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Maritime grassland restoration at Fingal Head

A trial plot where buffalo grass was sprayed and sashed. After persistent follow up about 90% cover is regenerating native species including prickly couch *Zoysia macrantha*, native violet *Viola banksii*, *Lobelia anceps*, blady grass *Imperata cylindrica*, *Plectranthus cremnus* and native rats tail *Sporobolus sp.* Very small numbers of a few grassland forbs (including golden everlasting daisy *Xerochrysum bracteatum*, *Evolvulus alsinoides*, and *Chamaecrista maritima*) were planted. Photo: Keiran Kinney. See story page 10.



President's Perspective

Hi all,

I'm pleased to be able to serve AABR during the coming year in the role of President – following on from the outgoing President Matt Springall, who will continue his activities in the role of Vice President. Thanks goes to Matt for his work in recent years, but thanks especially goes to the other outgoing office bearers and committee members, Heather Stolle (Secretary) and Danny Hirschfield (Membership Officer) who have put in many years of service in those roles and will be serving AABR in different capacities this year. So I know I speak for all of us when I wholeheartedly thank Danny and Heather for their long and generous service to keeping AABR functioning and flourishing over the years.

The need for committee reshuffles due to long service also marks a time of potential change for AABR; and the recent AGM confirmed the setting up of a working group to examine the parameters of such change and to develop a discussion document for taking to members during a period of consultation. (See snippet opposite and last issue's article on proposed changes.)

The level of change that is being considered is quite radical for AABR—so it is beholden on all members to pay attention to the issues at hand and have a say. We need to consider carefully how we might successfully and securely transfer AABR's mission to the next generation, in a context where ecological restoration is becoming more prominent in mainstream natural areas management. How do we both protect the unique 'brand' of bush regeneration, yet also ensure that the practice of regen is not sidelined as a worthy curiosities or lost in an integrated 'restoration' approach that pays lip service to the importance of assisted regeneration?

My personal views are mixed—so I am looking forward to vigorous discussion among the working group and among members. On one hand I see that a potential solution might be to renew and redefine our own practice as a package of more integrated, holistic approaches strongly predicated on assisted regeneration wherever possible, so that we can establish a model that we would like to see emulated by other restoration-oriented organizations. (The alternative, it seems to me, is to wait for others to define this for us and set an unknown standard, which may, as I say, sideline the practice of regeneration and lead to a moribund organisation.) On the other hand, I can also see that broadening our membership and scope without strong maintenance of the 'brand' of regen may be risking losing what is our greatest strength, our reputation for skill and experience in on-ground triggering of recovery processes ... hence the pre-eminent need to establish and expand(should we agree to a change at all) a very robust and ongoing accreditation system based on our current standards.

Whatever changes lie ahead, it is the committee's intention to maintain—with your help and guidance—the mission of finding the best way of fostering, encouraging and promoting sound ecological practices of bushland management by qualified people.

Cheers

Tein

Tein McDonald

From our outgoing president

Hi Folks,

This past year has seen some introspective looks into how AABR operates and progresses into the future in the biodiversity restoration and conservation world. The industry that has built around the restoration and management of natural areas has changed and grown from what it was when AABR first formed nearly 25 years ago. Land managers across the country now see ecological restoration as an important part of biodiversity conservation and employ people across a wide variety of positions using a broad selection of skills. The importance of bush regenerators as on ground practitioners in ecological restoration projects that use concepts of resilience and assisted natural regeneration, is just as vital today as it has always been, however in my experience is still too under valued, under utilised and poorly understood across a large proportion of this sector.

At the moment to be a member of AABR you also need to meet the accreditation in terms of experience and qualifications in on-ground works, or to complete a non-standard assessment. For many new to this work or not involved in the on-ground works (and many actively involved with on ground works, truth be told) this has been seen as elitist and/or onerous and has been a limiting factor for attracting and boosting our membership. This amongst other reasons is why we're putting the proposal to the membership to separate accreditation from membership in the hope it will open up membership to a wider section of the industry, to those generally excluded such as bushland managers, provenance nursery operators, and ecologists, but who have more than a significant input into natural area restoration. Part of this is to even look at AABR's name and raise the questions of our own identity, the logo, and even perhaps its relationship with other similarly focused bodies such as Society for Ecological Restoration International (SERI) and Restoring Biodiversity Industry Association (RBIA). Ultimately we're keen for a stronger, more representative organisation that can link science, and in particular, restoration ecology, with practitioners without losing the focus on assisted natural regeneration. As has been said many a time before, the practice of bush regeneration has often preceded the science and it seems that this is a situation that can be slow to change.

The day to day running of AABR does not happen without a strong and active committee and support from its members. For over 10 years most of the work on the committee has been done by 3 office bearers, being Heather Stolle as Secretary, Paul Ibbetson as Treasurer and Danny Hirshfeld as Membership Officer and without their efforts, dedication and passion for our natural environment AABR could not have achieved what it has over recent years. After a long service with AABR both Heather and Danny have stepped down from their positions, with Jane Gye taking on the Secretary role, and other committee members sharing Danny's role in looking after memberships (and hopefully eased with a more modern system of paying and receipting membership renewals). We're fortunate to have Tein McDonald taking on the President's position, with her wealth of experience in the industry, and I'll be sticking around as Vice President. I'm excited at the opportunities for AABR in 2011 and wish to give a big thanks to all committee members, especially Heather, Paul and Danny, for their valuable contributions over many years.

Matt Springall

AABR AGM supports separating accreditation from membership

AABR's AGM on Sunday 5th December, was well attended and a consensus motion was passed to set up a small working group to consider options for:

1. separating AABR membership from accreditation
2. broadening AABR activities
3. promotion and renewal
4. possible name change with minimal change to the AABR brand (logo and aims)

People who provided feedback prior to the AGM, were also positive about the proposed changes.

We chose not to have a guest speaker this year, to allow time to consider options for AABR's future. Our newly elected president Tein McDonald led the discussion. It was very positive, identifying that such a change would allow AABR to open up membership to a wider range of supporters who are not in a position to actually meet the training and experience criteria of membership. This would allow stronger partnerships with other fields including agency staff and academics.

