



AABR NEWS

Australian Association of Bush Regenerators NSW

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President's
Perspective

2

Bush regeneration
holidays

3

AABR Walk and Talk:
Maintaining habitat
for small birds

4

Can fire be used for
weed management in
littoral rainforest?

6

Natural Resource
Management News

10

What's happening

12

AABR walks and talks 09

Ecological communities

Illawarra Rainforest

Who Led by Anders Bofeldt

When Saturday April 11 10am

Where meet at Scarborough Railway Station

Cost free

Bring closed shoes, hat, water, raincoat, jumper

RSVP by April 9 to Tim Baker on 0414 908 396

Anders is an amazingly knowledgeable and enthusiastic group leader—a chance to spend time in the rainforest with him is an opportunity not to be missed.

Cumberland Plain

Who Alan Fairley

When Saturday August 1 10am–2.30pm

Where Lansdowne Park, Lansdowne, Sydney.

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

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.'

UPDATE

A date has been set for the natural area management industry forum:

Restoring Biodiversity 2009

Friday March 27 8:30am–3:30pm at Ryde Tafe *see back page for more*

August 23–27 in Perth *see back page for more*



Making Change in a Changing World

President's Perspective

Hi Folks

Occasionally I hear people ask, "What does AABR do?" or, "Why join AABR?". Even as President, looking back over the year, it still surprises me how much we get done. A list of our achievements for 2007/2008 was compiled for the AGM and is here re-printed in summary.

- 5 Field trips covering on site regen, vegetation classification, fauna and seed collection.
- 1 Seminar on project monitoring.
- 2 Conference presentations – NSW Educators Conference and 4th Biennial Weed Conference.
- 2 Publications – our quarterly newsletter and the Paying the Price of Garden Escapes report in conjunction with World Wildlife Fund.
- 1 New AABR regional sub-committee in the Hunter, who have already held a few events promoting bush regen since starting 6 months ago. The Far North Coast NSW / South East Queensland sub-committee continues.
- 3 Positions with other organisations – chaired National Tree Day Committee; Member of NSW Nature Conservation Council Bush Fire Advisory Committee; 2 Members on Bio09 Conference steering committee.
- 2 State Government grant program assessment positions.
- 1 Award supported - Beverly Blacklock Prize for the outstanding student in Cert III Conservation and Land Management at Ryde TAFE.
- 1 Guideline – Clearing of Camphor Laurel for electricity co-generation in Northern Rivers region of NSW (as promoted by Sunshine Electricity and Tweed Shire Council, but deserving modification on ecological grounds).

- 3 Public events supported, either with personnel or information – Royal Easter Show and Campbelltown and Blacktown Environment Festivals.

All this in addition to other ongoing work, including:

- AABR Website – now having >1 million hits with more info continually being added.
- Professional Association for the bush regeneration industry – scoping establishment.
- Improving working conditions.
- Commonwealth review of Conservation and Land Management Training Package – monitoring for any attempts to water down our industry's training package.
- WorkCover classification of Bush Regeneration – continuing to work towards an OHS policy for the industry.

AABR Members get a discount on the scientific journal most relevant to our industry, Ecological Management and Restoration (see our website for details), and we're looking at approaching other organisations for further Member rewards.

Most people reading this will already be a Member or a Subscriber. If you are, then maybe you'd like to bring up joining AABR with your colleagues. And if you aren't but are interested, either email membership@aabr.org.au or go to our website, click on the "About AABR" menu and download the "AABR Brochure" for more details. Note, anyone can be a Subscriber. Anyone can apply for Membership, though if you don't have a TAFE Certificate and 500 hours supervised experience over 2 years, a field assessment is involved.

Wishing you all the best in the New Year.

Happy regening!

Matt Springall
AABR President

An Alternate Use for Woody Weeds

Woody weeds such as African Olive, Privet and Camphor Laurel are a recognised threat to remnant Cumberland Plain Woodland, an ecological community listed as endangered under the NSW *Threatened Species Conservation Act 1995*. However a local woodworker, Ron Davies is using his craft to turn local woody weeds into pieces of furniture and art for around the home. Davies, a founding member of the Wollondilly Regenerators and Propagators group and an active member in Landcare groups, recently held a workshop to share his knowledge and craft with other locals. Davies and wife Robin also shared ideas about the various methods the groups are using to control weeds in their local patch. To read more, go to: <http://www.hn.cma.nsw.gov.au/news/4250.html>

Welcome new members

Frank Gasparre
Robert Stevenson

Bush regeneration holidays!

