



AABR NEWS

Australian Association of Bush Regenerators NSW

Nº 102
June
2009

AABR walks and talks 09 Ecological communities

President's
Perspective

2

Top 25 ecological
restoration projects

3

AABR walks and talks:
bushland topsoil
translocation

4

New database for
monitoring

7

restoration industry
forums

7

Are wildfires an
ecological disaster?

8

Ants spreading weed
seeds

9

Bush regen holidays

11

What's happening

12

Cumberland Plain

Who Alan Fairley

When Saturday August 1 10am–2.30pm

Where Lansdowne Park, Lansdowne & The Crest, Sydney.

Meet Lake Gillawarna Parking area on Henry Lawson Drive
near corner of Flinders Road

Cost by donation

Bring a picnic lunch, closed shoes, hat, water, raincoat, jumper.

RSVP carpooling until the time of the walk (although places are limited and may fill early) to Heather 02 9547 1692
or 0425 291 879

Alan Fairley is an environmentalist and natural history writer. Author of 'Native Plants of the Sydney District' and 'Seldom Seen - Rare Plants of Greater Sydney.'



Eastern Suburbs Banksia Scrub The North Head Disconnection

Who led by Peter Jensen

When Sunday August 30th 10am – 1pm

Meet North Head Sanctuary car park Follow Darley Road up the hill,
turning right at North Head Scenic Drive, go through the sandstone arch,
then after 200 metres turn left at the large white North Head Sanctuary sign
(through white picket fence) then follow the car park signs.

Cost by donation

Bring lunch, water, closed shoes, hat, jumper, raincoat.

RSVP by Monday August 24. To Danny Hirschfeld 0412-320-295 membership@aabr.org.au

Take a walk through the most intact stand of Eastern Suburbs Banksia Scrub while in full bloom. Almost half of all that remains of this nationally listed endangered ecological community is found at North Head. Wonder at the spectacular harbour and ocean views, the sculptured sandstone cliffs and the cultural history of the site. Learn about local management issues including bushfire management, heritage considerations, weeds and ferals, and look at projects undertaken including the construction of a network of boardwalks across the dunes and perched wetland areas.

Peter Jensen is Environment Officer, at the Sydney Harbour Federation Trust. He has had 17 year's experience in the natural area restoration industry and has worked for the Harbour Trust for the past six years.



August 23–27 in Perth see back page for more



Making Change in a Changing World

President's Perspective

Hi Folks

Looking back over the year so far has drawn not just the odd reference to Dorothea Mackellar's country of "droughts and flooding rains". The immense tragedy of the Black Saturday fires in Victoria while half of Queensland was under water surely demonstrates to even the most casual observer the extremes that we can face throughout this land. Looking back through history will show that these extremes are really part of the natural cycle of things and how we need to learn from these experiences if we are to effectively manage our land to protect biodiversity, and life and property.

I hope that that Chris McLean's article will provide some food for thought and discussion to help steer fire management towards good outcomes for protecting both biodiversity and lives, and help us avoid vitriolic sideline commentators, such as the Miranda Devines of the world, from dominating these discussions. Recently I also came across another very level headed and balanced perspective on the Victorian fires by Andrew Campbell, former forester and current managing director of Triple Helix Consulting. Read it online at http://www.triplehelix.com.au/documents/AndrewCampbellontheVictorianBushfires_002.pdf

Subscribers to Enviroweeds email group provided some profound and sobering accounts of those affected by the fires of Black Saturday. Some of the region's advocates and campaigners for biodiversity conservation lost their lives, their homes and/or friends and family in this disaster. For those of you affected please remember you have many bush regeneration friends all over this country who are hoping the best for recovery over the next months and years, and if you have stories to share of your local bushland in the aftermath of the fires or floods please share them.

Best wishes to you all,

Matt Springall

Do we have your current email?

We found when emailing news 101 that some of the addresses on our list were incorrect. If you have changed your address, please let us know—email membership@aabr.org.au

Even if you receive a paper copy of the newsletter, you are invited to be on our email list. We won't bother you too much, but it helps us keep you up to date between newsletters.

Paper or PDF?

A little over half our subscribers receive the newsletter by email as a PDF. The others receive a printed copy. If you would like to change how you receive the newsletter please email membership@aabr.org.au

Welcome new members

Brendan Pratt
Nick Willis
Sharyn Ryan-Hancock
Paul Malligan
Alissa Hattersley
Ross Norrie



Australasia's 'top 25'

ecological restoration projects

Tein McDonald, Editor EMR

Two projects with substantial bush regeneration components (Sydney Bushcare and Greening Western Sydney) have made the list—organised by the Journal of Ecological Management and Restoration.