Because this may also provide an opportunity for AABR to expand its scope, and influence restoration practice more broadly, the working group was asked to consider what

implications this change might have, and how we can retain assisted natural regen as our core business. They were also asked to consider what renewal and promotion opportunities could be tapped into as part of such a change.

A change of name was discussed. Bush regeneration can have a dryland ecosystem focus, and a more general term such as ecological restoration may better reflect what we are about, and be more inclusive, e.g. for those working in rainforest and wetlands. The meeting was supportive, provided this could be done with minimal change to the 'AABR brand' (people felt it would be very important to retain the logo and acronym so that the organisation would still be very recognisable as 'AABR' both in form and emphasis).

The working group includes Danny Hirschfeld, Tein McDonald, Jane Gye, Matthew Springall and Peter Dixon, with another group of members acting as a sounding board for the first draft of a report to the committee and, ultimately, members. The working group is aiming to prepare a discussion document within a few months, and to then engage in a full consultation process with members prior to developing any resolutions on notice to change AABR's constitution at a well-advertised general meeting.

Vale Chris Farmer

AABR lost one of its founding members in October when Chris Farmer passed away in October.

As well as his many conservation achievements, Chris was a talented painter, photographer and poet.

Throughout the 1970s and 1980s he was very active in the conservation and regeneration of bushland on Sydney's North Shore, particularly in the Denistone and Eastwood area. He was a driving force in a number of local groups, and was a Trustee of Lane Cove River Park.

But his conservation efforts weren't limited to Sydney. His brother Richard described how "between 1985 and 1990 Chris made about 50 trips to Lightning Ridge. He formed the Lightning Ridge Greening Group and submitted a proposal which was approved by Walgett Council for an extensive tree planting project. Over this period 6,000 gum trees and local Bimblebox trees were planted along the roads and in the parks and playing fields of Lightning Ridge".

At the funeral Chris' family collected donations to AABR in lieu of flowers.

Thanks from AABR to all those who contributed—this will help us continue Chris' legacy of restoring and protecting of bushland.



What AABR achieved 2009-10

From a report prepared for the AABR NSW AGM, December 7 2010. For the period between AGMs (October 2009 to December 2010).

Initials of people mentioned (Committee + etc): DH = Danny Hirschfeld (Membership Officer); ED = Elisabeth Dark (Committee Member); HS = Heather Stolle (Secretary); JG = Jane Gye; LB = Louise Brodie (Newsletter Committee); MD = Mike Delaney (FNCSEQ Committee); MS = Matt Springall; (President); PD = Peter Dixon (Enquiries Officer); PI = Paul Ibbetson (Treasurer); TM = Tein McDonald (FNCSEQ Committee); TB = Tim Baker; VB = Virginia Bear (Newsletter Editor & Committee); WK = Wendy Kinsella (Committee Member).

Projects:

- Nov 2010 AABR comments on TAFE training package (AHC10, Agriculture, Horticulture and Conservation and Land Management 2010) and Industry needs. **DH, MS & JG.**
- AABR submission to AGRIFOODSKILLS COUNCIL on CLMTP - Nov 23 2009 **TMc & Ian Perkins.**
- The committee considered ideas such as changing the membership structure to separate accreditation from membership, considered affiliation with the Society for Ecological Restoration International, and considered ways of reducing the work required of the membership officer.
- AABR supports weed reform in NSW—the Invasive Species Council has prepared 'Stopping NSW's Creeping Peril: A community call for action on weeds' to outline the weed reforms needed for NSW. This has been prepared by working with experts on weeds and reviewing the scientific literature, current NSW laws, policies and funding.
- Weed management co-ordination. **MS, JG, and Nancy Pallin** (AABR member) met with Paul Downey and Frances Pike, Sydney Weeds Project Officer 28 Sept. 09—discussed approaching RTA and other utilities.
- Volunteers Coordinators Network (Bushcare Coordinators) quarterly meetings—occasional attendance by **MS.**
- In May 2010 Restoring Biodiversity Industry Association. and AABR committees met (some people are on both committees) with **Tein** attending to discuss possible ways forward for both groups.
- Sydney Biodiversity Managers Network: Attendance by **MS & TB.**
- Many of AABR's members and subscribers are either members of Bushcare or Landcare Groups or are VCN members. After discussion with a number of Volunteer Coordinators, AABR has decided to form a Volunteer Program Working Group. The Group is to define its agenda, but early identified actions are to explore the idea of the development of a Standard for Care programs based on environmental and Volunteer Management Best Practice, to explore AABR accreditation of Care Programs that meet the Standard, a Care program membership category that will allow programs to access AABR information for publication in newsletters (could help overcome the current duplication of effort) and identifying ways that AABR could help Bushcare/Landcare Volunteering. **PD & MS** (see Positions with other organizations)

Field Trips

- July 14 Wednesday—Remnant Sydney Turpentine Ironbark Forest endangered ecological community at Yaralla in Concord West NSW.
- August 22 Sunday—Eastern Suburbs Banksia Scrub – Randwick Environmental Park, Randwick NSW. Locked away on Defence land for 100 years, this 13 ha area of remnant bushland near the heart of Sydney was turned over to Randwick Council for management as a natural area.

Workshops:

- July 10 & 11 Saturday & Sunday—Eucalypt identification workshop with Van Klaphake.

Seminars:

The north coast NSW/SE Qld group held a mini-seminar on October 17th at Pottsville Environment Park (see page 11).

Awards supported:

- Beverly Blacklock Prize of \$100 for the outstanding student in Cert III Conservation and Land Management—Natural Area Restoration (i.e. Bush Regeneration) 2009 at Ryde TAFE. Kate Low presented prize at graduation ceremony.
- New Award called the 'Mark Foster Memorial Award' of \$50 will be annually awarded by AABR to a graduating TAFE, Ourimbah Campus Certificate II or III in Conservation Land Management (Natural Area Restoration) student who has demonstrated an outstanding enthusiasm and genuine passion for the bush and bush regeneration. It does not necessarily reflect academic achievement but rather rewards a graduate who has shown a great 'feel' and keenness for bush regeneration and is able to inspire and motivate those around them. There is no age or financial restriction.



