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November
2024

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AABR NEWS

Australian Association of Bush Regenerators

working with natural processes

Stop Press - Project Officer Position

- Hours: 8 -12 hours/week
- Duration: 5-year project. Annual contracts, renewable, based on performance
- Location: Anywhere in NSW (working from home office)

The Project Officer will have a key project delivery role in the implementation of the Environmental Restoration Integrated Knowledge (ERIK) Learning System project funded through the NSW Environmental Trust

For position description and application details visit <https://www.aabr.org.au/bushjobs/project-officer-environmental-restoration-integrated-knowledge-erik-learning-system/>



Paul Gadsby will be running Eucalypt ID workshops at a number of locations in and around Sydney in November 2024 and February 2025

Paul is a eucalypt botanist and his extensive experience and passion for eucalypts will guide you through practical techniques to identify various species and enrich your appreciation of these remarkable plants.

DATES AND LOCTATIONS

Sydney south, Menai Community Centre, Menai NSW

Friday 22nd November, 2024- **Need to know numbers by Friday 15 November**

Sydney west, Harold Corr Community Hall, Werrington NSW

Friday 14th February, 2025

Sydney west/Blue Mountains, Blaxland Scout Hall, Blaxland NSW

Saturday 15th February, 2025

Sydney north, Mowbray Scout Hall, Lane Cove NSW

Friday 21st February, 2025

Saturday 22nd February, 2025

	AABR Member	Non AABR Member
Student	\$90	
Concession	\$100	
Individual	\$170	\$190
Local Govt/Business	\$210	\$230

For more information

<https://www.aabr.org.au/event/eucalypt-id-workshops-with-gum-guru-gadsby/>

Book your spot: <https://events.humanitix.com/host/australian-association-of-bush-regenerators>

Have fun at Barrington Tops National Park

Post Fire Scotch Broom (Cytisus scoparius) Control Works

See page 16 for information

President's Perspective

I must say that one of the aspects of society I find most baffling is why certain voices have a higher impact than others in terms of influencing government policy, programs and funding.

Most governments in Australia are under severe financial constraint at the moment... incomes are down, costs to govern are up, natural disasters are costing more and more, and many sectors are being told that there is less or no money to fund their activities.

The Environment is one of these sectors. The environment is one of those issues where there has never been enough funding and the rhetoric from all levels of government has never been matched with resources to actually tackle the problems that they recognise, yet it is often one of the first areas to be cut when governments economise.

Environmental restoration is something that is generally recognised and resourced during times of surplus; as a sweetener for something that is unpopular (for example, the Natural Heritage Trust and National Landcare Program being funded from the sale of Telstra); or from additional levies that mean that real Treasury dollars don't have to be allocated (for example, in NSW, the Climate Change Fund is a levy put on all electricity sold... half goes to fund environmental programs and half goes to Treasury). Still, even in times of "plenty" the fact that almost all environmental metrics are heading in the wrong direction shows that investment is not enough, and/or is poorly managed.

In tougher economic times, even this funding tends to dry up. More of the hypothecated funding like the NHT/NLP or CCF is spent on internal government programs and the on-ground works are unfunded. This is the situation now. The Australian government has significantly reduced the funding going to on-ground works funded through the NHT, have delayed funding for some programs and have constrained funding to Natural Resource Management bodies around Australia.

Where my confusion lies is that while governments are, with great eloquence, explaining why although they recognise the parlous state of the environment that there just aren't enough funds to spend on it, they continue to be influenced by those advocating for government funding for privatised toll roads, subsidies for developers and businesses like mining and petrochemical companies, and they are willing to go into debt

for 'critical' infrastructure like hospitals. While I agree that the government should go into debt for important things, what is more important than the environment that supports our entire economy?

The Biodiversity Council recently reported that the Australian government spends fifty times more public money subsidising activities and industries that harm nature than they do investing in protecting and restoring nature. The scale of debt that governments are willing to spend on industry and infrastructure dwarf environmental expenditure, such as spending \$1b a kilometre for Melbourne's East West Road Link or \$473 million per kilometre for Sydney's West Connex, or subsidising the Australian aviation industry to the tune of \$5.6 b during COVID. This compares to less than \$500m a year the Australian government spends on biodiversity across Australia.

Governments need to listen to other people alongside those that already hold their ear. They need to accept that we need to invest in environmental restoration now, as the task becomes greater, more expensive and less likely to succeed each day that we don't act.

The recent Nature Positive Summit demonstrated that the Australian government is pegging its hopes on private investment being voluntarily applied through their Nature Repair Market. AABR, and other eNGOs have formed the opinion that there are many flaws with what it being proposed, there is little understanding of environmental restoration science and practice among those developing the system and there is a risk that the program could be gamed, with significant profits being made, but few real outcomes, much as been seen with various carbon and biodiversity market programs around Australia.

AABR engages in many public consultation and exhibition processes of State/Territory and the Australian governments. We are always keen to add the voice of members through our submissions. If anyone is keen to get involved, please contact the Secretary.

Peter Dixon, President, AABR
president@aabr.org.au or call 0478 741 111

Welcome to new AABR Members

Congratulations on Accreditation

Joshua McCaig
Peter Nash
John Moen
Zachary Price

Bonnie Packer
Chantelle James
Dermott Leonard
Eleanor Muskens
Elena Colless
Helen Kemp
Indi Randall
Isaac Thompson

Members

Alexander Nicol
Amy Della-Sale
Amy Trello
Andrew Morrison
Anne Cooper
Ben Courtice

Jen Currey
Jennah Voigt
John Fountain
Kathy Eyles
Leah Samson
Melina Beecroft

Michael Cowell
Robbie Belchamber
Robyn Irwig
Sandy Eager
Tom Hume
Cajsa Knutson Lording
Hanna Preston
Jack Holdsworth
Jackson Pardoel
Keith King
Nicole McMahon
Olivia Zurek
Reuben Murray
Sinead McLaren
Stephanie Reichler

Not For Profit

Reforest Now Limited
Moora Moora Co-op
Project Platypus
Bush Workers Collective
Fingal Head Coastcare
Envite Environment (VIC)

Business

City of Coffs Harbour
Bush Regeneration
Happy Valley Landscapes and Concrete
Apical Bushfire and Planning
Keystone Conservation

AABR National Forum March 2024

'The R's of Restoration'

A number of presentations were covered in Newsletter No 159. These presentations are available from both regenTV videos and Newsletter No 159 available on line. The videos listed below and some written parts are mainly presentations and talks which are stories, or where videos contain a lot of visual material.

Mandy Nicholson - Welcome to Country

Dr Mandy Nicholson is a Wurundjeri-willam (Wurundjeri-baluk patriline) artist, the founder, singer and songwriter of Djirri Djirri dance group and Traditional Custodian of Melbourne and surrounds. Mandy also has connections to the Dja Dja wurrung and Ngurai illam wurrung language groups of the Central/Eastern Kulin Nation on her father's side and German on her mothers.

Mandy has a Bachelor of Arts (Honours) in Aboriginal Archaeology, is a Wurundjeri Woi Wurrung language expert. She is also cultural mentor to young Indigenous girls, through learning and teaching of culture, language, dance and ceremony and has a PhD in how Aboriginal people connect to Country, off Country.



Click on the photo above to see Mandy's talk

Jillian West & Uncle Shane

Consultation and Community Protocols

Guidance for protocols were detailed by Jillian

Jillian West has supported Aboriginal and Torres Strait Islander in work education and their life's journey. Jillian wants to see her people succeed in employment and education so the world can see just how amazing they are and how living in two worlds can be achieved.

Womanjenkla I'd like to acknowledge the traditional custodians the Wurundjeri or on people thank you Mandy for your amazing speech.