The Ku-ring-gai Flying Fox Reserve was the only one to be part of a Top 25 group project (Sydney Bushcare) and also highly commended in its own right.

I recently participated—along with two ecology professors, two restoration specialists and a consulting ecologist—in the judging of this exciting and informative project; the search for Australasia's Top 25 ecological restoration projects. This was a great learning experience for me because I found out about lots of really good projects going on around the country (and I suspect there are many more that didn't nominate!)

Seventeen projects were selected in the 'Top 25' category from nominations sent from all over Australia, with 8 projects selected from New Zealand. The Australian shortlist includes projects from areas as diverse as the Murray-Darling Catchment, the Great Barrier Reef, the Kimberly, South-west Western Australia, Atherton Tablelands, The Snowy Mountains and Tasmania. Ecosystems under restoration include wetlands, bushlands, rainforests, grasslands, deserts, rivers and marine ecosystems.

Bush regeneration projects shine

The bush regeneration projects in the 'Top 25' category (Sydney Bushcare and Greening Western Sydney) stood up well against

Grey-headed flying fox carrying her baby (they have only one a year). Flying-foxes are long distance pollinators for over 59 blossom species—eucalypts, paperbarks, and banksias in eastern Australia. They also disperse the fruit of 48 rainforest species.

Restoring roosting habitat is vital so they can provide these services to our forests, woodlands and heathlands.

Photo: Ofer Levy

the other projects. Equally inspiring, although smaller, were the highly commended Ku-ring-gai Flying Fox Habitat Restoration Project and Willoughby Council's Ecoburn project.

I found that the main benefit of the search was that we now have over 40 very informative project reports up on the web (a requirement of the listing) and now all these websites are linked to the main freely accessible information exchange website of the Society for Ecological Restoration – The Global Restoration Network website: <http://www.globalrestorationnetwork.org/countries/australiannew-zealand/>

I commend all readers of the AABR newsletter to visit this GRN webpage so that you can read some of these brilliant reports and get a taste of the breadth and depth of a range of projects going on around Australia.

As many of you will know, the release of the Top 25 list has been timed to coincide with the conference of the Society for Ecological Restoration International in Perth in August. Hundreds of scientists and managers from all over the world are expected to attend. NSW AABR has contributed sponsorship to this conference and all who can get themselves over to Perth are strongly encouraged to attend. The amount you spend—and it's not cheap that's for sure—will be well repaid by the inspiration it will provide for years to come.

AABR walks and talks

Bushland topsoil translocation

Mt. Pleasant: Laying out the delivered topsoil on top of the capping material. Photo: M. Walters

Virginia Bear with help from Mark Walters

In September 2008, Mark Walters (*pictured right*) showed us around two sites in Terrey Hills in Sydney's northeast that are being rehabilitated using bush topsoil salvaged from nearby development sites.

Mark teaches Conservation & Land Management at TAFE, but became involved in these projects when working as a council officer for Warringah Council. The projects, and the subsequent 5 year monitoring program, formed part of Mark's honours thesis.

The walk was subtitled 'One step from the tip: another option for bushland topsoil from construction sites'. Mark reminded us that in New South Wales, we lag behind places like Western Australia and Europe in using translocated topsoil seed banks as a restoration method. The topsoil from development sites usually is headed for the tip. So, although it's distressing to see bush being cleared, we should get excited about saving the seed-rich topsoil. The results certainly were amazing—it was hard to believe it was a reconstruction!

In the Sydney region it has been estimated that about 89% of species have a soil borne seed bank. In areas with similar sandstone or sandy vegetation about 80 to 90% of the seed bank is in the top 5cm of the topsoil. Translocation can produce a faster and better outcome than traditional revegetation methods, so it's foolhardy to ignore this resource.

Both the topsoil donor sites were industrial developments in a nearby area of endangered Duffys Forest Ecological Community. The donor sites were subjected to full environmental assessments, including Species Impact Statements by Council and NPWS (now DECC). The development consent conditions imposed by Council forced the developer to fully fund the translocation of the topsoil.

The recipient sites were chosen due to: biotic and abiotic similarities to the donor sites (i.e. similar vegetation, aspect and landscape position). Both the recipient sites were extensively



degraded, with no hope any good outcomes using traditional planting and weeding approaches.