Hat Head National Park

Beautiful diverse HHNP has many special headland species, fine tracts of the endangered ecological community Themeda grasslands, and also among the worst Bitou in NSW. Volunteer bush regeneration is needed to complement work by NPWS.

Free camping at Smoky or Hungry campgrounds is available in return for bush regeneration, outside of peak times (particularly Christmas and Easter). Volunteers need to be self sufficient (water etc) as facilities are very basic only (pit toilets).

Smoky is full of cabbage palms and rainforest, and lies right on the beach, under the Smoky Cape Lighthouse, 15 minutes from South West Rocks.



Hungry campground is just south of Hat Head village, near huge perched dunes and within 1km of the beach. It is about 30 minutes from South West Rocks or Kempsey.



Arakoon State Conservation Area

Arakoon is 5km from South West Rocks, NSW.

The dunal vegetation of this beautiful bay is unfortunately infested with asparagus, some lantana and environmental weeds. There is something for every regenerator, and our local bush care group really needs your help!

Free camping at Trial Bay is available (hot showers) outside of peak times at Christmas & Easter...



or accommodation at cute hideaway: Little Bay Cottage in return for bush regeneration. This beach house sleeps up to 5 cosily with 2 bedrooms (1 Queen; 1 double bunk and a pullout). It is available from 28 April–25 September 2009. Free entry to Trial Bay Gaol included.



For bookings and enquiries for both areas contact Ranger Cath Ireland
P 02 6566 7589 F 026566 7593 or
cath.ireland@environment.nsw.gov.au

2009 Korinderie bush regen week

Bookings are now open for the Korinderie Ridge community's 6th annual bush regen volunteers camp (August 10-14, 2009).

Korinderie Ridge is a 200 ha community-owned property next to Bundjalung National Park in northern NSW. Largely spotted gum / blackbutt open forest with a grassy understorey, the property has deep gullies, with dry rainforest and bangalow stands.

Excellent progress has been made into the control of lantana over the last five years, thanks to our regular 'bush regen weeks'. Convivial volunteers treat scattered lantana for about 3 hours each morning (over 5 days), with the host community providing delicious meals and great campsites, as well as guiding short bushwalks each afternoon in interesting local areas including Bundjalung National Park. A central dining shed is regularly visited by wildlife, occasionally including the brush-tailed phascogale *Phascogale tapoatafa*, a juvenile of which is pictured. Volunteers will need to bring their own tent, sleeping mat and sleeping bag etc. (The only expense is getting yourself to Korinderie.)

Enquiries: Tein or Graeme 02 6682 2885.



AABR Walk and Talk: maintaining habitat for small birds

Steve Anyon-Smith

On June 13th Jason Salmon, Bushcare Officer from Sutherland Shire Council led a walk round Honeysuckle Reserve, Jannali (It is named after the coast banksia - not the dreaded vine). Some of the group had travelled from Wollongong, the Blue Mountains, Bankstown and the North Shore to attend. The other presenter, Steve Anyon-Smith could not attend on the day, but prepared this article for us.

A cautionary note about bird watching, it is an affliction that I share with others. You won't see any rare birds in Honeysuckle Reserve, or in fact many birds at all. This is not important. Birdwatchers generally get bored unless they see new birds – generally rare ones – on a regular basis. I rather like to concentrate on small common birds.

A report prepared a little over ten years ago that assessed the potential for conservation and rehabilitation of Honeysuckle Reserve had this to say:

"The weed infestation that has a tight grip on the reserve has altered its appearance. It is typified by a thick weedy understorey, which has prevented access to parts of the reserve and reduced the recreational amenity. Such degradation of the area has encouraged further abuse and the reserve is probably viewed as a wasteland which could be used for development."

There have been various efforts over the years to rehabilitate the reserve. Some have resulted in lasting improvement whilst others have probably had no positive impact at all.

My involvement started with Chris Guthrie, Bushland Management, Sutherland Shire Council about seven or eight years ago and has continued since then with Jason Salmon and other volunteers.

