



AABR NEWS

Australian Association of Bush Regenerators NSW

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2011

President's
Perspective
2

Bush regen
stories, northern
NSW and south-
east Queensland
3

AABR walks and
talks: Central
Coast NSW
4

Improving
Madeira vine
management
6

African olive
8

Australia keeps
the Acacia
9

Reducing the
fauna road toll
10

Raymond
Borland Bequest
Grant Program
11

What's
happening
12

Cryptogam **workshop**

Saturday November 5
10:00–2:00

The Crest Reserve, Georges Hall, Sydney

**With Professor David Eldridge, University of NSW teacher of
*current issues in land management and life in arid lands***

The workshop will include:

- walk and talk on the species of cryptogams that occur at The Crest
- examination of collected samples using microscopes
- provision of some information on cryptogams (e.g. books, basic fact sheet if available)
- discussion of the importance of soil, measuring carbon dioxide in the soil as an indicator of soil microbial and invertebrate activity and health, measuring water flow/infiltration in the soil
- possible collection of invertebrate samples and discussion

Bankstown City Council will provide a BBQ at the end of the day with meat and vegetarian options (between 12 midday to 2pm at the lake side)

Please RSVP by October 28

to Heather Stolle
heatherstolle@hotmail.com
02 9547 1692
0425 291 879

*All welcome—you don't have to
be an AABR member. Maximum
number is to be around 20 people*



AABR AGM Sunday December 4 2-5pm

President's Perspective

It is now October—and less than 2 months away from the November 2011 AGM when we will be discussing the idea of AABR broadening its focus!

All members and potential members are encouraged to come to that meeting and seriously discuss the ideas. And there will be a chance for input from those who can't come—through feedback on a discussion document we will be sending to you soon.

This discussion document will outline the rationale and specifics of the potential changes. (It has been prepared by a small working group appointed at the last AGM and is currently being considered by the AABR Committee).

There are probably no surprises in the document as we have flagged the nature of the proposals in previous newsletters. The gist of it is that AABR needs to engage more actively with the broader ecological restoration community, while still conveying the message of the importance of assisted natural regeneration. Hence we are considering opening membership to all interested people, providing a separate accreditation system. If this were to be approved by members, all existing members would become 'accredited' regenerators, and only accredited members will be able to alter AABR's accreditation standards.

There are two main driving forces behind this change. The first is the increasing levels of pressure on bushland in Australia and throughout the world, and the second is that the message of natural regeneration (and limits to it) is still not widely disseminated. Our specialist organization has been terrific at setting standards of practice for regenerators, but we have done this at the cost of an increasing perception that bush regeneration is a niche activity rather than something of relevance to restoration more generally. Separating membership and accreditation therefore, could allow us to continue to maintain standards of practice but help us to avoid preaching only to the converted or inadvertently understating the broad relevance of regeneration to ecological restoration as a whole.

Awakening a broader constituency to regeneration will probably require AABR to promote the full range of appropriate approaches to ecological restoration, showing clearly (perhaps in an 'AABR Primer') the role of natural regeneration as a goal of all restoration and a key mechanism to achieve holistic restoration

outcomes. It is my view and the view of others that this would then position AABR to work more effectively with industry, government, non government organisations and the broader community—as well as develop closer partnerships with researchers, whose support is needed if natural regeneration approaches are to be adequately tested and understood.

Should AABR members choose to go in this direction, appropriate emphasis on regeneration would need to remain in the constitution and our publications. But placing this in a broader context and extending our interest into other fields would allow us to help raise standards in other restoration approaches as well as our traditional area.

AABR is interested in your ideas about this. So watch out for the discussion document and provide whatever feedback you can so that it can invigorate the discussion at the AGM. There will be no motions on notice about this for the upcoming AGM, as changes to the constitution require a great deal of careful wording. However, if there is sufficient interest at the AGM, the meeting will be proposing a strategy for identifying appropriate constitutional changes and a timetable for a process, hopefully some time in 2012, through which motions on notice can actually be voted on by the membership.

Tein McDonald
President AABR (NSW)

AABR AGM

Sunday December 4 2-5pm

National Trust Centre, Observatory Hill, Sydney.