The first recipient site, JJ Melbourne Hills Memorial Reserve, was once a landfill. The weedy northern batter was capped in crushed sandstone to suppress the extensive weed infestation. The original intention was to plant the site out, but it offered a home for the donated soil. In May 2000, the translocated material was placed in a 5 metre by 240 metre long strip bounded by logs from the donor site. A total of 24 separate experimental plots were created using the logs, and used to measure the long-term effects on the seed bank germination and plant survivorship due to:

- 1 Subsoil presence / subsoil absence,
- 2 The need for separation of leaf litter from the topsoil prior to stripping, and
- 3 the best post-translocation treatments of burning, smoke treatment and disturbance alone.



*Mt. Pleasant 18months post-translocation, widespread germination and resprouting of rhizomes from the translocated topsoil (no maintenance and drought conditions).
Photo: M.Walters*

Mt. Pleasant on the day we visited.

The second site is a former RTA depot at Mount Pleasant or Tumbledown Dick Hill, further east of the first site along Mona Vale Road. It is now part of Ku-ring-gai Chase National Park. No resilience here though—it was covered in deep layers of asphalt, and introduced fill including concrete, bricks, car bodies and old fridges.

The site was initially weed controlled and asphalt sections were ripped with machinery. The asphalt, car bodies and other debris were then capped with crushed sandstone and deeply excavated subsoil from the donor site. A total of 7,000 tonnes of crushed sandstone and 2,000 tonnes of topsoil was carted to the Mt. Pleasant site from the donor site.

How was the translocation process carried out? The process at both sites was the same: the donor site was initially cleared of trees, and the vegetation slashed and stockpiled for later brushmatting at the recipient sites. The topsoil was then stripped to a depth of 100mm using excavators,

Excavators are preferable to smaller skid steer machines. The larger bucket capacity allows topsoil to be scooped up more evenly, and in fewer passes: minimising damage to the soil profile.

At the recipient sites, the soil was spread out to the same depth as it had been stripped.

Minimal stockpiling of the soil was allowed, as stockpiling causes the seedbank to degrade rapidly. Typically the tricky to propagate species disappear first, and soon only peas and acacias are left. So good planning and organising is essential to ensure salvaged topsoil goes straight to the donor site, or only has to be stockpiled for a few days.

Mark used quadrats to assess stem density and species richness effects at JJ Hills over 5 years. The results show that there was no or little real difference due to a subsoil being present or absent. The leaf litter location experiment showed slightly more weeds in the first year and no difference afterwards. Both the subsoil



The group at JJ Hills with the translocation site in the background. silvereyes and wrens were using the site while we were there





Mount Pleasant 5 years on—ever seen revegetation look this real? The diversity of sedges was particularly impressive.

and the leaf litter experiments had stem density of about 20 stems/m² and about 12 species/m².

The results comparing fire, smoke products and disturbance-alone were more profound. In the first year the fire treatment had double the stem density and species richness (about 70 stems /m² and about 12 sp./m²). Both the smoke-products and the disturbance-alone treatments (about 30 stems/m² and 6 sp./m²). However, these initial differences were non-existent by the fifth year and all germination treatments were similar.

Two further interesting results from the monitoring show that the burnt plots had a dense vegetation layer at about 1.6 to 1.8 metres in height, the non-burnt treatments had a wider range of age classes due to slower and staggered germination.

The results at Mount Pleasant were not monitored as closely, but one statistic stands out: of the 106 species identified at the donor site, about 90 later appeared on the translocation site.



Mt. Pleasant after 18 months. The height above the path indicates depth of translocated topsoil, plants include sedges, flannel flowers, and grevilleas. Photo: M.Walters



Mount Pleasant, where the translocation zone joins 'real' bush. Its a scenic spot with views out to Broken Bay.



We were delighted to see this tiny lace monitor hanging out in a tea-tree right beside the track. Fresh out of its egg considering its size—hatchlings average 28-36cm.

Photos: V. Bear, unless otherwise credited

MERV—a new NRM database

From the EnvITE NSW website www.envite.org.au

MERV (Monitoring and Evaluation of the Restoration of Vegetation) Database Package MERV is a customised Access database package which:

- Allows for the capture, storage, display and reporting of Natural Resource Management (NRM) information,
- Allows changes in the structure and floristics of vegetation associated with restoration works (e.g. bush regeneration works, revegetation works) to be tracked,
- Allows changes in relevant faunal habitat information to be recorded,
- Allows resources utilised as part of the above to be recorded,
- Allows for the use of standardised settings and/or relevant user specified settings as required,
- Hopefully can be used by a variety of NRM practitioners (e.g. State and Local Government Agency representatives, Landcare & other community groups, contract implementers, environmental consultants, university students etc.)

