



No 156
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2023

AABR NEWS

Australian Association of Bush Regenerators
working with natural processes

Major AABR Event? AABR FEST

This event is a gathering for bush regenerators and all those interested in ecological restoration to learn and connect with one another. An opportunity to connect with the wider bush regeneration community, forge new connections and rekindle old friendships. Bring your family for a rejuvenating experience amidst the awe-inspiring landscapes of Topi Topi, the traditional lands of the Worimi People.

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The pile burn has been prepped, the trivia questions trialled, the tracks and trails trekked and the music is being made ... all systems are go in the preparations for AABR Fest 2023.

All the information, the program and how to get tickets is found at <https://www.aabr.org.au/event/aabrfest/>
Spread the word, [download a poster to share.](#)

Be part of the **AABR Fest** Bush Regeneration Song Contest.

This is intended to be fun, focusing on tunes that regenerators could sing in the field as they are working - such as 'Spraying Alive'. So this year we are focusing on 'adapted' songs - i.e. popular tunes that many people already know and words that are either witty adaptations or catchy to pick up.

How to enter: While the event will obviously one day rival Eurovision - this year it will start with a small event at the AABR Fest. Contestants (regen teams ideally) who are attending AABR Fest can perform their song live (or perform someone-else's song live). Or you can provide a short video or audio of your song via a file transfer link to teinm@ozemail.com.au. Alternatively, entries could just be a Word file containing lyrics and the name of the well-known song they are adapted to.

Entries need to be accompanied by the lyrics (in a Word file) that can be made available during AABR Fest.

One person can submit more than one entry and there are no restrictions on eligibility. Watch out for more emails regarding judging criteria.

President's Perspective

AABR's Influence

One of the main ways that AABR has been able to have a positive impact over years has been through those occasions where we have been able to engage with and influence decision makers in government and non government organisations. Our ability to get involved has always been, and still is, limited by the amount of time that people can commit to this type of activity, but over time, we have developed a reputation for providing considered, evidence based advice, and we are in a position now where we are often sought out to present at forums and conferences, deliver on line webinars and workshops, review and comment on plans and policies and to provide specific information needed for good decision making.

AABR also engages in consultations by governments for various programs, policies, reviews and legislation. A small group of members regularly volunteers to read through documentation, form an opinion that is then considered by the AABR Executive and to write submissions on behalf of the Association. We have started publishing these submissions on the website.

The Board has begun discussions on the idea of updating and expanding our suite of policies and position statements. The development of well considered policies and positions creates a body of opinion that can be used by AABR members and the general public, when they engage with various issues that relate to regeneration and the management of ecosystems. A list of potential policies and positions will soon be developed, prioritised and written as resources (people's time, really) becomes available.

Members have a long history of representing AABR on various committees, both government and non. This has a outcome of being able to positively influence other organisations to move

towards best practice restoration and to promote issues and ideas consistent with our views among communities where we don't have penetration.

We have also had a long involvement in the development and refinement of education and training, back to the days when we received a grant to work with other organisations to develop the competencies for the first CLM course. AABR members are still represented on processes to continually develop relevant training and education for bush regeneration.

Much of this work is not immediately apparent to the members. It is done because it is important for both professional and volunteer bush regenerators, and most importantly, for the bush. There are many opportunities for members to get involved in these activities, from helping write and review, to public speaking, to sitting on committees.

To find out more about what AABR does, you will find the list of AABR's achievement for 2022 in [AABR Newsletter Number 154 January 2023](#). If you would like more information or to ask about opportunities, give me a call.

AABR FEST

The cover in this issue, provides information and the weblink for the first AABR FEST. This is the brainchild of Scott Meier, AABR Board Member and proprietor of BARRC. This will be a great opportunity to come and meet other regenerators, meet the Board, learn, teach and sing silly songs. I encourage anyone who wants a good weekend away on the NSW Mid North Coast to come along. Hopefully this will be the first of an ongoing series of FESTS across Australia.

Peter Dixon, President

president@aabr.org.au or call 0478 741 111.

Welcome to new AABR Members

Alan Wallis	Stuart Boardman
Alex Mackenzie	Anna-Lisa Persson
Alissa Rogers	Bron Powell
Anne Makhijani	Con Palamara
Byron De Jager	Damian Black
Daniel Giannini	Elise Halliday
Evelyn Sandoval	Eliza Martin
Frances O'Brien	Ella Smyth
Gaelan Donnelly	Emma Hardwick
Henrietta Mooney	Ernest Williams
Joël Dunn	Fiona Bennett
Joshua McCaig	Georgia Reeves
Kim Stephan	Isis Isis
Lewis Green	Jarrah Reynolds-erler
Maria Victoria Lopez	Jay Turpeunen
Michael Paterson	Kathy Shields
Pam Rawling	Katie Leonardi
Patricia Cree	Kieran Giffen
Pauline Foote	Lisa Field
Simon Brown	Michael Tribbia

Reuben Murray

Rodney Castle

Susan Webber

Toby Danilo

Toby Ryan

Todd Ridgway

Vicki Reilly

Zachary Drummond

Agency

Whittlesea City Council

Business

Bushtekniq Pty Ltd

SpraySMART

GCC Corporate Group

Habitat Solutions

Not For Profit

Queensland Water and Land Carers Inc

Blackburn Creeklands Advisory Committee

Congratulations on Accreditation

Julien Pearce

Joab Wilson

Stuart Boardman

Daniel Hastings

Greg Taylor

Callum McKercher

"AABR acknowledges Australian Aboriginal and Torres Strait Islander peoples as the First Nations of this continent and recognises their custodianship and continuing connection to its land, waters and community.

We pay our respects to the Elders past and present and future, for they hold the memories, traditions, culture and hopes of Indigenous peoples across the nation."

It's membership renewal time

Our membership year is from 1 July to 30 June, so fees are due after the 30th June. You should have already received your invoice via email. Or by post if you are not on email and of course no invoice is sent to those who are already paid up. If you have not received your invoice yet, you should check your spam/junk folder.

There is the option to establish a Direct Debit, so your ongoing support is seamless, along with multiple year renewals that provide a discount if a 5 year renewal is undertaken.

Membership and accreditation fees are each \$35 annually and \$20 unwaged. Businesses, NFP organisations and Agencies will pay according to the list on the last page of this newsletter.

Your membership fees are used to support AABR's activities. Check Newsletter 154 to see what we achieved last year.

Prompt payment greatly assists AABR to plan for the year and considerably reduces the administration time spent on chasing up renewals.

AABR Event

August 25 @ 12:30 pm - 1:30 pm On line Lunchtime Webinar

Kicking goals in Wetland Restoration Damien Cook, ecologist and co-founder of the Wetland Revival Trust (WRT) will be outlining the project planning process the WRT are using to implement their goals

Book a ticket to attend <https://www.aabr.org.au/event/kicking-goals-in-wetland-restoration/>

When you book your ticket to attend you'll receive an invite to register for the meeting with Zoom. Free for members of AABR and ECAVic.

Newsletter Working Group

Are you keen to have input and help with the AABR Newsletter?

The AABR Newsletter is produced 4 times a year and the link to a pdf version is sent out to members.

AABR would like to review some aspects of the Newsletter. Things to consider include what content are we wanting and what format should we use to publish it? The editor would also like some assistance to make the process run more smoothly and ensure the Newsletter is finished in a timely manner.

Casual meetings by Zoom. Indicate your interest by emailing education@aabr.org.au.

Save the Date!

AABR's signature event for restoration practitioners and land managers, The AABR Forum, will be returning in 2024 and is being hosted by the Victorian Branch of AABR in Melbourne.



Opinion on the Voice

Geoff Robertson. Published in the *News of Friends of Grasslands*, May - June 2023. Reproduced with permission.