Publications:

Newsletter—editions 104, 105, 106, of the AABR Newsletter were published in print and electronically as a PDF.

Ongoing promotion of Robyn Buchanan's publication in association with TOCAL College, "Natural Area Restoration in Australia" included an AABR hosted picnic next to the Nepean River at Penrith NSW March 28 2010.

Positions with other organisations:

- NSW Environmental Trust Eco Schools Grants: Applications assessed by **ED**
- NCC's monthly Bush Fire Advisory Committee meetings (**JG**).
- volunteer Bushcare Training Industry Reference Group
- Parramatta River Catchment Group (**TB**).

Regional Sub-Committees:

Hunter Sub-Committee formed in 2008.

Far North Coast NSW / South East Queensland Committee have their own program of non-standard assessments

Website:

The website continues to be uploaded and updated on information, eg. references, eco journals, volunteer bush regen holidays, links to events of other environmental organisations, largely performed by **PI**.

- AABR 'Professionals'—members advertising their businesses on our website

- Bushjobs
- All recent AABR newsletters (previous one is placed on the web when a new one is released)
- Danie Ondinea's fauna items
- Promotion of bush regen and the new federal award system
- AABR granted Landcare NSW Inc a link to the AABR website.

Promotion of bush regeneration at public events:

- Royal Easter Show Bushcare Stall: AABR assisted staffing and provided info sheets.

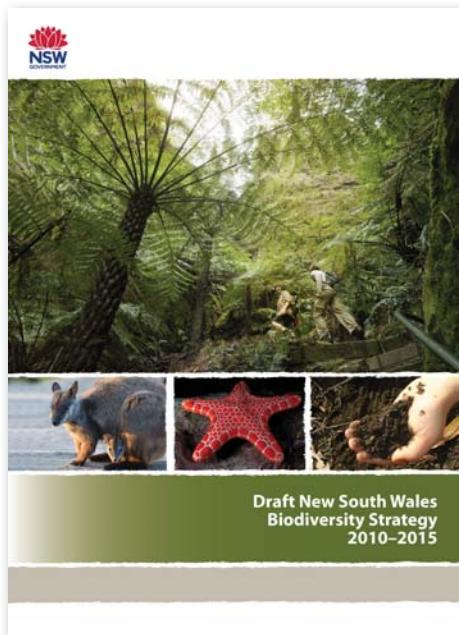
Other member benefits

- AABR members have 10% discount for the journal 'Ecological Management & Restoration'
- 10% discount on 'Natural Area Restoration in Australia.'
- Volkswagen Group Australia: AABR registered so that members can arrange trade conditions.
- The **Australian Museum** in Sydney is holding a series of exhibitions and events around the theme of Biodiversity in 2010. AABR members are eligible for a 20% discount on entry to some of these events.
- AABR obtained discount vouchers for AABR members/subscribers to Sydney Aquarium, Sydney Tower, Sydney Wildlife World. Featherdale Wildlife Park is now offering AABR members a 10% discount on adult and child (not family) tickets. Members need to show a current (ie paid for the current financial year) membership card.

Comments invited on Draft NSW Biodiversity Strategy 2010-2015

The Strategy aims to coordinate and guide biodiversity conservation in New South Wales for the next five years.

The closing date for submissions is 5 pm on Friday 21st January 2011. The draft Strategy, other supporting documents and submissions information is available at: <http://www.environment.nsw.gov.au/biodiversity/nswbiostategy.htm>



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Ecological Management & Restoration
Linking science and practice



History of ecological restoration in Australia

Early emerging restoration practice

The lights of ecological restoration in Australia, as elsewhere, have turned on one by one in Australia, starting with the isolated on-ground efforts of concerned, visionary individuals. Arguably the earliest recorded effort to rehabilitate a degraded ecosystem appears to be the fencing, in 1925, of a 390 hectare reserve at Koonamore Station, South Australia by Professor TGB Osborn of Adelaide University (Hall et al. 1964), although the original purpose may have been more for ecological curiosity than restoration of the ecosystem for its own sake. The next recorded cases emerge at opposite ends of New South Wales (NSW) in the mid-1930s with the efforts of Ambrose Crawford (in subtropical Alstonville) and Albert Morris (in arid Broken Hill) (McDonald 2008). Crawford was motivated to conserve and repair a sample of the local rainforest he had a close attachment to; while Morris successfully reinstated local desert vegetation communities around the mining town of Broken Hill to protect it from prevailing dust storms. Morris's work was subsequently validated by a university-based evaluation (Pidgeon & Ashby 1941) and went on to influence mine site rehabilitation techniques in northern Australia (Webber 1992).

These cases were followed in the two decades immediately after World War II, by more widespread efforts to raise standards of environmental practice, efforts which started to reflect the emergence of different management sectors. Soil stabilization and revegetation (e.g. Breckwoldt 1988) work was carried out, for example, in the agricultural, water supply and extractive industries, partially in response to rising community expectations. The urban bushland 'regeneration' movement emerged in Sydney in the late 1960s in response to a growing public environmental consciousness. This work in urban areas saw the development of a minimal-intervention approach to assist the natural regeneration of native vegetation degraded by weeds, increased fertility and altered fire regimes (Bradley, 1971); modified approaches of which later spread to most of the cities and major towns in Australia (Buchanan 1989, Gye & Thomas 2007). Soon after, in the early 1980s, the growing community awareness of the value of native habitat spawned NGOs and extension programs such as Greening Australia, Land for Wildlife, Trust for Nature Victoria, Trees for Life, Landcare and others who largely work in agricultural areas. These groups helped direct a rising tide of willingness by governments and communities to address degradation by active revegetation and habitat reinstatement. The quickening of the pace of restoration-related activity provided a fertile learning environment for practitioners intent on broadscale (largely woody) revegetation and rescuing remnant vegetation and faunal populations from ongoing decline. The period was characterized by a plethora of local workshops and conferences and the formation of a number of specialist restoration associations in various parts of Australia, with many restorationists beginning to draw on resources from overseas workers and organizations, including the gradually internationalizing North American based organization, the Society for Ecological Restoration.