MERV is (or soon will be) portable and be able to run on a pocket PC to potentially streamline data capture in the field.

MERV has been a collaborative project involving EnvITE, the Big Scrub Rainforest Landcare Group and Byron Shire Council. Seed funding was provided by these organisations in 2005 to develop a working prototype. The Natural Resources Advisory Council (NRAC) Forging Partnerships program funded the current refinement and development of the MERV database.

The MERV desktop PC system consists of the following modules.

- 1 **Set Up** manage drop down lists / application settings etc.
- 2 **Sites & Plots** entry of details about work 'Sites' (e.g. remnants or areas being worked on) and survey 'Plots' (type of assessment for monitoring being undertaken)
- 3 **M & E Surveys** monitoring and evaluation data collection associated with a 'Plot' or Area (vegetation structure, floristics, habitat indicators, fauna survey and water quality information)
- 4 **Restoration Work** entry of details on restoration works undertaken e.g. weed control using manual or chemical methods, planting etc.
- 5 **Charts** views changes in site / plot characteristics over time via graphical display
- 6 **Reports** views changes in site/plot characteristics over time via report output
- 7 **Import & Export to Pocket PC** transfer data to/from PDA and subsequent working with imported data on the desktop.

A trial is currently open and we would welcome your 'road testing' of the package and any suggestions for improvement. While the time available for the trial is compressed relative to what was initially envisaged, we are hoping that by promoting its availability amongst an increased number of NRM stakeholders, groups and other professionals a broader assessment on its utility for monitoring related work can be made. Suggestions for improvement will be prioritised for future modification, funding permitting.

If you have further questions regarding the MERV trial please email EnvITE on merv@envite.org.au or contact EnvITE on 02 66219588.

RB 09 industry forums

Over the last year, some AABR Committee members have been helping organise the **Restoring Biodiversity 09 Industry Forums**. The forums are being facilitated by the Restoring Biodiversity Industry Association Inc (RBIA). The RBIA has formed as an independent association to facilitate discussion and co-operation among the main sectors within the natural area restoration industry: government land managers, contractors, bush regenerators, landscapers, TAFE and academics.

The first forum was held at Ryde TAFE in March 2009. Out of this came three main discussion topics which will remain on the agenda for ongoing discussion at the next forums:

- 1 specific contract management issues
- 2 development of effective performance measures
- 3 furthering the development of a separate industry association.

All of these issues need ongoing consultation and input from industry representatives across public and private sectors, and from organisations such as AABR. The RBIA is currently the independent vehicle co-ordinating this involvement across the broader industry.

The next RB09 Forum is on Friday 17th July 2009, from 4.00pm at the Station Hotel in North Sydney. This will be a less formal event,

allowing information exchange and idea development.

On Friday 11th September 2009, the RBIA is planning another one day forum with presentations from industry peers.

The RBIA is calling for Expressions of Interest (due 3rd August 2009) for presentations about innovative techniques and practices in natural area restoration.

Andre Clewell from USA will come to Sydney after the SER Conference in Perth, to present at the Restoring Biodiversity 09 September forum. Andre is a restoration practitioner and past President of the Society for Ecological Restoration International (SERI). A botanist and former professor at Florida State University, Andy is an international spokesperson for both ecological restoration and the restoration of natural capital. He authored the book *Ecological Restoration: Principles, Values, and Structure of an Emerging Profession* and most of SERI's foundation documents that characterise restoration as a discipline.

If you would like to be involved or find out more about the Restoring Biodiversity 09 forums contact: info@restoringbiodiversity09.org.au or Phone Rosanna Luca on 0419 985 175.

Keep an eye out for updates on www.restoringbiodiversity09.org.au



Are wildfires an ecological disaster?

Chris McLean

Regenerating Mountain Ash forest on the Davies Plains track, north east Victoria December 2006, 3 years after an intense wildfire. Photo: Virginia Bear

After the latest Victorian bushfires, numerous questions again surface as to the fate of the burnt forests and associated biota—such as possums, wombats and lyrebirds—and if the forests will again ever return. This question is not aided by ‘doom’ reports within the media that ‘thousands hectares of forests have been destroyed’ along with images of charred wildlife and Sam the Koala.