Today is about a learning journey – to non indigenous people from our people

I am going to talk a little bit about cultural protocols

What I do every day is the legacy of my father. My father Japanangka errol West was born in Launceston Tasmania. He was put on a mission called Cape Barron in Tasmania. He did not finish primary school and he was in a segregated school. He became a teacher, did a Master's in teaching, was a senior university lecturer and a doctor of indigenous philosophy. My dad passed away 24 years ago at 53 years of age, leaving seven children behind and I'm one of those children teaching his Legacy. He worked within Victoria for 20 years. He wanted culture embedded in education from foundation levels. He said 'Jillian always teach with respect. You don't know where people have come from, and Australia was robbed of the true history of Australia'. So every day I walk with my dad and he walks with me from the dreaming and The Dream Time

I want you to think about the loss that we have had every day when you were walking on this country and looking after our country like we always did traditionally. So when we talk about cultural protocols we talk about overusing Aboriginal people and organisations.

Consultation with community

- All Aboriginal and Torres Strait Islander communities have their own defined set of communication and consultation protocols
- These protocols always dictate how, when and who can engage with their community
- Community can advise on the appropriateness of topics, written resources, guest speakers or contact people
- Consultation ensures that the information is acceptable to the local community
- Meetings allow community to have a sense of control as to how resources will be used
- Increases consultation, involvement and understanding is the encouraged way forward.



Click on the photo above to see the talk

If you're going to engage with a traditional or registered aboriginal parties (rap) traditional owner groups, how do you know who they are.

In Victoria you can go to [ACHRIS](#) In ACHRIS. Type in the area or the address of the land that you are on, and it will tell you whose land are you're on. We have to make sure we engage with the appropriate and the traditional owners of that area.

Considering Community

- Take care not to overuse Aboriginal and Torres Strait Islander resources and contact people
- Be sure to acknowledge the contribution of Aboriginal and Torres Strait Islander peoples
- Allow time for Aboriginal and Torres Strait Islander peoples to digest, consider and respond to requests
- Explain your request clearly and have realistic expectations.
- Make sure that the events or meetings are held at a convenient or suitable venue.

Resources

- [ACHRIS](#)
- [Victorian Aboriginal Heritage Council | aboriginalheritagecouncil.vic.gov.au](#)
- [Reconciliation Victoria](#)

Aboriginal Heritage Act 2006

Aboriginal Heritage Regulations 2018

Aboriginal Heritage Commission

We have to make sure that we go to our resources before consulting with community. It's really important that you consider everyday our people in everything you do. You look after trees and bushes and allow for fresh growth. That's what we did traditionally. We all live in a western world and a cultural world and we have to navigate those two worlds every single day. When my dad passed away within two days a kookaburra visited all of his seven children. It is his spirit animal.

I don't know if you've heard there's no Tasmanian Aboriginals. That's the rumour that's gone around for a very long time because of the black war in Tasmania. Even though I was born on Burrerrong country in Victoria, my dad's patrilineal lines is the Palawa. So my father was Japanangka errol West - they said he stood six foot six in his boots and the only people that could stop him talking was the pointing of a finger of an old aunt. Everywhere he went he would teach. We talk about the R's. He was about reconciliation and to teach non indigenous people who we are, where we want to go. Listening and sharing is the key to being with our people in my view.

My father always said. 'Time is not of the essence, it is the essence.' So with time with our people, we run on black fellow time. So we're trying not to. He had two axioms, that I want to share you and leave you with. ***It's not your right to understand, but it is your obligation to accept difference or newness.*** And ***philosophy is the pursuit of wisdom.*** And for those of you who are barefooted and touching the ground are at the core of philosophy. Take your shoes and socks off and touch our country as much as you can. 80,000 years of footprints from our elders and ancestors you're walking on - usually I wear no shoes!

Wait and see - the benefits of time to explore resilience

Brian Bainbridge

Brian has worked in ecological restoration, spending over 20 years with the community based not-for-profit organisation Merri Creek Management Committee, and the past six years as a biodiversity officer with Hepburn Shire Council in Central Victoria.

In 2018, Hepburn Shire Council staff had the challenge of 're-booting' a couple of half-completed restoration projects. The project delays were unintended, but ultimately fortuitous. Time had allowed the natural resilience of the sites to be demonstrated and allowed the shire to 'retrofit' ecological principles into restoration strategies for the sites. A butterfly, the bright-eyed brown (*Heteronympha cordace ssp. cordace*) is emerging as a local flagship for this approach to restoration.

The Hepburn Shire removed willows (mainly crack and grey sallow) and blackberry from approximately one hectare of marshy creek flats at 'Wombat Flat' above Lake Daylesford in 2016. A standard revegetation planting was installed on a quarter of the site but the balance of the cleared area remained untreated. Coarse woody debris was scraped up and mulched in 2018, but no further restoration plan was in place. At nearby Lake Jubilee a similar site was cleared of willow in 2018 but a planned revegetation program was postponed due to difficulties in burning the resulting woody debris.

In 2020, both sites were revisited and found to have regenerated abundantly with tens of thousands of individual plants from nearly 40 species of native sedge, rush, grass, herbs, ferns, and trees. Plants had grown from pre-existing remnants, soil-stored seeds as well as water, wind and bird-dispersed seeds. Removal of competition from invasive species, together with disturbance by machinery, fostered natural regeneration mirroring the 'Facilitated (assisted) regeneration' approach.

These stalled projects provided a valuable natural experiment to assess local capacity for natural recovery. The natural regeneration following initial intervention at both sites (4 years at Wombat Flat, 2 years at Lake Jubilee) allowed the sites to be reconsidered in terms of the six key principles of ecological restoration practice (Standards Reference Group SERA, 2021), in particular, principle 2 - *Restoration inputs will be dictated by level of resilience and degradation*. The principle calls for skilful assessment of capacity of natural recovery prior to prescribing regeneration or reintroduction-based approaches.

The works to date have also demonstrated SERA Principle 5, that *'Restoration science and practice are synergistic'*. Restoration plans were re-designed to incorporate the natural regeneration. A mosaic of regeneration capacity was evident across the sites with drier areas in particular showing lower regeneration and in these patches a higher input 'combined



Wombat Flat/Grove of Gratitude. Before and After
Photos: supplied by Brian Bainbridge



regeneration/reintroduction' approach was indicated. At Wombat Flat, planned annual commemorative planting for the Chillout Festival (an annual LGBTQI+ festival) was re-directed into these areas of poor regeneration. Similarly, at Lake Jubilee, the resources for revegetation were redirected into follow up woody weed control and revegetation of patches where natural regeneration was not evident. At both sites, some desirable species that had not regenerated became a focus for reintroduction.

Some in our community expressed strong objections to the Daylesford willow removal projects and to ecological restoration more broadly, reflecting divergent knowledge systems, aesthetic, and cultural values. Drastic landscape change, big machinery and chemical application were particularly challenging aspects of these restoration projects. Such opposition vividly illustrated the SERA Principle 6 *'Social aspects and critical to successful ecological restoration'*. Community support for restoration relies on trust in Council's capacity to achieve lasting benefits within the limitations of a small Shire budget. While the natural regeneration of native plants is a convincing illustration of the potential of wetland restoration, communication has also been aided by the story



of a butterfly. Butterflies are great ‘flagships’ because their habits are well studied, they are highly visible and are generally appealing to the wider community.

In summer of 2021, Shire staff discovered bright-eyed brown butterfly (*Heteronympha cordace cordace*) at the two Daylesford restoration sites and at two similar community-led restoration sites in Trentham. Previous local records of the bright-eyed brown butterfly were sparse and very dated. As a species, this butterfly is not regarded as threatened, however as a weak-flying wetland butterfly that is restricted to cooler regions it is evidently vulnerable to wetland degradation, climate change and habitat fragmentation.