Free parking available. A 15 minute walk from Wynyard Station.

Come at 12:30 to have lunch together (BYO) before the meeting at 2. If the weather permits we will go to Observatory Park (next to National Trust)—otherwise in the Annie Wyatt room.



House and forest for sale
Scarborough NSW

Advertisement

Striking architect-designed timber house built in 2003 sits comfortably amongst the trees on the large 2000m² plus block. Separate laundry and studio/workshop continue the house design and materials. Reverse-cycle heat pump hot water, 9000L rainwater tank, great ventilation and natural light, timber beams and ceiling.

Over 20 years of loving restoration has brought back the original plant mix of Subtropical Rainforest and Escarpment Blackbutt Forest species. Glimpses of the ocean through the trees and falling asleep to the sound of breaking waves reminds you how close you are to our beautiful coastline. A welcome refuge in hot weather for humans and birds.

Please contact

Danie Ondinea: 02 6493 5777

McGrath Estate Agents, Thirroul: Vanessa 0488 443 174
or Amanda 0414 450 830



HAVE YOU AN INTERESTING BUSH REGENERATION STORY TO TELL?

WHY DO WE ASK?

The Australian Association of Bush Regenerators (AABR) is seeking 6 of the most interesting stories about bush regen projects in the Northern NSW – SE Qld region for showcasing at our annual meeting, Carrara community centre, Gold Coast on Sat November 12th 2011, 10.00am

Visitors welcome. Bring your weed control questions & answers - and a picnic lunch.

Email your short proposal to

teinm@ozemail.com.au

by October 21, 2011

Enquiries welcome – final details on www.aabr.org.au will be posted on

Call for powerpoint 'stories' of Northern Region bush regeneration projects

On Sat 9th November, the Northern NSW/ SEQ regional group of AABR will be building on last year's successful event and holding another 2-hour showcase of some (15 minute) presentations of six of the many exciting bush regeneration projects being carried out in the region. Over a picnic lunch there will be a moderated session to exchange technical information on bush regeneration techniques plus a chance to join in on a guided walk around the venue, the Carrara community centre, Gold Coast (directions will be posted on the AABR website in November).

To select an interesting range of projects, the regional group is calling for proposals from anyone who thinks they might have an interesting bush regeneration story to tell—as we are hoping to represent a wide variety in the final selection, including community or government-run, coast or inland, and projects from both NSW and south-east Queensland. These proposals should be submitted by Oct 21 and just be an outline (no larger than 2 pages). The outline should include a summary of the project, plus reference to prior condition, causal problems,

treatments and results (also please include at least one low-file size set of 'before & after' photos). The outline can be in the form of a Powerpoint presentation if you like, but the size limit for the outline is about 2 meg. Enquiries to Tein (teinm@ozemail.com.au)

The final selection will include projects that:

- provide a very interesting example of bush regeneration (i.e. either outstanding results or an unusual case which has implications for regen in the region)
- have good 'before and after' photos and other records of positive changes on the site since treatment
- are based on sound bush regen approaches and ecological underpinnings
- can be converted into good Powerpoint presentations (if you are unsure, we can help with this).

Outlines should be emailed to teinm@ozemail.com.au by Friday October 21st at the latest

AABR walks and talks: Central Coast NSW

On Thursday August 11, 23 people attended a field trip to Wamberal Lagoon and Wambina Nature Reserves. Deb Holloman, Bush Regeneration co-ordinator for National Parks and Wildlife Service showed us through parts of both reserves where volunteers, NPWS staff and contractors have been working to rehabilitate threatened communities.

Deb Holloman provided a summary of work at the reserves...

Wamberal Lagoon

The reserve has ten vegetation communities including Littoral Rainforest (an Endangered Ecological Community) with the threatened species *Syzigium paniculatum* and *Chamaesyce psammogeten*, and coastal dune systems. It is habitat for seven migratory bird species protected under CAMBA and/or JAMBA treaties.

