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AABR NEWS

Australian Association of Bush Regenerators

working with natural processes



Saltwater National Park near Taree on the NSW mid north coast was subject to a very hot wildfire in early November 2019. When the drought eventually broke, regrowth was explosive.

In this still from AABR's upcoming video on post-fire bush regeneration, NPWS bush regeneration contractor Scott Meier explains how road-edge weeds have been managed with a combination of spot foliar spray and hand weeding. April 22 2020.

Subscribe to AABR's [regenTV youtube channel](#) to receive an alert when the new videos are available.

Photo. V Bear. Little Gecko Media

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President's Perspective

The rest of nature has flourished while humans have been isolating from COVID-19 - with improvements to air and water revealing its awesome beauty once more. Weed, of course, including weed triggered by recent bushfires, continues to flourish. It is very heartening, then, that professional bush regenerators have been able to continue to work, with COVID-19 protocols not adding hugely higher costs to our operations. Things have not been so favorable for volunteer bush regenerators, however, with most having been prohibited from working on sites. While some hardy volunteers have legitimately continued occasional forays into the bush (as it is their solo exercise) and contract coordinators of volunteers have tried to keep emergency treatments going - many volunteers have worried deeply about their sites not getting the attention they need during the autumn flush period. This is particularly concerning in the case of post-fire sites where unabated weed growth can have serious long term consequences.

It is for this reason - the inability for volunteers to get out on sites - that AABR has been working hard to build an online capacity to guide property owners and land managers with their post-fire weed management. In the coming weeks AABR anticipates launching a package of online resources to assist landholders working under isolation conditions and to prepare for return of volunteer assistance when the pandemic restrictions lift. Supported by the Foundation for National Parks & Wildlife these resources include some short videos and fact sheets and will pivot around a Locator Map where volunteers can directly contact the appropriate liaison person at multiple sites along Australia's eastern seaboard.

AABR is also acting as an auspicing organisation for grant applications to employ contractors to carry out emergency works on a number of high conservation value sites - and we are working with a philanthropic-funded program, **Restore Australia**, to seek resources for further supporting post-fire sites in need. PEW Charitable Trusts is also spearheading lobbying for an economic stimulus package that focuses on environmental work, with support from all environmental and farming bodies including AABR (see story page 12).

Apart from this work, the AABR Executive Officer, committee and volunteers have completed a range of initiatives that we have been working on for many months. The Conservation and Land Management training package review has reached the validation stage - nearly the final phase - with AABR contributors making a real difference to the qualifications through the revision of multiple units and the addition of new ones. This will hopefully lead to an outcome where national training for our industry specialisation (that we have recommended be called 'Ecological Restoration' instead of 'Natural Area Restoration') is now consistent with the National Standards for the Practice of Ecological Restoration in Australia in whose preparation AABR has been a partner.

As you will also see from the story on page 3, AABR has also completed its efforts to increase our capacity to implement our Bush Regeneration Practitioner Accreditation scheme in Queensland and NSW - although sadly the training of Victorian assessors has had to be delayed due to COVID-19. Hopefully this may be able to be run later in the year.

Tein McDonald

President, AABR

Grant to Assist in AABR's Post-fire Response

The Foundation for National Parks & Wildlife has awarded AABR a grant to assist with furthering our post-fire response.

The grant was initially designed to deliver a short video, 3 workshops, 1 webinar and some online materials.

However, given the restriction in place with COVID-19, the delivery of the workshops is now being redesigned to online platforms and materials.

Virginia Bear from Little Gecko Media, who has worked with AABR on a number of projects, has been commissioned to deliver the video, and is already on the job.



**Foundation for
National Parks
& Wildlife**

Welcome to new AABR Members

Richard Arbon

Aidan Bird

Nicola Booth

Paul Botterill

Stacey Brindley

Tegan Burton

Melissa Carmody

Soumali Chitdamrong

Tim Close

Nicolai Cooper

Barbara Ertz

Kirsty Follett

Louis Gillies

Elwyn Henaway

Tony Herwerth

Amelia Jones

Jerome Jory

Rohan Khot

Andree Kimber

Nikki Kirkman

Tamara Kubica

Charlotte Lauer

Sandy Lie

Angus McLean-Smith

Sally McLeod

Phillip Murphy

Nicky Muston

Warwick Noles

Robert Pergl

Helen Rateau

Dan Reed

Emma Roberts

Nicole Robinson

Jack Sampson

Jessica Schembri

Shannon Smedley

Richard Stanes

Amber Steele

Sue-Anne Steer

Darcy Stowe

Warren Tomlinson

Jessica Whittick

Businesses

Local Habitat

Under the Sun

Landscapes

Agencies

The City of Casey

Manningham City

Council

Organisations

Coal Point Progress
Association

National Trust of
Australia (NSW)

Congratulations on Accreditation

Russell Linnane

AABR In Victoria

Membership

The agreed focus in Victoria is still to recruit members. A third email was drafted with the assistance of our marketing officer Nat Simms and sent to the original list of industry contacts in late March and membership **has now reached 87**. Natalie has also produced a poster which encourages people to join and could be put up in workplaces. Contact Suzanne (admin@aabr.org.au) for a copy. Our next plan is to follow up the email campaign with phone calls. If you would like to assist, please contact Rob Scott – robscott@naturelinks.com.au.

AABR Accreditation assessor training and assessments

Tein McDonald invited 10 experienced practitioners to take part in a 3 day workshop to undergo a fast track assessment and be trained as accreditation assessors by interstate assessors. Several people agreed and the ground was laid to kick start the accreditation system in Victoria. Unfortunately the Covid-19 lock down has prevented the event from taking place so far.

A venue for the event has been secured with the assistance of Craig McGrath from the City of Yarra. Tein and Rob submitted a grant application with the Norman Wettenhall Trust for assistance with travel, accommodation and other costs. Once travel and group activity restrictions have been sufficiently lifted, we will make preparations for the event.

Vocational Education Training Review of the Conservation Land Management Courses

A few of us participated in the VET review carried out by Skills Impact. This was a great chance to look closely at and make changes to the course content for our industry and meet face to face and online with other members of AABR and the industry more broadly.

Representing Victoria (and other States) on the AABR website

Edits to the AABR website were discussed at the last national committee meeting with the opportunity for state focused content to be accommodated, for example, local employment, events and advertisements. If anyone from Victoria is interested in progressing this idea please let Rob Scott know.

Standardising bushland practitioner job descriptions and updating the Gardening and Landscaping Award

A few members are looking at the possibility of coming up with some standard roles and associated job descriptions for the industry. Associated with this is the possibility of implementing edits to the Gardening and Landscaping Award to make it more relevant to the industry and associated pay rates.

Annual Committee (Victoria) nominations

Its been a year since our first committee meeting and with a healthy membership, we will be electing our annual committee. The committee meets every 2 months and requires members to commit to driving the aims of AABR in Victoria and Nationally.

Rob Scott robscott@naturelinks.com.au
Kylie vicbranch@aabr.org.au

We know you're knowledgeable

Would you like to share your know-how? AABR has set up two Facebook groups to share knowledge about the post-fire recovery.

The post-fire bush regeneration group surged into being on 24/1/20 and now has 441 members. This group is for sharing posts among people wishing to help with the 2019-20 post-wildfire vegetation recovery effort and keep in touch with how the volunteer offers are progressing.

The group focusses on questions and answers relating to the strategies and techniques of weed removal and any other notes relating to post fire weeding. Ways for bush regenerators to improve faunal habitat in our work are welcome but please no animal rescue posts.

<https://www.facebook.com/groups/postfire.bush.regeneration/>

The seedling recognition group came into being on March 25. It currently has 83 members and aims to assist in seedling recognition, especially those emerging from the bushfires of Summer 2019-2020. New members with ID skills are most welcome.

<https://www.facebook.com/groups/seedling.recognition/>

AABR Accreditation

Seeking AABR Accreditation? AABR now has an abundance of accreditation assessors.

Eighteen experienced and enthusiastic accredited practitioners have joined the ranks of AABR's assessor team. This bodes well for progressing the 23 pending assessments, many of which are non-standard applications and so require a field assessment.