Bright-eyed brown butterfly caterpillars feed only on tall sedge *Carex appressa*, and adult butterflies require nectar of summer flowering plants such as prickly tea tree, *Leptospermum continentale*. Tall sedge had regenerated abundantly in the Daylesford and Trentham restoration sites but no tea trees. Introduced creeping buttercup (*Ranunculus repens*) and birdsfoot trefoil (*Lotus uliginosa*) were observed to be the main nectar sources for adult butterflies. Observations of un-restored sites suggest the butterflies had survived locally in low numbers around the edges of wetlands, where tall sedge and flowering weeds persisted outside the dense shade of willow and blackberry infestations.

Bright-eyed brown butterflies evidently respond well to wetland restoration locally and supply a ‘focal’ species for informing further ecological intervention. The butterfly’s reliance on introduced weeds for nectar has demonstrated the need for staged weed control and a target for reintroducing native flowering shrubs. In 2023 the butterfly was observed in a local high-quality remnant near Trentham, indicating the site’s suitability as reference ecosystem and creating the opportunity to further refine works according to SERA principle 1, ‘Ecological restoration is based on an appropriate local native reference ecosystem’.

Local groups have related that the butterfly story has given them hope and energy for their work. The butterfly also is a beautiful flagship for the approach of giving nature the time to demonstrate capacity for self-recovery. These site’s dramatic and cost-effective natural regeneration give council greater confidence to design ‘wait and see’ periods to monitor, assess and incorporate natural regeneration into restoration projects.

Standards Reference Group SERA. (2021). *National Standards for the Practice of Ecological Restoration in Australia. Edition 2.2.* Society for Ecological Restoration Australasia. Available from URL: <http://www.seraustralasia.com/standards/home.html>.

Click on the photo (right) to see Brian’s talk



Sharing, Learning and Working Together: On Country Learning

Ben Cullen, Chelsea Cooke and Renee Sweetman



Ben Cullen works with Trust for Nature. TFN works with private land protection using conservation covenants. Ben talks about the Warreen Beek Rangers Course.

Some years ago the CMA contacted traditional owner elders and community members asking them to suggest what programs they wanted. The responses had one common thing, which was to seek a ticket of accreditation for community members so they could work on country and use their knowledge.

The concept of the course was a Certificate III Conservation and Ecosystem management course which would be completed on country, expose people to different environmental issues and provide the opportunity to share knowledge. It

would be for First Nations people, both young people and elders together. It would be free and run for a year. It was important to take into account people’s knowledge and share that, and provide the opportunity to work on both public and private land.

The course was given the name Warreen Beek Rangers by the Bunurong Land Council Aboriginal Corporation. Ben talks about the development of the course. Ben is joined by Ben, Daren, Chelsea and Renee, who talk about the course and what it meant for them.

Utilising Drones in Weed Surveillance, Treatment and Management



Danny Pettingill

The adoption of drone technology is increasing across industries providing advancements and efficiencies in data collection, analysis and on-ground outcomes. This technology provides significant opportunity in the landscape management sector to collect data, utilise multispectral and GIS workflows and deploy on ground outcomes more efficiently whether deploying drones or traditional boots-on-the-ground workforce.

Observing flora and fauna interactions for bushland management - AABR Excursion

Sharon Mason, Accredited AABR Member

In May 2024, AABR hosted an excursion to Hurstbridge (Diamond Creek riparian zone near Ben Frilay oval).

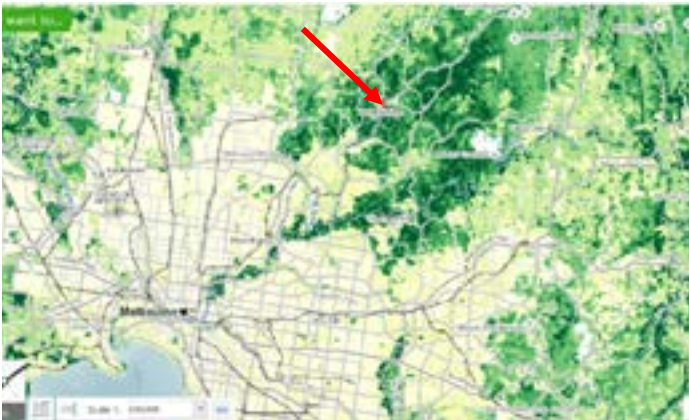
Our Guide was Michael Smith, Naturalist and Educator with 14 people attending on an overcast morning.

Context

First, I will give a small bit of context of the area before I write about the walk and talk.

Hurstbridge town in the shire of Nillumbik is approximately 28 km to the North East of Melbourne CBD. It is a small urban area surrounded by Green Wedge i.e. it sits outside the Victorian Government's Urban Growth Boundary - this means the private land outside Hurstbridge township is subject to restrictions on subdivision for now. This Green Wedge land consists of cleared land, horse paddocks, farmland, vineyards, hobby farms and bushland.

The below picture is a screen shot I took from the Victorian Government NatureKit website. In this picture the darker the green, the higher the relative biodiversity importance (this measurement takes into account the area's importance for threatened flora, fauna, vegetation communities and vegetation condition). I have highlighted Hurstbridge in red with a red arrow. This picture shows the area surrounding Hurstbridge, which contains some exciting plants and animals and a reasonable degree of connectivity through the landscape.



The Excursion

Collecting data is the first step in a revegetation project Michael tells us. We set out listening and observing how animals are using the site. The idea is that one records information over time in this and other areas and builds up a knowledge of how animals use different plant species, configuration of species and structure of plants in the landscape. Then one can use this knowledge when creating habitat.

The setting: Diamond Creek flats have a scattering of old Manna gum trees (with hollows). We stand on a goat track, mown grass strip on either side, a created wetland on one

side with oval beyond, a small bit of old revegetation the other, and the creek beyond. On the other side of the creek is bushland on private property. On the creek flats, there is a large amount of mown grass. The mown grass areas have a lot of potential to be transformed into more habitat and a much more interesting park.

We spent the majority of the time looking at the old revegetation (the plan was to look at more but time ran out). For birds, this area we looked at will only supply a part of their needs for food, shelter and mates. The bush block across the creek will be having a significant impact on the numbers and species and which species that can be seen on the public land. The amount of native vegetation and type across the broader landscape will also be affecting what is seen in this small patch.

Much discussion was had of behaviour and what different birds liked and didn't like.

A few bird examples:

- Spinebills: midstory (*Acacia dealbata*) dives down to (*Corea* sp.) to feed on nectar and flies up into the eucalyptus canopy.
- Superb Fairy Wrens: likes the dense low vegetation (*Lomandra longifolia*, shrubs, exotic tussock grasses) and the abutting mown grass.
- Red-browed finch: will feed on the seed of the dense unmown exotic grass and seed in the mown lawn i.e. the exotic winter grass (*Poa annua*).

One section of the revegetation was not looking as good as the rest. A suggestion was made that it was missing shrubs and *Acacia dealbata* suckers due to the very thick layer of kikuyu grass (*Cenchrus clandestinus*). Spraying the kikuyu was suggested as a solution. It was then suggested spraying might kill the mycorrhizal fungi associated with the large eucalypt. (My thoughts: I presume the area was sprayed with glyphosate before the planting occurred, that the kikuyu is stopping a lot of water reaching the ground surface and its rhizomes are probably monopolising most of the water/nutrient/air supply in the top layer of soil. Thus, not helping



Photo: Jane Pammer



Photo: Cathy Willis

the eucalypt or other existing plants and not providing any seed for insects/birds, i.e. is not great habitat and is expanding in area. Also, one way to encourage regeneration of existing plants or trigger germination of indigenous species in the soil bank is to create bare patches - spraying the kikuyu could be a step in this direction. I have no knowledge of the effects of herbicides on mycorrhizal fungi.)