We represent the better examples of one of the most disappointing animals on the planet. When many of us fiddle about in our bush regeneration tasks we might think of how we would like our favourite patch to eventually look and we dedicate whatever effort we make to this end. Too often we try to make bushland into bushy replica back gardens. Because most of us have reasonably ordered brains we find it difficult to be truly random when clearing or planting.

I made a conscious decision to undertake all my volunteer effort in this reserve whilst imagining that I was a small bird. This has led to an ongoing identity problem. I've found red wine helps. Imagining you're a small bird is a fairly easy thing to do if you have spent much time watching small birds in the field. Small birds need food, nesting sites and nesting material, shelter from predators – mainly other birds and cats, and for resident birds in isolated reserves like this one, there needs to be enough habitat for them to maintain genetic fitness, that is, that there needs to be at least a few breeding pairs. I will look at each of these requirements in terms of this reserve.

Food. There is a rich food supply in the reserve for small birds. Most of them eat insects, but some such as the red-browed finch rely almost exclusively on seeds. No bird on the planet knows which of its local plants are indigenous and which are not. This is very important. We maintain a strong bias in bushland reserves against exotic plants. Small birds lack this bias. In no way would I advocate planting exotics. What I would advocate is to see what exotics are being used by small birds and strategically replace these with native plants that can provide a similar or better quantity of food, but not all at once. The biggest threat to small birds in isolated reserves is for their food supply or shelter to disappear. If this reserve loses, say, its few pairs of white-browed scrub-wrens they will never return. They do not migrate and they can't fly very far or very high. The best food plants are often the most boring to look at.



Red browed finches find sticks to perch on and *Microlaena* seed to eat in a bush regenerate back yard. Photo: V.Bear

Nesting sites and nesting material. The best nesting sites are those where small birds don't get eaten or their nests destroyed by wind, rain, and passing feral animals like us. So where would these sites most likely be – in dense weedy child and dog-proof understorey, or in

known nesting situations that certain birds will generally favour. The red-browed finch is a resident of the reserve with its numbers steadily increasing. It nests in thickets of *Hakea sericea* for fairly obvious reasons.

It isn't much use having a great nest site but nothing from which to build the nest. Premium nesting material is less common than you might imagine. Chris Guthrie and I watched one day as three different bird species (little wattlebird, spotted pardalote and white-browed scrub-wren from memory) simultaneously stripped bark from a brown stringybark *Eucalyptus capitellata*. This tree is now dead but the seeds we harvested have been germinated by the council nursery and these have now been grown and re-introduced.



A brown thornbill with its fibrous bark nest, built in a *Dianella* surrounded by bridal creeper - no it didn't want the bridal creeper cleaned up. Photo: V.Bear

Shelter. Obviously small birds need shelter for reasons other than nesting. Many will not tolerate wide open spaces ever and simply will not cross them. Others will if they have to, but this exposes them to all the normal hazards. Increasingly they are exposed to noisy miner

attack. So corridors are essential – even if they are composed of totally exotic vegetation that could very easily be cleared. As most if not all of you know, clearing vegetation represents just a tiny fraction of all bushcare effort.

Genetic fitness. I don't know enough about the subject to make too many noises. But I would suggest that at least a few breeding pairs would be needed of each resident bird species to have any long term chance.

Why is this reserve - and many others just like it – important? Firstly it provides habitat for resident small birds. In Honeysuckle these include superb fairy-wrens, white-browed scrub-wrens, spotted pardalotes and red-browed finches. Secondly it provides feeding habitat for winter visitors. These include golden whistlers, rose robins, grey fantails, brown thornbills and silvereyes. Importantly it provides a rest and re-fuelling stop for summer migrants, principally black-faced monarchs and rufous fantails. And lastly it provides food and shelter for regionally nomadic and opportunistic birds that include various honeyeaters such as scarlet, new holland, eastern spinebill and yellow-faced.

Finally it is interesting to compare similar reserves throughout the shire and elsewhere in terms of small bird diversity. There are many reserves with better habitats than Honeysuckle, and yet most lack the common small birds present here. One reason might be that a single catastrophic event took place to wipe out all the small birds. A fire might do this but another possible cause might be the well-intentioned but poorly planned and executed bush regeneration team that destroys a critical element of the habitat across the whole bushland remnant. That is why you can still see many areas of Honeysuckle Reserve that are infested with exotic weeds.



The worst section of Honeysuckle Reserve on the day of the walk—dead Privet frilled and Anredera sprayed. Photo: H. Stolle

Can fire be used for weed management in littoral rainforest?

