the current exhibition at the Museum of Victoria called The Art of Science is excellent. It ends on Feb 1 2015.



Above: Swift Moth: *Abantiades labyrinthicus* by Helena Scott c.1864. Hand coloured lithograph.

Two people responded to our call for nominations to attend the National Landcare Conference in September 2014. Here are their reports.

National Landcare Conference Report 1: Big worms, fast trees and an honest politician

By Martin Royds

We flew from Canberra to Melbourne on Tuesday 16 September arriving in Melbourne late afternoon. As usual I got the window seat and had my nose stuck to the glass looking at changing landscape patterns below. The dams were low flying out of Canberra and there was a brown tinge across the landscape. I could see the sparkling of snow on the peaks of the Snowy Mountains and as we came into Melbourne the willowing fields of serrated tussock at the airport greeted us.

Up early the next morning I was dropped off at Spencer St Station and had chosen the Innovative Landcare and Sustainable Agriculture in South Gippsland Field trip. We headed out into the Gippsland which is east of Melbourne, very productive agricultural land, rolling hills of basalt soil, 25mm a week rainfall and a mild climate. Except the day we went out it was blizzard conditions which caught most people off guard. Luckily coming from the mountains I had bought my warm and wet weather gear.

We visited a dairy farm which had a robotic milking system which was fascinating to see the cows lining up and robot cleaning their udders and putting the cups on to milk them. The farmers in this area have only recently taken up Landcare and were excited about fencing off their riparian areas and planting trees. Most of us on the tour were envious of how quickly their trees grew. Our second stop was at a farm that the owner had only purchased seven years before and had forests that were eight metres high. It was astounding what could happen with constant rainfall,

good soil and not as severe cold as we get in Braidwood.

The highlight of the day for me was to go to look for the giant Gippsland earthworm. These worms can grow up to 1.5 metres long and weigh 400 grams. We were shown around a number of farms by the world expert on the Giant Gippsland earthworm, Dr Beverley van Praagh. The earth worms have a very specific habitat and we went to areas within some of these farms where the worms were. They move along their burrows and because the soil is so damp you can hear them moving through the soil making a “schlepp schlepp” sound.

Day 2 was the Conference with the main theme of Sustainable Agriculture and Challenges for the Future in improving productivity.

Pip Courtney, from ABC's Landline, was the MC for the event. The plenary session was given by Andrew Campbell, Head of School of Environment, Charles Darwin University, on The First 25 Years of Landcare. Following that was “From Farm to Kitchen” – Matt Moran (Restaurateur and Chef). This was an inspiring presentation where he talked about growing up on the farm, producing seasonal food and the importance of



Giant Gippsland Earthworm. Source: <http://www.theage.com.au/news/national/worming-out-of-a-problem/2005/12/01/1133422048310.html>

nutrient density – a topic I believe is very important for the future of the health of the human race and the health of the environment. It was great to see this included under the umbrella of Landcare.

There were many sessions on sustainable agriculture, productivity, celebrations on the 25 years of Landcare, promotion of Landcare globally and looking forward to the future collaborating with other organisations.

The gala dinner on Thursday night at the refurbished Melbourne Exhibition Hall was spectacular. Bob Hawke was the guest speaker and our good friend and regular Braidwood presenter, Colin Seis won the Bob Hawke award. We ate good food and danced into the evening.

Day 3 opened with a session presented by Minister Greg Hunt. Greg dealt extremely well with some fiery questions and comments from the floor and answered most of them in a very un-political way of being frank and honest. The questions were about reducing funding for Landcare, the perception that money was

taken from Landcare for the green army – “...who was the idiot who thought up this program?” He argued that he was in full support of Landcare and actually had argued for getting more money for Landcare where most government departments had to have serious cut backs. You could feel the anger in the auditorium towards the changed funding and perceived importance of landcare.

It was heartening to witness some of the younger landcarers enthusiastically pointing out to the Minister and the gathered of how social media can be effective in galvanising public opinion and spreading information and new practices, including crowd funding.

My feeling was that Landcare was continuing to evolve and improve and its strength lies in the fact that it is a grass roots organisation that has a very diverse family from city, coastal and rural areas. Everybody is coming out with innovative ways to combat their own challenges. The beauty is that it is the volunteers that can engage with each other and repair eroded areas, degraded areas and improve agricultural productivity.

National Landcare Conference Report 2: Industries need money, movements run on fire in the belly

By Ben Gleeson

In mid-September this year I attended the National Landcare Conference at Melbourne’s Crown Casino. Being the 25th anniversary year of Landcare in Australia there was a strong theme of reflection upon Landcare and what its next few decades might entail. This kind of discussion – “landcare has a great record, but will need to adapt in future” – has been a regular feature of commentary on Landcare for some time, but has not always been effectively critical and often seems to lack willingness to honestly examine any faults or problems. For that reason I was interested to see a presentation by Dr Charlie Brennan titled, “Australian Landcare movement: Let’s celebrate then radically redesign for the next 25 years”.

In accord with its title, Dr Brennan’s contribution begins with a celebration of all that Landcare has

achieved, but then comes the “however...” He continues: “...if the Australian Landcare movement is to survive, and flourish, for another 25 years, it needs to enter into an honest reflective process and be prepared to change. Relying upon past slogans, arrangements, aesthetics and practices will not work.”

No surprises there, as I’ve said, this is a common theme, however, Dr Brennan continues: “Indeed Landcare has changed over the 25 years; Landcare committees and volunteers have aged and the sector as a whole has become more professional....Both the administration of projects and the carrying out of on-ground works now require semi-professional skills.” So, whilst indicating the need for change, Dr Brennan indicates some changes that have already occurred, perhaps suggesting that these past changes (the shift from volunteerism toward professionalisation) are, in

Continued from p9

fact, something to be overcome or transcended. He continues: "Overall the movement has become less community-up and more top-down and the zeitgeist of Landcare has arguably shifted from altruism to one of compliance."