I believe that each of us needs to embrace the Voice - we should not just passively vote for it but take the opportunity to confront our own deeply held prejudices, welcome what might flow from the Voice and encourage our friends to do likewise.'

At the Conservation Council dinner (3 June) we were confronted by two powerful truth-telling sessions by our much loved and highly respected First Nations Elders, Wally Bell and Richard Swain. "Confronted" may seem like a harsh term as their words were spoken with patience, kindness and respect. Nevertheless, two powerful messages were conveyed. First, non-First Nations people have not walked in the shoes of the First Nations people, and second, the culture of non-First Nations people is destroying Australia and its unique landscapes, vegetation and culture.

At different points throughout my adult life I have gradually learnt these truths (and others) for myself - learning which has often been confronting and painful, but nevertheless healing and liberating, and which has opened up new ways of thinking and learning.

I grew up sharing the views (or prejudices) still held by many of my fellow non-First Nations Australians. These prejudices are deeply ingrained in most of us. They arrived with the First Fleet and largely remain undiminished. I believe that I cannot be angry with those who are slower to confront these prejudices within themselves.

While we need to support and accept the Voice as a matter of long-overdue justice (we can never make up for what our culture has taken from First Nations people) we should focus more on what its acceptance will mean for us.

I believe that the Voice will transform this country, although this will take time. It will encourage First Nations people to share their culture and knowledge with us. It will hasten what has been the growing resurrection of First Nations culture. We non-First Nations people will see every aspect of our lives through different and more enlightened eyes. We will learn to love this country anew with its unique landscapes, nature and culture. It will allow us to face our collective guilt and find healing - this I believe will be liberating and powerful and will promote greater equality.

It will also help us to accept recent migrants. While we call ourselves a multi-cultural society, in reality we expect newcomers to assimilate. Hence by learning to accept First Nations culture we are likely to accept more fully the many other cultures present in our midst.

I respect those First Nations people who are hesitant about the Voice, they have had many previous promises and disappointments. It will help if we demonstrate that we welcome and support the Voice, treaty and truth-telling. This is an opportunity to go beyond aspiration and make the words "we are one and we are many" a reality.

Bundanon: Managing Bushland and Planting for Purpose

Michael Andrews

Natural Resources Manager, Bundanon

Bundanon is a property of almost 1000 hectares on Dharawal Country on the northern side of the Shoalhaven River about 10 kms up-river from Nowra bridge. Nowra is near the coast around two and a half hours south of Sydney.

Bundanon is many things. An art museum embedded in the landscape. A place for artists to seek inspiration and develop their practice. A Wildlife Refuge and a place of environmental management and habitat enhancement.

Landscape artist Arthur Boyd and his wife Yvonne donated the property to the people of Australia in 1993 and Bundanon Trust was established by the Australian Government to manage the place. Bushland management has been long term, with additional planting projects underway for 30 years.

The property is an amalgamation of four adjacent lots. Approximately 80% is native vegetation, of which about 80% is in good to very good condition with 20% impacted by exotic species, particularly *Lantana camara* and *Rumex sagittatus*. The balance of the property includes grazing pasture and mown grasses with specimen trees.

Bushland includes eight major vegetation types as described by NSW Dept of Planning and Environment's classification system.

Eucalyptus maculata spotted gum is the dominant tree species, with good representation of *Syncarpia glomulifera* turpentine, *Corymbia gummifera* red bloodwood, *E. punctata* grey gum and *E. botryoides/saligna*.

Bundanon has engaged a number of consultants over the years to provide management advice, and the Bundanon Property Management Plan is up-dated every four years. A landscape steering committee, including representation from external organisations, meets three times/year to provide advice and assistance to the small NRM team. Several bush regeneration companies are engaged on an on-going basis to work on particular projects.

Each project is different and has specific purposes. Therefore plant selections, site preparation, planting techniques and maintenance actions vary across projects. This article describes a few of these projects.

Carbon sequestration

Two 30 h/a carbon sequestration forests were planned in 2010 utilising funding from Landcare Australia and the Australian Government's Biodiversity Fund. The project was listed with the Clean Energy Regulator which prescribes planting regimes to maximise sequestration.

The planting sites are river flat alluvium that had been cropped and grazed for generations. The first action was the removal of stock and fencing infrastructure to allow substantial riparian plantings over 100 metres wide. The sites were then contour ripped to 400 mm at 4 m spacings and sprayed with glyphosate. Over 50,000 tubestock were then hand-planted at 4 m spacings along the rows and protected by 500 mm triangular corflute tree guards.

The species mix is a diverse representation of woodland and forest species from the Greater Sydney Bioregion, including many *Eucalyptus*, *Melaleuca*, *Banksia* and *Casuarina/Allocasuarina* spp. along with a range of closed forest species such as *Podocarpus elatus* plum pine, *Syzygium australe* brush cherry, *Diploglottis australis*

native tamarind and *Toona ciliata* red cedar. Species were selected on the basis of their known success in the local area and those eucalypts known to be koala feed trees.

Maintenance throughout the early years included inter-row slashing, hand weeding and spot-spraying (glyphosate and metsulfuron). Sen-tree™, a browsing deterrent, was also sprayed to reduce the impact of wombats, grey kangaroos and swamp wallabies. Once the trees had reached 2-4 m high, the corflute guards were removed. A network of maintenance tracks has been established throughout the forests to allow understorey management and access for fire mitigation.

Bundanon's carbon forests have been assessed, audited, and reported to the Clean Energy Regulator and over 11,000 Australian Carbon Credit Units have been sequestered.

Habitat enhancement – stuttering frogs (*Myxophyes balbus*)

The stuttering frog has become regionally extinct in southern NSW due to the combined impacts of chytrid fungus, habitat destruction and loss of connectivity. This large frog (up to 100 mm) requires a riparian habitat under closed canopy forest where it can survive for even extended dry periods by burrowing into the leaf litter and damp topsoil.

In 2017 Shoalhaven Landcare Association, led by local ecologist Garry Daly, secured funding from the NSW Environmental Trust to capture wild frogs from central and northern NSW, breed them in captivity and release them into three locations in the Tapitallee Ranges west of Nowra.

At Bundanon, the release site was a small un-named creek which flows into the Shoalhaven River. The higher reaches of the creek are well vegetated by native trees and understorey. The canopy is made up of *Syzygium* sp, *Alphitonia excelsa* red ash, *Backhousia myrtifolia* grey myrtle, *Tristaniopsis laurina* water gum and *Eucalyptus botryoides/saligna*. Lower reaches of the creek are cleared grazing land which has been de-stocked but contains a narrow riparian corridor of *Acacia mearnsii* black wattle, *Melia azedarach* white cedar, *Ficus coronata* sandpaper fig and occasional eucalypts. Revegetation works were implemented to establish a wider riparian corridor along the lower reaches of the creek, a closed canopy and eventually, leaf litter.

At this site the riparian corridor has been planted with tubestock of predominantly *Eucalyptus robusta* swamp mahogany and



Above: Frog habitat enhancement - expanding the riparian corridor.

rainforest species including *Podocarpus elata*, *Diploglotus australis*, *Polyscias elegans* celery wood, *Syzygium australe*, *Ficus macropcarpa* and *F. rubiginosa* Port Jackson fig and *Archontophoenix cunninghamiana* Bangalow palm.

The plantings were protected by hand constructed 1800 mm high galvanised wire guards to reduce the impact of wildlife. Maintenance has included mowing and whipper snipping outside the guards and hand-weeding within. We have found that the tall guards provided too much vertical support for quick growing specimens (particularly *E. robusta*). As a result, when the trees exceed 2.5 metres and the guards are removed, the stems do not have enough strength to support the weight of the canopy and the tree may flop over. These trees have been re-staked. Some specimens of *E. robusta* have flowered and produced capsules at 3 years of age.