Contractors, volunteers and NPWS staff have been working on site for over ten years to reduce the threat of weed invasion—particularly Bitou. Bitou is a weed of national significance (WoNS) and the Bitou Bush Threat Abatement Plan (Bitou TAP) ranks Wamberal Lagoon as a high priority site for treatment. A variety of methods have been used, including cut and paint, spraying, hand removal and splatter guns. Gas splatter guns have been found to be extremely effective in removing large areas of bitou, using Glyphosate and metsulfuron methyl. The bitou dies slowly giving native plants a chance to regenerate. The resilience of the site has been astonishing—nested quadrat data shows an area that was over 80 % bitou before treatment, 3 years later is less than 5%, with over 40 native species regenerating.

Other problem weeds include *Lantana camara* (another WoNS), *Erharta erecta*, *Polygala myrtifolia* and *Asparagus sp.*

Over \$150,000 of funding has been received for the reserve over the past 8 years, from the Hunter Central Rivers CMA, Environmental Trust and Bitou TAP.



Ocean views and a fine morning tea to start the day



Deb points out carprobrutus—its dense foliage helps suppress weed regrowth in areas previously dominated by lantana and bitou.



A section of lantana recently sprayed, some coast banksias have survived many years of lantana competition but have not been able to regenerate.



Bitou regrowing on the dunes—fortunately there are also many native species including *Acacia sophorae* and *Senecio lautus*.

Wambina Nature Reserve

Wambina Nature Reserve at Matcham protects the headwaters of Erina Creek and Lowland Rainforest Endangered Ecological Community. It is habitat for 145 fauna species of which 12 are threatened (including powerful owl, yellow-bellied glider, greater broad-nosed bat) and contains 134 native flora species.

This significant site suffers from weed invasion from WoNS—lantana, blackberry and bitou, as well as privet, asparagus fern, honeysuckle and tobacco bush. One of the original Landcare Groups, Matcham/Holgate Landcare, was established there in the early nineties by Ena Middleton, who at 85, still volunteers on site. An open kikuyu paddock has been regenerated along with Spotted Gum Forest on the ridge and riparian rainforest. \$80,000 of grant funding has been received from CMA, Environmental trust and NHT.

Myrtle rust at Wambina

Wambina has the dubious honour of being the first bushland site found to have Myrtle Rust, in October 2010. A month long effort was carried out to try and treat the fungus, with teams of up to 30 people (DPI, NPWS and bush regenerators) walking the entire 60 hectare site, tagging then spraying infected *Rhodamnia*s. In late November myrtle rust was found in Olney State Forest and subsequently up and down the NSW coast.

At Wambina the rust has been kept a bay, with monitoring sites showing no visible signs of the fungus for many months. As the weather warms up bright yellow spores are slowly appearing again, so now it is a wait and see game.

In Wambina, the main species attacked by the rust is *Rhodamnia rubescens* with one specimen of *Calistemon salignus* and half a dozen specimens of *Rhodomyrtus psidioides*. There are about 30 other myrtaceous species in the reserve which are showing no signs of infection by Myrtle Rust. This perhaps gives us hope that a lot of our natural native species will be strong enough to resist any infection—only time will tell.



Regenerating fern dominated groundlayer upslope of the rainforest



Rainforest in the gully at Wambina

Thanks to Deb and NPWS for taking good care of us. The BBQ lunch in the bush was much appreciated.

Photos in this story: V.Bear

EMR Journal discount subscriptions

The 2011 affiliate discount rate for Ecological Management & Restoration in 2011 is \$64 (GST inclusive price is \$70.40).

AABR members can renew or subscribe at *ordering*. onlinelibrary.wiley.com/subs.asp?ref=1442-7001. Click on the AABR price. A form will come up (discount code not needed).

Improving Madeira vine management

Tony Cook
NSW Department of Primary Industries

An edited version of a paper published in the NSW Weed Society newsletter No.55

This paper reports on trials of triclopyr/picloram based products, and compares them to alternative herbicides for the control of seedling vines and tubers. Long-term management of this weed species is discussed.

Madreia vine *Anredera cordifolia* is an aggressive weed on coastal riparian areas of northern NSW. It can survive as tubers, runners, and seed.