John Eaton

Bush Regeneration and Volunteer Co-ordinator
NPWS Central Coast Hunter River Region

It is a generally accepted practice to exclude fire from rainforest ecosystems due to the community's sensitivity and the long recovery time, but observations from the NSW central coast show that fire may have a place in regeneration projects.

In the Central Coast region the most common large weed infestations in littoral rainforest are bitou bush *Chrysanthemoides monilifera* and lantana *Lantana camara* accompanied by a large range of other weeds, particularly vines.

Most beach areas are weed infested—Wamberal Nature Reserve is a typical example.

The magnitude of the problem is a huge challenge. Loss of such ecosystems due to ineffective management

practices and lack of continuity in resourcing is a real threat.

Bush regeneration is the standard weed management practice in local reserves with rainforest. This is very effective but limited by:

- available money (usually supplemented by grants)
- size of infestations
- pace of work vs size of infestation(s)
- growth rate of weed
- dispersal mechanism
- physical amount & area of infested areas within region
- current condition of rainforest (weediness)
- projected condition based on current condition & method of control

Fire does sometimes occur naturally in rainforest. Its occurrence and severity is determined largely by amount of rainfall, season of rainfall, fuel load, altitude & longitude.

Major disturbance events within rainforest, (such as hot



Figure 1 Fire ground in 2005

infrequent fire, frequent fire, clearing or a combination of these conditions) in close proximity to urban or disturbed areas can lead to invasive infestations of weeds in a short time frame.

Local examples can be found at Salts Bay (Swansea Heads), Wallarah National Park, and Munmorah State Conservation Area, where weeds have rapidly expanded.

Fire and regen at Wyrabalong National Park

Over the past 3 years I have observed a patch of littoral rainforest in Wyrabalong National Park which had a fire in August 2005 (area approx.0.5 ha). The fire wiped out all ground cover & shrub layers with some scorching of canopy tree foliage (see figure 1).

Before the fire this area had substantial amounts of bitou, lantana & asparagus fern at ground cover / lower understory zone with many native species.

Post fire, many native species in the ground cover shrub layer responded by coppicing—most commonly *Acmena smithii*, *Breynia oblongifolia*, *Alphitonia excelsa*, *Elaeocarpus reticulatus*, *Sarcopetalum harveyanum*, *Stephania japonica*, with *Acacia* sp & bitou responding from heat induced seed germination (see figure 2). Re-establishment from coppicing was rapid compared to seed germination.

Soon after the fire a site inspection was carried out, and within 2 months of the fire a bush regeneration

team was contracted to follow up through the fire zone, exploiting the opportunity the fire provided. They removed any emergent weeds, and pushed beyond the burn area to treat adjacent infestations of lantana & bitou. The works cost was \$3000 to weed the half hectare burn area and about half a hectare surrounding it.

Field data

Nested quadrats were set up (12 months post fire) to compare the difference in response of littoral rainforest to disturbance events in the form of fire & bush regeneration (the quadrat data will be available on AABR's website).

Nested quadrat data 2006:

- the fire zone had a few more species (50) than regeneration zone (46)
- 6 species occur in fire zone that do not in regen zone
- 3 species occur in regen zone that do not in fire zone
- there has been a slight increase in species richness in fire zone.

Although there is now very little difference between the 2 sites, the fire site had much more rapid growth initially.

Native regrowth on the fire site was mainly coppicing species, while the regen site had mainly germinating species.



Figure 2 Fire ground in 2006

Regeneration Site 2007			
Total species 2007	New species	Species loss from 2006	Total Species increase
47	4 <i>Hibbertia scandens</i> <i>Cassine australis</i> <i>Pittosporum undulatum</i> <i>Syzygium oleosum</i>	3 <i>Euroschinus falcata</i> <i>Solanum nigrum**</i> <i>Commelina cyanea</i>	1

Fire Site 2007			
Total species 2007	New species	Species loss from 2006	Total Species increase
53	6 <i>Acacia longifolia</i> <i>Plectranthus suaveolens</i> <i>Syzygium paniculatum</i> <i>Erectites valerianifolia**</i> <i>Hydrocotyle peduncularis</i> <i>Banksia seedlings</i>	3 <i>Solanum nigrum**</i> <i>Homolanthus nutans</i> <i>Glochidion ferdinandi</i>	3

APPENDIX 1. Initial response of all species encountered in fire ground 6 months after fire.