Bioregions, Ecological Vegetation Classes (EVC's), and NatureKit were all mentioned briefly. This Victorian Government information is useful. However, finding some good remnants of similar EVC is, I think, much more useful. This site is in Highlands Southern Fall Bioregion, the EVC is 18: Riparian Forest. In NatureKit the mapping is fairly broad scale, so you cannot rely on the exact location of your site being the particular vegetation class/s it is mapped as. If one decides 'yes, I agree this is Riparian Forest', one cannot then decide that the list of species provided is what is most appropriate to use for your site. When I read the list of 'species typical of at least part of EVC range' (quote from web site) Riparian Forest in Southern fall bioregion, many of the plants listed I would not expect to survive on this Hurstbridge site now. Note the word 'part' in the quoted words. Also, these lists only mention some of the species you may find. Michael says 'it never floods here; it is not a proper Riparian Forest'. (My post talk thoughts: part of the description of Riparian Forest says 'regularly inundated and permanently moist', - this description no longer describes the Hurstbridge site. The site in the past would have been wetter, the creek is now very eroded and incised. If the bottom of the creek was less deep the site would be moister. As well, before colonisation the catchment of the creek would have absorbed much more of the water that falls, and this water would have slowly seeped through the landscape to the creek flats. Creeks that once ran all year round now do not, e.g. Smiths Creek, a tributary of Diamond creek, stopped running in summer in the 1940's. Now the catchment is full of hard surfaces, gutters, drains, roads and roofs, with overgrazed and compacted land, so water that falls moves very fast across ground, gutters etc. into Diamond Creek and on to the Yarra. Also, the trend for this area, at present, is that rainfall is decreasing and the temperature is increasing.

Michael thinks the council should be planting to provide more habitat for some iconic butterfly species and also to do some interpretation on these species.

Some examples of interesting butterfly species:

- **Imperial hairstreak /Imperial blue (*Jalmenus evagoras*).** The larvae feed on *Acacia* sp. such as immature (a few metres high) black wattle (*Acacia mearnsii*) and blackwood (*Acacia melanoxylon*). It is easy to see adults, larva, pupae and attending ants (*Iridomyrmex* sp.) all on the one plant. Adults feed on flowers of sweet bursaria (*Bursaria spinosa*). Late flying adults will feed on flowers of wetland plants such as purple loosestrife (*Lythrum salicaria*) and Australian gypsywort (*Lycopus australis*) when bursaria has finished flowering.
- **Moonlight jewel (*Hypochrysops delicia delicia*).** The larvae use borer holes in *Acacia* sp. such as blackwood (*A. melanoxylon*), silver wattle (*A. dealbata*), and black wattle (*A. mearnsii*) to shelter in during the day and to pupate in. The attendant ants (*Crematogaster* sp.) also live in the borer holes. It is important for this species that acacias are left to mature and senesce. Adults feed on sweet bursaria flowers.
- **Two-spotted line blue (*Nacaduba biocellata*).** (Right) The larvae feed on lightwood (*Acacia implexa*) flower buds. Adults feed on sweet bursaria flowers.



Michael mentioned that in a block in suburbia with little connection to a larger natural landscape it can be hard to attract birds, but one can have an insect garden. Michael created insect habitat in his backyard in suburban Reservoir. Some of the plants he used to attract insects were cut-leaf daisy (*Brachyscome multifida*), common everlasting (*Chrysocephalum apiculatum*), *Pelargonium* sp., *Dianella* sp., hop goodenia (*Goodenia ovata*) and a range of indigenous grasses – *Poa* sp, kangaroo grass (*Themeda triandra*), wallaby grasses (*Rytidosperma* sp.). This small planted area attracted native bee species, wasps and common butterflies.

Thanks to all the people who came and asked questions and joined the conversations. I think you made the day work well. Thanks to Michael - his passion and enthusiasm I have not captured in the words above. I loved that Michael could point out hollows and what had nested there and where the baby powerful owls had called from, and on and on about so many animals.

We found a rain moth, and Michael said 'that's djeri' (the grub which is found in or near the tree Wurun, Manna Gum). The Wurundjeri are the Manna Gum people.

Someone asked is there any material they can read.

Michael has made 2 videos

- **Wildlife of the Nillumbik Shire**
<https://www.youtube.com/watch?v=PeWWA1huFu8> (covers many animal groups including insects)
- **Nillumbik Pollinators: Bees, Flies and Butterflies.'**
<https://www.youtube.com/watch?v=IUAnhNKnQ6Q> (strictly insects)

Books

- **Habitat Management for Invertebrates - a practical handbook** by Peter Kirby - this is a British book, but a lot of the logic holds for Australia.
- **Butterflies -Identification and life history** by Ross P. Field – this book covers Victorian butterflies and gives distribution, habitat, life cycle, larval food plants in Victoria.

Rainforest restoration at Seal Rocks AABR Walk and Talk

Peter Juniper, Accredited AABR Member

Seal Rocks, is located on the NSW Mid North Coast, and is one of the jewels of the area. On Saturday, 10th August 2024, AABR held a walk and talk field trip to Seal Rocks.

A beautiful place known for its surf, rugged coastline and rainforest. During the walk the characteristics of littoral rainforest, the significance and value of littoral rainforest, its threats, and the efforts invested in aiding the recovery of the Seal Rocks littoral rainforest were discussed.

The littoral rainforest of interest this field day, covers approximately 30 ha within Myall Lakes National Park on Worimi country. Littoral rainforest is characterised by its thick shady canopy of evergreen leaves which exclude 70 % or more of the sky. It occurs within two km of the coast. Depending on wind exposure and aspect, this forest varies from very low vine thickets to tall forest supporting strangler figs and epiphytic ferns. This littoral rainforest is quite complex and diverse. In NSW Plant Community Types (PCTs) are used for vegetation classification. Littoral rainforest contains *Lower North Sands Littoral Rainforest (PCT 4114)* and *Sydney Coastal Lillypilly-Palm Gallery Rainforest (PCT 3039)*. On the very frontline of the coast this vegetation changes to the more sclerophytic Coastal Sands Littoral Scrub-Forest with its characteristic coastal banksias (*Banksia intergrifolia*) and bracelet honeymyrtle (*Melaleuca amillaris*). According to Alex Floyd's classification scheme the littoral rainforest qualifies as Suballiances 19 and 23.

As a subtype of subtropical rainforest, littoral rainforest has plant species derived from ancient Gondwana flora that existed over 100 million years ago, and more recently from southeast Asian flora over the past 20 million years or so. Plant structural types found in the Seal Rocks littoral rainforest include strangler figs, palms, epiphytic ferns, orchids and moss, wiry vines and heavy lianas, shade adapted shrubs and ground layer species, such as ginger and ferns.

Littoral rainforest in NSW has been greatly affected by extensive coastal development. Given its limited extent and the variety of threats that surround these areas this type of ecological community is listed as endangered under State and Federal legislation. The rainforest at Seal Rocks supports a number of species also listed as endangered or vulnerable



Photo: Peter Juniper



Photo: Fiona Miller (NPWS)

to extinction (under NSW *Biodiversity Conservation Act 2016* and Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*):

- the rainforest cassia (*Senna acclinis*) which grows in a wide range of plant communities but has a low population density with a highly fragmented distribution and
- the magenta lilly pilly (*Syzygium paniculatum*). Widely planted as a street and garden tree this tree species is limited to approximately 1200 individual wild trees distributed across 44 locations, of which only 18 are protected within conservation reserves. Seal Rocks is one of six priority management sites listed for the preservation of the magenta lilly pilly under the NSW Office of Heritage and Environment *Save our Species* program.