Over the past few months the aspiring assessors have been inducted, via an online overview, in the process and the procedures involved in undertaking a non-standard assessment.

The new assessors are now teamed up with experienced assessors to get practical guidance on the ins and outs of a field assessment. Whilst the COVID restrictions have put field assessments on hold at the moment, when they are lifted AABR's assessors will be well placed to spring into action.

Each assessor team has a regional coordinator who oversees the processing of applications in their region liaising with the assessors who conduct the accreditation assessments.

Welcome to the new Accreditation assessors

Region: Sydney, NSW Central Coast, Illawarra, Blue Mountains

Regional Coordinator: Danny Hirschfeld-

New Assessors: Deb Holloman, Helen Logie, Kate Consterdine, Lyndall Sullivan, Matt Springall, Peter Jensen, Stephanie Chew, Mark Walters

Region: NSW Far North Coast and South East Queensland

Regional Coordinator: Stuart Hanna

New Assessors: Bob Smeuninx, Jesse Vanderbosch, Kris Hely, Mel Coyle,

Region: NSW Mid North Coast & Hunter

Regional Coordinator: Scott Meier

New Assessors: Neridah Davies, Tom Clarke

All other States

Regional Coordinator: Tein McDonald - Victoria

South Australia: Matthew Pearson

Tasmania: Todd Dudley

For more information and how to apply for accreditation, visit <https://www.aabr.org.au/about-aabr/accreditation/>

What's been happening with AABR's Post Fire Response

The Summer 2019-2020 bush fires resulted in AABR launching a bushfire response (<https://www.aabr.org.au/do/post-fire-wildlife-habitat-recovery-response/>) to assist in the recovery of bushland and habitat. AABR was pleased to have many people donating as well as offering to join in post-fire bush regeneration work on sites in need of assistance. AABR has continued to track down high conservation sites needing work and to plan a range of post-fire workshops for rural centres.

Of course all of this planning was BC (Before COVID-19) and the distancing measures and travel restrictions now means that in-person workshops and on-site weed removal by volunteers is not possible. While we were able to conduct one in-person workshop and bush regen work at one site in NSW prior to the restrictions, the remaining workshops are now being delivered online. Indeed AABR has gained a small grant from the Foundation for National Parks & Wildlife to expand our capacity to offer online support for landholders working on their own properties during the COVID-19 restrictions. We have substantially expanded our working relationships with other environmental NGOs working in the post-fire space, and are working on ways to gain funding to support the employment of contractors to undertake important and timely post-fire bush regeneration work on sites, now that native and weed regeneration has had time to reveal itself.

Below is a summary of what we have been able to carry out to date (end April 2020) and plans for the future

1. Workshops

AABR has held a number of workshops to assist and share knowledge with communities working to help their bushland recover. To date the workshops have been carried out in different parts of NSW with different audiences.

Eurobodalla 17th March 2020

On the NSW south coast, a pilot workshop was held at Eurobodalla Botanic Gardens, Batemans Bay NSW. The workshop was hosted by South East NSW Local Land Services in collaboration with Eurobodalla Regional Botanic Gardens and AABR, with funding provided through the National NRM Coordinator, Kate Andrews.

The presenters from AABR were Dr Tein McDonald (AABR President and bush regenerator) and Gerard Proust (AABR-accredited bush regeneration practitioner from the South Coast) – who drew on their experience of facilitating and guiding post-fire recovery after previous fires in other areas and after the recent fires on the south coast.

The participants came from a number of organisations and individuals with diverse backgrounds and experience. The 18 attendees included people from the two Local Aboriginal Land Councils (Mogo and Batemans Bay), Eurobodalla Shire Council (including the Botanic Gardens), Local Land Services and two landholders and one contractor.

Workshop Program: The workshop started by talking about the specifics of how local native vegetation is recovering, comparing this to what is happening in the broader region and what we know of other regions in NSW. The presenters explained potential for post-fire recovery actions, particularly focusing on opportunities for works to assist recovery of sites where

Right: Eurobodalla workshop participants looking at burnt areas.
Photo: T McDonald March 2020

bushland recovery might be hampered by weeds.

A walk in the Botanic Gardens to observe the recovery of native species provided an opportunity for exchange of information about what genera were recovering locally. Council and LLS staff provided invaluable perspectives on local weed issues, priorities and opportunities including discussion on barriers to funding. The LALC representatives raised highly relevant issues regarding continued work in the region – particularly during the field trip to a riparian site at Mogo.

A need for further support for landholders was noted with the landholders highlighting the need for more advice and encouragement, particularly for riparian sites where some weed species have a catchment-wide presence.

Leanna Moerkerken from LLS SE spoke on legalities of tree clearing, particularly with respect to the increased amount of tree clearing in the region. The allowances and controls for clearing and processes for application and complaints were explained clearly and leaflets provided.

Feedback and Recommendations: It was felt that the workshop was more suited to landholders and community as council staff and contractors already have a lot of expertise in bush regeneration and had already spent much time planning for post fire action. This was noted for the planning of future workshops.

The landholders present found the workshop very useful for them. The need among landholders for technical assistance and encouragement in dealing with post-fire weed management challenges was noted. (This is particularly the case with the current COVID-19 rules with group engagement, where learning and collaboration are not able to occur).

The provision of workshops in an online format was discussed with AABR now working on this for other workshops.

Workshop at Killabakh on the 17th March 2020

Killabakh is on the mid north coast of NSW, inland and north of Taree and Wingham. The workshop was put together by the NSW Biodiversity Conservation Trust (BCT) at a private property in Killabakh. (The BCT is a statutory not for profit body which since 2017 deals with private land conservation and replaces private land programs previously run through the NSW Office and Environment and Heritage and the NSW Nature Conservation Trust).

The owners of the property have a private conservation agreement through the BCT - the mid north coast has a fairly high concentration of these agreements. A small group of about 12 landowners from the region turned up - less than expected due to the Covid19 situation. Never-the-less the day was very successful, and the property owners were very appreciative of the positive attention and the expertise on-hand.



AABR committee member Scott Meier, an experienced contractor in the area, was our representative at the workshop and summarised his take-home points as being:

- The importance of what they were doing. The landowners had a genuine need to know that there was “light at the end of the tunnel” for their beloved properties.
- People needed to know that there were land management techniques that would help them restore their properties and very importantly help them manage the vegetation to reduce future fire danger. Many wanted to know how to implement fire regimes etc and the theory behind it all
- People were heavily impacted in the emotional sense. Attendees had detailed and heartfelt stories of their experiences of the fires, including death of a loved one after the fire due to impacts of the fire. But it was thought important to care for their conservation properties
- There was a discussion about how to run future information sessions with the Covid19 restrictions being in place.

Webinars for Upper Yango Creek (NSW Hunter Valley) – 29th March 2020

Heading into new territory - a change in the presentation

Deb Holloman and Suzanne Pritchard from AABR attended a community meeting at Laguna on the southern side of the Hunter Valley in March 2020, hosted by Wollombi Landcare and the Australian Wildlife Conservancy. This resulted in offering a field based workshop with landholders of Upper Yango Creek to be held on one of the properties to look at areas post fire. Topics would include basic bush regen techniques, tools and plant identification. March 29th was the agreed datebut all plans were thrown out the window thanks to COVID 19.

A quick rethink was needed. A webinar via **Zoom** was proposed for the same date. This was new technology to most of the landholders but they took to it enthusiastically. A **WhatsApp** group allowed participants to send photos and videos of plants to be identified. The two experts were Deb Holloman who was the chair with Paul Malligan from Gecko Environmental Management joining as an expert, both AABR accredited regenerators. Suzanne Pritchard worked technological miracles sharing photos from WhatsApp to the Zoom presentation.

The webinar went for 2 hours with most plants being able to be identified from photos, and advice given on weed removal and native plant identification. Ten attendees from eight properties attended the workshop, three others participated in the WhatsApp conversation. The Upper Yango Creek (UYC) landholders deepened their local connection to each other through this process by sharing what was happening on their site. In a small community such as UYC, what's relevant to one is relevant to many.

The decision to limit the workshop to the smaller local groups was so that it would have more local relevance and build the capacity of the local community.