20x20 quadrat

<i>Acacia falcata</i>		7
<i>Acacia sp</i>		5 seedlings
<i>Acmena smithii</i>	lilly pilly	12
<i>Alphitonia excelsa</i>	red ash	8
<i>Breynia oblongifolia</i>	breynia	30
<i>Clerodendrum tomentosum</i>	hairy clerey	2
<i>Chrysanthemoides monilifera*</i>	bitou bush	39 seedlings
<i>Cissus hypoglauca</i>	5-leaf water vine	45
<i>Dodonaea triquetra</i>	hop bush	1
<i>Elaeocarpus reticulatus</i>	blueberry ash	12
<i>Endiandra sieberi</i>	corkwood	6
<i>Entolasia stricta</i>	right angle grass	4 clumps
<i>Eucalyptus botryoides</i>	southern mahogany	5
<i>Eustrephus latifolius</i>	wombat berry	5
<i>Geitonoplesium cymosum</i>		16
<i>Lantana camara*</i>	lantana	7
<i>Livistona australis</i>	cabbage tree palm	24 lge, 22 sml
<i>Notelaea longifolia</i>		15
<i>Pandorea pandorana</i>	wonga-wonga vine	25
<i>Protasparagus aethiopicus*</i>	asparagus fern	4
<i>Sarcopetalum harveyanum</i>	pearl vine	33
<i>Smilax australis</i>	wait-a-while	60
<i>Smilax glycyphilla</i>	native sarsaparilla	26
<i>Stephania japonica</i>	snake vine	16

What can we learn from Wyrabalong?

Based on the response post fire (considering further studies & monitoring would need to be undertaken to establish suitability) it would appear use of fire in small scale applications is a beneficial tool for weed control, (particularly bitou) within littoral rainforest.

Potential advantages to using fire as a tool are:

- cost effectiveness
- speeding up process of:
 - eradication of main infestation
 - reduction of size of infestation
 - recovery of rainforest
 - reduction of weed seed
 - improvement in condition of rainforest in short & long term
- more effective use of available monies in management of weeds

Potential negatives of using fire as a tool are:

- threatened species issues
- potential ecosystem response
- pollution
- habitat destruction
- losing control of fire

Littoral rainforest is an endangered ecological community in NSW, its value widely recognised—but its scarcity and importance can make people nervous about managing it. The more comfortable option may be to sit on our hands rather than try something different.

The legislation set up to protect endangered communities can sometimes limit management options. Currently, it would not be possible to use deliberate burning as a regen tool because the method is not provided for in the current Wyrabalong Plan of Management or Fire Management Plan—although both are due to be reviewed soon.

Due to the scale of weed infestation in Wyrabalong National Park's rainforest patch (in places close to 100% density in the understorey) restoring the forest's integrity seems a long way off, unless we can come up with a more effective approach.

There is no excuse not to explore options and patterns

of management which are effective even if at first they go against convention.

If limited resources is the way of the foreseeable future we need to adjust our way of managing & find new patterns that work under those circumstances.

The use of fire would require a systematic, long term, planned approach with the intention to use fire as a one off event in any given area for weed control. Fuel load, timing, scale & other variables would need to be considered beforehand. This may seem too radical for some from the outset. If so I would like to hear some options that will achieve a positive result keeping in mind the scale of the problem.

Contact details

John.Eaton@environment.nsw.gov.au

02 4358 0406

Battling black-snakes

Bush regenerator Narelle Hulbert was working at Lugarno in southern Sydney last September when she photographed these two fighting red-bellied black snakes.

Apparently most published information about this sort of behaviour is based on captive snakes. In the introduction to his 1981 paper about fighting snakes in the Macquarie Marshes, Rick Shine writes *"Ritualised 'combat' behaviour between rival males has been*

recorded in many snake species ... However, few detailed observations on male combat have been made under field conditions. This dearth of information has led to differing interpretations of male combat in snakes".

It's a good reminder about the importance of the observations we get the chance to make in our work. It may not be possible to get great close up shots like this, but detailed notes might have scientific value too.