Noteable animals observed in and above the forest include dingos, the noisy pitta and osprey, while the endangered long-nosed potoroo has been recorded nearby.

The remains of middens located behind Number One beach indicate this area had been visited by people for a very, very long time. This site would have been a rich site for seafood, forest foods and is near the spectacular Sugarloaf Point Blowhole which must have had quite some significance to the Worimi.

By the late 19th century, the area was often passed by ships – some were wrecked on offshore rocks. Beginning in 1875, construction of a lighthouse on nearby Sugarloaf Point prevented further shipwrecks. This was followed by a seasonal lobster harvesting industry which led to a more developed fishing industry and village, the first dwelling being built in 1917. Thus, the effect of coastal development on the distribution and health of littoral rainforest in the area was mounting.

More recently, the littoral rainforest, featured during the AABR field day, has been disturbed by the presence of a thoroughfare road (now sealed), an old unsealed road (now overgrown), a former house and garden (some foundation work and two tall Norfolk Island trees remain), and a former fish co-op – occupied by a large formal camping ground, and

a history of informal camping within the forest. The littoral rainforest has also been disturbed by other factors such as bush fire and fire mitigation machine work at its margins and a powerline corridor (now buried).

The walk started at the main beach carpark with a discussion about what is littoral rainforest, National Park's role in managing littoral rainforest and what extinction is – relevant to illustrating the precarious existence of some of the endangered species present at the site. Whilst progressing along Seal Rocks (which divides the littoral rainforest into two sections) the restoration of a former powerline corridor along the road edge was discussed. The powerline is now underground and rainforest regrowth occupies this corridor. We look forward to the time when the forest has enclosed this road with a full canopy – a realistic vision for all of us who manage this site. Even now the trees on either side are beginning to touch in two places.

A diversion into some of the tallest rainforest on site took us into a cool shaded forum to discuss rainforest structure, dynamics and the effect weeds and vines, both native and exotic, can have on the rainforest and the importance of managing these plants.

Some of the weeds found at this site were decorative species and had probably escaped from past gardens now lost to recovering rainforest, existing gardens adjoining the site and from greater distances via bird and wind dispersal. These weeds include the climbing species climbing asparagus (*Asparagus plumosus*) and coastal morning glory (*Ipomea cairica*). By being able to climb, these species are able to seek sunlight, proliferate and shade out the native tree, shrub and ground layers. Blocking sunlight will stop the recruitment of new plants in the forest. Asparagus species have been controlled with herbicide spray (glyphosate and metsulfuron) while coastal morning glory is bulk removed by hand. Resprouting roots are controlled by cutting/scraping and painting with concentrated glyphosate.



Photo: Peter Juniper



Photo: Fiona Miller (NPWS)

Native vines are an essential component of the littoral rainforest at Seal Rocks. However, even these can cloak and shade native vegetation. Thus where young rainforest trees are recolonising the rainforest edge or filling canopy gaps within the forest, these vines must be managed. To allow maximal growth rates in such trees, the vines are judiciously thinned to reduce their shading capacity. However, littoral rainforest is subject to the pruning effects of salt laden winds. This effect is most evident on the frontline of the forest where tip pruning caused by the salt winds stunts the trees, creating a canopy as low as two metres high. The canopy of the forest reaches much higher where the landform protects the forest from wind. Therefore, the control of native canopy vines must be limited to retain a protective 'skin' over the canopy to reduce exposure to and beneath the forest canopy.

The exotic shrub bitou bush (*Chrysanthemoides monilifera* subsp. *rotundata*) is another major factor affecting littoral rainforest in NSW. At Seal Rocks bitou bush is of most concern on the seaward frontline of the forest where a mosaic of heath species and low windswept littoral rainforest occurs. It can also establish within the forest's natural canopy gaps. Bitou bush was introduced into Australia from South Africa accidentally in the early 20th century, and used from the late 1940's to late 1960's as a revegetation tool for sand mining operations. It is now considered as a Weed of National Significance and *Key Threatening Process to Biodiversity* in NSW as it is a very effective invader on both disturbed and undisturbed plant communities. Depending on the time of year, location and size bitou bush has been treated with a foliar spray of dilute metsulfuron (this has minimal effects on the coastal native heath species in winter), spot spraying with glyphosate and metsulfuron or is simply cut to a stump which is painted with glyphosate concentrate.

The day's walk progressed to a formal path that took attendees to the windswept forest and heath edge above the coastal cliffline. The transition from littoral rainforest to open sclerophytic heath species was an interesting point to show how the rainforest creates a cooler, more moist microclimate that is protected from the warmer air and seabreeze outside. Here the significant effect of the seabreeze on the vegetation and value of the protective canopy was apparent.

In 2001, the littoral rainforest was protected within Myall Lakes National Park and in 2006 a program of regeneration began. This effort was expanded in 2014 with Commonwealth grant funding and a later partnership with Midcoast Council. We envision a time when the rainforest will have matured over previously disturbed areas and even reach over Seal Rocks Road. Such recovery will greatly expand the size of the forest and increase its resilience into the future.

Regent Honeyeater Project

Applying the principles to the process

Ray Thomas continues his comments on making progress in the United Nations Decade on Ecosystem Restoration. In this article Ray describes the Regent Honeyeater Project he coordinated. Using this experience in large-scale restoration/reconstruction works, he has helpful ideas to share...specifically what were the factors that enabled the on-ground works to scale up to such a large degree.

A bit of background

The Regent Honeyeater Project was instigated in the early 1990's to improve habitat for the regent honeyeater which is listed as Critically Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (1999). The works were focused in and around the Lurg Hills, just east of Benalla in northeast Victoria.

It is mostly farming country, but still retains many blocks of regrowth Mugga Ironbark on the drier foothills. The vegetation grades into Grey Box on the plains to the north, and into Red Stringybark/Red Box further up slope to the south.

Grazing has removed much of the understorey vegetation in many of these remnants. Fortunately the older reserves and many roadsides are excellent reference eco-types.

Community Engagement

A significant part of working with farmers was helping them with the issues they saw as serious such as dieback of farm trees, gully erosion, and lack of windbreaks for livestock. With talks to Landcare meetings and targeted visits to individual farmers, many people began to understand that restoring habitat could be very helpful for farming – just by restoring natural balances that had long since collapsed.

For example: plantings will attract birds and gliders to control insect pests that were seriously defoliating farm trees; creating wildlife corridors and placing nest boxes will attract possums to eat the mistletoe that was obviously out of balance in many areas. In the process, the work was improving stock shelter from freezing winter winds, reducing salinity, and halting erosion of creek banks, etc. It wasn't asking people to give away land to the wildlife but encouraging wildlife to protect the farm for the long term. It can be (and needs to be) a win-win for everyone!

External support

I went to potential groups that have an interest in nature and education, to see if they may like to be part of the action. I gave many picture-based presentations to schools, universities, service clubs, bush walkers, bird observers, field naturalists, scouts, churches, etc, always focusing on the values we were protecting, the threats to those values, and most importantly, our proactive concrete steps that have multiple benefits for farmers as well as wildlife...

I had many teachers say that the only way for their students to learn this is just doing it. From seeing the successes of older sites, they know that it works...

University lecturers brought their classes for field trips to see the theory being enacted across sites of various ages, and then roll up their sleeves to assist in the restoration work.

It amounted to hundreds of farmers, scores of schools and universities, bushwalking clubs, Scouts, bird observers and other outdoor enthusiasts. This was more than 32,000 volunteers from across the wider community, over a period of 22 years.