Since coming to Braidwood I have had ample opportunity to engage with multiple community associations across a range of interest areas. Nowhere has semi-professional capacity been more integral than in the practice of Landcare activity. The "Organisational Health Check for Landcare groups" provided on the NSW Landcare website is ostensibly about promoting and supporting "good governance", but can certainly be categorised as "compliance" focused. There are 52 different aspects of governance listed, and groups are expected to assess their level of achievement in relation to each one ('Yes', 'No', or 'Needs Attention'). Another checklist is provided for 'Landcare Networks' (i.e. district level associations, like the USLC). This one contains 153 different criteria to which these volunteer groups should measure up! This checklist entails a great deal of paperwork for someone, because many of these require the creation of a new policy document or record. Since every Landcare survey ever conducted has indicated

that volunteers are always lacking time, what is the effect of creating these paper hoops for groups to jump through? Increasing professionalisation much?

But even where funding to pay for this work exists, what group wants to see paid staff struggling with endless mountains of paperwork expected by other paid staff? Such activity may create employment (i.e. work), but wouldn't this time be better spent developing relationships, documenting and sharing community experience and facilitating on-ground Landcare works?

Interestingly, following Dr Brennan, Pip Job, "Chief Executive Officer" of Little River Landcare and National Rural Woman of the Year for 2014, presented her own experience as "Evolving Landcare – A process of continuous improvement", in which she uncategorically lauded the deliberate professionalisation of Landcare. From the presentation abstract, Ms Job suggests that Landcare's success as a volunteer movement has (somehow) highlighted the need to "adapt and improve the way we do business" (my emphasis). Elsewhere (Landline) she has stated "Landcare is an Industry more than a Movement." Her abstract concludes: "It is time for Landcare to explore how it adapts to meet the expectations of all stakeholders and position itself as one of the strongest movements (sic) in Australia again –

Landcare rebranded as a professional community of practice that everyone wants to invest in." The suggestion is to establish Landcare as another tier of policy implementation professionals (exactly like the CMA, and now the LLS), and compete with these other organisations in a tight investment market.

The only 'buy-in' being sought here is from public and private investors. You might still expect a turn-out from 'member-clients' at events, etc..., but would they actually support this "industry" as



David Holmgren on fire at Flood Creek, December 2014

they did with the Landcare movement? Or are they now simply consumers of its subsidised products? What if this industry's consumers became unhappy with the products offered by Landcare professionals? Do they still get a say in where their old "movement" is directed if this industry is now professionally oriented to attract maximum investment? In fact, we may well ask, who are the clients of this industry really (who pays the money), and who are the product being marketed to the investors?

Pip Job is advocating a form of independent Landcare corporate based on the existing District Landcare Associations, but there are other arrangements leading to increased professionalisation of Landcare. In this context I was interested to attend a presentation by Jenny O'Sullivan from the South Gippsland Landcare Network, "Walking the talk with Landcare: Volunteers and bureaucracies can share goals, aspirations and achievements". Ms O'Sullivan and an employee of the West Gippsland CMA (apologies I didn't catch her name), presented the, apparently novel (but not really), benefits of cooperation between a District Landcare Association and the CMA. They listed three:

- Access to experienced and skilled team of community engagement and sustainability professionals.
- Employment opportunities and career pathways for staff.
- Access to communication networks and channels.

Given these "employment opportunities and career pathways", Landcare staff are effectively already CMA employees once they step on board the corporate ladder of which the Landcare Support Officer is now the bottom rung. We must ask, what are the predictable outcomes of this cooperation in regard to the direction of the Landcare "movement"? Again, how do volunteer grassroots Landcare members influence the direction of their movement (and it is 'a movement', make no mistake!) if support staff are already anticipating their future employment arrangements and working closely beside their future bosses who are paid to implement existing government policy?

Until recently in the Upper-Shoalhaven, Landcare support staff were directly employed by the former

CMA (Southern Rivers). Today our support officer, Su Wild-River, is contracted by the Upper Shoalhaven Landcare Council (USLC—the District Landcare Association) with funding provided by National Landcare to South East Local Land Services (LLS—the new organisation incorporating the Catchment Management Authorities or CMAs).

Previously, the Landcare support officer was a CMA employee with an unusual level of discretion to engage in the service of the USLC and local Landcare groups. A level of independence from CMA management was expected for this individual so as to enable a level of independence of the Landcare movement itself (the obvious carrot of the career pathway in the CMA notwithstanding). The shift to the current employment arrangement is a significant indicator of the continued desire to nurture this 'supported independence' of the Landcare movement in our district. However, the implementation of this potential for independence will always rely upon the outlook and skills of the individual support officer; whether they tend to a professional compliance and Landcare industry outlook or to facilitation and empowerment of a volunteer community (the Landcare Movement).

Throughout Landcare there are people in similar positions. It is essential that these privileged professionals recognise that 'Movements' do not run on money—that is the modus operandi of a struggling Landcare 'Industry'. Make no mistake, movements run on a 'fire in the belly' of their members and money is only a substitute for this fire. Landcare today is in need of re-invigorating-change more than it is in need of greater dollar investment. But change can struggle to emerge at times because of the natural conservatism of established social norms within any community. Transformative land management perspectives do not spread from a top-down "professional community of practice"; like a fire, they spread from the bottom-up. Given the level of professionalisation that exists today, however, if the Landcare movement needs change, then professional facilitators right across Landcare will need to actively embrace change and fan a fire in the belly of our community when they see it.

The Battle of the Brambles

By Michael Gill and Chris Payne, co-ordinators Sheep Station Creek Landcare Group, and their own property, Ilonka Wildlife Refuge

Listen...shush...LISTEN... Can you hear it? (No, that's my stomach grumbling.) There it is again...THAT is the sound of weeds growing...sucking up all that fabulous Spring and early Summer rain...they're growing so fast you can SEE them coming up, screaming with joy as they block



out the sun, eat your children and strangle everything you hold dear.

I'm not talking about dandelions in the herb garden. I'm talking about Blackberry on 140 acres – 2kms of creek and half a dozen

damp gullies – Blackberry mounds the size of Gina Palmer and Clive Reinhardt put together. Blackberry clumps with their very own postcode.