Persistence of weed species is usually a consequence of underestimating strengths in the weeds life cycle. This theory holds true Madeira vine. Much effort has focused on the control of established vines with lesser regard to the juvenile vines. This often resulted in established vines re-infesting treated areas within 6 months to 2 years. More effort needs to be targeted at younger vines, as the control of established vines is time consuming and therefore expensive. Until recently, there were few chemical control options available. Previous work from NSW DPI has investigated the use of herbicides to control juvenile

vines and subsequently, in January 2008, a Pesticide Permit was obtained that allows the use of products containing triclopyr 300g/L, picloram 100g/L and \pm aminopyralid 8g/L.

Feedback from people in the industry suggest that this new treatment supersedes that of foliar applications of glyphosate, by providing better levels of control of tubers, keeping competitive grasses alive and having a residual effect.

Four Madeira vine experiments were done (Table 2). All experimental treatments were applied according to commercial standards, as stated on herbicide labels. All herbicide applications were made to healthy, actively growing vines.

Picloram/triclopyr \pm aminopyralid formulations were highly effective on both juvenile forms of Madeira vine (also cat's claw creeper). It has many advantages over other treatments, namely:

- it is selective and safe to competitive monocots
- it has superior efficacy on juvenile vines at reduced dilution rates and kills the tubers attached to these vines
- it can kill all sizes of Madeira vine tubers—other treatments had lower efficacy
- it is translocated to aerial Madeira vine tubers following foliar spraying and dramatically reduces their viability
- it reduced juvenile Madeira vine density by 99.6% over 4 years
- it has residual active ingredients that may provide residual control
- it has potential to reduce herbicide application rates

Table 2. Experiments undertaken on Madeira vine

Exp. Code	Started	Location	Investigating what?	Herbicides used	No. of treatments
MV1	10.2.06	Ellenborough	Repeated application on tuber persistence	Initially a range of herbicides followed by 2 applications of Starane® \pm Brush-off® followed by 3 applications of Gazon® DS or Extra	1
MV2	20.9.08	Tamworth – Glasshouse	Effect of ¼ & 1/8 dose rates of foliar sprays on tuber survival	Many combinations of metsulfuron, glyphosate, picloram/triclopyr \pm aminopyralid, fluroxypyr \pm aminopyralid	24
MV3	22.9.08	Tamworth – Glasshouse	Effect of foliar applied treatments on viability of aerial tubers	Full dose rates of metsulfuron, glyphosate, fluroxypyr \pm aminopyralid and triclopyr/picloram/aminopyralid	5
MV4	15.9.08	Tamworth – Glasshouse	Effect of tuber size on survival	¼ dose rates of metsulfuron, glyphosate, fluroxypyr \pm aminopyralid and triclopyr/picloram/aminopyralid	5

Suggested management plan

The key to successful long-term control of Madeira vine hinges upon the persistent treatment of juvenile vines following effective killing of established vines. Control of established vines is generally completed successfully, using a modest range of options. Once this is achieved, the task of gradually depleting the soil of tubers can commence.

More regular spraying is required when treating Madeira vine due to faster growth rates. It is estimated that two to three foliar applications of herbicide are required per year to prevent vines getting too large. Therefore, Madeira vine is a weed that requires

a great deal of effort due to the need to treat more frequently and for longer periods.

The preferred treatment is a foliar application of herbicide that contains picloram, triclopyr and possibly aminopyralid as their active ingredients. However, people may wish to select fluroxypyr or glyphosate as their herbicide, but are likely to get lower levels of control and will need to spray for more years. It would be prudent to have annual scans of riparian areas once vines density appears non-existent, as one established vine may develop into a significant infestation within a relatively short period of time. A small effort spent treating the occasional vine now is likely to prevent an enormous effort later.

Maintaining control programs to foliar treatment of small vines will be an efficient use of labour. It can be less demanding on staff compared to the physical exertion of cut stump or stem scrape applications. More infested ground can be covered and less herbicide is required each year as vine density reduces significantly with time.

It is recommended to treat upper catchment infestations first. These infestations are a source of seeds/tubers for riparian areas downstream. The main logistical problem is the range of difficult terrain that has to be traversed to access these weeds and the shortage of resources to cover large areas.