Habitat restoration – Haunted Point

Haunted Point is a Shoalhaven River floodplain with a northerly aspect that was extensively cropped and grazed until the 1980s. The property owners at that time stopped any management activities across the 24 h/a river flat and the area was rapidly colonised by the native *Acacia meamsii* and the weed *Lantana camara*. High populations of browsing animals largely prevented seedling establishment so that only unpalatable species survived (eg: *Melia azedarach*, *Dendrocnide excelsa* giant stinging tree, *Claoxylon australe* brittlewood, *Clerodendrum tomentosum* hairy clerodendron).

The site's Coastal Floodplain Eucalypt Forest is an Endangered Ecological Community, so in 2011 work commenced to try to restore the area. *Lantana* was mechanically removed by positrack trittering followed by glyphosate herbicide application. Individual plantings of eucalypts in corflute tree guards proved to be fairly unsuccessful as browsing prevented the trees from growing above the guards. In 2019, with support from the NSW Environmental Trust, revegetation and weeding works



Above: Restoration of the flood plain

commenced to restore the original vegetation. Plantings were established in 5 m x 5 m hinge-joint wire cells. While standard rural fencing does not offer much protection from grey kangaroos, (they just go over or through it) it was realised that the small fenced plots prevented them from accessing the plantings. The roos don't have enough run-up to jump back out again!

Each cell was treated with glyphosate, heavy jute weed mat and wood-chip mulch and then planted with five trees, five shrubs and 30 understorey plants listed for this vegetation type. The plantings are very dense but the extra care in site preparation has produced very rapid growth. Four years later trees, shrubs, grasses and other understorey species are producing flower and fruit and are dense enough to exclude most weeds. We view the plantings as seed orchards and hope to see native recruitment across the site in future years.

Treelines Track - Artistic Expression and Cultural Heritage

In 2015, artist Janet Laurence was commissioned by Bundanon to establish a walking track. The Treelines Track is a 3.5 km linear arboretum that tells a story of Bundanon's history through trees.

The track commences in native forest dominated by *Eucalyptus maculata*, *E. botryoides/saligna*, *Ficus rubiginosa* and *Dendrocnide excelsa* and passes by a historic stone hearth on the site of the property's original farmhouse. It continues beside a dam constructed long ago for stock, a small hut originally built for cedar getters and through the Homestead precinct with its two storey 1860s sandstone home, timber out-buildings and formal garden. Finally, the track circuits operational grazing paddocks and the Bundanon Carbon forest.

Plant selections along Laurence's arboretum reflect the well documented history of the Bundanon property. Jacaranda trees tell of a memorial specimen planted for a young girl who drowned in the river while washing her horse in the early 1900s. *Eucalyptus tereticornis*, *Ficus rubiginosa* and *Eleocharis reticulatus* refer to some of the dominant bushland trees and *Casuarina cunninghamiana* reflects the Shoalhaven River itself. *Brachychiton acerifolius*, the Illawarra flame tree, is used as a stunning feature along the track with about 50 specimens dominating one section. The flame tree was selected to mimic the exotic *Erythrina x sykesii* which Arthur Boyd included in several of his paintings of the rural landscape.

These trees are planted at 6 – 8 m spacings protected from stock by rural fencing and kangaroos and wombats by individual wire guards. The spacing allows each specimen to develop its true form without interference from adjacent trees.

Most of the track passes through kikuyu-based pasture and is very exposed to the prevailing weather conditions. Since their planting in 2016/7 the trees have been kept well mulched and were occasionally hand watered during the 2017-19 drought. As the trees reach maturity, they are being under-pruned to reduce the impact of browsing cattle and wildlife and the wire guards are removed.



Right: The Treelines track

All photos supplies by Bundanon

Managing a property of Bundanon's size and diversity is challenging. In each planting project, our planning includes consideration of future maintenance. Our team is very conscious that we need to be sure our ability to maintain the plantings under existing funds and resources until maintenance actions significantly reduce, or indeed, become self-sustaining. If this cannot be achieved, we don't start the project.



Bundanon's Art Museum site is open to the public from Wednesday to Sunday and the Homestead site each weekend.

Wodi Wodi Country, 533 Bundanon Rd, Illaroo, NSW

<https://www.bundanon.com.au/>

<https://www.facebook.com/bundanon>

In our last newsletter we highlighted AABR's educational graphics to spread the word on **What do regenerators do?** In line with this theme, articles on where bush regenerators work and what they do will feature in the newsletter.

Last newsletter Willoughby Council introduced us to how both paid and volunteer regeneration work fits into council's bushland management and fire hazard reduction programs.

Spencer Shaw, a contractor working in south east Queensland, a long standing AABR member and former committee member answers question which highlight the breadth, and pros and cons of contract work.

What do Bush Regeneration contractors do?

Spencer Shaw

AABR Member from Brush Turkey Enterprises answers some questions

What sort of work you do?

Over the last 3 decades we have provided ecological restoration services / assisted regeneration and reconstruction in a variety of ecosystems throughout SE QLD, from dunes to the coastal plains and rivers, the foothills, the ranges and the valleys of the Sunshine Coast and North Moreton Region. My personal favourite - yes, I know you're not supposed to have favourites... are the rainforests of the Blackall Range, Jinibara Country, that I've been fortunate to work in for 30 plus years. I was particularly pleased last week to see my son, who has worked in the bush regen side of our business for 8 years, who along with the rest of the crew, started work on one of the very first sites that I did as a



Above: an offset planting for the Critically Endangered *Zieria exsul* (banished stink bush!) due to highway upgrading, with Brush Turkey doing the propagation, replanting and management.



Above: Working on steep sites is pretty common.
All photos supplied by the author

paid regen gig, courtesy of the SEQ Rainforest Recovery Project, way back in 2002, finishing off the last (very steep) lantana patch on that property.

Talking about steep, that's a fairly constant factor affecting access and workability of many of our sites on the Blackall Range. We're often working the edges of the range, regenerating slopes that were cleared over the last 150 years. These slopes were always marginal as grazing country or for horticultural crops such as banana and pineapple, and as management for these purposes lapsed, the slopes reverted to woody vegetation, primarily dominated by weeds such as *Lantana camara* and *Ligustrum lucidum*. However, these 'weeds' can provide fertile (metaphorically and actually) ground for assisted regeneration when working with the migratory resilience of our rainforest flora. Downside - and it can be a long way down at times... is accessing this steep country on foot and by vehicle during wet weather, which being Rainforest Country, we tend to get a bit of.



Above: Control of *Grevillea banksii* was undertaken to prevent them competing for habitat and hybridising with *Grevillea hodgei*, a Critically Endangered species, that only occurs naturally on a few of the Glasshouse Mountains.

Is our work broader than bush regeneration?

We have always had a broad portfolio of operations that includes our production nursery that grows a wide diversity of native plants. We also specialise in growing of threatened plants for offset requirements and the selection of resistant individuals in species that are usually susceptible to Myrtle Rust and protecting these species through their propagation. For the last 8 years we have also operated our specialist native retail nursery, providing native plants and education to gardeners. Our educational services include workshops and programs covering flora and ecological restoration for community, students, professional development but also wider community environmental awareness and education through the Kids in Action program that Karen has co-ordinated for Sunshine Coast Council for nearly 10 years.

What types of organisations use contractors in your region?

Over the last 20 year in SE QLD, the various local councils have been the major drivers of ecological restoration through the acquisition of natural areas, the formalisation of restoration practices (SE QLD Ecological Restoration Framework), and the implementation of assisted natural regeneration works requiring the services of employed bush regenerators to undertake those services.

Primarily councils address their requirement for bush regeneration services through the tendering of contracts to be delivered by bush regeneration service contractors who in-turn employ trained and skilled staff to deliver the services. Services

are required for local governments natural area estates, but also through their funding of services for privately owned Voluntary Conservation Agreements, landholders through the Land for Wildlife Program, council driven Bushcare programs and last but not least the environmental management requirements of Development Applications set by local government.