I spell it with a capital B out of respect and awe. Its bot. name is *Rubus fruticosus*, but I tend to call it *Rubus JESUS!* through gritted teeth as it rakes its thorns across my forehead, tears off my old coot's straw hat and opens great gashes in my arms. Blackberry is a truly magnificent survivor and it fights back, hard.

Once, we were nice people. We had hearts as pure as Lancelot and refused to sully our land with herbicides – we chopped our weeds out by hand – Blackie, Hemlock, Thistle, Verbascum and Sweet Briar. They mistook our murderous intent for pruning and sprouted five stems from the original stump, even when we painted the ends (ever so sweetly and carefully and cosmically) with

Roundup Biactive.

When we switched to digging and forking and heaving them out by the roots, my back took me aside and, using short, harsh, Nordic words, pointed out that Chris and I were not getting any younger and that some herbicides were, in fact, Lourdes holy water in disguise.

(When going into spasm, my back reveals itself as The Devil and gets a bit blasphemous.)

Blackberry has a great, fat, woody, underground THING from which grow all its roots and its shoots (the term ligno-tuber springs to mind) – the love child of a parsnip and a potato, with a Jerusalem artichoke for an aunty and a ginger corm for an uncle. Alas it stores lots of energy.

Three more reasons why you won't beat Blackberry by just chopping it off at ground level:

1. Blackberry loves a big root. Some of them have lateral roots which run 2 or 3 metres in all directions and we have noticed dozens of new baby Blackies sprouting in a radius, from what appear to be its root-ends, fed by the tuber back under the original stool.
2. In the photo, you will see Chris's finger pointing to a new, pink shoot – each green cane will have a couple of these hiding well below the surface, springing vigorously from the tuber. Cut a big stem at the ground and each pinky will charge to the rescue, howling like a Banshee.
3. A Blackberry vine's stems will climb and creep and snake along, arching over gullies and swamping anything it can get



Continued from p12

over or into. (In our case, Tree Ferns.) When such exploratory, leading shoots touch the ground, metres away, they sprout their own roots. Cutting the big, green stems at the main stool will not kill that long cane.

Chris and I are no experts, but we have suffered - here is how we now tackle our Blackberry:

We carefully spray broadleaf weedicide onto the green foliage (always away from the creek) before it flowers or sets fruit, using a 5 litre backpack connected to a Splatter Gun, originally designed for medicating sheep. (Blessed be the name of Landcare's David Crass, who found them for us and saved us from being tortured by weeds and finally institutionalised, deranged and gibbering.)

Once the first onslaught has browned and withered the foliage (after 2 or 3 weeks), we follow up by spot-spraying the hardy survivors, any new green shoots and peripheral start-ups.

And then we follow up again. And then again, until the



whole clump seems to have karked it.

Stop there, however, and it will spring back to life the moment your back is turned, especially after good rain and warm weather. The final step is the Sour Sob Bob method. This can only be done once you are able to get into the centre of the clump – you have to hack and barge your way in through tangles of dried, hardened and lethal

Blackberry razor wire. (or through live, green razor wire if you just can't bring yourself to spray).

Some large patches will present you with half a dozen large root stools under the dead canopy, each sprouting a similar number of thick, green stems. Cut them about 30 cms above the ground and scrape off the thin, green bark in 3 or 4 longitudinal passes, top to bottom, with your secateurs. Don't rest. Don't stop to admire the Spotted Pardalotes or Whipbirds... the photo shows Chris applying neat Roundup Biactive with a sponge-tipped bottle to the full length of each fresh scrape. Do it within seconds of scraping the stems.

This technique is the full catastrophe and we've never seen any Blackberry survive it.

Alternatively, drag the whole stool out if you have the strength, the sacrum or the machinery, but this will leave dozens of root tips in place, all ready to do a Lazarus on you.

We have waited for years to begin this battle because our Blackberry was full of birds' nests and possum dreys. (The photo shows that sometimes the nests are full of Blackberry!) We allowed our Blackthorn (*Bursaria*) and Tree Violet (*Hymenanthera*, or *Melicytus*) bushes to go nuts first - they have very successfully replaced the Brambles with thorny, native shelter, blossom and fruit.

Good luck with your own Battle of the Brambles – you'll sweat, you'll bleed and you'll play host to ticks and leeches – so don't forget to reward yourself and...try to stay sane.

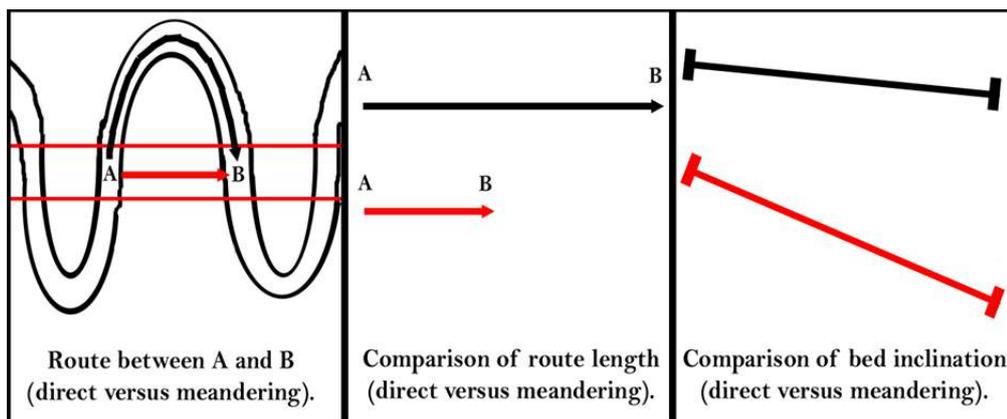


A lesson in landscape process and function

By Ben Gleeson

An article in the last Landcare Perspective gave an update on 'the bank job', a Landcare project on the Mongarlowe River. Apparently, a willow causing bank erosion was removed, and rock groins installed along with native vegetation, but the bank continues to erode. The article finished with the welcome suggestion that an evaluation of project outcomes now take place to inform future work at the site. I hope that the following contribution will help.