Participants were encouraged to join AABR's facebook pages for further advice. **Dropbox paper** was used to share the content of the presentation and collate the information provided by landholders so there would be a reference document from the workshop. The document was updated during and after the workshop, adding details to the supplied images. The WhatsApp group is still active with advice and plant identification continuing. There was positive feedback from the landholders, and it was felt that the adaptation to an online presentation was extremely effective.



The webinar for landholders at Upper Yango Creek allowed participants to send in photos of plants on their properties prior to the webinar to identify the plants species and discuss control options for weeds.

Left: Native species - *Geitonoplesium cymosum* scrambling lily, *Stephania japonica* snake vine and *Clematis* sp

Right: *Cyperus* sp - to be identified - there are both weed and native sedges - they are tricky to identify



A number of landholders approached AABR seeking support with post-fire weed management, and one landholder expressed interest in hosting an event for the Upper Yango Creek Community as early as possible.

Webinar - Wollombi Region Landcarers and landholders 10th May 2020

This second webinar was in the same format. Both the online workshops were made possible with funding through the Hunter Region Landcare Network, in partnership with NSW Landcare and Hunter LLS.

Continuation of Webinar Presentations and online assistance

AABR has communicated to Landcare and CMA coordinators in many regions, particularly Victoria, with offers of online workshops or webinars.

- Webinars can be delivered using internet tools that can allow landholders to share photos of their sites and gain site-specific technical guidance. This will build landholder and group capacity and provide encouragement in a social and physical landscape which is highly challenging. This allows landholders to better prepare for and look forward to a time in the medium-term future when Landcare, Bushcare and other volunteers can be allowed to work on sites in person.
- The use of WhatsApp to circulate images and workshop details was an efficient and effective way of interaction and starting the conversation. It worked exceptionally well and will evolve as it gets used.
- For plant identification, image choice (leaves, flowers and fruits) and description (texture and smell) will improve.
- Focussing on a community was positive - what's relevant to one participant is relevant to many and builds community capacity. Smaller local groups will have more relevance.
- Inclusion of videos to demonstrate and endorse the various techniques will be pursued. (AABR has commissioned a video for this purpose, to be funded by the Foundation for National Parks and Wildlife grant.)
- The organisation and type of promotion can be broad - use of facebook posts, media releases, etc). For Upper Yengo, WhatsApp was used to seek interest in the workshop, determine the best date and encourage participation by sharing images.
- AABR has established a Seedling Recognition Facebook group to support seedling identification - <https://www.facebook.com/groups/seedling.recognition/>, it currently has 83 members.

2. On-Ground Work by Volunteers

AABR's post fire response internet page provided an opportunity for people to volunteer their time and experience to assist individuals and community to regenerate burnt areas. There was also the opportunity for groups and people who had been affected to register their sites for assistance.

The response was heartening with over 230 people, either as individuals or as teams, volunteering. People have offered to travel and stay for a week and some organisations such as North Sydney Council, have offered its bush regeneration team! To date there has been around 8 groups who have asked for assistance on a number of sites. In addition AABR is liaising with groups who have networks of groups.

A further step was to gain an understanding of the skills of the volunteers and to identify those who were happy and had the skills to assist in co-ordination of work on sites.

Of course no sooner was AABR setting about to coordinate volunteers, both individuals and teams to be deployed to appropriate sites, COVID-19 arrived and restrictions were placed upon activities, which has meant that at this time we are unable to provide people to assist on sites. So the program has changed.

We are in the process of allocating sites to those who have offered to be co-ordinators so that they can become a contact person and build up a relationship with the groups.

It is hoped that a sound relationship can be made and the needs of the people and groups at these sites be identified. Thus we hope to be able to open up some on-site opportunities later in the year and volunteers will be able to determine which sites they would like to be involved in.

Our volunteers will not be available long-term. However, providing a helping hand in the early stages when the work is more intense will be greatly appreciated by the communities who often struggle to get support to look after the local bushland. It will also set them going in the right direction. Working close-up and in direct contact with the bush will also increase the appreciation and value of the local native plants and animals and, as most bush regenerators acknowledge, it gives a huge sense of satisfaction and is a great form of therapy.

Sites Registered to Date

Two private properties in Kyogle in northern NSW with 2kms of fenced off riparian sites where intense fire has severely affected native rainforest species and encouraged weed regrowth. Has previously had bush regeneration grant. Both catsclaw and Madiera vine are now coming back and rainforest trees are severely affected. Richmond Landcare's Emma Stone has been working hard to obtain funding to engage contractors to undertake the important bush regeneration and revegetation works needed on these deserving sites.

Emu Creek near Kyogle NSW. A degraded silky oak/blackbean remnant in a riparian zone which has had previous treatment. The rainforest trees have been severely affected by the fire and subsequent rampant weed growth. Jane Baldwin from Northern Rivers Fire & Biodiversity Consortium has now gained some funding to employ contractors to undertake works on this site but is keen to retain a link with AABR.

A high conservation property at Ellangowan, North Coast NSW. Owned by one of Australia's best botanists. The main need here is information on weed control techniques and for a link person to assist with potential volunteer action in the future. Funding is being sought to employ contractors to work on the site, while AABR remains keen to support the work wherever possible.

Private properties in the Orara Valley west of Bellingen, on the mid north coast of NSW - wet sclerophyll/rainforest boundaries where fire may provide opportunities to treat lantana and other weeds and improve the condition of these high priority sites. However, some landholders are reporting that lantana has not survived the fire – but other weed requires treatment. AABR is exploring potential for online support by local regenerators to help guide landholders in their regen work.

Barrington Tops National Park near Gloucester NSW - an amazing opportunity to work with NPWS to help treat scotch broom which has been burnt. There is likely to be massive seedling regeneration. AABR hopes to work out ways to help NPWS gain the assistance of volunteers over a three year period. Trials are being conducted as part of the project where multiple techniques will be tested and monitored in collaboration with Conservation Volunteers Australia. AABR has recently sought funding from the federal government's Wildlife and Habitat Bushfire Recovery Program for contract works on this site to hold the fort until a major volunteer effort can become reality.

Crowdy Bay National Park - near Laurieton NSW - a 40-year bitou bush control project run by volunteers but now the whole site has burnt including already treated and not yet treated sites. NPWS has been able to source some emergency funding for some works but it is insufficient, so AABR has applied for funding from the federal government to engage contractors to work in and around the severely burnt and remaining littoral rainforests on site.

Scottsdale Bush Heritage property, Bredbo, south of Canberra NSW. A total of 11 ha of work has been done on the site - mainly spot-spraying African love grass coming back after January fires in sites where natives are already regenerating after aerial spraying of the weed. AABR has also applied for federal government funding to engage contractors to work here.



Tein McDonald and David Meggitt from AABR volunteering at Scottsdale. March 2020

Multiple private properties adjacent to Mt Jerusalem NP - need support to recover Lowland Subtropical Rainforest post-fire. AABR has included these sites in our application to the federal government to employ contractors to undertake a recovery analysis, weed management, erosion control and planting where required. If successful this will assist the landholders by complementing a small amount of funding already obtained from Landcare to undertake post-fire emergency works.

A recent grant application to the federal government (article page 12), means the AABR post-fire team has made contact with many other organisations working on very deserving sites. This is enriching our picture of what sites are in need of assistance and our engagement with partners with whom we can work both now and in the future. Our work continues.

How to keep in touch : the AABR post-fire response web page (<https://www.aabr.org.au/do/post-fire-wildlife-habitat-recovery-response/>) and Facebook page (<https://www.facebook.com/AusBushRegenerators/>). The facebook page has two groups – Post-fire Bush Regeneration and Seedling Recognition.

Fires then Floods (& a pestilence)

Gerard Proust, Bush Regenerator

As we have seen over the last summer there was a series of predicted and cataclysmic fires that seemed to mark a critical turning point in many landscapes across a broad swathe of the east coast of Australia. Many areas had then been followed up by a range of much needed rains that turned into floods, causing ever accumulating challenges. These challenges were on an ecological level but also on a social and political one, just keeping to the ecological challenges and the opportunities they can create.