As a fire ecologist I am aware that fires do not represent complete ecosystem destruction, after all fires have occurred within the Australian environment for several thousand years. Most vegetation communities in Australia experience fire at varying frequencies (including rainforest) and in the case of the Black Saturday fires many of the areas that were burned in 2009 also experienced fires during 1939 and 1983, yet still contained high biodiversity values including Koalas with a preference for bottled water over leaves.

Studies on fire ecology in Australia are plentiful and have produced significant knowledge on fauna responses to both individual fires and fire regimes but it is very important to consider the fire regime rather than individual fire events (like the 2009 fires).

Studies on fire regimes (a fire history including differences in

severity, season and frequency) are still limited due to fires having only being mapped effectively for around the past 30 years (predominantly only the fire boundary with effective fire severity work only occurring in the past decade) and are also not aided by the infrequency of fires in certain vegetation types such as wet sclerophyll forests and rainforests.

The most important components of the fire regime for biodiversity conservation is that of the severity (ie canopy scorch and rate of litter consumption) which is also related to the patchiness of fires. Areas that remain unburnt or that are only lightly burnt function as refugia from which plant and animal populations can recolonise burnt areas. Secondly the frequency of fires is also important as if fires become too frequent biodiversity loss will occur due to an inability of obligate seeder plant species (those killed by fire such as *Banksia ericifolia* and *Casuarina* spp.) to set sufficient seed or in the case of fauna, non mobile species that breed slowly getting ‘hit for six’ too frequently. Fire frequency is vegetation community specific, for example one fire every 12 years will conserve heathland floristic diversity yet will reduce understorey floristic diversity in shrubby wet sclerophyll forests.

There are a number of studies that have occurred throughout Australia on fauna recovery post fire yet control impact studies (where monitoring had occurred before and after wildfire) are a little scarce. One of the best known studies has occurred in the heathland of Nadgee Nature Reserve since the early 1970s by Dan Lunney, Harry Recher and other associates with monitoring mainly concentrating on small mammal populations. The area experienced a high severity wildfire in

1972 (2 years into the study) and a low severity wildfire in 1980 with no fires since. Small mammals have been continuously sampled on the site since 1972 and their population trends were recently summarised by Recher and others in the journal *Wildlife Research*. The most important conclusion from the Nadgee small mammal work along with other studies on small mammals in heathland communities (eg Barry Fox's work at Myall Lakes) is that not all small mammals (along with birds) demonstrate the same response with certain species peaking post fire and decline until the next fire (eg new holland mouse) while others only peak once a complex vegetation structure has occurred (eg brown antechinus).

Of greater interest at present is fire recovery in the Victorian mountain ash/alpine ash/messmate forests that experienced fires during the 2009 Black Saturday fires. Significant work has documented the requirement of mountain ash and alpine ash communities of infrequent high severity fire (ie crown fire) to regeneration (ie to stop them becoming rainforests) as Eucalypts germinate poorly in low light conditions. A book titled *Wildlife, Fire and Future Climate* by Brendan Mackey and associates (CSIRO Publishing 2002) summarises the response of mountain ash to fires. They regenerate in single age stands post fire, with hollows occurring predominantly in killed trees (stags). Trees that survive a fire, and eventually decline over time, can also develop hollows suitable for hollow dependent fauna such as possums and gliders.

The mountain ash forests are in complete contrast to east coast eucalypt 'resprouter' communities that can withstand high intensity wildfire with only nominal death—predominantly due to fire induced collapse among decayed trees. This is due to the presence of lignotubers and epicormic shoots that allow shoot regeneration. Within the local dry east coast

eucalypt 'resprouter' communities fire frequency may consist of a single fire every 5-10 years with most understorey species being able to persist. Yet wet eucalypt forests (eg Sydney blue gum) require infrequent fire due to the presence of different midstorey species. As with mountain ash forests, if 'resprouter' wet sclerophyll communities remain unburnt for several hundred years the canopy species will die and due to eucalypt seeds inability to effectively germinate in low light conditions, only rainforest elements will remain. Under different fire regimes there are winners and there are losers and it is a judgement decision as to which species are more valuable. Is the conservation of the threatened northern bettong or northern population of the yellow-bellied glider that both require relatively open eucalypt forests more important than conserving expanding tropical rainforest that is colonising wet sclerophyll due to a regime of infrequent fire? This is just one of the questions that we face within the Australian environment. Certain species are sensitive to frequent fire while others relish frequent fire. Unfortunately we can't cater to all species with single fire regimes and at best we can probably only cater to species that are easiest to monitor, represent the greatest ecological importance or are flagship species that attract the greatest conservation interest.