In the freshwater aquatic and marine sector, the 1980s to early 1990s saw increasing attention being given to issues of habitat loss and the introduction of legislation to prevent poor water

From the article 'A perspective on the evolving science and practice of ecological restoration in Australia'

Ecological Management & Restoration Volume 10, Issue 2, August 2009, By Tein McDonald and Jann Williams

Full article including references available online at <http://onlinelibrary.wiley.com/doi/10.1111/j.1442-8903.2009.00472.x/full>

quality across Australia. Some small-scale marine and estuarine restoration works were starting in this period, along with the beginnings of what were to later become the main tools of aquatic restoration, fishing regulation and the establishment of aquatic and marine reserves. A number of inquiries into the state of the aquatic environment (e.g. Cappo et al. 1998) were needed, however, before governments could take decisive action.

Early emerging restoration science

The nascent restoration practice that was proceeding apace during the 1980s and early 1990s drew largely on the existing ecological and biological information about Australian ecosystems, coupled with technical knowledge from horticulture, forestry, agronomy, soil conservation, hydrology (including salinity) and other fields. Around this time, a recognizable discipline of more specialised restoration ecology was also beginning to emerge. In Western Australia, for example, research to inform Alcoa's Jarrah forest minesite restoration was underway into local seed ecology, propagation, topsoil handling and other topics (see *Restoration Ecology* 2007 for a recent synthesis of this work). Issues of landscape fragmentation and its effects on fauna and flora were also becoming the target of research, particularly by CSIRO's Division of Wildlife and Ecology in WA, resulting in the 'Nature Conservation' book series, which raised considerable awareness of degradation and potential for restoration among researchers and managers (Saunders et al. 1987, 1993, Saunders & Hobbs 1991, Hobbs & Saunders 1993).

In Victoria, where severe decline of temperate grasslands was the subject of substantial community concern, restoration research was commencing (McDougall 1989, Morgan 1989, Lunt 1990). Similar work was occurring for native pasture rehabilitation in northern New South Wales (Lodge & Whalley 1989); with rainforest restoration science starting to emerge in north coast NSW and south-east Queensland prompted by forest logging debates (Webb & Kikkawa 1990, Lamb 1993).

Improving integration of science and practice

The sheer size of the interest in environmental work around Australia and the isolation of some management sectors and actors from others, meant that many on-ground works during the 1980s and 1990s were undertaken without an appreciation of the ecological processes involved. This is illustrated by early actions such as 'tree planting' (overlooking ground stratum degradation), 'target weeding' (overlooking complex weed ecologies), 'quick fixes' (overlooking potential for regression in complex systems) and 'technological fixes' (overlooking ecosystem processes). Projects were often characterized by

a desire to remove symptoms of degradation rather than addressing and countering its causes. Many of these issues could have been addressed with better dissemination and uptake of scientific research, greater resources for onground activities including training and a greater appreciation by the scientific community and funding bodies of the constraints and realities faced by managers. The need to better integrate science and practice across a range of issues was clearly apparent.

In the last 10 to 15 years, increases in cross-fertilisation between theory and practice and between 'management' sectors have seen a burgeoning of both science and practice and an improved integration of knowledge between them. This integration has been particularly enriched by contributions from a range of branches of environmental science including landscape ecology, conservation biology, community ecology, resilience theory, social theory, restoration theory and reserves theory.

Landscape ecology, community ecology and conservation biology have, for example, contributed an understanding of the need for restoration projects to consider the quality, quantity and configuration of habitats at landscape and population level to meet the needs of their multiple and interacting component species, particularly declining or threatened species (Hobbs & Norton 1996, Bennett et al. 1998, McIntyre et al. 2002, Lindenmayer & Hobbs 2007, Radford et al. 2007). Recent work is beginning to explore other aspects that need to be considered, such as the lag-times involved in the provision of habitat by revegetation and the impact of different management actions on these patterns (Vesk et al. 2008). Information from these areas of research is now actively sought out by managers working in the field of restoration planning and practice (Palmer et al. 1997, Pressey et al. 2007) and the topics are being incorporated into training at practitioner level (Buchanan 2010 forthcoming). Other actions that could enhance the interaction between the research community and practitioners, particularly aimed at increasing adoption of research findings, are provided in Lovett et al. (2008).

An understanding of community resilience and succession, and the importance of natural disturbance regimes, including the role of fire regimes, have increased restoration success (Young et al. 2005, Prober et al. 2008). While these theories have long been part of ecology and conservation management, appreciation of their special relevance to restoration has increased as a result of insights gained from restoration practice (McDonald 2000, Buchanan 2009, Clewell & McDonald 2009).

The social sciences have contributed to an understanding of the human dimension of land management (e.g. Briggs 2006,

Lovett et al. 2008), which is critical if restoration activities are to be successful and sustainable in the long term. Substantial innovation in field extension to landholders has been contributed by some agencies, drawing on the experience of NGOs (Mendham et al. 2007). The increased focus on natural resource management at the regional level has promoted changes in the models, approaches and theories used in extension (Millar 2007). The economics of market-based instruments has also featured strongly as a research topic with implementation of a range of models for landholder incentives providing an increased understanding of the value of these approaches (Morrison et al. 2008).

Progress has also been made in the development of decision support tools to assist the prioritization of both onground projects and the science that supports them (Joseph et al. 2009). This is an area where considerable potential exists for research as well as improvements in restoration practice, given the importance of prioritization in implementation at continental and landscape level (Wintle 2008).