These challenges create a series of land management issues (including species loss, erosion, sedimentation, successional weeds, feral animal increase, edge effect increase) that give rise to a range of opportunities. These opportunities can only be taken with well planned, resourced and managed 'actions'. Some of these opportunities are:

Access to and through sites. Many vegetative communities (e.g. vine thickets) make movement through them extremely difficult because of the density and habit of the plants. The fire opens these sites up making not only movement easier but also locating and treating weeds.

Germination of soil seed bank. Many native (e.g. Acacias, Fabaceae) and exotic species (e.g. Senna, Solanum) respond strongly to fire leading to many possibilities of succession. What we do and the timing of works is crucial for the regenerative process.

Many underground tubers (e.g. *Acetosa*, *Anredera*, *Dolichandra*) are exposed by fire and floods again making locating and control a lot more successful given the right amount of resources at the right time.

Time management: The clock is ticking loudly - trouble is many people's focus is elsewhere. How long do we have before we lose these opportunities? It varies widely and depends on the severity of the fire, the amount of weed and native recruitment and many other factors. If we wait too long the weeds will start to seed (perpetuating the weed cycle) and in many cases start to overtake the native species on their way to forming a monoculture.

Topics raised at workshops conducted through Landcare, Local Land Services and AABR on the NSW south coast included:

- prioritising the works on a site by site, on a regional scale and on weed by weed basis.
- winners & losers. There are many fauna and flora that benefit from the fires and there are others that do not. Knowing these aspects are important for current and future works.
- funding sources. Most people knew of various funding sources but accessing them was somewhat difficult.
- the maintenance of diversity requires variability in fire regimes.
- traditional, mosaic, ecological, cultural, controlled burns
- fires esp. hot ones can result in strong native regeneration even in highly weed-dominated areas.
- some plants and vegetative communities require a fire interval of between 6-30 years, others 15-50 years, still others > 50 years and some never.
- some plants are obligate seeders (dies with fire and regenerates from seed) and have a variable seed longevity.
- some plants are re-sprouters that can take up to 15 years to develop fire-resistance.

- some plants are an important source of food for honeyeaters and small mammals in the winter months.
- Fabaceae (a winner from fire) have high levels of seed dormancy that makes them likely to be persistent in the soil seed bank (230 spp. in Sydney region).

In a time of great upheaval these issues are very important for a society as we do not want to emerge from this human crisis (what effect is it having on the natural environment????) to a landscape diminished. On the south coast as in other fire affected areas, urgent works are required across a broad landscape. These areas should be located, surveyed and have a well-resourced plan adopted and implemented. Rainforest especially has suffered dramatic historical loss and we need to stop and reverse this on-going process.



On a property at Killabakh, landholders look at burnt areas.

This is an area of significant post fire response where more than 50% of the foliage cover is weed species, many of which are exotic Solanaceae (blackberry nightshade and wild tobacco) and Asteraceae (thickhead and fleabane etc). However there is a reasonable diversity of native groundcovers, *Acacia* sp. and pioneer rainforest species including *Alphitonia excelsa*, *Trema tomentosa* and *Commersonia* sp.

The Acacias and pioneer rainforest species will generally come to dominate the assortment of weed species within 2-3 years with targeted weed control and suppression of vigorous native vines. More mature phase native rainforest species should begin to populate the understory during that time and start to replace the short lived pioneer rainforest species and weeds that persist (wild tobacco and *Senna* spp. etc). Generally resources for weed control in these situations are limited and restoration efforts would not attempt weed eradication but look for targeted control of groups of individual weeds and native vines that are placing pressure upon strategically located native species that will fill the canopy quickly and begin to suppress weed species underneath.

Landholder workshop at Killabah March 2020. Photos Scott Meier



A tale of Two Seasons: Part 1

Bushland Regeneration in 'New England'

Kate Boyd

Kate Boyd works both as a bushland regenerator for Uralla Shire Council and with other volunteers in Armidale NSW. This article is in two parts. This first part describes the effects of severe drought in 2019. Part 2 will be in the next newsletter and will talk about how it all changed as summer heat in October to December was replaced in 2020 by regular rainfall through January to March, prompting lush 'spring' growth and a shift in regenerator tasks.

10 November 2019: Drought, climate change, fire and weeds

It is a very deep drought, breaking some local records throughout the misnomered 'New England'. Bright green is now an uncommon colour. Extensive parts of New England have big patches or a scatter of dead or part-dead eucalyptus trees. It is 2 ½ years since we had a prolonged soaking. We were relieved to see most deciduous exotic trees produce small leaves. Some remain leafless – waiting?

In 2019 Armidale has had 36% of average January-October rainfall. 18mm of rain – the best for 6 months – was followed by little green shoots, but few kept growing. Armidale is on Level 5A water restrictions so gardens can only be watered with reused washing water, and businesses are required to use less.

Nurseries are banned from connecting hoses to the town supply. Fortunately, Armidale Tree Group (ATG) has a dam and licence to pump from it to our native nursery. Sales are poor but we need to keep stock alive and ready to plant when the drought breaks.

I wonder how the birds and other wildlife I see have survived, and how many have died, but I know our native species and ecosystems have resilience built into their genetics, behaviour and ecology from previous droughts. In autumn 1965, trees on hills all over eastern NSW died from sudden drought but trees grew back. How different our present drought is will best be



Acacia dawsonii survived the driest winter. Photo: Kate Boyd

understood when we can look back on it, but the heatwaves have definitely made this drought like no other.

The uncontrollable summer bushfires, when even rainforest burnt, were far from my usual work sites, but Armidale had been plagued by arsonist/s in winter igniting 7 fires in or near two bushcare sites and others in 'overgrown' locations. The fire brigade rapidly stopped them burning 'property' or more than 1 hectare of bushland and 1 hectare of creek bank plantings.

It is OK that local wetlands called lagoons dry out occasionally, but fires are a threat to them. A fire burnt Dangars Lagoon near Uralla. RFS volunteers stopped it escaping into pastures and buildings. Most of the dry wetland plants were gone in hours – not much refuge left there for quail, little grass birds, cisticolas and pipits. Carbon stored there over a few thousand years as peat only ignited in five very small areas, but kept burning outward, sometimes in the opposite direction to the wind. The brigade returned to douse the most obvious smoking patch. With the aid of a heat-sensing camera and a bucket of lime I found they expanded at 1-2m per day. After 10 days RFS asked Uralla Council to pour more precious water on the hot spot, not knowing that I and another bushcare volunteer had put one tiny fire out and spent that morning containing two others with relatively little water. What worked on these 20cm deep fires was digging shallow trenches along the burning front and just wetting the trench and hot edge – this stopped the fire extending through the dry surface peat and roots. We let Council drench the other two peat-fires – successfully.



Chris Nadolny stops expansion of a shallow peat fire in Dangars Lagoon by digging then wetting a shallow trench between dry peat and the smouldering flameless fire. Photo: Kate Boyd

Now most of the snow gums (*Eucalyptus pauciflora*) around Armidale are showing us why this was the limit of their range – by foliage going yellow then white and trunks cracking: dying if the roots below their lignotuber also dies from lack of water. I will predict that climate change will shrink their range to cooler, moister areas like Ebor.

Ribbon gums (*E. viminalis*) in a few hilltop locations are also dying, yet nearby yellow box is flowering! They won't be producing as much nectar as usual, but any nectar is welcome. When I planned a planting project a few years ago, I wanted to get seed of ribbon gum from a two degrees warmer hilltop site, but we are near the northern end of this species' range: it only occurs in a few places two degrees warmer which turned out to all be valley bottoms with more deep moisture than our rocky hilltop. I will predict that Armidale's hilltop populations will die out but those in valleys or in deep soil may survive.

Much of the biodiversity in our Ribbon Gum – Snow Gum Grassy Woodland endangered ecological community is in the ground-layer – wildflowers, insects etc. Many of the low shrubs and herbs are still partly alive. Others survive drought as seeds. We don't yet know whether enough individuals will survive to rebuild the old web of life.

Some of the species we planted earlier in that project got well-enough established, thanks to one wet year, to still be surviving.



Austral bugle *Ajuga australis* (above), poverty wattle *Acacia dawsonii* (below left) and a daisy bush proved drought tolerant Photo: Kate Boyd

They were from local seed. I focussed on getting only species that belonged on the site including a few declining species. This meant the project was drawn out over four years. I had to find propagating material and Armidale Tree Group nursery had to try growing them. Volunteers who usually stick to weeding had to do a lot of watering even though we didn't want to pamper our plantings.