Biodiversity Research News

From the newsletter of the NSW Biodiversity Research Network www.environment.nsw.gov.au/biodiversity/newsletters.htm

Restoring Endangered Woodlands

Researchers from CSIRO and Charles Sturt University's Institute for Land, Water and Society are looking for practical solutions to restore the endangered White Box Grassy Woodlands of south eastern Australia. Methods are focussed on non-chemical solutions such as re-seeding, crash grazing, burning and reducing available soil nutrients by adding sugar to the soil to re-establish native grasses in degraded sites. The project will evaluate the effectiveness of different treatments and combinations of native grasses for keeping weeds reduced over the longer term. Suzanne Prober from CSIRO states "the understorey in most remnant woodland patches is highly degraded and dominated by introduced plants....[but] recent trials near Young...showed that perennial native grasses such as Kangaroo Grass play a critical role in restoring degraded woodlands by helping to control soil nutrient levels and, in turn, exotic weeds." The seven year project has been funded by the NSW Environmental Trust, the Murray Catchment Management Authority and support from the Hume Rural Lands Protection Board and Sugar Australia. Read the media release at: <http://news.csu.edu.au/director/latestnews/environment.cfm?itemID=F3DC957B97593C15B345DFCC2F67D7A3&printtemplate=release>

Management Options for Bitou Bush

By Marion Winkler

A new Bitou bush Management Manual will soon be ready for distribution throughout Australia. Bitou bush (*Chrysanthemoides monilifera* ssp. *rotundata*), a Weed of National Significance (WoNS), is currently found along 80% of the New South Wales coastline, on the south-east coast of Queensland and in isolated pockets in Victoria. The new manual provides information to assist anyone working to control bitou bush in natural habitats. Details in the manual include planning and pre-control considerations, monitoring methods, current chemical, physical and biological control options available and eleven community case studies of firsthand experiences of success. It also touches on 'other weeds to look out for after bitou bush is controlled', and promotes links between control and native community restoration through an holistic approach to site management. The manual, funded through the Commonwealth Defeating the Weeds Menace Program, compliments the Boneseed Management Manual; boneseed being the other weedy subspecies of *Chrysanthemoides monilifera* in Australia, and other WoNS manuals already produced in this style. It also adds to the growing resource library of information on bitou bush management including the Bitou bush Threat Abatement Plan and Native Plant Species at Risk from Bitou Bush Invasion: a field guide for NSW (both available from the DECC website www.environment.nsw.gov.au/pestsweeds/BitouBush.htm). Copies of the Bitou bush Management Manual are available from the Weeds Australia website (www.weeds.org.au/WoNS/bitoubush), or can be obtained free-of-charge by contacting Hillary Cherry, the National Bitou bush and Boneseed Coordinator on Hillary.Cherry@environment.nsw.gov.au.

Ecology of Cumberland Plain Woodland Webpages

By Doug Benson and Lotte von Richter (Botanic Gardens Trust)

The Woodland Conservation area at Mount Annan Botanic Garden near Campbelltown has been the focus of research and monitoring by Plant Sciences staff for more than 20 years. The Ecology of Cumberland Plain Woodland webpages have been developed on the Botanic Gardens Trust website, to communicate this information to a wider audience. The web format allows ecological interactions such as between species and woodland components (e.g. plants, insects and pollination, herbivory and competition) to be more effectively conveyed than in traditional text media (e.g. formal scientific publications); We use a wide range of photos and diagrams and, in particular we want to show that the biodiversity in the Cumberland Plain Woodland is more than just a species list. The webpages were begun in 2007 and there appears to be increasing use by students, but we'd like to draw it to the attention of botanical consultants and bush management workers who may not know it. The webpages are organised under five major headings, and include text and diagrammatic information, as well as over 3000 images. Western Sydney Woodland: • Introduces the Cumberland Plain Woodland in Western Sydney • Explains why habitat is so important, and the need to conserve all the small remnants. Woodland at Mount Annan Botanic Garden: • Results from our research monitoring in the woodland remnants since 1988. Woodland Ecology: • life cycles, germination, herbivory, death and decay, fire, drought • Photo galleries of seedlings, plant rootstocks and resprouting species. Plant Species in the Woodland: • ecological information and photographs of more than 260 native and exotic plant species from the Mount Annan woodland. • Also included are: mosses, lichens, liverworts and macrofungi. Wildlife in the Woodland: Pictures and information on spiders, butterflies, beetles, bugs, snails and other invertebrates, as well as amphibians, reptiles, birds and mammals. Continue the journey. Visit the website at: www.rbgsyd.nsw.gov.au/science/hot_science_topics/Ecology_of_Cumberland_Plain_Woodland

Are Regent Honeyeaters Assured of their Foothold in the Capertee Valley?