As well as the above-mentioned 'process-based' research, improved links have been ongoing between researchers and practitioners involved in the restoration of specific ecological communities, whether it be tropical or subtropical rainforest (Gooseem & Tucker 1995, Kooyman 1996); rangelands and grasslands (Ludwig & Tongway 1996, Cole et al. 2005, Gibson-Roy et al. 2007); freshwater wetlands (Brock & Britton 1995, Roberts & Marston 2000); saline wetlands (Laegdsgaard 2006); riparian and freshwater aquatic restoration (Koehn et al. 2001, Arthington & Pusey 2002, Lake et al. 2007); and coastal and marine restoration (Little et al. 2005, Sleeman et al. 2005).

Steps to a stronger future

The emerging, mutualistic disciplines of ecological restoration practice and restoration ecology in Australia have demonstrated some very strong underpinnings and a growing sophistication, yet work in this area has really only just begun. Substantial work is needed to identify and attempt to fill a range of research gaps relating to the ever increasing restoration challenge; to embed monitoring, evaluation and reporting as a core part of restoration projects; and, last but not least, to improve restoration programmes themselves so that restoration goals can be more securely met. Improved communication between the research community, practitioners and policy makers underpins each of these areas. These topics are addressed in greater detail below. [In the original article].

Psst ... some hot news from EMR journal. Online practitioner summaries

We have heard from a reliable source that there is a format change planned for the EMR journal starting with Issue 1 next year. The reliable rumour is that EMR's short Project Summaries (many of which are bush regen-oriented) will be going onto a special EMR website 'hub' next year, allowing short summaries to be illustrated by photos and maps, and include live links to longer reports elsewhere or other online resources. (This won't cost the journal anything so it looks like it will be a freely available resource and will remain permanently online.)

Initially it looks like Tein McDonald will be editing these till the new platform is well established. So if you want to be one of the first projects to be showcased in the new format, email good 'before & after' photos to teinm@ozemail.com.au and she will send you a template for writing your own Project Summary. Any really great projects will then be in line for full feature treatment in the printed and online version of an issue of the journal.

Ed.

Myrtle rust—there is more than we thought

Matt Springall

As many of you may already know a plant disease new to this country known as myrtle rust was detected in a nursery on the NSW Central Coast in April of this year.

In laboratory conditions this rust has been found to infect all Myrtaceae species so far tested.

This has the potential to threaten not just some of our most widespread, iconic and best loved native plants, including eucalypts, bottle brush, lilypillies and tea trees, in their natural environments, but also the livelihoods of many people across a range of industries.

Until recent months it was thought to have infected only plants in nurseries and the NSW Department of Industry and Investment (I&I) has undertaken an enormous amount of work tracing plant sales and purchases to track down infected plants and carry out quarantine and eradication works.

In October it was unfortunately found in bushland reserves on the Central Coast and a huge effort was undertaken involving National Parks, Forestry, and Local Government staff with the help of local bush regenerators, to carry out control works.

This involved mobilising up to 40 people a day to track down infected foliage across over 50 ha of rugged bushland, tagging and spraying infected foliage with fungicide (not something you ever want to do large scale in a Nature Reserve)—a truly massive operation. Following weeks of gruelling work confirmed reports had come in of myrtle rust across a wide area of bushland on the Central Coast that now spans over 30 000 ha, including the Watagans and Olney State Forest. As you might imagine, this was devastating to all those that had worked so hard to eradicate this disease, and means that this is something we will unfortunately now have to live with and manage in the landscape.

From the extent of infestation in some of these reserves it is now quite clear that this has been present for over 2 to 3 years—much longer than originally thought. However the range of plants infected so far in the field (much of the information I've been getting is qualified with "so far" or "at the moment") is much smaller than those infected in lab conditions and, according to I&I, it doesn't appear to spread as easily as other rust species.

The main species affected in the wild so far appear to be *Rhodmania rubescens* (scrub turpentine) although the list is growing and does include widespread species such as *Melaleuca quinquenervia* (broad leaf paperbark). The Rhodmania on the Central Coast that have longer term infections are apparently dying, and at this stage it is still too early to tell what the long term impacts on many species will be.

With the change of strategy from an eradication program to long term management I would suggest that we now need to work towards an asset protection based approach to identify species and ecological communities most at risk with a realistic chance of keeping out the disease and implement appropriate controls.

There are some good basic hygiene procedures that can be followed, which bush regenerators on the Central Coast and surrounds have been working with for some time, but now is the time for all those working in and around our bushland to take some measures to prevent the further spread of the rust.

For those of you that have been working with phytophthora hygiene protocols you are already doing most of the effort to prevent the spread, however myrtle rust can be spread by wind and from contact, so there is a bit more to it, albeit reasonably straightforward. This would apply in particular to those that move between reserves, whether it be for work or for a bushwalk, especially across a large area and between the Central Coast and other areas. It would seem that many bush regenerators on the Central Coast feel they have been unfairly targeted for the blame for the spread, and I would agree that would be unfair as it has been quite clear from the outset that we are just one of many stakeholders that have an important role to play in addressing this problem. In the last few weeks I have been in touch with contractors, volunteers, mowing contractors, NPWS staff, bushwalking clubs and other groups to raise the level of awareness, and in the last couple of weeks I&I has acknowledged publicly the important role bush regenerators have played in the detection and control the myrtle rust.

So what can we do...

Please pass this information on, talk to your staff, colleagues, volunteers, local bushwalkers—do not assume that everyone knows about the issue. Become familiar with what the rust looks like, particularly on the Myrtaceae species you regularly work with, so that it can be identified as soon as possible. There is a great deal of information, including identification and prevention of spread, on the I&I website (see the AABR website for links).

If you find it, please report it immediately using the I&I hotline number 1800 084 881. In fact, if you look for it and are not finding it then this is useful also, especially if you have plants listed, such as Rhodmania, which are particularly susceptible. Check the new growth as it appears to show the rust first in many cases. We need to know the extent of spread of this disease and the more people looking the better. There is a good chance that it is more widespread than we know. As of yet I haven't heard of it in bushland south of the Hawkesbury River, though that doesn't mean it's not already here. I haven't heard exactly how far north and west it has spread but have heard of sites around Lake Macquarie and at St Albans. I've been checking many sites around Lane Cove National Park where I work and not found it—if everyone's checking their own sites we could get a good picture of its distribution.