How/if you work with any regen staff in a contract and how you work with volunteers?

Our bush regen staff are all employees, and their employment is based on the successful tendering for contracts. Culturally we have focused on the development of employment for bush regenerators, but also work with volunteers for Bushcare sites and projects.

What sort of roles do regenerators take in your organisation?

We've always encouraged and provided a range of roles for bush regenerators in Brush Turkey, including management roles, project management, consultancy and of course assisted regeneration and reconstruction and fabrication services.

Are regenerators permanent staff and/or employed as casuals?

We have had the full mix over the years, permanent, permanent part-time, casual and sub-contractors. Currently our regenerators are employed as casuals due to the flexibility required for us in the market niche we fill. This does have some benefits for staff in that it gives flexibility to do other work if needed e.g., weather makes it hard to reach our regen sites. Bush regeneration employers would generally be biased towards casuals, due to the majority of services provided being contract based, even though there is an ongoing requirement for these services by local governments.

Can you tell us the pros and cons of contractors and how they work?

Essentially, I'd suggest that the primary reason for the dominance of contract services for what are generally considered to be the "physical" delivery of services for clients is that they can reduce costs on the delivery of these services. But this does come at a cost to those folks in the workforce that deliver these services. I would argue that the employment / social outcomes for those working in contracting services should be valued equally to those of staff working for the local government agencies that engage them for natural area management. Its (long past) time to recognise the highly skilled and valuable services that bush regeneration contractors deliver, and that the clients who require these services structure their service delivery needs so that these skills and services are valued, grow and stay in the industry.

The more things change, the more they stay the same

Gio Fitzpatrick

**Naturalist and ecologist based in Melbourne.
Committee member of the Yalukit Willam
(formerly Elsternwick Park) Nature Reserve**

Cycles of change are normal in nature. Like a slow-motion kaleidoscope; a dynamic landscape has new kinds of environments that are constantly emerging as others recede. For every successive set of conditions that comes to the fore, there is a suite of specialized organisms waiting to flourish in a pulse of new life. It could be a seed of a sun-loving plant waiting for a fire to clear away the dense undergrowth and trigger germination or it could be an Australian Spotted Crake waiting for a lake to evaporate; exposing the bare muddy bed. If, for example, the lake remained full all of the time, plants will grow densely to the water's edge and the crake will have no mud in which to find food. If the lake remained low all of the time, the exact same thing would happen. It is the cyclical change between one state and another that unlocks the niches in between.

Many of these cycles of change are driven by two opposing factors...

1. The succession of plants, leading over time from fast pioneer species, through various intermediate stages and finally, to the strongest competitors that come to dominate and preclude others from growing or reproducing.
2. Disturbance which can reset the process of succession.

Large herbivores (including 'wombats' weighing as much as three Angus bulls) that would have once helped to keep vegetation open and diverse, gave way to humans, who skillfully burnt the land to achieve a similar effect. In so doing, humans have become an integral part of the very ecosystem that today we are trying to save.

A well-studied example - high productivity grassland dominated by Kangaroo Grass - shows that in the absence of fire it will quickly 'choke' with excess biomass and begin to lose its wildflowers and much of its animal diversity. After 7-11 years, even the Kangaroo Grass itself can die from the build-up of its own dead matter and the whole grassland can collapse permanently into one dominated by spear-grasses or (more usually) introduced weeds.

Of course, aside from humans, there are still several other mammals in our region, with the ability to change vegetation including (but not only) ...

- Eastern grey kangaroos – Mowers that reduce the biomass of grasses; allowing other plants to survive in sunlit gaps.
- Swamp wallabies – Pruners that restrict the recruitment of woody plants and increase the density and flowering of those that do recruit.
- Bandicoots – Ploughers that mix leaf-litter into the soil, spread fungal-spores and create pits of bare, friable soil in which various seeds are able to germinate.

Land managers working in England, with an area about thirty-five times the size of Elsternwick Park Nature Reserve, decided to introduce large herbivores and digging animals to naturally manage the vegetation succession. The dynamic environment that ensued abounds with ecological surprises. Among them, is that this piece of former farmland has provided a new baseline for how many birds can be squeezed into a UK landscape. Tony Davis, an ornithologist working on the project, banded more Eurasian Blackcaps and Lesser Whitethroats in two weeks on this property than in the rest of his thirty-year career. The abundance of life in this kind of dynamic landscape is beyond anything we've now come to accept as normal.

Most of the key drivers of vegetation disturbance are missing from the Elsternwick Park Nature Reserve (although I suspect that our Purple Swamphens are important in counteracting the march of rhizomatous sedges across the wetland). Even the seed bank of indigenous plants is currently lacking and will take time to redevelop.

Our challenge at the Elsternwick Park Nature Reserve is to generate cycles of disturbance and succession, on various spatial scales, that support high biodiversity and productivity. This will rely on community engagement and adaptive management.

I propose the following methods:

- **'Bandicoot working-bees'** – Groups digging scattered, shallow pits and scrapes, especially targeting relative monocultures. Kids with bikes and shovels have already begun diversifying kikuyu monocultures.
- **'Wallaby working-bees'** – Groups selectively thinning the emerging woody vegetation and tip-pruning of shrubs and herbs to increase density, flower-production and longevity.
- **'Kangaroo working bees'** - Mowing/slashing to create strips and patchworks; reducing grass biomass and so maintaining floral-diversity along with foraging habitat for wildlife including Eastern Rosellas and Superb Fairywrens. Care must be taken not to create too many broad, mown swathes with overhanging trees (Noisy Miner habitat).



The activities of large mammals have produced many different states of succession in a small area at Knepp Wildland in Sussex.

- **Periodic drying of wetlands** – Allow significant but gradual fluctuation in water-levels of as many water-bodies as possible. In the creek itself, this can be achieved by directing most of the flow to one of the major N or S wetlands while the other gradually recedes over months and vice versa.
- **'Micro-burns'** – Burning and subsequent thorough dowsing of very small areas e.g. a few square metres of ground at a time. Burning can have a similar influence to mowing/slashing but with added benefits relating to seed germination and other factors. As well as direct dowsing of burnt patches; burning could also be planned to be completed immediately prior to the commencement of sprinkler irrigation.
- **Murnong harvesting** – Ideally under the guidance of traditional owners; the digging and replanting of Murnong or yam daisy (an important food source for indigenous people) has a similar ecological influence to bandicoot-diggings but with added cultural benefits for the community.
- **Coppicing and pollarding of certain trees** – Especially targeting eucalypts but also some acacias. This will produce flushes of young growth, ideal for many native moth caterpillars, while changing the vegetation structure to counteract Noisy Miner-dominance.

Find out more: <https://knepp.co.uk/>

Global Natural Regeneration Webinar launches new NR network

At the end of June, 2023, the Society for Ecological Restoration's Natural Regeneration Network (SER-NRN) held its 'launch' webinar, titled *Communities harnessing natural regeneration in ecological restoration – case studies from around the world*. This webinar will remain Open Access through the SER Webinar Library at this [LINK](#) – and is the first offering from this new SER global network.

The webinar's four speakers provided insights into their work using regeneration approaches - spanning four continents.

The first speaker, the widely published Robin Chazdon, shared insights about the natural successional recovery trajectories that occur in the wet tropical forests of Costa Rica after the adoption of policies to reduce livestock grazing in some agricultural lands.

The second speaker, Tony Rinaudo from World Vision, provided an extraordinary description of how he and local farmers in the Niger Republic and Ethiopia developed a system of Farmer Managed Natural Regeneration that turned desertified landscapes back into productive native vegetation communities.

The third speaker, Ray Thompson, illustrated how the ingenious technique of waterponding triggered eroded Australian claypans to regenerate with native plants despite being bare for over a century.