Mr Chris McLean is a PhD candidate at the Centre for the Environmental Risk Management of Bushfires at the University of Wollongong. Chris researches the correlations among fire frequency and logging on hollow abundance along with the abundance of owls and arboreal marsupials in these areas. This work is based in Chaelundi in northeast New South Wales. Chris has also been involved with local Landcare groups for approximately 10 years.

Email: cmm895@uow.edu.au

Argentine ants give weeds a boost

From ABC Online February 18
by Anna Salleh

In a double blow to the environment, Argentine ants are not only outcompeting native ants, but they are helping spread weeds, Australian research has found.



An Argentine ant hauling a weed seed (Source: Alexei Rowles)

Dr Alexei Rowles, an ecologist with the Victorian Department of Primary Industries in Rutherglen, reports his findings in the journal *Oecologia*.

"[Argentine ants] are knocking out native ants, and in doing that they are disrupting the roles that those ants have," says Rowles, who carried out the research with supervisor Dr Dennis O'Dowd as part of his PhD at Monash University.

"We've shown they disrupt dispersal of native seeds and, worse than that, they actually can aid the dispersal of an introduced weed."

No humble ant

Argentine ants, a native of South America, are dark brown ants just 2 millimetres long and have the scientific name *Linepithema humile*.

"It's quite ironic that their species name, which is 'humile' actually means 'humble' in Latin. But they're far from that. They're quite a dominating species," says Rowles.

He describes Argentine ants as very aggressive and highly competitive, successfully invading around the world.

Rowles says his research is the first study of the ecological impact of Argentine ants in Australia.

Weed seeds preferred

Rowles studied coastal scrub sites on the Mornington Peninsula in southeast Victoria, which had been invaded by Argentine ants from nearby urban areas.

Comparing these sites with control areas that were free of Argentine ants, Rowles analysed the impact of the invaders on native ant species, native plant species and weeds.

Rowles found that in invaded areas the number of native ants had been reduced and that one important seed-dispersing ant had almost entirely disappeared.

But unlike previous studies done elsewhere in the world, Rowles found the same number of overall seeds were being dispersed.

He found Argentine ants were favouring seeds from a weed species called *Polygala myrtifolia*.

"It's one of the worst weeds on the [Mornington] Peninsula," he says.

Not only were the ants dispersing the weed seeds, but they were actually taking them back to their nests and covering them in soil increasing the chance that they would germinate, says Rowles.

As part of his research, Rowles also carried out experiments using artificial seeds to test the type of seed Argentine ants prefer.

He says his findings suggest *Polygala myrtifolia* seeds have the right size and nutritional pay-off - in the form of a fleshy edible appendage on the seed.

Strength in numbers

In a one on one fight with Argentine ants, Australian species would always win because they are larger, but the invaders have an advantage.

Because Argentine ants in Australia all evolved from a small population base, they are genetically similar.

While such a genetic bottleneck can be a weakness, Argentine ants have turned this to an advantage, says Rowles. Their genetic similarity means they are more likely to get along.

"It's almost like one big family and there's no aggression," he says.

Despite their tiny size, separate nests of Argentine ants join forces to form formidable "super colonies", which in some countries have been found to be thousands of kilometres across.

While Australian ants are held back by infighting, Argentine ants co-operate and spend comparably more energy on collecting food and fighting off competing species.

Rowles says he is very "fond" of ants, which form such a dominant part of the Australian landscape.

"They're so diverse and their importance in an ecological sense is underrated," he says.

And he's even fond of Argentine ants.

"I think they're amazing creatures. Amazing in that certain traits they have has enabled them to travel world and be so successful."

www.abc.net.au/science/articles/2009/02/18/2490438.htm

After Neil Tucker posted the article on the Enviroweeds listserver, Graeme Lorimer added a personal observation

Dear Neil,

You're always coming up with interesting articles! Thanks for spreading the word.

I have made some interesting observations of my own regarding ants. My seven-year-old son, Andrew, has taken an interest in ants and had put up a sign near our front door asking people not to step on the 'ant homes' in the pavement cracks there. It prompted me to look closely at the heaps of chaffy material next to the ant holes, and in doing so, I solved a longstanding mystery to me: The ants had carried seeds of Panic Veldt-grass *Ehrharta erecta*, (a serious weed) at least five metres from the nearest plants to their nest. I had long wondered why that weed spreads so effectively when its seeds lack the usual

dispersal mechanisms that one expects in grasses. The ants had also carried seeds of *Microlaena stipoides* and other species to their nests.