Flow-lines are in the business of handling varying flows of water and the erosive stream-energy that comes with them. If they are functioning well, they slow the water to limit stream energy and associated erosion. There's a



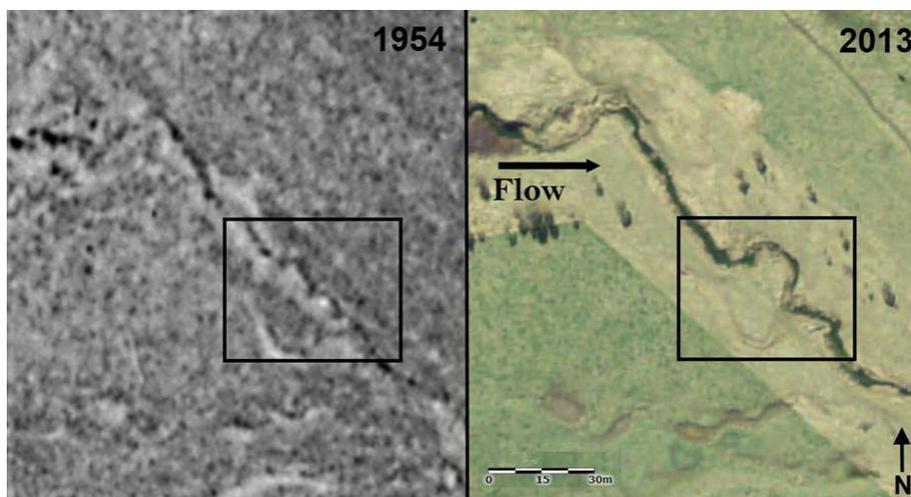
commonplace perceptual maladjustment in this country whereby people see a creek or river and assume that it functions to take the water away; whereas—as a matter of fact—flow-lines naturally develop in ways that will slow the water and hold it back as much as possible. This is achieved in multiple ways:

Figure 1: comparison of route length and bed inclination for direct versus meandering flow-lines.

overflowing across a floodplain is one of these, but many flow-lines are now significantly incised, so high flows don't access floodplains as they once did. Where flows are contained within an eroded channel, stream-energy may also be dissipated by the process of meander development. Figure 1 shows how a direct path between two points of different elevation creates the steepest slope while a meandering route creates a longer path and correspondingly-lesser inclination; this lowers stream-energy and associated erosive force.

So meanders are a good thing, but how do they form in creeks and rivers? Well, it's to do with the natural growth of vegetation. During recent fieldwork in an incised swampy meadow near Orange, I studied the development of pools and meanders caused by vegetatively-fixed bars of sediment situated along the base of the incision. Figure 2 compares a 1954 aerial photograph with another image taken in 2013, over this period of time a significant meander (indicated within the black rectangle) has emerged in the course of the incised flow-line.

The processes which led to this deviation are illustrated in Figure 3. The left side of this figure (A) shows the



vegetatively-fixed bar and the pool below it—note the eroding bank on the right and the recently deposited sediment at centre. The right-hand image (B) is a close-up of this patch of sediment 4 weeks later—note how grasses have grown and stabilised (aggraded) it into the existing bar; this bar of sediment is actively growing.

Peak flows travelling over the bar are slowed and energy is dissipated at this point so that new deposition occurs after every high-flow event. At the same time, remaining stream-

Figure 2: Aerial photographs from 1954 and 2013 showing meander development in an incised flow-line near Orange, NSW.



Figure 3: Showing (A) eroded bank and vegetatively-fixed bar with recent deposition; and (B) grasses aggrading deposited sediment 4 weeks later.

energy is deflected into the opposite bank causing erosion and channel deviation. The bar is expanding because stream-energy is lower where the plants have established; the bank is eroding because energy is being deflected to the opposite side from the

bar. Over 60 years this process has created a pool–riffle sequence and a meander at this location. These slow the high flows and help dampen overall stream-energy within the incision.

Note that there is no ‘problem-willow’ at this location. This bank erosion is being caused almost entirely by grasses. Does the NRM lexicon have a term to describe these ‘problem-grasses’? This example illustrates the fact that all vegetation able to stabilise sediment is capable of causing bank erosion. Willows are often undeservedly singled out for the status of “problem-species” because they are particularly good at establishing in high-energy locations. Since meander development is a beneficial natural response to excess stream energy, it seems obvious that what we often see in ‘problem’ situations is actually ‘problem-urbanisation’, or ‘problem-property-boundaries’ which have been placed too close to dynamic natural flow-line systems.

The observations presented above demonstrate energy-dissipation processes within an incised flow-line. I suggest this is also happening at ‘the bank job’ site. Figure 4 is an aerial photograph of the bank job with the eroding bank and rock groins indicated. Also indicated is the existence of a gradually-developing bar of sediment, known as a ‘point-bar’, slightly upstream and on the opposite side of the river from the eroding bank. Successional ecological processes are indicated on this bar by a change in observable texture (indicating height or species differences) from upstream to down.

This is the initial stage of an energy-dampening repair process: the natural development of a river meander. It is promoted by vegetation spreading on one side of the river (the relatively low-energy side with the point bar) which causes energy deflection and corresponding erosion on the other side. Those rock groins may one day form part of the southern bank of the river! Alternately, they may succeed in preventing meander development, but protecting one part of the stream against bank erosion only exports the erosive energy further downstream, possibly creating problems elsewhere. Taken to an extreme, consistently armouring flow-lines against erosion and meander development promotes a higher-energy flow regime throughout the entire catchment, in spite of natural tendencies towards stream-energy dissipation.