The final case study, presented by Anand Krishnamurthy from southern India on behalf of himself and Ramesh Venkataraman, illustrated how the Junglescapes Trust worked with villagers to achieve substantial revegetation success in degraded lands after a range of treatments to trigger natural regeneration.

The SER-NRN network helps SER members gain knowledge on harnessing natural regeneration in ecological restoration and spreads the word to all those interested in the range of approaches available. SER-NRN will also share case studies and resources to inform people about using natural regeneration. Membership is confined to SER members but there are discounts for low income members.

<https://www.ser.org/page/Membership>



Above: Farmer Managed Natural Regeneration was triggered by the discovery of extensive rootstocks and buried seed on the desertified site in Niger Republic. – This photo shows Tony Rinaudo with a trailer load of seedlings embarking on a planting exercise, frustrated in the knowledge that most seedlings would die, and at the time, ignorant of the vast 'underground forest' (such as the native plant rootstocks circled in the photo) literally at his feet. The discovery that everything needed for reforestation was already there would lead to the regeneration of 6 million hectares of degraded lands in the Niger. (Photo provided with permission Tony Rinaudo.)

Looking for Assessors

AABR is looking for experienced bush regen practitioners to become Assessors for AABR's accreditation program. This volunteer role is a perfect vehicle to support the next generation of bush regenerators and give back to the bush regeneration sector.



We are looking for Assessors across NSW, Victoria and Queensland. A supportive mentoring program is provided to guide you through the very clear and standardised procedures.

The foundation of AABR's resilience-based approach to restoration is 12 competencies that define the field-based knowledge and expertise of the practice of bush regeneration. Our Accreditation process allows bush regeneration practitioners to be recognised for their unique skill set and understanding of the 12 competencies.

If you would like more information or to talk about what's involved contact:

Tein – Chair of Accreditation Sub Committee via accreditation@aabr.org.au

Suzanne – Accreditation Coordinator via admin@aabr.org.au

This article, originally published in May 2023 by Big Scrub Conservancy, (formerly Big Scrub Landcare) highlights a dilemma when restoration of specific ecosystems meets with environmental actions undertaken with different aims.

Koalas in the Big Scrub: A Conservation Dilemma

Big Scrub Conservancy

The Big Scrub Rainforest Conservancy, landowners, land managers and regenerators have been working hard for 40 years to protect, regenerate and replant the vegetation that once flourished on the red ferrosol soils of the Big Scrub. That vegetation type is lowland subtropical rainforest – a complex and diverse ecosystem that evolved 40 million years ago in the times of Gondwana. An estimated 600 ha have been restored via plantings and natural regeneration. In addition, Big Scrub Rainforest Conservancy cares for around 40 Big Scrub remnants.

Since European settlement the area of lowland rainforest and specifically the Big Scrub has undergone a dramatic reduction due to clearing and in 2011 it was listed by the Commonwealth as a Critically Endangered Ecological Community.

Eucalypt species did not occur in the Big Scrub rainforest. However, currently there are extensive eucalypt plantations being established in the open paddocks of the Big Scrub for koala habitat and carbon sequestration. We understand that more plantations are proposed. These eucalypt plantings are not native to the area, are therefore ecologically inappropriate and will negatively affect the restoration of the Big Scrub rainforest.

Where did the koalas in the Big Scrub come from?

In the 1970s and 80s, macadamia growers planted many kilometres of windbreak trees, primarily tallowood (*Eucalyptus microcorys*) which is one of the koala's primary food trees. This created favourable corridors across farmland within the Big Scrub. At the same time, the then NSW Forestry Commission planted a number of timber plantations, and promoted eucalypt plantings to landholders in the Big Scrub, further attracting koalas.

A major problem arose for the Big Scrub koala in the early 2000s when macadamia plantation management undertook wholesale removal of the Tallowood windbreaks. Their removal left the vast majority of koalas isolated in the few remaining eucalypt stands with no corridors to allow safe movement. This problem is causing further inbreeding, stress and poor health in these isolated populations.

Bushfires, climate change and koalas

The Black Summer bushfires occurred in 2019-20 taking a terrible toll on koala populations and dramatically raised the awareness of the koala. In February 2022 the koala in Queensland, New South Wales and the ACT was listed as endangered. This listing and the impact of the 2019-20 bushfires has led to a surge in public funding programs and private sector contributions, galvanising government and community support for eucalypt plantings.

This newfound concern for the koala has been supercharged with climate change awareness and the need to plant trees for carbon sequestration. We can now plant eucalypts for koalas and carbon sequestration; sounding like a 'win win'.

The ecologically aware 'tree changer' landowners of the Big Scrub particularly hear this message.

Some of these plantings badged as 'Koala/ Carbon Farming Projects' on Big Scrub soil have been composed of close to 100% eucalypt species and often come at no cost to the landowner.

Ecological restoration

Rainforest restoration and koala habitat restoration should be based on ecological restoration principles. The guiding principle of ecological restoration is to restore the plants and animal communities that once occurred on the site. The Society for Ecological Restoration states as its first principle: "conservation, repair and renewal of the local native ecosystem" (SERA, 2018).

Similarly the *Koala Habitat Restoration Guidelines* (DPE 2022 chapter 4.2.1.) states: "Reference ecosystems will be a specific ecological community, usual dominated by eucalypts, that grows in similar soil, aspect and topographic conditions as the restoration site, and provides primary habitat for koalas".

Put simply: if there was a rainforest, plant rainforest trees; if there was a eucalypt forest, plant eucalypts.

Camphor laurel

A major problem with planting eucalypt forests on red soil is they become dominated by camphor laurel, and other woody weed species. Camphor laurel is a major weed in the Big Scrub that has taken over thousands of hectares of pasture and invaded riparian and remnant edges. However, it cannot establish under the low light conditions of rainforest.



Above: Camphor laurel trees establishing under a eucalypt plantation in the Big Scrub

A eucalypt plantation, no matter how densely planted or mature, will always allow camphor laurels to establish. In the long-term, without concerted management using herbicide or control burning methods, the camphor laurel will dominate the plantation, the eucalypts will die out and the koalas will have no food.

Future threat of fire

Intense wildfire is a major threat to rainforest remnants that adjoin large eucalypt plantations. Increasing fuel loads in these maturing plantations combined with the more extreme weather conditions as the climate changes is a risk to our Big Scrub remnants and plantings. Are we seeing the emergence of yet another 'key threatening process' to our critically endangered Big Scrub rainforest?

The Black Summer bushfires have shown how eucalypt forests/ plantations with a high fuel load can burn into rainforest. Small remnants, fragments and edges are especially vulnerable and have been devastated up and down the east coast.

Big Scrub koalas

What about the plight of the Big Scrub koalas? Aren't all koalas endangered and deserve help? Or are they genetically isolated, inbred, unhealthy and too close to houses, roads and a high density of domestic dogs? Aren't these small populations worth saving?

There is no doubt there is a strong push to not only save but also increase the population of koalas in the Big Scrub. It will be difficult to discourage individuals from planting eucalypts especially as they are cheap and often donated to planting projects. But most importantly, everyone loves the cute koala and the simple act of planting a eucalypt to feed a hungry koala is a strong emotional drive. This is a sad reflection on our collective awareness of the other amazing native fauna that rely on the Big Scrub for habitat, like the pademelon, quoll and countless varieties of birds and reptiles.

Is there a planting design that will help the Big Scrub koala and Big Scrub rainforest restoration? Clearly planting 100% eucalypts produces camphor laurel forests with a fire risk and no rainforest. It is also clear Big Scrub koalas need a corridor to link populations and provide a way out of the Big Scrub.

A solution could be to replicate the function of the original eucalypt windbreaks of macadamia plantations. That is to plant continuous narrow corridors, even one tree wide, of eucalypts to allow the movement of koalas through the Big Scrub.