By Tiffany Mason

Since 1994, the Capertee Operations Group (established to help conserve the Regent Honeyeater in its primary stronghold, the Capertee Valley) has been holding bi-annual tree-planting events in the valley to restore habitat for Regent and other declining woodland species. But how effective have these efforts been in attracting woodland birds and providing future resources, particularly for threatened species? And can the artificially established woodland habitat be improved? To answer these questions, the Capertee Operations Group conducted surveys in Spring 2007 of 28 of its planting sites, including some of the very first (planted in 1994) and some of the most recent areas to be revegetated. Whilst Regent Honeyeaters have not yet been recorded on the planted

sites, the Operations Group is confident that the birds will begin to utilise the trees and shrubs once they mature, flower and begin supporting good populations of lerp. The surveys detected a total of 78 bird species, including three listed as threatened: Hooded Robin, Diamond Firetail and Turquoise Parrot. From an initial analysis of the results it became apparent that the single most important factor negatively affecting species richness on the planted sites was neither the age of the site nor the height of the trees, but the presence of Noisy Miners. The Noisy Miners occurred on those sites where the understorey had been lost (usually to hungry cattle!). To rectify the problem the Operations Group will consider going back to these sites to replant an understorey. Since Noisy Miners like to walk, rather than hop, creating a heterogeneous ground layer of grasses, forbs, rocks and logs may prove the most effective deterrent. Recreating the ground layer may prove to be the biggest challenge of all. For more information and to assist with tree-planting in the Capertee Valley, contact Tiffany Mason at Tiffany.Mason@cma.nsw.gov.au

Woody Debris Introduced for Fish Habitat

Woody snags that improve fish habitat are being added to the Castlereagh River downstream of Coonabarabran. The NSW Department of Primary Industries (DPI) in collaboration with the Central West CMA is undertaking the resnagging work, which will involve the reintroduction of at least 100 tonnes of woody habitats into the river. The woody debris has been sought from legal land clearings, with cooperation of local landholders and contractors. Shaun Morris, Conservation Management Officer with NSW DPI said snags provide important habitat for a range of aquatic animals but particularly native fish. "The presence of wood in stream environments is essential for many species of native fish to complete their life cycle, providing refuge and shelter, feeding and spawning sites," he said. Read the full media release at: <http://www.dpi.nsw.gov.au/aboutus/news/recent-news/fishing-and-aquaculture/fish-benefit-from-snags>

Weeds Attack!

By Hillary Cherry

In Australia, weeds are the second greatest threat to biodiversity after land clearing. Australians spend over \$4 billion per year managing the weed problem. The Australian Government partners with all State and Territories in the Weeds of National Significance (WONS) Program. Bitou bush is a Weed of National Significance that impacts over 80% of the NSW coastline and the NSW DECC hosts the National Bitou Bush and Boneseed WONS program. To help combat the weed problem, a new school resource that educates children about the impact of weeds on biodiversity and what they can do to help reduce those impacts was developed through a partnership between the Australian Government, NSW DECC, NSW Department of Education and Training (DET) and NSW Department of Primary Industries (DPI). "Weeds Attack!" is a web-based, multimedia resource with interactive learning activities that increase weed awareness through a series of challenges. Students are engaged by exciting computer games and the opportunity to do "hands-on" field work. Weeds Attack! also incorporates Weed Warriors, a national program that empowers students to act on weed issues using biological control agents. In NSW, students actively reduce

the impact of bitou bush by rearing, releasing and monitoring the Tortrix leaf-roller moth at sites in their community, thus supporting an important biological control program. This project recognises the importance of educating our children and will lead to increased weed awareness at school and at home as students share the message with their parents and the wider community. You can take the Weeds Attack! challenge and download (or view) the resource from <http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds/schools>. For hard copies of the CD or more information, please contact Hillary Cherry, National Bitou Bush and Boneseed Coordinator at 9585-6587 or hillary.cherry@environment.nsw.gov.au.