Grants from governments at all levels, plus several philanthropic trusts, private donors, and in-kind contributions from many businesses all helped farmers to tackle projects that they otherwise just couldn't afford.

Target sites

Flowering ironbarks are a major food reserve for honeyeaters, so these sites were our prime focus. Our work was a mix of restoring missing elements in degraded remnant sites, plus reconstruction on open sites that would add extra habitat value to the remnants. For example, habitat corridors to link sites together, and planting fertile sites adjacent to the bush remnants, which were mostly on the poorer soils.

We continued to work in the same geographic area for the life of the project, so that everyone could see signs of change literally growing before their eyes. This had a significant effect, as farmers could share their experience on the value it had for their farms. By comparison, spreading our efforts over the entire region would have missed this 'critical mass' point, as people realised this was working, and wanted to be part of it. This 'people power' changed the landscape!

Results

- Approx 1700 ha of Box-Ironbark habitat was restored or reconstructed.
- Threatened wildlife species were systematically monitored to quantify the ecosystem benefits.
- Squirrel gliders, brush-tailed phascogales, and a mass of threatened woodland birds made significant gains over that time.
- Weediness of sites is significantly decreasing.
- Many plant species are successfully reproducing.

The long list of conservation awards is probably the simplest way to show the significance of the project.

Work processes

This powerful work force was carefully guided by good botanical and ecological understandings, so the best knowledge could be applied at a much larger scale. Our work was very carefully planned to achieve the best outcomes for the massive input of resources: grant money, volunteers' efforts, and not least, people's trust.

I get 95% seedling survival or more, and that is vital for this special UN Decade on Ecosystem Restoration. Many volunteers commented on how well-organised our planting weekends were. They felt their efforts were valued and respected, and they really appreciated seeing the successful results from previous years.

Some practical insights may be worth sharing

- What ability does the site have to recover by itself over time? Here we need to work with ecological processes and be proactive to stimulate them – e.g. using fire to trigger germination of seed in the soil. Sow Nitrogen fixing plants in sterile soils to pave the way for healthy

canopy trees. Encourage leaf litter accumulation to stimulate soil fungal development and nutrient cycling. Planting of ecotonal zones needs to include a mix of species from both higher up and lower down the slope - this allows species dominance to develop by natural selection in the changing climate.

- Take care to match plants to the varied soil types and moisture levels across a site. Knowing the vegetation type from personal experience is hugely important in this work, or many seedlings will be put in the wrong soil and can't thrive.
- Niche direct seeding by hand is very effective, and a whole lot more natural in appearance than by machine. On well-drained country, I always place seeds in slight depressions that will collect some rain; the extra moisture improves seed germination rates significantly! I have used this as a great educational exercise for local schools.
- On the other hand, when replanting broad areas of dense weeds, I plant only the overstorey and larger shrubs as the first stage. These more robust plants dry out the site over a decade or more, and then the introduced grasses do poorly which allows the indigenous grasses to take over. With this approach, I have seen dense monocultures of Yorkshire fog grass *Holcus lanatus* go back to small dryland Danthonias and Stipas. Only then is it sensible to think about introducing the ground layer plants.
- My work in local bushland reserves uses all these approaches. The canopy layer is mostly OK, but the understorey is usually greatly simplified due to past grazing. I'm planting the middle storey as the first step, and it's on a broadly scattered basis to enable widespread seed dispersal in a few years' time. I use spot spraying in the weedier areas of course, plus scalping off the top few cm of soil to remove weed seed from around each planting spot.
- Perhaps most significantly, I've realised that restoration can never be a single pass operation. Some things can only be done after earlier interventions have produced a certain site 'readiness'. For example, forget ground flora until the weed levels have been greatly reduced by trees and large shrubs drying out the site, combined with targeted spraying work.

Common mistakes

We probably all recognise many common mistakes in field work, and it's a shame to see such a waste of funding, not to mention the human effort.

- It appears that the goals/aims for a site are often not thought about, let alone addressed!! Is it understorey restoration in an open woodland? Is it targeted habitat for particular threatened wildlife? Is it primarily aesthetic/amenity value for the local community? Is it ...??



- Knowing the reference vegetation type is essential here. This is a combination of personal knowledge from many remnants on similar geology, and publications that record this info.
- Achieving a particular habitat structure/density is vital, and clearly needs to take account of the mature size of various plants being reintroduced. It is just as important for many wildlife species as selecting the right plants, or perhaps even more so.
- I was shocked to hear a comment recently, that the best way to plant is really close together, because 'the dense growth reduces/eliminates the need for follow-up weeding'. That was the prime consideration, and more important than the ideal vegetation structure for a particular habitat type.
- The plant-and-forget approach is rather too common. This means most seedlings are lost to dense weeds, especially in fertile riparian sites. With no prior weed control and no follow up afterwards, the seedling survival can be 20% or less. Sadly, some people accept that as normal and okay.
- Following a generalised planting guide for the wider region is all too common. This introduces species from different geological/ecological zones. It's the Cootamundra wattle 'weed' scenario again...
- But even our local indigenous plants are often put in the wrong terrain. I commonly see species from the sandy, granite foothills planted in grey box plains country, which has heavy, wet clay soils... and the reverse.
- Poor planting technique: such as seedlings buried too deep in wet, heavy clay which is a sad waste of materials, labour, finances, and volunteers' effort. On the other hand, plantings on dry rocky ridges benefit from a 'bowl' around each seedling, to catch extra rain in summer. Adjust the techniques to suit site conditions, and show people what's best, as we work side by side with them.

Beginner groups clearly need guidance on many aspects of the process, and it's obvious that the AABR community has much expertise to draw on. I think it would be good to read hopeful stories from members about their work.

It's important to share and encourage each other in this important UN Decade on Ecosystem Restoration.

Ray Thomas, Euroa, Victoria.

For more about the about the Regent Honeyeater Project go the [EMR Project Summary on Regent Honeyeater Habitat Restoration Project](#) Published as part of the journal Ecological Management & Restoration



Left: Trees suffering from dieback because of too many leaf eating insects and no understorey habitat for insect eaters.

Above: A new block of planting among dieback affected trees will help the affected trees on a site recover.

Photos: Ray Thomas.



ONLINE EVENT SUMMARY

Kicking goals in wetland restoration

Matt Hall

Damien Cook details restoration progress at Wirra-Lo.
Photo: Mick Connolly

In late August, the Australian Association of Bushland Regenerators Victoria (AABR Vic) and ECA Vic co-hosted an online lunchtime presentation by Damien Cook, ecologist and co-founder of the Wetland Revival Trust (WRT) titled 'Kicking Goals in Wetland Restoration'.

WRT is a not-for-profit organisation founded by Damien and Elaine Bayes established with the primary purpose of providing landscape scale restoration of degraded wetlands in Northern Victoria that are of high cultural and ecological significance. Importantly, WRT aim to deliver this restoration effort across both public and private land.

Wetlands are important at a landscape level for the ecological services they provide (such as nutrient filtration and flood mitigation) in addition to providing vital habitats, and seasonal refugia, for threatened flora and fauna.

However, of concern is the fact that wetlands are one of the most endangered ecosystems globally due to land

development and altered flow regimes. It is estimated that approximately 2/3 of Victoria's wetlands have been destroyed since European settlement, primarily due to drainage for agricultural expansion (VEAC 2010).

Wetlands can also be difficult to understand, and therefore difficult to manage, as they are often dynamic communities that can have multiple forms (i.e. wet phase and dry phase) requiring different management approaches. They can also be influenced by unpredictable episodic flooding events. For this reason, wetland management is necessarily adaptive by nature.