As humans we often employ reductive thinking methods. These limit our perception of reality to a manageable problem or threat that we feel able to solve. You can see this happening in Australia right now in current obsessions over ‘the problem’ of asylum-seekers...or Muslims...or willows; take your pick. In each of these cases the underlying causes of the perceived situation are not adequately addressed because “the

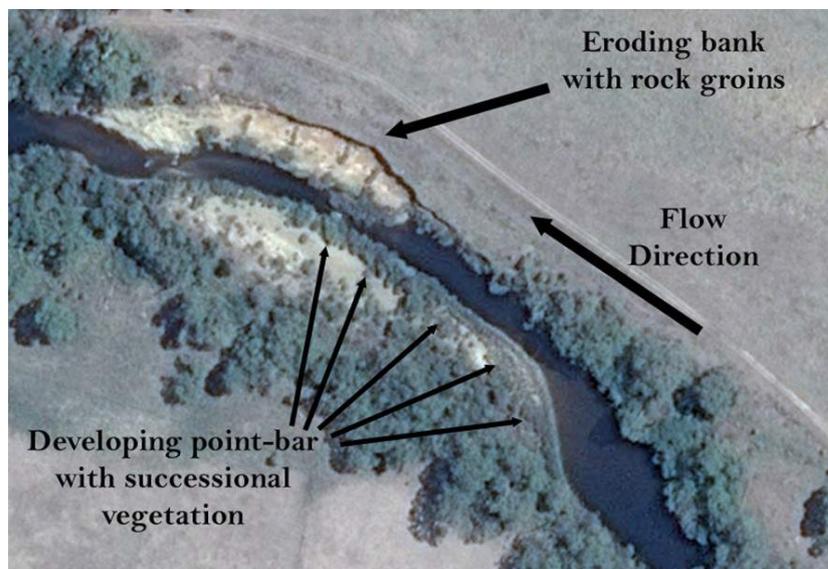


Figure 4: Aerial photograph of ‘the bank job’ showing eroding bank with rock groins and developing point bar.

Continued p17

Understanding your farm's most important asset – your soil

The Upper Shoalhaven Landcare Council (USLC) Xmas in July invited feedback about Landcare priorities from all present. Soil health was the most mentioned priority. USLC considered running soils workshops for landholders, but this series on soil health was already being planned by South East Local Land Services. Here's a short report. Let us know if you missed out, and are interested in other similar (or different!) courses in 2015.

By Rebecca Bradley, South East Local Land Services.

Your soil is your most important natural asset on your property. Recently a group of landholders participated in a series of workshops, subsidised by South East Local Land Services and presented by David Hardwick (Soil Land Food) learning tools to assess soil health, understand key soil properties and how to interpret a soil test.

Monitoring the condition of your soil can help with the decisions you make to effectively improve soil fertility and paddock management. It is important to consider the condition of physical, chemical and biological properties of your soil. A healthy soil is one that demonstrates good condition in all three of these areas.

During the first workshop participants learnt some practical skills to assess these factors in their own soil, with ten main indicators addressed including physical

properties of soil texture, groundcover, soil infiltration and aggregate stability; Chemical properties of pH, salinity and sodicity; Biological properties of root depth, root volume and soil organisms. All these tests are activities that you can do yourself in the paddock to get an understanding of soil condition.

Participants learnt about the relationship between these various factors within soil, along with management options for addressing any poor or moderate soil health indicators.

During the second workshop, participants learnt the value of a soil test and key parameters that provide a guide to soil condition. Some of the key things to look for include:

- An understanding of the Total Nutrients within your soil not just those that are currently available which will improve your understanding of the total reserve of nutrients in your soil;
- An understanding of soil texture, the presence of clay and the Cation Exchange Capacity (CEC) — an indicator of the soil's ability to retain positively charged elements (nutrients) within the soil. Understanding your CEC will provide a guide to your approach to soil amendment as low CEC soils will not cope with extreme changes. CEC may be increased via increasing your organic matter.
- The Carbon to Nitrogen ration provides a guide to the quality of organic matter within your soil.



- The percentage of exchangeable Aluminium and Sodium are also key indicators to look at when determining the ability of your soil to retain other key nutrients.

- Other soil fertility indicators including Calcium, Magnesium, Potassium, Sodium, Sulfur and Phosphorous.

David Hardwick provided some benchmark ranges for these factors, dependent on soil texture as a guide to use when assessing the fertility of our local soils.

David Hardwick recommended following a decision making process when making fertiliser or



soil amendment decisions. These decisions will generally cost you money and therefore influence the profitability of your enterprise. Managing the factors limiting your soil fertility and plant growth require the use of good management practices not just various inputs. David recommends considering the following steps:

1. Determine your soil's overall fertility;
2. Understand your soil health and key topsoil properties;
3. Determine your productivity goals and realistic targets for production based on your soil asset;
4. Set long-term soil condition targets;
5. Manage your major soil constraints;
6. Identify and manage the nutrients that are limiting your production;
7. Monitor your soil health, fertility and enterprise productivity.

Feedback from landholders who attended the days found the information presented extremely useful and relevant to their enterprise. Participants indicated they now have the ability to assess their own soil and understand the value of regular soil monitoring and testing for the own property management.

For more information or to express your interest in attending similar future workshops, contact Rebecca Bradley, South East Local Land Services in Braidwood 02 4842 2594 or Rebecca.bradley@lls.nsw.gov.au

Continued from p15

problem" has been narrowly defined to a single component. Community discourse is constrained so that the subject is culturally-constructed as having *no redeeming features whatsoever*. As such, "the problem" simply becomes the presence of the demonised subject. The solution must therefore be its removal (like when the RTA wanted to cut down Braidwood's avenues of poplar). Often, explicit militarisation accompanies the goal of removal: 'sovereign borders', 'war on terror', 'willow warriors'. Real causes of various issues, and better-informed ways to respond, are ignored because they are only apparent when we look beyond the narrowly defined "problem" and consider a broader context. Too much time, effort, and money (mainly it's the money) is currently targeted in NRM to fight narrowly-defined "problems" in ways that ignore and actually undermine natural landscape function.

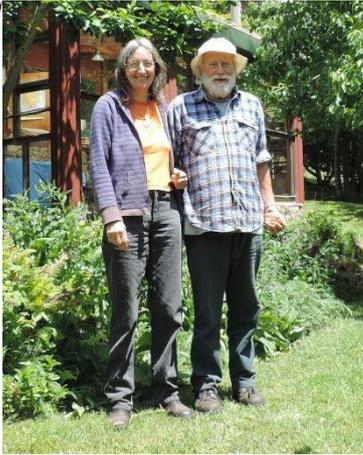
A more productive way to consider 'the bank job' situation might be to *re-define excess stream-energy as a kind of water pollution*. Like other pollution, it can be 'point source' or 'diffuse' and it represents a potential resource not being properly diverted or utilised—in this case to replenish nutrients and rehydrate floodplain landscapes. Also like other pollution, if we observe symptoms at the bottom of a catchment we look higher up to find the source.