Current registered treatments

The following table summarises the current registered and Pesticide Permit treatments for Madeira vine in NSW. It is important to note that Permits 9907 and 10200 have only been issued since April 2007 and January 2008, respectively. Therefore prior to 2007, the range of available treatments was rather poor, and permit 10200 has added a great amount of flexibility.

There are other Pesticide Permits that are restricted to specific groups of people in NSW or for Queensland only. For more details on the current status of Pesticide Permits, see www.apvma.gov.au.

Table 1. Current control options in NSW

Label or Permit	Herbicide(s)	Rate	Type of application
Permit 11916 (expires March 31st 2012)	glyphosate 360g/L	1 part to 50 parts water and/or 1 part product to 1.5 parts water	Foliar spray Cut stump/stem scrape
Permit 9907 (expires March 31st 2012)	Starane®	500mL to 1L per 100L water 35mL per 1L diesel	Foliar spray Basal Bark
Permit 10200 (expires January 31st 2013)	Grazon® DS or Grazon® Extra	400mL per 100L water	Foliar spray
Label	picloram 43g/kg eg. Vigilant® gel	Undiluted	Cut stump/stem scrape
Label	Starane® or Starane® advanced	500mL per 100L water or 300mL per 100L water	Foliar spray

Juvenile vines

A critical point in the life cycle is when the juvenile vine attaches itself to the host. It can then climb above most of the competitive species and utilise more sunlight. Once these vines receive increased sunlight, their growth rates and competitive abilities improve. Another vine, Cat's claw creeper *Macfadyena unguis-cati* is not so affected by light intensities, as it can grow reasonably well under forest canopies whereas Madeira vine prefers open canopies with more direct light. Therefore Madeira vine is commonly seen above hosts and as ground based vines if ample sunlight is available (Stockard 1996). Floyd (1989) states that Madeira vine grows approximately 1 metre per week under favourable conditions.

Preservation of competitive groundcover species is essential, as these species will be light, moisture and nutrition competitive against seedling vines, reducing their growth rates. The foliar application of glyphosate is associated with death of other species, and the reduction of these species has led to increased emergence of vine weeds (Prior and Armstrong 2001, Cook and Storrie 2007).

Seed bank and dormant tuber persistence

If one is to undertake a persistent control program for juvenile vines, it is necessary to know how long seed banks or tubers survive in a dormant state. Once this is known, management plans can be written to accommodate the need for repeat applications until these survival tissues are exhausted.

Swarbrick (1999) reports that Madeira can produce seeds, however the longevity of this seed in the soil is unknown. This will ensure their persistence once the adult plants are killed. Seed production is considered the minor vector or spread and survival. The primary mechanism is the development of aerial tubers that may survive between 2 and 15 years (Vivian-Smith et al. 2007) and may be found at densities of at least 1,500 tubers m⁻² (Floyd 1985). Larger, more persistent root (subterranean) tubers can be formed and may have a diameter of 20 cm (Vivian-Smith et al. 2007).

Vines can also exist as ground runners. Often these runners form root tubers after stem nodes form roots in the process known as tip layering (Vivian-Smith and Panetta 2004).

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African olive

The NSW Hunter region

From the Roadside Environment Newsletter
Newsletter August 2011 Edition 7

African Olive is listed as noxious weed in NSW and South Australia, and is listed nationally as a potential environmental weed. Current extent of spread in south-western Sydney and extension into the Hunter Valley suggests a potential for spread well beyond current distribution in NSW.

Over the past 10-15 years African Olive *olea europaea subsp. cuspidata* has become a significant problem in the Hunter Valley, where it has become well established along roadsides, in particular along the New England Highway where it has formed dense monocultures.

African Olive has a significant impact on remnant bushland areas as its dense canopies shade out surrounding areas, resulting in bare soil, soil erosion and loss of biodiversity resilience as native seed banks become unviable. It also invades pasture areas impacting on grazing lands. Trees can survive for over 100 years and are extremely hardy.

It is mainly spread by birds, so is mostly found growing under roosting spots such as telegraph wires, along fences and under and around trees and larger shrubs, which makes it a significant threat to roadside environments. Dense seedling 'halos' appear around the base of large roosting trees ready to develop when conditions are right.