With this in mind, one of the primary challenges facing wetland restoration practitioners will likely be situationally relevant practical knowledge regarding past site history, ecological observations and land management practices. In acknowledging that wetland management can involve making decisions from positions of uncertainty, WRT have developed some fundamental principles which govern how they plan and deliver their program of works. These



Above: Growling Grass Frog. Below: Setting a fyke net to collect baseline data on small-bodied fish at Wira-Lo. Photos: Mick Connolly

much water has previously contributed to the loss of mature Red Gums at Wira-Lo due to drowning or possibly an intolerance to high salinity levels caused by rising water tables as a result of previous irrigation regimes.

The challenge is to deliver the right amount of water, in the right place, at the right time – no easy feat.

Damien explained that some species of flora are well suited to post-flood recruitment while others have been introduced via a mixture of direct seeding and pockets of temporarily netted wetland plantings. This practice, plus time, have resulted in transformational change in some areas of the property.

The improvement in vegetation community quality has resulted in a number of significant fauna species returning to Wira-Lo since restoration works have begun including Growling Grass Frog (*Litoria raniformis*), Australasian Bittern (*Botaurus poiciloptilus*), Freckled Duck (*Stictonetta naevosa*), and Magpie Geese (*Anseranas semipalmata*).

Ever humble despite his revered status within the ecological community, Damien shared a number of learnings which have come from WRT's work at Wira-Lo to date including:

- The importance of collecting good baseline data and establishing a comprehensive monitoring regime inclusive of photo points.
- Observational data and records are invaluable, this may relate to the way that natural floodwaters typically recede, which areas retain water the longest post flood and which species respond well to post flood conditions.
- Carefully staging works strategically and allowing recently restored areas to stabilise before embarking on the labour intensive, step-change transformation of a new area.

Some exciting funding opportunities are also emerging including the development of a 'Teal' carbon sequestration accounting method and the potential utilisation of the proposed federal Nature Repair Market. Involvement in these schemes may help an increasing number of wetland restoration projects become economically viable for landholders in the future.

To conclude, we were treated to an interesting and inspiring presentation by a leader in practical ecological restoration. ECA Vic are grateful to Damien for kindly sharing his knowledge and learnings with us and thank AABR Vic for inviting us to collaborate with them in the delivery of such a worthwhile activity.

References: VEAC (2010) *Remnant Native Vegetation Investigation Discussion Paper*.

are outlined in the WRT Blueprint for action and include the following:

- Ensuring restoration is based on sound science and practical knowledge;
- Embedding the *National Standards for the Practice of Ecological Restoration* in their work processes;
- Basing restoration on appropriate local indigenous reference ecosystems;
- Establishing a technical steering committee utilising state and local experts; and
- Improving knowledge of ecological restoration by trialing innovative restoration techniques and sharing/ collaborating with the broader restoration community.

Damien used the case study of WRT's restoration works at Wira-Lo station, located on the Loddon River Floodplain in North-Central Victoria, as a conduit for outlining the project planning and implementation process that WRT have worked through since beginning works at this location in 2015.

Wira-Lo wetlands are located on the traditional land of the Barapa Barapa people and have been managed by Dairy Farmers, Jill & Ken Hooper, since the early 1990's. Now of retirement age, the Hoopers were quick to recognise the ecological significance of their property and, in particular, the importance of the property's riparian areas and episodic wetlands. Through his work Damien has built up a relationship with the Hoopers over the years and has been diligently working to transform what were formally irrigated agricultural paddocks into vibrant wetland communities. Importantly, it must be stressed that this can be achieved while keeping parts of the land productive and landholder livelihoods intact. In fact, finding a balance between sustainable agricultural output and ecological restoration on private land is fast emerging as one of the key challenges of our time as society seeks to both feed an ever-growing global population, mitigate the drivers of climate change and preserve the natural beauty and utilitarian potential that exists within functional natural ecosystems.

In order to continue and build on the good stewardship of land at this location, WRT have been able to raise funds sufficient to purchase Wira-Lo and provide ongoing ecological restoration and management.

Environmental water is an important tool for restoration and, if applied correctly, can be considered to be a restoration accelerator. However, as the saying goes, the poison is sometimes in the dose with evidence that too



Click on the link (left) to watch Damien's webinar.



VALETE: Stephanie and Julian Lymburner

A story of a friendship

It was at a meeting of the Society for Growing Australian Plants in Lismore NSW, when I first met Stephanie and Julian Lymburner. That was sometime in the early 1990s. We became friends quickly and easily in the hospitable atmosphere of that organisation. We found we had a lot in common. Anybody who spent time with them would know that it's impossible to talk about one without the other. They were many-faceted people who had lived rich lives together before I ever met them. At that stage, our interest in Australian plants was broad and general, our conservation values still a bit naive and undefined.

That changed about 1995, when Stephanie and Julian started studying the Bushland Regeneration course at Wollongbar TAFE College. Their enthusiasm for the quality of the course was directly responsible for my own enrolment the following year. Through these studies, our ecological sensibilities changed forever as we focused on preserving and promoting the values of the local indigenous plants of our region.

The bush regeneration world was a small one in those days, and the Lymburners and I were soon fortunate enough to gain employment with the National Parks and Wildlife Service, Environmental Training and Employment, Lismore Council and others, where we worked alongside some very knowledgeable and experienced regenerators. I can't remember all the sites we worked on together, and there were many, but I have special memories of extended times we spent together at Iluka Nature Reserve, at Digger's Camp and at Brockley. These were big projects and we were doing pioneering work.

We spent a couple of years in Yuraygir National Park on the Iluka to Shark Bay track, cutting climbing asparagus, spraying regrowth, then the same thing all over again. Bush regenerators need to make it clear to environmental weeds that there can be only one winner. Our efforts at Iluka and elsewhere made us realise that as professional bush regenerators, we could contribute to the great cause of conservation in the most direct way possible.

We spent another couple of years working from Digger's Camp to Wilson Headland (east of Grafton), exploring and improving the bush there from the heathland to the coast. Too far to drive home each day in Julian's lime green Kombi, we would often stay for two or three days at a time, camp on site, cooking together, playing Scrabble and drinking red wine after dinner then swimming at daybreak in the seagrasses of the little rocky bay at Digger's Camp before going to work.

We also shared work over several years at Brockley, a lovely property near Wollongbar, where Stephanie's wonderful cakes were regularly admired and consumed at morning tea time. In those days, stem injection was initiated by opening up the stem of target trees with a tomahawk, a tiresome and dangerous chore. Julian, always the practical thinking man, came up with the idea of chucking the tomahawk and taking up the brace-and-bit for drilling injection holes. It was so much safer, just as efficient, and somehow presaged the merciful invention of the cordless drill a couple of years later.

All through those fabulous years, there were endless stories and anecdotes, there was good humour and a strong conservation ethic common to us all. Lots of hard work too, something that the Lymburners never shied away from. One of their greatest achievements was the restoration of the bushland at their uniquely beautiful property, 'Crystal Hill' at Coolgardie, mostly by themselves, no small undertaking considering the steep, rocky terrain there, and the scale of the task.

And this is only a sketch on a page of a single chapter in the big picture book of Stephanie and Julian, dear friends, great workmates, much missed and always remembered with great affection.

Stephanie passed away this year (2024), and Julian in 2021 (see Newsletter #150 for Julian's story written by Stephanie).