Stream-energy pollution is embedded within multiple landscape *processes*, not simply in component features. As a concept it may help broaden perspectives beyond a simplistic focus upon "problem components", to encapsulate the wider processes driving natural landscape function. A better way to deal with stream-energy pollution would be for upstream land managers to adopt practices which maintain all riparian vegetation and allow natural succession within flow-lines. Instead of armouring banks and exporting stream energy, we could slow and spread run-off using structures that create pools and bring peak-flows out of incisions, back onto their natural floodplains. This would reduce stream-energy thereby assisting natural processes of stabilisation lower down. Benefits would cascade through the catchment: rehydrated landscapes without destructive stream energy. Understanding underlying processes can stimulate beneficial ways of working to support natural landscape function and repair. Members of our Landcare community should pay close attention to ongoing NSF trials happening in our local area to learn more.

Meet the Upper Shoalhaven 2014 Champions of the Catchment

In November 2014, Upper Shoalhaven Landcare Council was supported by South East Landcare and South East Local Land Services to host a "Champions of the Catchment" event to celebrate some district Landcare heroes. This was a 'peoples' choice' award, with each winner having been nominated at the Xmas in July event. Place Stories for the three will be on the USLC website, along with full stories about their contributions. Here are summaries of the champions' stories.

Lyn Ellis and Murray McCracken for Currajuggle Creek Nursery Creek Nursery



Lyn Ellis and Murray McCracken have run the nursery at Currajuggle Creek since 1995, growing native trees and shrubs. Situated in the foothills of the Budawang mountains east of Braidwood in the middle of the forest, their work has helped increase diversity and habitat and to provide more shade and shelter for livestock.



The clear goals within their business plan have been assisted through support from the Catchment Management Authority (now the South East Local Land

Services), the Upper Shoalhaven Landcare Council and local Landcare groups whose contacts with farmers helped find places for the trees to go. They also benefited from grants to farmers under the National Heritage Trust, One Billion Trees Program, Farming for the Long Haul and the National Landcare Program.

They have faced many challenges throughout the years, from birds, insects and other creatures eating the seeds and seedlings. Each year it seems like a different pest causes most of the problems. again. The complexities of working within the natural ecosystem means there is always something keeping them on their toes.

A Catchment Management Authority land assessment of the Braidwood Granites helps give an idea of the positive change brought about by Currajuggle. This suggested that about 1 per cent of remnant vegetation remained around the Braidwood Granites area by the 1990s, and that trees and shrubs from Currajuggle have roughly doubled that area.

Over there years, Lyn has studied where different native plants grown in the landscape . These observations now form part of the nursery conversation so people get great advice about what species will do best on their site. This has led to more successful plantings around the local landscape.

Lyn and Murray are grateful for all the support and encouragement from the many individuals who have worked in Upper Shoalhaven Landcare Council, the Catchment Management Authority and South East Local Land Services.

Jacqua Creek Landcare Group



The Jacqua Creek Landcare Group is a small group which has achieved a lot in a small area over two decades.

Ken and Diana Moran came to the area in 1980, buying a block with beautiful natural flora as well as sheet and gully erosion. Soil Conservation Service staff helped them to correct most of the gullies by putting in dams and a concrete flume. This was the start of a long process of improving the soil and landscape of their property and for the first ten years they planted

2000 pine trees each year in badly eroded areas.

Later, they joined the Goulburn Field Naturalists Society, gaining a better understanding of the natural beauty of the environment. This started their efforts to plant native species, rather than the pine trees.

In 2001, Jacqua Creek flooded twice within a couple of months, each time eroding badly, both within the creek and up its tributaries. Realising that landscape scale action was needed, Ken and Diana started the Jacqua Creek Landcare Group.

Other members who have been a big part of this process include Julia McKay, Annabel Scholes, Pat Miller and Bob Everingham.

Jacqua Creek Landcare Group members have very different approaches to farming and land management, but they have all agreed on Natural Sequence Farming as a strategy for creek improvement. This has been driven in particular by Julia McKay, and supported by her 40-year association with Peter Andrews. Following this approach, several in-stream structures have been put in place to de-energize the stream at high flow times and to allow water to spread the flow and rehydrate the flood plains.



Natural Heritage Trust I and II grants, allowed the group to put in trees and fences around Jacqua Creek. They then put in more in-bed structures further up the creek. In only 6 months before they could see the improvement from the in-bed structures, which had become almost invisible due to the raised creek bed level. The group now aims to create more permanent pools for habitats for aquatic species and increase vegetative cover to reduce evaporation. Raising the creek, slowing the water, rehydrating the land, and replanting native species have all helped to increase the biodiversity. Water birds are coming up the creek into different areas, rather than staying at the Jacqua crossing. Vegetation now covers a lot of land that was once dry grazing paddocks.



The future benefits for Jacqua Creek and the people who are connected to it will have clearer water and more regular water that will last longer. Farms will have a much more productive agricultural environment which will make their farming enterprises more sustainable.

Martin Royds and Patricia Solomon for Jillamatong

Martin Royds and Patricia Solomon are the present custodians of Jillamatong, which is a 457 ha property just 5km from Braidwood. Their principal role at Jillamatong is as regenerative farmers, working the landscape to build soil biodiversity and a productive business both environmentally and economically. They are principally a beef cattle operation running up to 1000 head of cattle.



Martin and Patricia are adapting the farm to climate change by introducing the principle of Natural Sequence Farming. This slows the water down into the landscape allowing soils to hold more water, and higher carbon levels, making them cooler in summer and warmer in winter. By doing this it creates better ground cover, greener grass and greater biological activity in the soil. After years of this approach, there are over 80 different types of herbs and grasses in the pastures.