These corridors will need to be strategic and run towards the areas of quality habitat and avoid areas of denser human population and busy roads. This may mean directing koalas towards Goonengerry National Park, Nightcap National Park, Modanville and south of Lismore.

Conclusion

Imagine large-scale, well planned, and fully funded, biodiverse, carbon rainforest restoration plantings being undertaken across the Big Scrub. The good news is, we are seeing some projects with a high standard of ecological integrity underway by progressive landholders and supported by astute carbon brokers and/ or NGOs.

The critical issue is to inform and educate all landowners, government departments and decision makers in all organisations to have a policy of ecological restoration. This means restore all types of our biodiverse ecosystems where they occur naturally, to ensure they survive and thrive into the future.



The red-legged pademelon – like the kangaroo and wallaby, a species of macropod – is listed as vulnerable to extinction in NSW. This species along with the quoll and many species of birds and reptiles inhabit the Big Scrub. Image credit: rosewise, <https://www.inaturalist.org/users/3772292>.

The resources available for carbon and ecological restoration are only going to increase, so let's get it right and bring back both the koala and the Big Scrub.

References and more information

Department of Planning and Environment (2022) *Koala Habitat Restoration Guidelines: A practical guide to identify, connect and restore koala habitat in New South Wales*. Free Publication found at <https://www.environment.nsw.gov.au/research-and-publications/publications-search/koala-habitat-restoration-guidelines>.

Friends of the Koala 2023 <https://friendsofthekoala.org/> Download *Koala Facts* at <https://friendsotkoala.wpengine.com/wp-content/uploads/Koala-Facts-Combined-FINAL.pdf>.

Standards Reference Group, Society for Ecological Restoration Australasia *National Standards for Ecological Restoration - Edition 2.2*.

Download at https://www.seraustralasia.com/standards/NationalStandards2_2.pdf.

This article was published by Big Scrub Conservancy and is available online at <https://www.bigscrubrainforest.org/koalas-in-the-big-scrub-a-conservation-dilemma/>

On the webpage you can also view two maps which by dragging a slider show the Big Scrub footprint and changes over time.

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Symposium - Save the Date

Flora After Fire – winners, losers and lessons

This symposium which is a collaboration with the University of NSW and the Australian Network for Plant Conservation Inc. (ANPC) will be held via Zoom webinar 12.30 – 4.30pm AEST on Wednesday 16 August 2023. This **free online symposium** will focus on the post-fire recovery of native vegetation. There are three themes: plant and fire relationships; impacts and observations (case studies); lessons and actions moving forward

Visit: <https://www.anpc.asn.au/news/online-bushfire-symposium/>

The full program will be available soon!

AABR Board Member Tein McDonald will be one of the speakers.



Plant Taxonomic Changes

Robinson, Les 2003, *Field Guide to the Native Plants of Sydney*, Revised 3rd Edn, Kangaroo Press covers an area within the area of greater Sydney bounded by: Hawkesbury River in the north, Nepean River in the west, and Cataract River to the south. Species occur across a wider range.

Botanical name changes are always hard to keep up with. The following list shows changes in nomenclature which have occurred since publication. These changes appear on the PlantNet website of the National Herbarium of NSW Sydney, as at 7 July 2020, unless stated otherwise. These will be relevant to other locations.

Taxonomic Changes:

1a) FAMILY & SUB-FAMILY LEVEL:

- Adiantaceae: all taxa moved to Pteridaceae, inc. Genus:
 - Adiantum
- Apiaceae: 2 Genera moved to Araliaceae:
 - Hydrocotyle
 - Trachymene
- Asclepiadaceae: all taxa moved to Apocynaceae, inc. Genera:
 - Marsdenia
 - Tylophora
- Avicenniaceae: all taxa moved to Acanthaceae, inc. Genus:
 - Avicennia
- Epacridaceae: all taxa moved to Ericaceae, inc. Genera:
 - Epacris
 - Leucopogon
 - Woollisia
 - 15x other Genera in NSW
- Euphorbiaceae:
At least 4 Genera moved to Phyllanthaceae (total of 8 genera in NSW):
 - Breytia
 - Glochidion
 - Phyllanthus
 - PorantheraAt least 2 Genera moved to Picrodendraceae (total of 6 genera in NSW):
 - Micranthemum
 - Pseudanthus
- Grammitaceae: all taxa moved to Polypodiaceae, inc. Genus:
 - Grammitis
- Liliaceae split into many families
- Mimosaceae: now sub-family Mimosoideae in family Fabaceae, inc. Genus:
 - Acacia
- Myoporaceae: all taxa moved to Scrophulariaceae, inc. Genus:
 - Eremophila
 - Myoporum
- Myrsinaceae: all taxa moved to Primulaceae, inc. Genera:
 - Aegiceras
 - Myrsine
- Rapanea (now Myrsine) Philesiaceae: all taxa moved to Luzuriagaceae, inc. Genera:
 - Eustrephus
 - Geitonoplesium
- Schizaeaceae:
At least 1 Genus moved to Pteridaceae:
 - Cheilanthes
- Scrophulariaceae now:
Orobanchaceae: 5 Genera, 1 Genus in the Sydney region:
 - EuphrasiaPhrymaceae: 5 Genera, 2 Genera in the Sydney region:
 - Glossostigma
 - Mimulus (now Thyridia)
 - ThyridiaPlantaginaceae: 6 Genera, 5 Genera in the Sydney region:
 - Bacopa
 - Callitriche
 - Gratiola
 - Plantago
 - Veronica

Scrophulariaceae: 3 Genera, all in the Sydney region:

- Eremophila
- Limosella
- Myoporum

- Sinopteridaceae: all taxa moved to Pteridaceae, inc. Genus:

- Pellaea

- Sterculiaceae: all taxa moved to Malvaceae, inc. Genera:

- Brachychiton
- Commersonia
- Lasiopetalum
- Rulingia now (Commersonia)
- Seringia

- Tremandraceae: all taxa moved to Elaeocarpaceae, inc. Genus:

- Tetratheca

1b) GENUS LEVEL:

- Austrodanthonia now Rytidosperma
- Baumea now Machaerina
- Blechnum now:
 - Blechnum: most species still in Blechnum
 - Doodia: 4 species in the Sydney region, 2 species not in the Sydney region
 - Telmatoblechnum: 1 species in the Sydney region
- Cassine now Elaeodendron
- Citriobatus now Pittosporum
- Danthonia now:
 - Chionochloa: 1 species, not in the Sydney region
 - Monachather: 1 species, not in the Sydney region
 - Notodanthonia: 1 species, not in the Sydney region
 - Rytidosperma: ~50 species, many in the Sydney region
- Eucalyptus: 11 species moved to Corymbia, inc. 3 in the Sydney region: C. eximia, C. gummifera, C. maculata
- Guringalia now Chordifex: inc. 1 species in the Sydney region: C. dimorphus
- Helichrysum now ~9 genera, inc. a total of ~50 species
- Isolepis: 1 species moved to Ficinia: F. nodosa
- Lagenifera now:
 - Lagenophora: 2 species in the Sydney region
 - Solenogyne: 3 species in the Sydney region
- Maytenus now Denhamia
- Melanthera now Wollastonia: 1 species in the Sydney region: W. uniflora
- Mimulus now:
 - Elacholoma: no species in the Sydney region
 - Mimulus: no species in the Sydney region
 - Thyridia: 1 species in the Sydney region: T. repens
- Morinda now Gynochthodes
- Omalanthus now Homalanthus
- Pratia now Lobelia
- Rapanea now Myrsine
- Restio now:
 - Baloskion: 4 species in the Sydney region
 - Chordifex: 2 species in the Sydney region
 - Eurychorda: 1 species in the Sydney region
- Rulingia now Commersonia
- Saropsis now Chordifex: inc. 1 species in the Sydney region: C. fastigiatus

1c) SPECIES LEVEL and below:

- Acacia longifolia var. longifolia now A. longifolia subsp. longifolia
- Acacia longifolia var. sophorae now A. longifolia subsp. sophorae
- Isolepis prolifer now I. prolifera
- Lobelia alata now L. anceps
- Lobelia gibbosa now:
 - L. gibbosa
 - L. browniana (not in the Sydney region)
 - L. simplicicaulis
- Lobelia gracilis now L. andrewsii
- Themeda australis now T. triandra

Korinderie Ridge Bush Regen Week

Opportunity for a low cost bush holiday Aug 2 – 6 2023

Tein McDonald
former resident of Korinderie Ridge

I can't believe this August will mark the 20th Korinderie Bush Regen week! It seems only yesterday we started the project, inspired by the wonderful example of the volunteer tours to Lord Howe Island and Nancy Pallin's suggestion to try it at Korinderie Ridge. So I'm really looking forward to meeting up again this August with some old friends and new to celebrate the two decades of achievement to control the property's *lantana*.