Breaking Down Barriers for Migrating Fish

Minister for Primary Industries, Ian Macdonald has announced the completion of over 500km of improved access to upstream habitat in rivers and streams stretching from Taree to Gosford. "Key fish passage barriers at seven priority sites have been remediated improving the ability of native fish to migrate to new habitats," Macdonald announced. The works were completed as part of the "Breaking Down the Barriers" project managed by the DPI, which aims at installing or fixing weirs, road crossings and floodgates to allow better fish passage. Further works include four rock-ramp fishways, the removal of a disused causeway and the alteration of two tidal floodgates that improved water quality to 150ha of valuable wetland habitat. Read the media release at: <http://www.dpi.nsw.gov.au/aboutus/news/recent-news/fishing-and-aquaculture/breaking-down-barriers-to-migrating-fish>

Concern about Possible Threat to Travelling Stock Route Network in NSW & Qld

Adapted from the Long Paddock Scientists Statement and accompanying letter, compiled by concerned scientists and led by Hugh Possingham and Henry Nix.

Scientists have voiced concerns that imminent administrative changes in NSW and Qld pose a threat to the Travelling Stock Route networks. The Travelling Stock Route network provides a critical resource for biodiversity across the two states, for instance, in the highly modified landscape west of the Great Dividing Range the network contains some of the best remaining examples of threatened vegetation, such as grassy white box woodlands. Being fairly straight lines, the Travelling Stock Route networks tend to sample vegetation types fairly evenly, often better than the reserve system. Furthermore the network provides important connectivity over a vast area (> 3 million ha across two states). In a recent review investigating the structure of the NSW Rural Lands Protection Boards it was recommended that non-profitable sections of the network be ceded to the Department of Lands, an approach that would greatly increase the likelihood that sections of the network are sold or subject to long-term lease. In Qld it has been announced that none of the network will be sold however the proposed separation of the network into "active" and "inactive" routes may allow long term agistment with continuous grazing. To find out more about these proposals and to make a submission to the Qld government, please go to: <http://www.nrw.qld.gov.au/factsheets/pdf/land/1179.pdf>. To read the Long Paddock Scientists Statement, follow this link: <http://www.ecology.uq.edu.au/docs/news/LongPaddockStatement.pdf>

What's happening

Friday March 27 8:30am–3:30pm

Restoring biodiversity 2009, industry forum

Where Ryde TAFE, Sydney

If you are a contractor, consultant, work for a local council, state agency, NGO or tertiary institution: this is your industry forum.

New and different approaches to contract management - how can we work smarter?

- What are some new and different ways to manage contracts for on ground work?
- Hear some perspectives of bush regeneration contractors, an ecological consultant, a state authority and local council officers.
- Come and share your knowledge and experiences with peers in the industry.

Part of a series—other workshops are planned for June (technical issues) and September (monitoring).

Organiser the Restoring Biodiversity Industry Association Inc—newly formed by the forum steering committee, including AABR. The association covers the broader restoration industry eg, nurseries, ecological consultants etc.

Bookings essential. Give your name, organisation and contact details by March 25 to Rosanna Luca. info@restoringbiodiversity09.org.au

02 9659 2325 0419 985 175 (9.00–3.00 weekdays)

Saturday April 11

Illawarra Rainforest with Anders Bofeldt

April 30–May 1

Australian Network for Plant Conservation Second National Forum. Minding our own biodiversity: conservation on private land

Where Halls Gap, The Grampians, Victoria

Are you interested in conserving native flora and fauna on your land? Do you have a management agreement or covenant over some of your land? Do you participate in conservation activities on local public land? Are you part of a network linking conservation across the landscape? Do you receive any support or are incentives available to assist your efforts?

Our second national forum will focus on conservation outside the formal reserve system, whether on small blocks or large landscape level efforts or cross-tenure projects. It will highlight the people and places involved and investigate the incentives and support available.

This is your opportunity to participate, learn, contribute, debate and move this essential component of biodiversity conservation forward.

The forum will include presentations, case studies, facilitated discussion sessions and field visits to project sites.

Contact 02 6250 9509 anpc@anpc.asn.au

www.anbg.gov.au/anpc/conferences.html

Saturday August 1 10am–2.30pm

Cumberland Plain with Alan Fairley

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

Where North Head, Manly NSW

Organiser AABR

Sunday October 11

Sandstone with Matt Springall

Where Muogamarra Nature Reserve, NSW

Organiser AABR

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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.

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