Follow the hygiene protocols, including putting hats and gloves through the washing machine and washing down tools, boots, pouches with 70% methylated spirits (full procedures listed on the I&I website). I would suggest paying attention to items that may not be necessary to take into bushland, and even having one set of weed bags for each reserve or site. This is all about risk

management and so of course the more area you cover and the more sites the greater the risk. In some reserves this is going to be much easier than in others. For those of you who only work one or just a few sites this, too, will be easier to manage. And of course don't go bushwalking then take your backpack to work with you the next day. It does seem that the rust spores do not survive well if not on a living Myrtaceae host, but how long for exactly we're not sure, so prevention is better, as they say.

Sorry to all of you for being the bearer of bad tidings, but I'm sure you all appreciate the gravity of the current situation. As I've

said to many in the last few weeks, we all know about our worst, widespread weeds and the problems we deal with every day, but it can be the things we don't know about that could potentially cause us the most serious grief. I thank you for your efforts to help with this issue and you will find this is not the last word on myrtle rust. The known situation is changing quickly and as I write this there is a national meeting in progress to discuss how we deal with this into the future. I am very happy to discuss this issue with any of you and to take suggestions about how we best manage to protect our environment from myrtle rust and to get the most accurate information out to you.

Situation Updated: 07 Dec 2010 (from I&I)

Myrtle Rust has been found on the NSW Central Coast. It affects plants of the Myrtaceae family which includes many much loved native species.

NSW is working on behalf of the Commonwealth to manage Myrtle rust and control the extent and rate of spread.

In an effort to control the fungus a Quarantine Area has been declared on the Gosford and Wyong Local Government Areas (LGAs) effective from Friday 23 July 2010 on account of the presence of Myrtle Rust within these LGAs. Surveillance efforts are also ongoing in the surrounding areas including nurseries and bushland.

Myrtle Rust has been made a notifiable pest, which means that by law, you are required to report myrtle rust within 24 hours after first discovering or becoming aware of its appearance. Call the Exotic Plant Pest Hotline 1800 084 881.

Industry and the public are asked to learn how to recognise the fungus and report any suspected cases early, as well as practise good hygiene methods to restrict the spread of the fungus.

At present, severe infestation has only been observed on *A. flexuosa* (willow myrtle) cv. 'afterdark', *Tristaniopsis nerifolia* water gum and *Austumomyrtus inophloia* cv. 'aurora' and 'blushing beauty'.

The full host range of myrtle rust has not yet been determined and research efforts into the taxonomy and ecology of the fungus are ongoing.



Melaleuca
quinquenervia
infected leaf

What does it look like?

The rust can start as small purple spots on leaves. The mature spores are bright yellow. Older infection is duller yellow. Death of soft plant material may occur.

For more information

see the I&I website <http://www.dpi.nsw.gov.au/biosecurity/plant/myrtle-rust>

Ryde TAFE & the new CLM courses

Jane Gye, Danny Hirschfeld and Kate Low

From 2011, all nationally-recognised Conservation and Land Management qualifications will come under the new Agriculture, Horticulture and Conservation and Land Management Training Package (AHC10). This will replace the Conservation and Land Management Training Package (RTD02) under which many of us would have become qualified in the industry.

As part of the process of introducing the new training package and the qualifications within it, Ryde TAFE held an industry consultation day on 17 November 2010. This was a well-attended session presented by the Applied environmental management staff at Ryde, Kate Low, Agata Mitchell, Mark Walters, Rachel Yeomans and Phil Stewart. Representatives from a cross-section of the bush regeneration industry attended, including councils, contractors, teachers at other TAFEs, Catchment Management Authorities, NGOs and NPWS.

The aim of the session was to identify:

- The qualifications which the industry believes are needed by people employed within the industry, e.g. Cert III, Cert IV, Diploma, and
- The competencies required within each qualification, e.g. relating to OHS, plant identification, treating weeds, etc.
- Appropriate delivery and assessment strategies.

From the qualifications on offer within the new training package, the session felt that the following were most relevant to our industry:

- Certificate II – to a limited extent, e.g. for Bushcare volunteers
- Certificate III – the standard for bush regeneration field operators (and specifically identified as the appropriate qualification in the new award)
- Certificate IV – useful for those wanting to work as supervisors and in a range of local government positions.
- Diploma

Another aspect of the new training package is the raising of the "specialisations" within the old Conservation and Land Management Training Package to qualification level, i.e.:

Old qualification	New qualification
RTD30102 Certificate III in Conservation and Land Management (no specialisation)	AHC31410 Certificate III in Conservation and Land Management
RTD30102 Certificate III in Conservation and Land Management (specialising in Indigenous Land Management)	AHC31510 Certificate III in Indigenous Land Management
RTD30102 Certificate III in Conservation and Land Management (specialising in Lands, Parks and Wildlife)	AHC31610 Certificate III in Lands, Parks and Wildlife
RTD30102 Certificate III in Conservation and Land Management (specialising in Natural Area Restoration)	AHC31710 Certificate III in Natural Area Restoration
RTD30102 Certificate III in Conservation and Land Management (specialising in Vertebrate Pest Management)	AHC31810 Certificate III in Vertebrate Pest Management
RTD30102 Certificate III in Conservation and Land Management (specialising in Weed Management)	AHC31910 Certificate III in Weed Management
RTD30102 Certificate III in Conservation and Land Management (specialising in Conservation Earthworks)	AHC32310 Certificate III in Conservation Earthworks

Ryde TAFE has been delivering Cert. III in Conservation and Land Management (specialising in Natural Area Restoration) since 2005. The new Training Package has a different set of units of competency attached to this specialisation, and is now a much less useful qualification. The staff at Ryde looked hard to find enough useful units in this specialisation to make a meaningful course. In the end, Ryde TAFE proposes to offer the CIII in Conservation and Land Management as a qualification instead, without any specialisation. They feel that the new Cert. III in Conservation and Land Management qualification would better serve the industry and the natural ecosystems we are restoring using resilience, rather than the new Cert. III in Natural Area Restoration. This is a quirk of the national process to develop the new training package and was, to a large extent, out of TAFE's and AABR's hands.