In the 50s, the farm had just two paddocks. When Martin's grandparents bought it they built up to 12, and it is now increased to over 50 paddocks. This supports rotational grazing, moving the cattle every couple of days depending on the season and the pasture.

Martin and Patricia have learned and taught holistic farming techniques through field days and other training. The starting point was an holistic farm management course after which they incorporated holistic principles and set goals for building biodiversity pasture cover into the business and incorporating biological products rather than chemicals into farm management.

Martin and Patricia have found that organic processes are a lot more positive than chemical based farming. Holistic farming processes build biodiversity and soil and achieve healthier animals by focusing on what you want and not on what you don't want, and, by doing this you actually tend to achieve the desired outcome. Each day there are many things to do, from planting trees, to moving the cattle or even changing the grass species. All are continual learning journeys. Landcare has helped greatly along the way by holding courses where they have met experts in various fields.

This approach delivers a farm landscape that Martin and Patricia enjoy working in. For Martin growing up, the success of a farm was how many cattle you're farming. The new indicators include how they feel on the farm—whether they are hearing or seeing more birds, whether the soil is getting more spongy and when it rains if there are more worms running down the cattle tracks.



To produce healthy food you need healthy soil and at Jillamatong this includes a biodiverse pasture. This leads to sequestering CO₂ and producing cleaner water with a bi-product of less pollution, erosion and weeds and a healthy, resilient landscape.

Results from the Mongarlowe Landcare Farm Forestry Trial

By Lyn Ellis and Paul Dann (and possibly others)

The Mongarlowe Landcare Group commenced a farm forestry pot demonstration site in 1999 on Hugh and Marina Tyndale-Biscoe's property on Northangera Rd, Mongarlowe. Landcare members wanted to trial species that may have commercial value in the region, which included a range of products such as timber, nuts, oil production, cut foliage and shelter belt stability.

In October this year, a group of 23 Landcarer's visited the site during the "Mongarlowe River nature walk and plant identification morning."

The site is made up of two replicates on north-facing slope and the soil is a red clay-loam. The site was ripped in rows oriented north-south, a couple of months prior to planting in spring. The site is situated in an agricultural landscape, adjacent to a mature pine plantation.

A range of locally grown native tubestock and a selection of non-natives from a variety of sources were planted by Landcare members in October 1999. Ten of each species were planted along rip-lines spaced roughly 4 metres apart and watered in. This was replicated in an adjacent plot.

Variables included in the methodology were:

- Wallaby grazing in the first year so netting was added to fencing,
- Significant drought period over the course of the demonstration



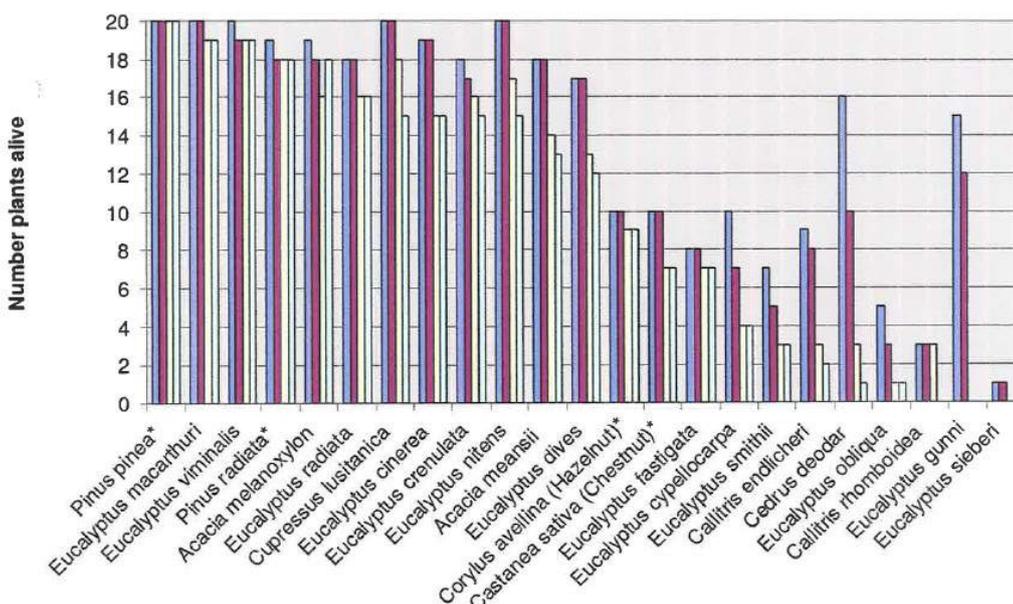
- Pruning of bottom branches from timber species to improve form took place in 2004 and 2006.

A photographic record of tree size was taken in 2006 and 2010 due to difficulties in accurately measuring heights. The diameter at breast height was taken in 2010.

Results

- Local timber species *Eucalyptus fastigata*, *Eucalyptus cypellocarpa*, *Eucalyptus sieberi* and *Eucalyptus obliqua* were unsuccessful in the first year due to frosting.
- Fastest growth rates were from *Acacia meansii* and *Eucalyptus nitens*.
- *Eucalyptus intense* also had the highest survival out of the Eucalypts.
- Other Eucalypts that performed well were *Eucalyptus viminalis* and *Eucalyptus macarthurii*.

Survival of species in trial plot 2000 - 2010



best performing species left to right

- *Acacia melanoxylon* has survived and grown well but has poor form for timber production.
- Of the exotics, the *Cypressus lusitanica* performed well, in both survival and growth rates.
- *Pinus pinea* and *Pinus radiata* had a high survival rate. *Pinus pinea* were slower but are strong and healthy.
- The Hazelnuts and Chestnuts have also performed well.

Letters to the editor

The Upper Shoalhaven Landcare Council welcomes debate and discussion about all Landcare issues, and we don't expect everyone to agree. Please send in your thoughts, comments, criticisms, suggestions and anything else you think deserves an

Dear Editor,

I am a new Landcare member and am thinking about what it would take for me to shift from landcare consumer to active contributor member of Upper Shoalhaven Landcare. Here are some ideas.