I was pleased to find in late August that most of those planted in April survived the driest winter on record. We hadn't watered since early May. Some herbs like chocolate lilies planted a year earlier had a few leaves too. I rewarded them with half to one litre of my greywater each!

One good side to severe drought is that most weeds stop growing. They were slowing down last summer – I didn't think cut-and-paint would work on cotoneaster in Uralla because, with no downward sap flow, herbicide would not be carried down. I'm still waiting to confirm that those we drilled and injected herbicide into in autumn can't reshoot. The only place I've used

either technique this spring is on woody weeds beside an urban creek. No spraying anywhere.

We did our annual 'broom sweep' pulling up whatever *Genista* seedlings grew last summer before they can set seed. In Snow Gums Bushland Reserve, we may in some years miss a few plants flowering amongst other dense weeds, but in Drummond Park's bushland we think we've prevented any broom seeding for over a decade. The soil seedbank is diminishing.



Celia Smith and Nerille Waterhouse remove jasmine that looked dead but wasn't from Drummond Park, Armidale Photo: Kate Boyd

Now untreated privet, jasmine and periwinkle in our grassy woodland remnants are going brown! It is easier to pull jasmine out of dry soil. Roots and growing points were still alive, so our keen regular volunteers kept up their hand weeding.

What happens now? Find out what happens after rain falls and read about changes to the work required. See our next Newsletter 145 for Part 2.



**Restocking
regenTV**

Deeply embedded in AABR's reason-for-being is to promote the study and practice of ecological restoration. AABR's quarterly newsletter, occasional e-news, website and more recently regenTV are the vehicles we use to distribute the educational experiences we are engaged in, to our membership and beyond.

RegenTV has a home on our website and also as a [YouTube channel](#). The latter increases the searchability and broadens the access to the regenTV collection. You can subscribe to the YouTube Channel and receive alerts when new videos are added. Your subscription also adds value to the site as potential sponsors can see the reach of their support.

Whilst the COVID restrictions have put on hold many forums and festivities, the collection of presentations from past forums have hours of viewing available.

- 2019 Seeds for the Future – ANPC & AABR
- 2018 Striving for Restoration Excellence – SERA
- 2016 Experience counts – New restoration Standards reflect 30 years of repairing Australian nature. AABR & SERA

- 2014 AABR Seminars
- A selection of field days and interesting talks.

Currently in production is a mini-documentary, *The Big Scrub Decline and Recovery*, sponsored by the Paddy Pallin Foundation. This video will be weaving the footage captured at the 2018 Big Scrub Field trip into the story of how the recovery process started and continues in this unique landscape of lowland subtropical rainforest remnants.

Also being fast-tracked in the production schedule are a series of post-fire recovery videos. Scott Meier and Deb Holloman, highly experienced bush regenerators and AABR committee members, share their post-fire recovery strategies and the techniques unique to working in the transitioning landscapes. These videos are being funded by the Foundation for National Parks & Wildlife grant.

As the end of the financial year approaches there are sponsorship opportunities available to support the production of new regenTV resources. Contact Suzanne at education@aabr.org.au or visit <https://www.aabr.org.au/help-aabr-donate-volunteer/>

Donations to support regenTV are also welcome from individuals however AABR does not have tax -deductible status as yet, so these are acts of generosity on your part. You can donate to regenTV at <https://hub.benojo.com/campaigns/regenTV-best-practice-ecological-restoration-case-studies>

Saving the rainforest of Susan Island

Historic weed management of an intrinsically valued indigenous flora community

Peter Ardill, member, AABR

Systematised bush regeneration and ecological restoration practices did not develop in Australia until the twentieth-century, but colonials did attempt to manage the threat posed by weeds to intrinsically valued indigenous flora.

The control of weeds that impacted upon commercially valued flora, such as crops and plantation timber resources, strongly featured as a component of colonial agricultural management policy. For example, by ca.1850 considerable public agitation and lobbying was demanding the control of scotch thistle (originating from Europe and Asia) and Bathurst burr (South America), and these weeds and their commercial impacts were scrutinised by state legislatures. "An Act to make provision for the eradication of certain Thistle Plants and the Bathurst Burr" was assented to by the Victorian parliament in 1856, and other states adopted similar legislation.

However, some colonials were also concerned about the detrimental impacts that weeds could have on intrinsically valued indigenous flora. By the term intrinsically valued, I am referring to respect for, and appreciation of the inherent qualities of these flora species and their associated vegetation communities and fauna species: evolved biodiversity, aesthetic qualities, and also the knowledge that is embodied in and exemplified by such species. This form of value can be distinguished from utilitarian or instrumental value, such as the ecosystem services that we derive from nature, like clean drinking water and recreation opportunities.

A documented and historically significant attempt to protect a valued indigenous rainforest community from weed infestation took place on Susan Island, located in the Clarence River at Grafton, New South Wales, in 1894. Here is the story of that early conservation management effort.

From time immemorial the lands of the Clarence River valley in northern NSW were traditionally occupied by the Bundjalung, Gumbaynggirr and Yaegl First Nations. From the 1840s colonial

settlers forcibly occupied these lands, logged their cedar brush flora community (Lowland Rainforest on Floodplain), and then burnt the remainder to the point of virtual extinction in order to create farms on the rich alluvial river flats.

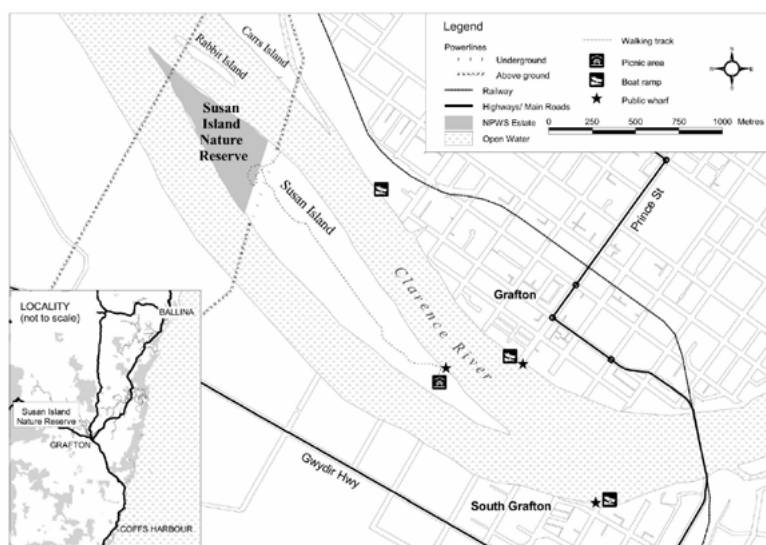
Although logged for its cedar, the fifty-nine hectares of rainforest that covered Susan Island were otherwise spared this treatment, and in 1870 the island was declared a public recreation reserve; the precise historical reasons for this declaration are not known. There is no doubt, however, that the biodiversity, uniqueness and aesthetic values of the rainforest community were much appreciated by the reserve's trustees, and particularly by trustee and noted naturalist James Fowler Wilcox: "the cutting of timber, shrubs, grasses, or any plants should be strictly prohibited as there are many choice plants such as palms, Livingstonia, Flindersia, brachychiton, melaleuca, alstonea, Grevillea... all peculiar to the brushes...[sic]".

The trustees were determined to protect the rainforest, and also its indigenous avifauna, and in 1870 posted this public notice: "The Trustees, being desirous of preserving the indigenous timber and plants upon this Island, from destruction ...the public are hereby CAUTIONED AGAINST CUTTING DOWN, or OTHERWISE INJURING THE TIMBER or PLANTS...[original emphasis]". For the times, these were ambitious conservation objectives: Ku-ring-gai Chase reserve, Sydney, NSW, was declared a public recreation reserve in 1894 specifically for the purpose of preserving its indigenous flora and fauna, and is now regarded as a pioneering example of colonial nature conservation.