Ants usually collect seeds for food, and in the absence of any sacrificial appendage (such as eliasomes) on the seeds collected by Andrew's ants, I thought the ants may have eaten out the seeds before piling them in the heaps. I therefore sowed the seeds about six weeks ago to see what would germinate. They've grown into a thriving crop of *Ehrharta erecta* and a Sow Thistle *Soncus oleraceus*. I can send a photograph to anyone interested.

Regards,
Dr Graeme Lorimer
Bayswater North, Victoria
Phone (03) 8711 3454



We contacted Graeme, who supplied the photo, and added that he has "since learned that in grassland research by Ian Faithfull, *Pheidole* ants harvested a very high proportion of all fallen seeds in their territory, including many indigenous and introduced species. The heaps next to nest entrances appear to be food stockpiles".

For useful ant information, google *Australian ants online*.



Gap beach at Arakoon

Bush regen holidays

Korinderie Ridge bush regen week August 10-14

North Coast NSW— adjacent to Bundjalung National Park

Willing volunteers are very welcome to book into the Korinderie Ridge community's annual 'bush regen volunteers camp.' **There are still place left for this year—August 10-14.**

The work is removal of Lantana in sclerophyll bushland for about 3 hours each morning.

The community provides delicious meals and great communal facilities for the volunteers, as well as guiding short bushwalks each afternoon to some interesting local sites.

Volunteers only need to bring their own camping gear and get themselves to Korinderie. The atmosphere at previous camps has been fun and inspiring. Previous bush regen experience is not essential.

Contact information Tein or Graeme: 02 6682 2885 or teinm@ozemail.com.au



Phascogales are sometimes seen at Korinderie Ridge. Illustration: Jodie Smith

Arakoon

NSW North Coast, Hat Head National Park close to South West Rocks.

Help to control invasive weeds over an extensive area in the park with the local DuneCare and BushCare groups and National Parks.

The project has been running for many years with great success. Assistance is needed to consolidate the work done. Free accommodation is offered at historic Arakoon House in return for weed removal work in the park.

The house has 4 self-contained two bedroom apartments and is available between the end of March and the end of September for groups of up to 16. Individuals and couples are also welcome.

Contact information Alan Hill 02 6566 7013, 0419 012 640 or leave a message on 02 9997 6973, or via hillyuille@bigpond.com

Ben Ricketts Environmental Preserve

At Jamberoo, on the Illawarra escarpment only a couple of hours south of Sydney, is a rainforest remnant which is being regenerated. Cabin accommodation and camping are available on the property. Landcare weekends are held at least four times a year, and are fun and sociable. Saturday night dinner is provided.

Contact information www.benricketts.org.au/index3.html

Lord Howe Island

The World Heritage listed Lord Howe Island has major weed problems which threaten the biodiversity of the island.

Bush regeneration tours to assist with the weed control work have proved to be very popular over many years. They are a great combination of making a real contribution to the environment plus enjoying the many aspects of this magnificent island.

Generous discounts are offered on air fares and guest house accommodation. Free afternoon tours with naturalist, Ian Hutton, provides a wealth of information that makes the holiday extremely rewarding.

Contact information www.lordhowe-tours.com.au/friends.htm

Bush Heritage Australia

Bush Heritage Australia owns land it manages for conservation in every state. Some of them have opportunities for short stay working bees and longer volunteer ranger work.

Contact information www.bushheritage.org, Joelle Metcalf 03 86109102, info@bushheritage.asn.au

AABR maintains an up to date list on our website to find it go to www.aabr.org.au then click on Bushcare Volunteering then under Other Ways to Volunteer click on Download this pdf

What's happening

Friday July 17 4.00pm

Restoring Biodiversity Industry Forum 2

An informal event where regenerators, land managers, academics and landscapers can exchange information and develop ideas together

Where the Station Hotel in North Sydney.

Organiser Restoring Biodiversity Industry Association Inc (RBIA)
info@restoringbiodiversity09.org.au
Rosanna Luca on 0419 985 175.
www.restoringbiodiversity09.org.au

Saturday August 1

Cumberland Plain with Alan Fairley

(see page 1 for details)

August 16–21

10th international congress of ecology: ecology in a changing climate, Two Hemispheres, One Globe.

Ecologists from around the world will explore how global climate change has impacted, and will further impact, ecosystems and their vital services to human communities. They will explore unique features of ecosystems in the southern and northern hemispheres but look for common elements in a search for solutions to this looming problem.