The Hunter region has some of the worst infestations of African Olive in Australia predominantly in the Maitland and Singleton local government areas. The Hunter-Central Rivers Catchment Management Authority (CMA) has been working over the past five years to support agencies in the Hunter tackle African Olive along roadsides and on public and private land.

Treating mature fruiting trees can significantly reduce the seed source as a single semi-mature tree can produce 25,000 fruits. Control trials conducted by Maitland City Council have identified effective ways to treat mature African Olive trees and have led to a state-wide permit for an effective dosage rate and application method for basal bark spraying, which is less labour-intensive and more efficient than foliar spraying.

To find out more about African Olive control in the Hunter region contact the CMA's Lorna Adlem on (02) 4930 1030.

Mt Annan, south-west Sydney

From the Australian Botanic Garden, Mount Annan
(Peter Cuneo) www.rbgsyd.nsw.gov.au/annan/the_garden/future_planning/African_Olive_control_program/Update_June_2010

African Olive *Olea europaea ssp. cuspidata* is a medium-sized dense crowned tree with a small black fruit. The main centre of natural distribution for African Olive is eastern Africa, where it occurs from the desert shores of the Red Sea to the high rainfall mountain regions of Uganda. African Olive was introduced into Australia as

a hedging plant and rootstock for the edible common olive *Olea europaea ssp. europaea* in the early 1800s.

The Camden region in south-western Sydney is an early Australian introduction site for African Olive, which has asserted itself in recent decades as an aggressive woody weed.

Current situation at Mount Annan

The Australian Botanic Garden, Mount Annan is a 416 hectare site located near Campbelltown, NSW. The Garden is a unique combination of developed horticultural theme gardens, woodlands and grasslands. With the Garden now surrounded by urban development, the native vegetation remnants have assumed greater significance and are providing valuable refuge for displaced fauna. The native vegetation at Mount Annan Botanic Garden has regionally significant conservation value, and includes the following endangered ecological communities listed under the State and Federal legislation:

- Cumberland Plain Woodland (reclassified since January 2010 as critically endangered)
- Western Sydney Dry Rainforest
- Sydney Coastal River Flat Forest

This endangered bushland is under direct threat from African Olive invasion. The Botanic Gardens Trust has implemented a strategic approach to African Olive control over the past 10 years, which has focused on olive control in the highest quality bushland areas

Large scale African Olive control across the estate is currently beyond staff resources, with the current level of African Olive infestation estimated to be:

- 75 hectares of dense African Olive forest
- 31 hectares of woodland invaded by African Olive understorey
- 37 hectares of good quality bushland free of African Olive

African Olive update June 2010

Stage One of contract African Olive control work has now been completed, at a total cost of \$150,000. The main focus of the work done in the first half of 2010 was:

Controlling the spread. A 10 hectare area in the eastern valley was spot sprayed to control small olive shrubs emerging in grassland areas. Several thousand shrubs were sprayed with selective herbicide (which doesn't affect grasses) to limit the spread of African Olive in this sector of the Garden. Area treated: 10 hectares. Contractor: Greening Australia.

Mt Annan summit. Freeing up surviving native trees. Mt Annan is covered in dense African Olive forest established over the past 20 years. Despite this dense invasion there are still some native trees surviving above the African Olive canopy. These important remnant native trees have been mapped using GPS by Garden's staff and transferred onto a digital map layer (GIS). Work in this first stage was to free up these native trees by controlling all African Olives within a 10 m radius of each tree. Olives were either removed by chainsaw/herbicide treated or drill/injected with herbicide. The cleared zone around each tree will ensure the tree's survival and encourage natural seedling regeneration. Access paths into the Mt Annan summit area were created to facilitate future work on this steep and difficult site. Area treated: 28 trees/1 hectare. Contractor: Toolijooa Pty Ltd.

Maintaining previously treated sites. All bush regeneration projects require follow-up (secondary) work, particularly when large dense weed invasions have been cleared for this first time. Follow-up weed spraying was completed for sites mechanically cleared of olive in 2003 and 2007. Direct sown native grasses are

establishing well at these locations. Area treated: 2.3 hectares. Contractor: Greening Australia

Securing new conservation areas and fauna corridors.