Tim Roberts
October 2024

Right: Stephanie at Lumley Park, Alstonville NSW.
Photo: V Bear



*Fanciful view of Crystal Hill 1994
by Tim Roberts*



Book review

Weedlings and Seedlings

A field guide to seedling identification for bush regeneration

Rusty Linnane

Reviewed by Spencer Shaw

Self-Published by the Author 2024

RRP \$28.00 195 Pages

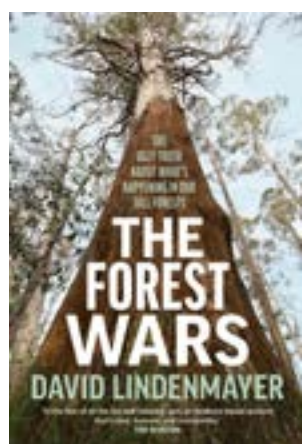
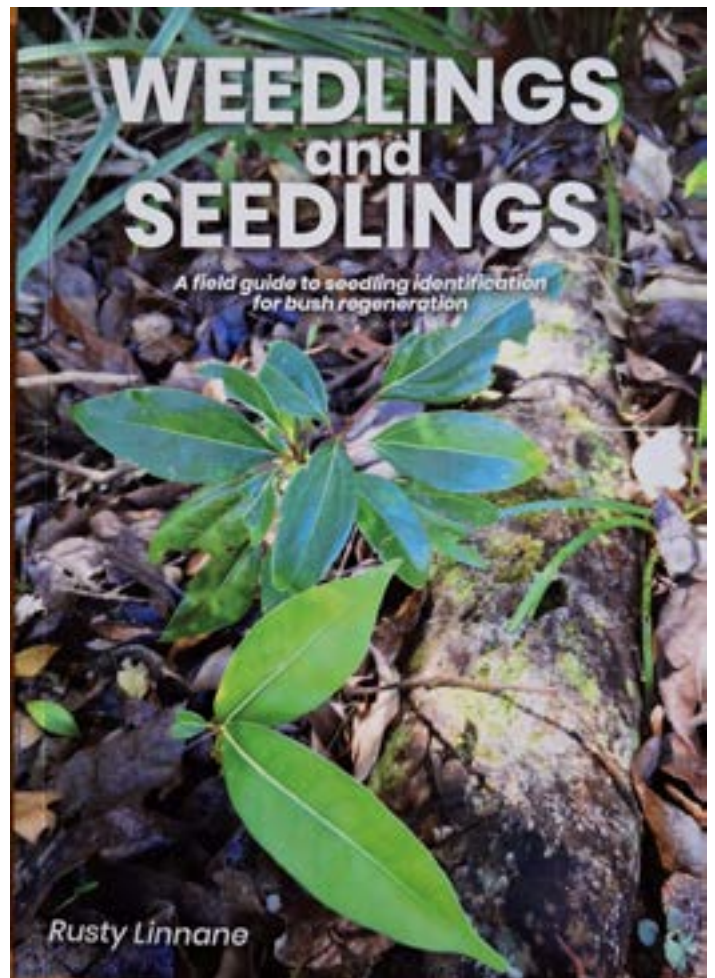
Sales: rustleinthetrees@outlook.com

Back in about 1999 I had my first taste of Bush Regen, working with Robyn Becket at a site called Drapers Crossing, just north of Brisbane, Queensland. What I lacked in Bush Regen technique and knowledge, I was able to assist with rainforest seedling identification, having been a collector and grower of rainforest plants for just a few years at this stage, but long enough to recognise different species as seedlings, which of course is crucial when you're practising assisted natural regeneration. Being familiar with seedlings of natives and weeds was a fundamental piece of my growth as a bush regenerator.

You may have studied bush regen, but are you still a novice at flora ID? or have you recently moved to a new location, with unfamiliar flora and you're unsure of the seedlings in the regen site you're working on? Can you tell the difference between *Neolitsea dealbata* and *Cinnamomum camphora* or can you tell your *Archontophoenix cunninghamiana* from *Syagrus romanzoffiana*? Resources you could use to help bring you up to assist with identification of flora, include books, web pages and apps, but these are generally aimed at the identification of plants at a mature stage, with flowers, fruits and mature foliage. Identification of seedlings is rarely if ever covered and yet it would be such a crucial resource for bush regenerators ... and when you think about it, it is a resource just waiting to happen!

And at last, it has happened. Rusty Linnane has just self-published his book "Weedlings and Seedlings – A field guide to seedling identification for bush regeneration", a very handy little field guide applicable to the higher rainfall ecosystems in SE QLD and Nth NSW. Species listed in this book number 168 species in total, with a focus on environmental weed seedlings and look-alike native / indigenous plants. Each species has a page dedicated to it, that includes a clear image of each species at the seedling stage, generally cotyledons and a few subsequent sets of leaves, viewed from above, just as you are likely to see them yourself. Common, botanical names and family are given, plus key identification features, basic botanical description, ecosystem's, leaf arrangement and form.

Congratulations to Rusty on putting this great little book together, a great addition to any Bush Regenerators library. If it doesn't cover your area, hopefully it might provide inspiration for many more seedling and weedling books to come!



The Forest Wars:

The ugly truth about what's happening in our tall forests

David Lindenmayer

David Lindenmayer is well known for his work in forest ecology, resource management, and biodiversity conservation, plus many books on land management and the environment.

This book looks at the destruction of native forests and lets us know the mess that is being made in the harvesting of native forests and the lack of sound reason for doing this – generally financed by governments. The book is very clearly set out and David debunks the myths which are used to suggest harvesting of native forest is a great thing. A must read, especially for those who would like to learn more.

Louise Brodie

ISBN:9781761470752

Publisher:Allen & Unwin, 12th March 2024

Paperback. 288 pages, \$34.99

What's happening



Have fun at Barrington Tops National Park

Post Fire Scotch Broom (*Cytisus scoparius*) Control Works

Join NSW National Parks and help make a difference. The environmental weed Scotch Broom is widely distributed throughout sub alpine communities and is impacting on the structure, floristics and ecology of the area. These works are helping to protect Endangered Ecological Communities and Threatened Species Habitat in the Barrington Tops Region.

Polblue Scotch Broom Control 2024/25 2WD access

DATES

- Activity 1: 14th till 17th November 2024
- Activity 2: 20th till 23th February 2025

Polblue Campground - The campground has been booked for event participants - and camping is free.

Post Fire Scotch Broom Control 2024/25 4WD access only

DATES

- Activity 1: 5th to 8th December 2024
- Activity 2: 30th January to 2nd February 2025

Little Murray Campground - e campground has been booked out for event participants - and camping is free.

Numbers are limited. Go to <https://www.aabr.org.au/event/barrington-broom-bash-2024-25-activities/> for more information. and to find out how to register using the NPWS process.



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of Bush Regenerators
working with natural processes

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Australian Association of Bush Regenerators

The Australian Association of Bush

Regenerators Inc (AABR) was incorporated in NSW in 1986, and has several hundred members from all over Australia. AABR is pronounced 'arbor'.

Our aim is to promote the study and practice of ecological restoration, and encourage effective management of natural areas.

All interested people and organisations are welcome to join. AABR members include bush regeneration professionals, volunteers, natural area managers, landowners, policy makers, contractors, consultants, nursery people, local, state and commonwealth government officers—and lots of people who just love the bush and want to see it conserved.

AABR also offers accreditation for experienced practitioners.

AABR News is usually published in January, April, July, and November.

**AABR C/O Total Environment
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Membership fees

Individuals \$35 (unwaged \$20)

Organisations (*does not confer membership to individuals in the organisation*)

- business (< 5 staff) \$120
- business (5-20 staff) \$300
- business (> 20 staff) \$480

Government/Agency \$480

Not for profit \$30

Benefits of Membership:

- discount admission to all AABR events
- four newsletters per year
- increased job opportunities
- discount subscription to the journal Ecological Management & Restoration
- opportunities to network with others involved in natural area restoration
- helping AABR to be a strong and effective force to promote natural area restoration, and support the industry.

Newsletter contributions and comments are welcome

Contact Louise Brodie newsletter@aabr.org.au 0407 068 688

Opinions expressed in this newsletter are not necessarily those of AABR