Korinderie Ridge is a 200ha bush block, home to a small community adjacent to Bundjalung National Park on the north coast of NSW. The property's ridges are largely grassy open forest with rainforest in the gullies. It is habitat for threatened species including brush-tailed phascogale, squirrel gliders, and large forest owls such as the powerful and barking owls. Removal of *lantana* protects and maintains habitat for these species.

Details of the Korinderie Bush Regen Week are on the [Korinderie Facebook](#) page - the general idea is that bush campsites and all (delicious) meals are provided in exchange for guests pulling *lantana* each morning. There are two teams – one for people who prefer an easier area and the other for those who like to get more physical. The camaraderie around the campfire is a staple offering, and this year the guest speakers will include experts on forest owls and (we hope) the restoration programs at Lord Howe. There will also be a bush band and family friendly activities on the weekend!

All up this is a wonderful (low-cost) back to nature holiday that would very much suit bush regenerators of any age as there is plenty to do but also plenty of time to relax and socialize. Why not get a few friends together to make the trip!



Above: Volunteers at the Korinderie Regen week's first event in 2004 embarking on their morning's work tackling *lantana*. Many AABR members have participated over the years – both younger and older people - enjoying the camaraderie, fresh air, good food and sense of achievement.

Enquiries Rachel 0493 407 260 or regenweek@korinderie.org.au
Check out the [Facebook](#) page for photos of the past years' events.
Register here: <https://forms.gle/YE3Hy3TuWz5tA7ik6> .

Check out the [Korinderie Facebook](#) page.
Check out the website for the updated [gallery of photos](#) of past years' events.

Invasive Species Council - Froggatt Awards 2022

These Awards are named in honour of Australian entomologist Walter Froggatt, who was a lone voice lobbying the Federal Government to exercise caution, when the cane toad was released into Australia in the 1930s to control beetle infestations in the sugar cane industry.

Congratulations to the 2022 Froggatt Award winners – Steve Taylor and Friends of the Fitzroy

Steve Taylor

If you don't map weeds, you can't manage weeds. That's the simple principle that's generated file upon file of maps documenting the weeds being controlled by different people in different ways in different years across the ACT. But no one was mapping everything. Steve Taylor, as manager for the Invasive Plants Control Program, set about fixing the mess, using ArcGIS, which is the mapping program used by land managers all over the world .

Friends of the Fitzroy

Have you heard of rubber vine? It's a relentless climbing weed, once only found in Madagascar. The flowers of rubber vine are annoyingly pretty, but this is also the secret to its downfall. It was first found along the Fitzroy River in WA in 2005 and when this vine crept into the area which was the new digs of local resident and former Queenslander John Szymanski, he made it his mission to eradicate it. With a bunch of allies he formed the Friends of the Fitzroy whose objective is to rid the Fitzroy River and its surroundings of rubber vine.

Go to the [web page](#) to learn the detail about these projects .



Want to assist setting up AABR NSW

The AABR Board wants to sound out NSW members and other regen interested people about the idea of setting up a NSW AABR branch. Since the new AABR constitution was approved by members a few years back, we have had a national structure, with the potential for members to set up Branches in various States and Territories.

We have a very active Victorian branch, but activities in NSW and other jurisdictions are currently managed through the National Board in collaboration with local members.

If people are keen, we will set up an online meeting to discuss.

If you are interested in getting involved in setting up a branch, or have any thoughts or opinions, please contact me, Peter Dixon at president@aabr.org.au or leave a comment on the webpage. <https://www.aabr.org.au/a-nsw-branch-of-aabr/>

A GeoRegion coming soon to a landscape near you?

Dr Peter Mitchell OAM

We are all familiar with the concept of National Parks as areas of land protected at the highest level, and managed for the conservation of their biodiversity, ecosystems, and cultural heritage. In New South Wales we have a range of different types and sizes including; World Heritage Areas, State Parks, State Forests, Flora Reserves, Historic Sites, Aboriginal Areas, Karst Conservation Areas, Wilderness Areas, and even Wild Rivers. With the exception of Karst Conservation Areas, some of which owe their recognition to 19th Century Mining Acts, there is nothing in this bewildering list that seems to specifically identify special geological or geomorphic landscapes.

It is not that we haven't tried. In 1979, the Geological Society of Australia and the NSW National Parks and Wildlife Service released a report on the *Geological Heritage of the State* (Percival 1979). This was a listing of important geological sites and although it provided a focus to site identification, little management action or legal recognition resulted from it.

Two decades later the Australian Heritage Commission funded a project to establish an *Australian Natural Heritage Charter* (Cairnes 1996, 2002) which was intended to guide conservation practice in areas of important natural significance where the definition included; ecosystems, biodiversity, and for the first time - geodiversity. The Charter was administered by the Australian Committee for the IUCN and the document was modelled on the ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter). The *Burra Charter* has since become a best practice standard in heritage work but the Natural Heritage Charter, and attempts to identify and manage geological heritage, have lagged.

This situation is changing as a result of developments overseas where 25 geoparks established in Europe and China joined in a Global Geopark Network under UNESCO in 2004. Global Geoparks are places where sites and landscapes of international geological significance are managed through a holistic concept of protection, education and sustainable development. By promoting an area's geological history, geoparks can give people a greater awareness of the dynamics of the land they live in and provide opportunities for education and employment through sustainable geotourism, whilst protecting the geological resources on which the geopark is based.

Geoparks can develop from aspiring, national, state, regional to global. They are nominated by national governments and evaluated, endorsed, and reviewed every four years by UNESCO. Today, there are 195 geoparks in 48 countries. However the United States, Australia and most of Africa have not registered a geopark. Eighteen new ones were established this year including New Zealand's first - the Waitaki Whitestone Geopark on the South Island.



Weird geological features, Left: Moeraki boulders on the beach south of Oamaru are included in the Waitaki Whitestone Geopark. Right: and the prismatic sandstone is one of the proposed GeoSites in the Ku-ring-gai GeoRegion. Photos supplied by the author.

To be endorsed by UNESCO as Global Geopark, a nomination must:

- include geosites of national and international significance,
- have logical boundaries that may include both protected and unprotected land,
- demonstrate that the area has been functioning as a 'defacto' National Geopark for at least one year with established geotrails, signage, promotional material, and management,
- have received awards or formal recognition for its activities in geodiversity, conservation or sustainable geotourism during the last five years,
- have been involved with at least one scientific/academic institution and to have been the subject of one higher degree thesis or academic paper within the last three years.

A Geopark may include geoheritage features on scales ranging from World Heritage sites down to individual geosites or interpretive geotrails. Examples might be important volcanic or glacial landscapes, and they can include areas with historic or active mining.

What is happening in Australia?

The Australian Geoscience Council is implementing a National Geotourism Strategy to support the orderly development of major geotourism projects.