Kate explained that Ryde TAFE proposes to drop Cert II as the entry point level for the industry. Cert III would become the entry level. The other courses would continue to be offered. Also, the label 'Natural Area Restoration' would be dropped, as under the structure of the Training Package, this would allow TAFE to provide courses that are more appropriate for bush regeneration.

Certificate II will continue to be offered for people with specific needs, such as job seekers, as training for labour market programs and for those who may not be capable of getting a CIII qualification.

After an initial presentation, the meeting split into a number of small discussion groups each led by Ryde staff.

Some of the points raised included:

- The qualifications suggested by Ryde TAFE are appropriate.
- The majority of units suggested by TAFE to offer were appropriate.
- CIII level - basic GPS, cultural awareness, fire management, plant propagation, track construction, Vertebrate pest management? (not everyone agreed on all these)

CIII Track work (install aggregate paths) is not a vital skill for all bush regenerators, but it is a useful way of teaching students

about working with heavy tools, erosion and sediment control, people and bushland management issues.

CIV level - People management (leading teams and facilitating volunteers), heritage and cultural awareness, fire as a tool, CIV was seen as a really useful qualification, but there was a lot of discussion about how to get people to do this course – while the qualification gives specific skill in a range of areas, there is no particular financial incentives to gain anything other than CIII in most work places.

The Diploma was seen as a useful qualification, but some discussion about job outcomes for graduates. (people come out with great technical skills and are useful in a range of job roles, but no clear path).

All levels need a real emphasis on habitat management, stormwater and stormwater management, and resilience.

Other TAFE colleges present included Blue Mountains, Richmond, Padstow and OTEN. These colleges indicated that they may not make the same decisions as Ryde, so employers will have to check and see which units of competence the students have completed.

If you are interested in being part of any ongoing discussion, or to get any additional information about the new training, please contact Kate Low. Kate is looking for volunteers to be part of ongoing assessment validation (where you as industry people check that our assessment is what industry needs). Please contact her if you are interested.

More information:

Kate Low, Ryde TAFE T: 02-9448-6263, E: katrina.low1@det.nsw.edu.au

Industry Skills Council for our industry: www.agrifoodskills.net.au/training-packages/merged-package-page/

Our industry training package, qualifications and units of competence: www.ntis.gov.au/?trainingpackage/all-AHC10 should be loaded onto this web-page soon.

Pottsville field day – telling our bush regen stories

The north coast NSW/SE Qld group held a mini-seminar on October 17th at Pottsville Environment Park, at which six case studies of regional 'bush regeneration stories' were presented. The event attracted about 45 members, subscribers, students and interested landholders. Half the people attending were from Queensland, many coming from as far north as the Sunshine Coast, while the other half were from northern NSW.

The presentations were of a very high quality, having been selected by a panel of three regional AABR members, after a 2-month call for submissions. The presentations were followed by a BYO smorgasbord lunch and lots of chat about techniques and ideas. Feedback from attendees suggested that the northern region group should repeat the format again, but hold it during the week so that agency people could attend more readily.

Mike Delaney, from EnviTE, described an exciting project on Wampoo Gorge, a private property at Huonbrook, NSW, which forms a key rainforest biolink between Nightcap and Goonengerry National Parks. The innovative technique of driving over and slashing lantana during the dry season (developed by Ralph Woodford at Rocky Creek Dam) was applied under Ralphs advice 9 months ago, with good regeneration results already emerging. The other two rainforest projects reported on were at Wootha Nature Reserve (a 10 year old private rainforest reported on by Spencer Shaw, from Brush Turkey Enterprises) who emphasized the project's importance as the oldest regen project in Queensland's Sunshine Coast hinterland; and at the South Stradbroke Island Conservation Area, managed by Gold Coast City Council, reported on by Darren Mcilroy (from Gecko Regen).

We were all then treated to an intriguing grassland restoration story at Fingal Headland, presented by Kieran Kinney (from Fingal Head Coastcare Inc) who described some very promising trials applying assisted regeneration techniques to a Buffalo-dominated grassland headland in northern NSW, resulting in high native cover within a year, supplemented with some reintroduction of missing species (see below).

The two sclerophyll stories were both from Queensland. Adrian Hansen described how fire was used to brilliantly facilitate post-fire spot spraying of exotic grasses at Belli Park on the Sunshine Coast for herb layer restoration - and Jen presented on the Burleigh Ridge project, part of one of the highly efficient urban bushland corridor restoration programs being carried out under her direction at Gold Coast City Council's Areas Management Unit.

Maritime grassland restoration project, Fingal Head

Kieran Kinney
Fingal Head Coastcare Inc

Fingal Headland is located on the Far North-Coast of New South Wales and is adjacent to the Tweed River estuary. Today the headland forms part of Fingal Head village and is heavily utilized for passive recreation such as whale watching and bush-walking. Fingal Head Coastcare Inc. is a long established and active group of Tweed residents that operates 4 days per week with many members attending several times a week, with support and assistance from Tweed Shire Council Natural Resources Management Unit.

During the 19th & 20th century the headland suffered significant degradation due to grazing by goats. As a result the headland (1.5 ha) is now almost entirely covered with invasive buffalo grass *Stenotaphrum secundatum*. Consequently, in 2009 the group determined that the headland should be restored to a Maritime Themed Grassland, using nearby Norries Headland and Hastings Point as reference communities. Both of these sites are hosts to relatively intact Themed Grassland communities.