- 1) A Landcare 'focus shift' from a general environmental 'care' emphasis to a 'sustainable production' focus on 'micro enterprises'. This may mean upper size limits to production volume limit or volumes which help to differentiate the Landcare role from that of LLS.
- 2) Seek to provide a more representative balance between 'environmental science' and 'production research' based science and technology. This would include a balance between Rural Science Technology and Engineering.
- 3) Paid landcare support/project officer skills focus shift to electronic communications/office management secretariat function, with emphasis on in-house Ecoms 'interactive' technology capability development.
- 4) USLC Executive assume the role of landcare support officer 'coordination and research' with functions devolved to 'special interest' sub groups.
- 5) Landcare Perspective feature 'special interest sub group' direct reporting. This could include supportive feature articles from specialist science journals/ journalists.
- 6) USLC executive avoid promotion of any particular favoured second party 'alternative farming system'. Particular system alternatives could be accommodated within a specialist sub group.
- 7) USLC executive actively promote formation of 'special interest' sub group research projects. Purchase specialist research leaders to support 'special interest sub groups' through a transparent funds allocation formula.

From Rob Woolley, Braidwood

Dear Rob,

Welcome to Landcare and thanks very much for your thoughts, all of which seem worthy of further discussion. I like your picture of a Landcare network making better use of digital communication, actively engaging in scientific discourse and fostering special interest groups.

Your vision of new roles for the Executive and support officer are also interesting.

As far as USLC goes, we are gradually upgrading our website to encourage more interactive on-line communications, although this may not suit all Landcarers. I think there's a lot to be said for the traditional models, and wonder if these new ideas can be developed while also maintaining the existing focus.

Su Wild-River, Editor

Dear Editor,

Thanks for the Winter/Spring 2014 Newsletter . Always nice to read about motivated people.

However an inadequately edited newsletter can have a major negative effect on land repair when misapprehensions are given the weight of facts.

Three examples .

Margaret Royds says page 1 . ' *How can I tell others that goats eating all the reeds can destroy the habitat etc ..* " .

Probably best not to tell people , because it is not true .

Goats , correctly used , are a powerful tool for eliminating the tangles of blackberry in reed beds which kill baby swans .

It is cows , not sheep , who crave the minerals in reeds , walk into beds and ruin hydrology. Too late , the reader now believes goats are the problem .

Su Wild -Rivers says page 15 ' *The active bank erosion was being largely caused by a massive, old crack willow* " .

No it wasn't . The erosion was caused by a complex of historical, ecological, agronomic and management issues going back to white settlement. Soil compaction, increased overland flow, faster flood peaks , removal of reed, Casuarina and tea tree sieve systems, snag realignment,



stream bed reshaping, lateral water movement through deoxygenated sodic soils etc are the reasons. Removing the willow and replacing it with money and carbon intensive over-engineered groins will only waste even more than \$26,650 hard to get dollars.

Seeing the willow as a useful tool to anchor bioengineering and setting up a five year management plan would have fully stabilised the bank for a fraction of the cost. Too late, the reader now believes willows are the problem.

On page 14 we see 'clearing the creek from encroaching casuarinas'. Makes them sound like a problem. In fact they are the best onsite resource for stream repair you could wish for.

Respected authors must realise that their words may well be taken as received wisdom by keen readers. Just one phrase, taken out of context, can live on in misapplied management for a full forestry rotation or two.

Best Regards

Peter A. Marshall, Reidsdale

Hello Peter,

I've had some time to share your ideas with others whose projects or views were described in the articles that you have commented on. I believe that more than anything, your ideas and others' responses show the incredible complexity of the challenges we encounter in Landcare.

My article on the Mongarlowe River "Bank Job" inspired much feedback, including the p14 article by Ben Gleeson in this newsletter.

You are correct that river restoration is a complex issue. You are wrong to assume that we didn't consider the complexities. We engaged many open-minded practitioners with decades of experience in river restoration. Together, we reviewed the site and evaluated overland flow, sodicity, soil compaction, and faster flood peaks as well as other issues.

Removing the willow was one part of a solution. Our bioengineering also included leaving the many native species that had grown up behind the large crack willow, which are both soft and rough for slowing the flow of water around the bend. These are shown in the photo on the right, together with the rock groynes we installed. We planted more shrubs and trees within the groyne area and many have survived despite the high water events. Our planting above the bank was another bioengineering strategy to slow the overland flow and add structural stability.

In the ideal world, we would have used logs to stabilise the bank as they mimic large woody debris and provide habitat. They were too expensive and impossible to

obtain locally in the project timeframe. We had to work within practical time frames using local solutions. Given the complexity of the problems, and the short-time-frame since our interventions it is no surprise that the Bank Job continues. And it must reassure you that our five-year management plan includes these reviews.

I could go on, but instead, I invite you to come into the office and review the research. Or consider visiting the site to ground your recommendations in direct observations.

With regard to goats and cows, it is probably true that cows have done more damage in Australia—there are more of them! But the issue is not just about which animal gets into the waterways. It's about how that access is managed. Around our district are instances of animals being used sensitively to build up pastures and improve riparian biodiversity and stability. There are also many examples where damage is being caused by grazing too much at the wrong time. Horses for courses I suppose. There is extreme complexity in the underlying landscape, the impacts and responses that continue to evolve through different landholders and management practices.

On the protection or removal of casuarinas, I trust you'll be reassured that many perspectives are being sought while developing a 5-10 year management plan. Strategic removal of some individual casuarinas is one of many suggestions being debated for streambed stabilisation. It will only be implemented if clearly required.

Margaret's main point was about the need for good communication. Given the many discussions spurred on by these articles, that comment clearly holds water. While I personally welcome debate, it seems to me that courageous listening, and respect for others should underpin all contributions.

Su Wild-River, editor.





Australian Government

The 'Corridor links and Carbon Sinks: Biodiversity for Carbon and Corridors' project is supported through funding from the Australian Government.

Sender:
Upper Shoalhaven Landcare Council
PO Box 9
Braidwood, NSW 2622