Throughout the 1870s and 1880s the trustees persevered with their rainforest preservation policy: "The trustees have desired to preserve the island...visitors will see that giant of our brushes, the great fig tree...the great red and flooded gums, the cedar, the bean, the beauteous tamarind and tulip trees...". They did permit a small level of development: walking tracks and two spacious picnic areas were formed, in a likely attempt to create outdoor environmental learning spaces, and the NSW colonial legislature authorised the construction of a rifle range in 1887. Even so, by ca.1890, only seven per cent of the island's rainforest flora had been modified, despite regular community calls for it to be completely levelled and developed.

Castor oil plant (*Ricinus communis*) was reported to be well established on the eastern sandy tip of the island by 1880, but it was the arrival of lantana (*Lantana camara*) that set off alarm bells within the local conservation community. Introduced to Australia in ca.1840 and well established outside Brisbane and Sydney by ca.1870, lantana was first recorded on Susan Island in 1894. Possibly for the first time in the colonial settler era, the threat that a weed posed to an indigenous flora community was recognised and publicised, and plans to manage the threat were implemented and documented: "This plant, unless checked, will in time, it is feared, overrun and consequently destroy the beauty of the natural and indigenous brush and trees. An effort is now being made to keep it in check".

Slashing work was undertaken, and possibly Australia's first bushcare sessions took place on Susan Island, as visitors were encouraged to hand remove lantana seedlings! Trustee and naturalist James Clarence Wilcox



Susan Island showing the island and location in northern NSW near Grafton
From Susan Island Nature Reserve Plan of Management. NPWS 2012

(son of James Fowler Wilcox) also arranged for further regular weed slashing in the late 1890s, but whether all of this work constituted Australia's first documented bush regeneration effort is not clear, as the precise location of the lantana was not specified in the historical documents.

Unfortunately, these control efforts failed, and by the 1920s the lantana had established a firm hold in the centre of the island, leaving the indigenous flora in a devastated condition by the 1940s. But all was not lost. The lantana had initially thrived within the cleared picnic areas and rifle range, but sixteen hectares of relatively undisturbed rainforest, located along an isolated point of the island, largely survived the weed and further development onslaughts. From 1951 the now disbanded Clarence Valley Field Naturalists Club took up the cause of preserving this surviving remnant, and largely due to the club's advocacy, the 18 hectare Susan Island Nature Reserve was gazetted on the 14th May 1982 under the NSW *National Parks and Wildlife Act 1974*.

Today, the rainforest reserve is perpetually weed threatened and susceptible to species loss, and conservation management there takes the form of natural regeneration and weed management programs administered by rangers of the National Parks and Wildlife Service's Grafton office. The Traditional Custodian Nyami Julgaa group of First Nations' women, the still operational Susan and Elizabeth Islands Recreation Trust and other local community groups are valued advocates and supporters of this vital work.

Of course, it is quite possible that even earlier efforts to protect valued indigenous flora from weeds occurred in Australia. Fortunately, the Susan Island event was documented, and further confirms that post 1788 environmental history was not entirely a story of settler exploitation, but also featured instances of delight at ecological diversity and unique forms of beauty, and concerted efforts to protect these qualities.



Above: Susan Island 1945. Future nature reserve located at further end of island. Note cleared farm land on river floodplain. Source: Charles Pratt, State Library Victoria

Below: The island more recently showing the Nature Reserve and Grafton. Taken from Newsletter #163, 2019 of The Clarence River Historical Society Inc



Reference: Peter J Ardill. 'Colonial and twentieth-century management of exotic species threatening intrinsically valued indigenous flora: Susan Island, Lumley Park, Broken Hill', *Australasian Plant Conservation* 28:2 (September – November 2019) 26.

Sydney - Parthenium weed alert

Parthenium weed *Parthenium hysterophorus* is a Weed Of National Significance (WONS), and is regarded as one of the worst weeds in Australia because of its invasiveness, potential for spread, and economic and environmental impacts, being mainly a weed of pastures and crops. It is widespread in Queensland with sporadic infestations reported in NSW. It can cause severe allergic reactions in people and health problems in dogs and livestock. Other common names are bitter weed, carrot grass and false ragweed.

Recently the first incursion of Parthenium weed was recorded in Sydney. It was found in an urban compost heap by a Sutherland Shire Council invasive species officer in Engadine (southern Sydney) and reported to DPI Biosecurity. This is the first recorded incursion of parthenium weed east of the Great Dividing Range.

The weed could be brought into NSW in contaminated soil, seed, grain and hay if proper biosecurity procedures are not followed. NSW DPI State Priority Weeds coordinator, Nicola Dixon, advises Sydney residents to look for the weed in their local area, especially after rain. Inspect roadsides and areas with bare soil, where soil or compost have been delivered or where earthworks

have taken place and check areas where animals have been fed hay, grain or bird seed.

Anyone who suspects they have seen parthenium weed should note the location and call the **NSW DPI Biosecurity Helpline, 1800 680 244**, or their local council or Local Land Services with the details for identification and assistance.

More information:

Weed profile: <https://weeds.org.au/weeds-profiles/>

For control and biosecurity information visit NSW WeedWise visit: weeds.dpi.nsw.gov.au/weeds/partheniumweed

Right: Parthenium weed *Parthenium hysterophorus* is a Weed Of National Significance (WONS). Keep an eye out for infestations.



AABR Involved in Economic Stimulus Plan

AABR is one of some 70 conservation and farming groups who have written to the Prime Minister calling for \$4b COVID-19 economic stimulus measures for conservation and land management. The groups included national and state organisations.

In the letter – initiated by PEW Charitable Trusts - it was noted that “Investment in a jobs-rich conservation and land management program, as part of broader economic stimulus measures, presents important opportunities for safe, meaningful and socially beneficial work during the period of economic crisis, while leaving enduring benefits for the environment, tourism and farm businesses.” said the letter to the Prime Minister.

“The conservation and land management sector is ready to be part of the ‘bridge to recovery’ and can take on an expanded workforce once social distancing measures are eased. During the period of economic recovery, there is scope for tens of thousands of skilled and unskilled workers to be employed in the conservation and land management sector in roles that are:

- practical and labour intensive;
- located in both regional and metropolitan areas;
- appropriate for temporarily repurposing existing workforces which are under pressure, including tradespeople and workers in the tourism and small business sectors;
- contributing to building Australia’s natural capital, through helping improve land condition and resilience;
- supportive of long-term sustainability of food and fibre production;
- will not create long-term structural commitments in the budget.”

The proposal put forward is for a \$4 billion combined federal and state economic stimulus package. This would provide jobs to 24,000 workers at its peak to undertake practical conservation activities such as weed and pest control, river restoration and bushfire recovery and resilience.

The proposal also states that a package should “capitalise on existing organisational and land management capabilities across the non-profit sector, private sector and local, state and federal government.”

AABR has also put in two submissions for possible projects under this funding should the proposed package be successful.

One of these is where AABR is part of a consortium with partner organisations involved in preparing the *National Standards for the Practice of Ecological Restoration in Australia* to facilitate the use of skilled ecological restoration contractors/consultants to provide quality assurance for environmental appropriateness in cases where the proponent organisation does not have that capacity in-house.

A second proposal, from AABR alone, is to get additional regeneration trainee workers to be absorbed by existing regen businesses, with the funding going to the current clients (councils and NPWS) who could expand existing, well planned programs. AABR hopes to make the role of existing regeneration businesses stronger.

Volunteer needed to progress DGR status for AABR

AABR is progressing the adoption of a national structure to more efficiently accommodate its expanding membership and growing relationships across the States. Once the national structure is in place AABR will be pursuing Deductible Gift Recipient (DGR) status, to allow us to fundraise across all jurisdictions and provide tax incentives to do so.

If you would like to volunteer your time or expertise to support AABR to progress DGR status please contact Suzanne, admin@aabr.org.au, 0407 002 921, to chat about what is required and the timeframe.

Renewal of Permit 9907 for pesticide use in NSW

Pesticides include herbicides, fungicides, insecticides, fumigants, bactericides, rodenticides, baits, lures and repellents. Pesticide use in NSW is regulated by the NSW Environment Protection Authority (EPA), and by the Commonwealth Australian Pesticides and Veterinary Medicines Authority (APVMA).