Trials commenced in 2009 with the treatment of a 100 m² plot, followed by a similar-sized plot on more skeletal soils in 2010. Herbicide spraying of swathes of buffalo grass was followed by slashing and planting of very small numbers of a few grassland forbs (including golden everlasting daisy - *Xerochrysum bracteatum*, *Evolvulus alsinoides*, and *Chamaecrista maritima*). These were propagated in Fingal Coastcare's nursery from stock sourced at Fingal Head and from other headlands in the vicinity. Natural regeneration occurred extensively on the trial plots. Regenerating species included prickly couch *Zoysia macrantha*, native violet *Viola banksii*, *Lobelia alata*, blady grass *Imperata cylindrica*, *Plectranthus cremnus* and slender rat's tail *Sporobolus creber*. By spring 2010, after average rainfall and consistent weed control, about 90% cover of naturally regenerated native species had occurred. Some native species had already self seeded, including the planted *X. bracteatum* and the naturally regenerating *P. cremnus*. Weed follow up requirement was substantial and is ongoing. Results from the trial plots will now inform a plan for capturing the site and will include a planting plan for the reintroduction of missing species such as kangaroo grass *Themeda triandra* to guide the long term reinstatement of the goal community.

Email: kierankinney@gmail.com

What's happening

8 -21 July 2011

16th NSW Weeds Conference - Making a difference - from country to coast

The NSW Weeds Conference commenced in 1971 as a "Weeds School". The event has since grown to become recognised as the premier event in NSW to discuss weeds and related vegetation issues.

The event brings together over 300 delegates including weeds specialists from government, academia, community groups and private businesses from across eastern Australia and internationally. It provides an opportunity to meet with other contemporary weed professionals, to share knowledge and learn about innovative weed management through a fresh range of learning experiences.

The NSW North Coast region is one of the fastest

growing areas in NSW and also boasts some of the highest biodiversity values and highest rainfall in the state.

The region is characterised by fertile, volcanic and alluvial soils which combined with a subtropical climate provide an extended growing period. These features render the region as possibly the most vulnerable part of NSW to the invasion of new plant species and further the proliferation of existing weeds.

The 16th NSW Weeds Conference in Coffs Harbour will provide you with an opportunity to experience best practice weed management from across the country in the centre of one of NSW's weeds hotspots

Where Pacific Bay Conference Centre, Coffs Harbour

Contact <http://2011weeds.coffsharbour.nsw.gov.au>

25-30 September 2011

3rd Asian-Pacific Weed Science Society Conference; Weed Management in a Changing World.

Where Cairns, Nth Queensland.

There will be presentations on the role of genetically modified organisms in weed management, climate change, water availability, biosecurity, population growth and the utilisation of weeds.

Contact Further information and to register at discounted rates: www.apwss2011.com

Weeds conference proceedings now available for download

Pdf files from the 17th Australasian Weeds Conference (New Frontiers in New Zealand) are now available on the CAWS website. http://www.caws.org.au/awc_contents.php?yr=2010

Managing native vegetation In travelling stock reserves

This project will involve conducting six, two-day workshops over three years to engage on-ground managers of travelling stock reserves (TSRs) to increase their ecological knowledge and plant conservation skills.

Course materials will also be developed as a resource for further workshops and other training opportunities outside of the project funding and which could be applied to linear reserve management. ANPC plans to hold the first workshops in the Wagga region, NSW in the first half of 2011.

For further information contact Sue Mathams on 02 6250 9523 or sue.mathams@environment.gov.au

Community small grants: box-gum grassy woodlands

Communities in Landscapes (CiL) has invited community groups in the Central West, Lachlan and Murrumbidgee catchments to apply for grants to boost biodiversity in their local area. Industry & Investment NSW (I&I NSW) CiL project officer, Tony Cox, said grants up to \$3000 (GST included) are available. "The aim of the project is to benefit the critically endangered box gum grassy woodland environments which sustain a variety of important native plant and animal species," Mr Cox said. "These woodlands contain valuable resources which can provide economic and environmental benefits to the whole community." Healthy box gum woodlands contribute to the productivity of farms by providing shelter and pasture for stock, habitat for animals and insects which eat pests and pollinate crops and in the management of rising water tables and salinity. As part of the big picture CiL is working with landholders to develop cross-property plans and now we're looking to community groups to complement the work we're doing at that larger scale. CiL aims to identify and protect more than 55,000 hectares of endangered box gum woodlands which can be identified by their main tree species - white box, *Eucalyptus albens*; yellow box, *E. melliodora* and Blakely's red gum, *E. blakelyi*. Financial support is available to projects which raise awareness or support good management of box gum woodland and the species it supports.

Applications for the CiL Community Small Grants Scheme close on December 24 with forms available from <http://cil.landcarensw.org.au/smallgrants> or community woodlands officer, Kristy Lawrie, 0457 953 778.

Research grants: australian flora foundation 2012

Applications for grants to support original scientific projects on the biology and cultivation of Australian plants are invited from research workers in Australia. The Foundation expects to support between two and four projects at \$5000 - \$12,000 each in 2012 with possible extension into 2013.

Applications are in two stages. Preliminary applications of two A4 pages should indicate the purpose of the project, the likely costs and the research protocol. The institution or company to which the applicant is attached, a contact phone number and email and postal address must be included. Please use the form provided at http://www.aff.org.au/AFF_2_Call_for_applications.htm. Preliminary applications will be accepted until 21st March 2011

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AABR News is the newsletter of the Australian Association of Bush Regenerators (NSW) AABR Inc.

AABR NSW was established in 1986 out of concern for the continuing survival and integrity of bushland and its dependent fauna in or near bushland areas, and seeks new members and friends for promoting good work practices in natural areas. The Association's aim is to foster and encourage sound ecological practices of bushland management by qualified people.

AABR NSW has regional committees in northeast NSW/Southeast Queensland and the Hunter, and a sister organisation in Western Australia: AABR WA.

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To keep in touch and be notified about events, subscribe to Bush Regeneration or Bushcare list servers and check out Solutions, the Bush Regeneration Bulletin Board—see website for detail.

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(all interested people)

(email for 1 year for students of Certificate III CLM-Natural Area Restoration)

(appropriately qualified & experienced bush regenerators)

(appropriately qualified & experienced bush regenerators)

Newsletter contributions and comments are welcome

Contact Virginia Bear newslette@aabr.org.au 0408 468 442

Opinions expressed in this newsletter are not necessarily those of AABR NSW