The ecological research of the two host countries, New Zealand and Australia will be on display, and visiting delegates will have the opportunity to appreciate both the unique biotas of these two countries and the strong basic and applied research effort applied to regional ecological issues that could be translated to other regions.

Where Brisbane

Organiser INTECOL (International Congress for Ecology) www.intecol.net

August 23–27

World conference on ecological restoration: making change in a changing world

SER International meetings provide an essential international forum for scientists and practitioners who look to restoration as a means to conserve the planet's dwindling biodiversity and failing

ecosystems. These meetings provide a critical platform to assist us in defining the principles of restoration, understanding goals and milestones, debating what ecosystem functions to measure and closing the gap between the science of restoration ecology and the practise of ecological restoration.

With a focus on Making Change in a Changing World, the local conference organising committee hope to engage the debate on the impact of a changing world on our restoration capabilities. With this focus, SER International 2009 aims to accommodate as many interests as possible. The meeting will host an array of themes representing current research and global restoration practice. Themes that are relevant, of high focus and contemporary in Australia will also be part of the SER International 2009 program.

Given it's location, the SER International 2009 conference is aiming to attract a broader audience, including practitioners and scientists from Oceania and the Eastern Hemisphere regions. The SER International 2009 conference provides an ideal opportunity to promote the SER and ecological restoration within these regions - India and China represent two new major global hubs for economic growth with growing restoration needs.

Where Perth

Organiser Society for Ecological Restoration International (SERI) www.seri2009.com.au

Sunday August 30 10am–1pm

Eastern Suburbs Banksia Scrub with Peter Jensen

(see page 1 for details)

September

Seminar: New Developments in Herbicide Use

Wednesday 9 Epping Club, Rawson St, Epping, NSW

Wednesday 16 Narrabri Bowling Club

Topics will vary according to the venue and will cover a range of subjects including chemical regulations, revised mode of action herbicide groups, spray drift management, glyphosate resistance & management, and weed precision control (WeedSeeker technology).

Organiser The Weed Society of NSW www.nswweedsoc.org.au

Mike Barret 9875 3087, Alan Murphy 4341 3574

Friday September 11

Restoring Biodiversity Industry Forum 3

A one day forum with presentations from industry peers. The RBIA is calling for Expressions of Interest (due 3rd August 2009) for presentations about innovative techniques and practices in natural area restoration. Special guest speaker Andre Clewell from USA, author of *Ecological Restoration: Principles, Values, and Structure of an Emerging Profession*

Where TBA

Organiser Restoring Biodiversity Industry Association Inc (RBIA)
info@restoringbiodiversity09.org.au
Rosanna Luca on 0419 985 175.
www.restoringbiodiversity09.org.au

September 15-17

NSW Biennial Weeds Conference The Old and the New (Changes in Weed Management)

Where The Crossing Theatre, Narrabri

Organiser www.weedsconference.com

Sunday October 11

Sydney Sandstone Bushland with Matt Springall

Where Muogamarra Nature Reserve, Cowan, Sydney

Organiser AABR

Eucalypt workshop full

You may have seen on the AABR website and the email servers that AABR is hosting the first of Van Klaphake's new "Guide to the Eucalypts of the Sydney Region" workshops in June. The course was booked out very quickly.

Van is running several more this year for a number of Sydney Councils so there may be opportunities if you missed out on the AABR event. We will probably run the workshop again next year.

AABR NSW

President
Matt Springall
president@aabr.org.au

Vice President
Tim Baker

Treasurer
Paul Ibbetson

Membership Officer
Danny Hirschfeld
membership@aabr.org.au

Secretary
Heather Stolle

Committee
Wendy Kinsella
Jane Gye
Peter Dixon
Elisabeth Dark

Northeast NSW/Southeast QLD sub committee
Mike Delaney 02 6621 9588
miked@envite.org.au

Hunter sub committee
Trisha Barker 0423 490 757
Mark Evans 0427 859 714

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.

AABR C/O Total Environment Centre PO Box A176 Sydney South NSW 1235
0407 002 921
www.aabr.org.au
enquiries@aabr.org.au

ABN: 33 053 528 029 ARBN: 059 120 802

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.

AABR Newsletter Subscription	(all interested people)	\$20:00 p.a
AABR Membership	(appropriately qualified & experienced bush regenerators)	\$25:00 p.a
AABR Contractors & Consultants List	(appropriately qualified & experienced bush regenerators)	\$25:00 p.a

Newsletter contributions and comments are welcome

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

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