The APVMA controls which pesticides are registered and sold in Australia. Registered pesticides must be used according to the label. However, bush regenerators carry out work with ‘off label’ uses under a permit from the APVMA. PER9907 is a permit to allow minor use of agvet chemical products for control of environmental and noxious weeds in areas of native vegetation, non-crop areas and open public spaces

This permit expired on the 31st March 2020, and has just been renewed. It is now stated as being in-force from 1 APRIL 2007 to 31 MARCH 2025 for persons generally. The permit can be viewed at <https://permits.apvma.gov.au/PER9907.PDF>

Updates for Early Invader Manual

The Early Invader Manual for Victoria produced as part of the project WESI: Weeds at the Early Stage of Invasion also publishes regular updates.

The Update issue #18, 14 February 2020 has a feature on weed management and fire. There is a brief summary of the influence of fire on weeds, and weeds on fire and the benefits of fire for weed management. There are also links to useful fire and weed resources. To download updates and the manual, go to <https://www.environment.vic.gov.au/invasive-plants-and-animals/early-invaders>

Agricultural Chemical Skill Set

TAFE NSW is now delivering the new AHCSS00074 Agricultural Chemical Skill Set. Essentially the Skill set is comprised of two units:

- AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases -**this one is new**.
- AHCCHM304 Transport and store chemicals

This skill set will be offered as part of the Cert 2 or Cert 3 of the Conservation and Land Management qualification (which may get a new title) or it can be offered as a commercial course where participants complete just the two unit Skill Set.

TAFE will of course contextualise the delivery to the Conservation and Land Management industry needs.

Chemcert training

Chemcert have been and will be delivering the course online.

Korinderie Ridge Bush Regen Week - will it happen this year?



The Korinderie Bush Regen week is a wonderful opportunity for like-minded visitors to join with locals to progressively remove lantana on the Korinderie Ridge property in exchange for a wonderful experience of camping and camaraderie. It is usually held in the first week of August each year. However it is uncertain whether this year's event will go ahead due to the lingering COVID-19 risk. (Watch this space.) If it does, it may be a camping and self-catering affair or a smaller event just for residents without meal sharing - it all depends on how the 'curve' is going come August. But if it does not go ahead as a public event this year, be assured that the Korinderie community is planning to make the 2021 event a bumper year!



Above: Many regulars come to Korinderie each August but it is unclear whether we will be able to run it this year due to the pandemic. Whatever happens, the Korinderie community will keep working on the corky passionfruit discovered during last Regen Week!

Enquiries to Nadia 0432 660 717

or regenweek@korinderie.org.au

Also join the [Korinderie Regen Week facebook page](#) and check out the [Korinderie website](#) for updated gallery of photos of past years' events.

Korinderie is located on the far north coast of NSW

Crowdy Bay National Park

In November 2019 Crowdy Bay National Park on the mid north coasts of NSW had 84% of the park burnt. Thankfully several patches of littoral rainforest were saved.

Sadly in this 41st year of the park's volunteer bush regeneration program, the annual camp which was to be held in May 2020 has been cancelled until further notice.

The good thing is that since the beginning of the year our local area has received almost two-thirds of its annual rainfall. We are witnessing swamp habitat filled to the brim, a sight that hasn't been seen for at least twenty years. With that amazing resilience of the Australian bush, regeneration began before the first rains



Photo: Suzanne Pritchard

arrived, with widespread growth of small wildflowers and a brilliant display of Christmas bells. Grass trees, eucalypts and paperbarks are now sprouting madly. Diamond Head is a carpet of green. The wildlife population has been decimated and we will look forward to repopulation.

Luckily many of the birds have found refuge in the heavily vegetated area of Dunbogan just to the park's north.

Only a few bitou bush plants have emerged so far in the large area that has been intensively treated over recent years. I expect a different story in other areas. NPWS is currently employing a contractor using funds from the annual pest species budget and are awaiting some government funding. We have also applied to the Foundation for National Parks & Wildlife for funding. I will be looking forward to the reinstatement of our program including the help of AABR members, whenever that will be.

Our dedicated band of volunteers did manage to undertake one activity just as all NPWS volunteer programs were closing. The fire exposed the most unbelievable amount of rubbish, 99% beer bottles many of which had shattered in the heat. We have evidence that the rubbish deposit dates to at least 1963!

Sue Baker, March 2020

NPA Mid North Coast Branch, Bush Regeneration Project Officer



Above: Rubbish which was exposed by fire and collected by the volunteer group at Crowdy Bay 2020 Photo: Sue Baker

Book Reviews

Australian Rainforest Seeds

A Guide to Collecting, Processing and Propagation

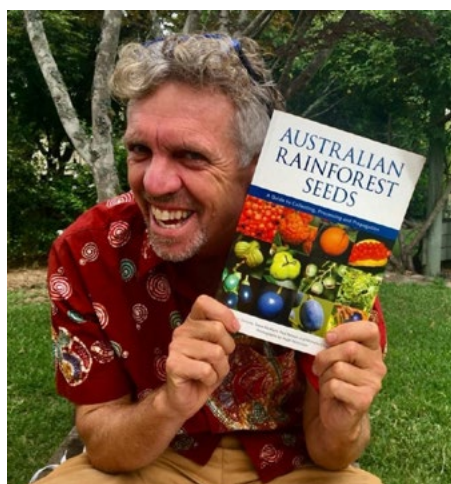
Authors: Mark Dunphy, Steve McAlpin, Paul Nelson and Michelle Chapman

Photographs: Hugh Nicholson

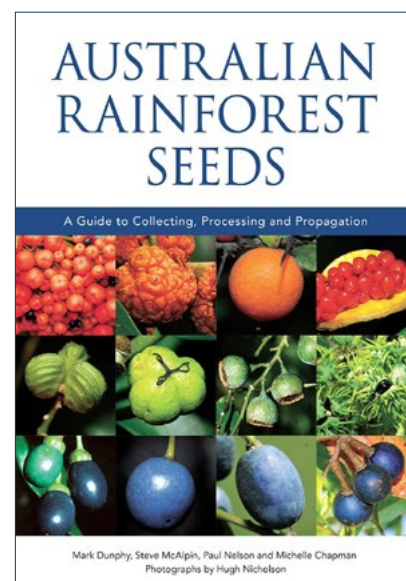
Twenty-two years ago, when we started out as a rainforest seed collection business in SE QLD, a book like this would have been very, very, very handy. For many decades many of us have been building the knowledge base of identifying, collecting, growing and revegetating subtropical rainforest plants. Through trial and error, the secrets of collecting, cleaning and germinating rainforest seed have been discovered for many species ... although this has involved lots of walks through tick and leech infested forests, fermenting of fruits that produce some very interesting odours...getting the odd bit of Jagera hair in the eye etc...

Now at last the secrets of rainforest seed are revealed thanks to the amazing team of Mark, Steve, Paul, Michelle and Hugh, in this long overdue book, that focuses on literally where it all begins for rainforest restoration, with the seeds.

This book is a boon for new and old seed collectors / nursery folk, with over three hundred species covered. The format provides space for 2 species per page, with details that include name, image, fruit and seed type, fruiting period, collection, processing, sowing and germination details. I must admit some bias, but I just love photos of fruit and seed and this is a standout publication with photographs primarily supplied by renowned rainforest plant photographer Hugh Nicholson.



One of the authors, Mark Dunphy with the book.



Approximately 80% of this text is dedicated to the 300 individual species covered, but it also includes so much more general information about rainforest seeds, in chapters on Biology and Ecology; Collecting; Processing; Storage and Propagation. Technically this book, literally writes the book on rainforest seed and their treatment, being the first of its kind. This relatively specialised field of rainforest seed treatment has a language all of its own and in it you will learn about Dehiscent, Dormancy, Macerating, De-winging, Wet Composting and much more.

As with so many CSIRO publications, this book is a standout piece of knowledge, accessibility and beauty. A must have for anyone restoring rainforest in Northern New South Wales and South East Queensland.