Three pilot programmes are listed for development; the Murchison GeoRegion in WA, the New England high country in NSW, and the Ku-ring-gai GeoRegion in northern Sydney focussing on the Triassic geology.

The Ku-ring-gai proposal was initiated by Friends of the Ku-ring-gai Environment Inc., and a steering group has identified and documented more than 50 geosites in the Triassic sedimentary rocks between Berowra Waters and the coast.

Geotrails similar to those at Port Macquarie, Newcastle, Warrumbungle National Park, Central Darling River region, and Mutawintji National Park will soon be signposted and operational. This work is a collaboration of all local governments in the area and the NSW National Parks and Wildlife Service. The first trails will be at; Long Reef, Browns Field, Sheldon Forest, West Head, Hornsby and Berowra Waters.

The Ku-ring-gai GeoRegion contains:

- the best exposed geological sequence of early to mid-Triassic (240 million years ago) sedimentary rocks in the Sydney Basin,
- a diversity of Triassic fossils and internationally significant exposures of Jurassic diatremes (volcanic necks),
- a coastal landscape that has evolved through important Pleistocene climate change,
- a complex biotic pattern of 24 plant communities with over 1,000 species and their attendant fauna,
- over 570 Aboriginal sites in one of Australia's highest concentrations, and
- a European history with intriguing stories of development, shipwrecks, conservation, preparation for war, and geological constraints on urban expansion.

The GeoRegion project will build on the recognised values of the area, its biodiversity, natural and cultural heritage, and place these in a global context. Progress and community acceptance has been positive although development of geotrails has been slowed by Covid-19 and the need to seek grant funding. In 2022, the GeoRegion was the subject of a scientific presentation and publication

by the Linnean Society of NSW. Political support is essential and cooperation with the new NSW State Government is anticipated to form an appropriate management structure.

Once operational as a GeoRegion, the next step will be to document a nomination for an aspiring Global Geopark and have the Australian Government present it to UNESCO who will then send representatives to evaluate it.

In time, it is expected the GeoRegion/Geopark will provide measurable economic benefits through increased visitation and local employment, and that site interpretation will make an important contribution to community education and a sense of ownership.

These are early days in this new approach to conservation management in Australia but you may expect to see rapid expansion of the ideas.

For more information see:

Cairnes L. 1996, 2002. *Australian Natural Heritage Charter*. Australian Heritage Commission in Association with the Australian Committee for IUCN 143p
<https://globalgeoparksnetwork.org/>
<https://www.whitestonegeopark.nz/>
<https://murchisongeoregion.com/>
<https://gleninneshighlands.com/files/geotourism-strategy.pdf>
<https://www.foke.org.au/projects-2/ku-ring-gai-georegion/>
<https://www.pittwateronline.com.au/The-Ku-Ring-Gai-GeoRegion-Proposal.php>
Linnean Society review paper 2022. *The natural and cultural history of the Ku-ring-gai GeoRegion, New South Wales*.
<https://openjournals.library.sydney.edu.au/LIN/article/view/17009>
Video: Ku-ring-gai GeoRegion: a new concept in landscape conservation.
<https://www.youtube.com/watch?v=iOzka7xbrLQ>
Percival I.G. 1979. *The Geological heritage of New South Wales - Volume 1: a report / prepared for the Australian Heritage Commission and the Planning and Environment Commission of New South Wales*.

Watch the recording of the Mistletoe restoration workshop

Mistletoe has had a bad reputation in Australia. This reputation is somewhat unfounded. There are ninety species of Mistletoe in Australia and seventy of these are native. They are a major food source for a variety of native animals, and while they are parasitic, they do not necessarily kill trees.

In this video Gio Fitzpatrick, shares the why and how to restore populations of these fascinating plants.

Watch the video here :

<https://youtu.be/YfWrdc5RGtw> or

<https://www.aabr.org.au/mistletoe-restoration-workshop/>.



Vale: Desley Pike 1962 - 2023

Desley commenced her career in ecological restoration over 20 years ago, working in northern NSW and south east Queensland from the Clarence to Gold Coast. Desley restored sites for councils, Landcare, NPWS, agencies and private landholders.

Desley was a director of Bushland Restoration Services and her work was extremely professional, no shortcuts, mentoring up and coming bush regenerators and had a genuine passion for the bushland where she worked.

"Desley The Beautiful - The Dynamic - Regen Rock Star Angel. She was a good one - a bloody keeper and a keeper of keeping it real" Sue and Hank Bower.

"I've been thinking about the impacts of her work and the difference that she has made to the conservation effort across the national parks of the Clarence Valley in the past years and how much she will be missed. I've been thinking about the energy and enthusiasm that she brought to each project and the professionalism, knowledge and skill that I and others so much respected". Dell, Ranger Clarence.

"Desley had an amazing spirit and enthusiasm that inspired others to truly appreciate the bush that we work to restore and conserve and showed that we could make a difference. Landholders and Care groups would often express a desire for Des to be assigned to their sites and she was a brilliant trainer with a wealth of knowledge that she was always happy to share". Amalia, Tweed Landcare Co-ordinator.

From landholders - "Desley was an amazing bush regenerator and an amazing person. She gave her all to everything she did and treated everyone with sincerity and kindness." "Desley could sprint through the bush up a very steep slope with loppers in one hand and a drill in the other. I loved how she marvelled as trees responded after being freed from their cloak of vines. She always added a special sigh. You could tell she loved her work and the results spoke for her abilities. I was proud my property responded so well to her care. She led through example and her team all seemed happy and I so enjoyed working with all of them. She seemed valued as a mentor and was incredibly strong and hardworking." "She impressed me with her knowledge of and enthusiasm for the job." "Desley was such a lovely person and brilliant at her job. I really learnt a lot from her. She will be missed."

Desley is sadly missed by the team at BRS, partner Mark, regen friends, colleagues, family and friends. A sudden loss, her smiling face will be looking down on us to make sure we appreciate the natural environment and maintain high standards in bush regen.

Live on in our hearts Desley.

Rhonda James – friend and colleague.



Above: Desley standing next to a yellow carrabeen in Mooball National Park in the Big Scrub

What's happening

7 - 10 August 2023



NSW Weed Conference

The NSW Weeds Conference hosted by the Weed Society of NSW, will be held in Dubbo NSW and showcase the latest research and ideas for managing the establishment, impact and spread of weeds.

The conference theme is *weeds gone wild* with the conference sub-themes being:

- Taming the Wild | Onground Weed Control Methods
- Searching the Wild | Weed Surveillance
- What's gone Wild
- Community and Stakeholders
- Networking and Sharing Knowledge

The conference will include a range of options to explore Dubbo and the surrounding region.

Registration is now open.

For more information and to register please go to the website <https://www.nswweedsconf.org.au/>

23 - 24 August 2023

Victorian Weeds Seminar

To be held at Queenscliff, Victoria

Hosted by the Weed Society of Victoria

<https://www.wsvic.org.au/events>

3 to 8 September 2023

65th Annual Symposium of the



International Association of Vegetation Science

Opal Cove Resort, Coffs Harbour, NSW

The Conference theme is

The Future of Vegetation in the 22nd Century

Visit the [website](https://iavsaustralia2023.com/) to find out more, and register.

<https://iavsaustralia2023.com/>

AABR Event

16 September 2023 9 am to 1 pm

Cumberland Plain Woodland at Ropes Creek : The understorey

Find out more- <https://www.aabr.org.au/event/understanding-the-understorey-of-the-cumberland-plain/>



For more information go to

<https://www.landcaretas.org.au/conference2023>



Australian Association of Bush Regenerators

Australian Association of Bush Regenerators
working with natural processes

The National Board

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Victorian Branch

Enquiries please contact Rob at robscott@naturelinks.com.au or phone 0412 865 027

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 Centre

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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