CSIRO Publishing

ISBN: 9781486311507 Paperback \$49.99 216 pages | 245 x 170 mm

Also available as ePDF and ePUB from eRetailers

Reviewed by Spencer Shaw, Brush Turkey Enterprises 6/02/2020

The AABR Broken Hill Collection

Documenting our Restoration History

All those who gathered at Broken Hill in September 2017, to celebrate the Broken Hill regeneration area and the work of Albert and Margaret Morris and their colleagues, will be pleased to learn that the Australian Association of Bush Regenerators (AABR) has recently established an archive of the regeneration area items at Broken Hill. Housed at **Outback Archives**, Broken Hill City Library, and known as the **AABR Collection**, the archive documents the history and ecological significance of the regeneration area project and also the more formal landscaping work of Albert Morris.

Keenly welcomed by the librarians at Outback Archives, the archive primarily consists of articles, books and photographs, and is available to both researchers and the general public. Further additions are planned. In particular, the archive emphasises the distinction between the landscaping work of Albert Morris,

which was characterised by tree planting, and his ecological restoration work in the regeneration area, which predominantly employed natural and assisted regeneration techniques, and little in the way of irrigation and planting works (although the latter form of works are still erroneously much featured in some accounts of the regeneration area project!).

Members who participated in the 2017 events may be in possession of material, particularly photographs of environmental or historical significance that can be accurately provenanced and labelled, that they would like to copy and donate to the archive.

Please contact AABR Newsletter manager Louise Brodie (newsletter@aabr.org.au) with your enquiries.

Peter Ardill

Fire Country

How Indigenous Fire Management Could Help Save Australia

Victor Steffensen

This book is not only about cultural burning, but a story of how the author has been given the knowledge of traditional burning to pass on to others and enable the broader community to use it as a way to improve our land management.

During the past summer, watching the hot fires burn relentlessly across the landscape over such a long period of time caused many of us deep distress. The loss of wildlife was seen as an horrific outcome by the broad community, and the fires and smoke affected many, including those who were not in the vicinity of the fires.

Surely we must change how we do things. After two centuries of questionable management of land, water and fire, with wholesale clearing and some farming practices badly affecting the environment and even encouraging desertification and climate change, we are overdue for a rethink. Currently, there is talk about now being the right time to reset how we do things, with much of our way of life challenged by fire, floods, and now a pandemic. Can we seize this opportunity?

Victor's engaging book is timely, allowing his vast knowledge of indigenous burning to be passed on to a wider group of people. It is written as though you were sitting by a campfire or standing in the bush listening to a yarn. Victor takes us on his journey starting as a boy in north Queensland where his first brush with fire was lighting up a pile of banana leaves in the backyard! His story tells us how he went to Laura in lower Cape York where he met the elders, Poppy and TG, who passed on their knowledge of traditional burning, through to today when a large audience is now increasingly receptive and learning about these things.

He describes different vegetation types, reading the landscape and how to burn in ways which work with the land. Bush regenerators and those working with vegetation and some styles of farming have an understanding of reading the land, but the depth of knowledge about cultural burning is new to most of us. I found the descriptions of land management in the book talked about treating the land with respect and demonstrated a wonderfully gentle approach.

He talks about the sort of things which indicate the ideal time for burning, such as running your hand through the long grass to feel the moisture level. Other considerations include how and at what time animals use the land for breeding and food.

Frustration with formal processes and the patience required to deal with these is also part of the story, plus ways to move forward not only for cultural burning, but empowering indigenous groups to build connections with their culture.

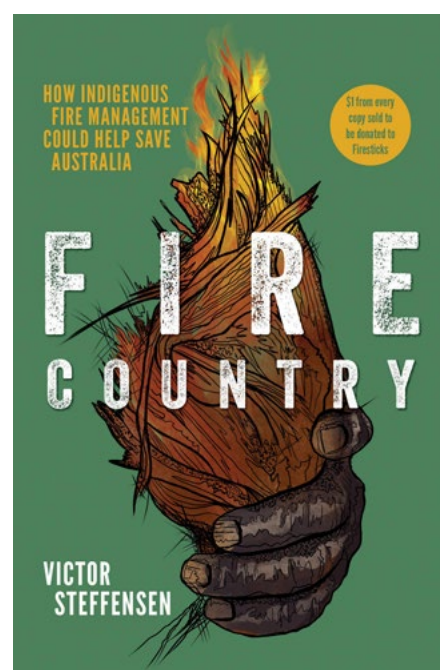
Let's hope we can make some changes. Definitely worth a read!

Learn more <https://www.firesticks.org.au/>

Publisher: Hardie Grant Travel Published: 18 February 2020

ISBN: 9781741177268 240 pages RRP: \$29.99

Reviewed by Louise Brodie



The Allure of Fungi

Alison Pouliot

Alison Pouliot knows a lot about fungi, and is keen to share her knowledge with enthusiasm. As well as workshops she has a great photo library and has brought together her knowledge and photos in this book.

Rather than looking at fungi from a purely scientific aspect, the book contains her personal anecdotes and as well as meeting fungi, there is the history and stories about what some fungi mean to different cultures. The macrophotography is stunning.



CSIRO Publishing

ISBN: 9781486308576 Paperback
September 2018 \$ 49.99 280 pages | 245 x 170 mm

Also available as ePDF

Visit **Alison's website** to see spectacular photos. Check out her workshops – some of which are currently available on-line.

<https://alisonpouliot.com/>

Field Guide to the Frogs of Australia

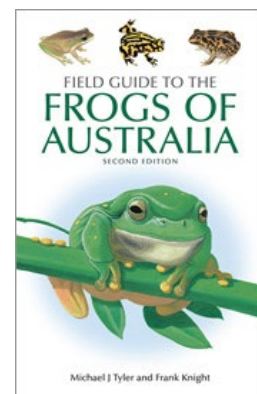
Second Edition Michael Tyler, Frank Knight

This second edition of *Field Guide to the Frogs of Australia* provides fully updated accounts of all the known frogs of Australia. There are 248 species within the five native frog families: Hylidae, Limnodynastidae, Microhylidae, Myobatrachidae and Ranidae. Also included are the introduced Cane Toad and nine 'stowaway' species that have arrived in Australia.

CSIRO Publishing

Paperback March 2020 | 49.99
ISBN: 9781486312450 | 208 pages | 230 x 148 mm

Also available as ePDF and ePub from eRetailers



What's happening

The COVID-19 pandemic has resulted in events being postponed.

The new dates for some events are below Put them in your diary.

**Wednesday 11th
to Friday 13th
November 2020**

National Landcare Conference

Preparation is underway for this conference and abstracts are encouraged. However COVID-19 developments are being closely monitored.

Where: International Convention Centre, Darling Harbour in Sydney, NSW.

Information; visit the [website](https://landcareaustralia.org.au/national-landcare-conference-2020)

<https://landcareaustralia.org.au/national-landcare-conference-2020>

**Wednesday 19th and
Thursday 20th May
2021**

(Postponed from 2020)

Nature Conservation Council's 2020 Bushfire Conference

Cool, Warm, Hot: the burning questions

Where: NSW Teachers Federation Conference Centre at 37 Reservoir Street, Surry Hills, Sydney, NSW.

Information; visit the [website](https://www.nature.org.au)

contact (02) 9516 0359 or email
BushfireConf2020@nature.org.au

**Sunday 10th to
Wednesday 13th
October 2021**

22nd Australasian Weeds Conference

(The Weed Management Society of South Australia (WMSSA), on behalf of The Council of Australasian Weed Societies (CAWS), will be hosting the 22nd Australasian Weeds Conference (22AWC) at Adelaide Oval.

Note that abstract submissions have re-opened.

More information at <http://wmssa.org.au/22awc-program/>

Monday 10th to Thursday 13th May 2021

Society for Ecological Restoration Australasia (SERA) Conference Restoration Through Traditional Knowledge

Where: Darwin.

Information; visit the [website](https://www.sera.org.au)

Submit proposals for workshops and sessions by Friday, 6th November 2020.

Abstracts by Friday, 11th December 2020

Registration closes Friday, 30th April 2021 (Early bird closes: Friday, 26th March 2021)



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Victorian Committee

Enquiries please email Kylie at vicbranch@aabr.org.au

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 Centre

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Membership fees

Individuals \$30 (unwaged \$15)

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

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

Government \$60

Not for profit \$30 (or \$0 with newsletter exchange)

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