Good native woodland areas exist along a series of creeklines and gullies north of the Banksia Garden. This area has excellent native tree canopy and understorey with some African Olive invasion. Work in this area has now controlled the majority of olive invasion which will allow natural regeneration. This area, located in the southern sector of the Garden, is important as a fauna corridor linking south beyond the Garden boundary to the Nepean River. Area treated: 3 hectares. Contractor: The Bush Doctor.

Early intervention: maintaining good bush. Good examples of Cumberland Plain Woodland can be seen by visitors as they travel around the Garden. The work in the woodland has focussed on

controlling early olive invasion in bushland areas located in close proximity to Caley Drive. Bushland areas respond very quickly to this timely control of olive invasion. Area treated: 2 hectares. Contractor: The Good Bush People.

Providing the seed resource for future regeneration: seed harvesting and production.

The native vegetation of western Sydney is very resilient and in many cases able to regenerate from seed held in the soil seedbank. For areas that have been dominated by African Olive forest for many years, large amounts of native seed will be required to 'kick start' the regeneration of the native bushland. To meet this demand for seed, a dedicated native seed production area was established at the Mount Annan Botanic Garden nursery to provide high quality native grass seed for use in restoring areas once African Olive is cleared.

Australia keeps the Acacia

From transcript of the science show 30 July 2011

www.abc.net.au/rn/scienceshow/stories/2011/3278116.htm

Robyn Williams talks with Dr Kevin Thiele, curator of the Western Australian Herbarium at the The International Botanical Congress meeting in Melbourne.

Robyn Williams: *Acacia* has also been of high significance in this meeting, and you prefaced it in a talk on Ockham's Razor about three or four weeks ago. What has happened with *Acacia* and how was the problem solved?

Kevin Thiele: Once upon a time we used to think that there was a huge genus *Acacia*, 1,500 species, one of the largest genera of flowering plants in the world, found through much of the warmer parts of the world, so Australia, India, Africa and the neo-tropics, America, Central America. Since the 1980s botanical researchers have realised that this huge genus is actually five separate groups of plants which aren't all that closely related. So what was once a single genus needs to be split into five. Normally when that happens the rules by which plants are named state that the group that includes the type species of *Acacia* retains the name *Acacia* and every other group needs a new name.

The type species in this case is a species previously called *Acacia nilotica*, which as the name suggests occurs in Africa and throughout India. The group that includes *Acacia nilotica* is a fairly small one, about 150 species. There is a group of acacias in Australia... Australia is a real hotspot for *Acacia*, over 1,000 of the 1,500 species in the old genus *Acacia* occur in Australia. There has been an immense irradiation in Australia. And that group doesn't include the type because of course they were discovered after *Acacia* was named, *Acacia* was named in the mid-18th century. So under the strict application of the rules, all of those species needed to be renamed, whereas a relatively small group of species would retain the name *Acacia*. And the name that was available in Australia was a genus called *Racosperma*, so our golden wattle, the national emblem for Australia, the one that has given its colours to the Olympic green and gold, that would be called *Racosperma pycnanthum*, the golden wattle.

Some Australian botanists eight years ago made a special application under the rules to move the type species of *Acacia* to an Australian species, *Acacia penninervis*. That would mean that the Australians could retain the name *Acacia* but the Africans

would then need to change the name. And not surprisingly that has been a controversial move. *Acacia* is iconic in both Australia and Africa. Most of Australia is dominated by *Acacia*, so it is a very important genus, it's iconic for our national flower et cetera. But in Africa equally the flat-topped thorn trees in the Serengeti that you see browsed by giraffes, many of those are *Acacias*, and *Acacia* appears widely in African culture. So African botanists were very upset by this proposal, and there has been a contest since that proposal as to whether it gets accepted or not.

Robyn Williams: And what have you decided?

Kevin Thiele: The last congress was six years ago in Vienna, and that meeting ratified a decision to move the type to Australia. However, there were some issues with the vote that occurred in Vienna which have been challenged by botanists since then, and there has been a lot of discussion about whether that process that happened in Vienna was properly conducted. At this meeting, we endorsed that process and we endorsed that decision. So pending a ratification at the end of the International Botanical Congress, which is regarded as a very straightforward ratification, the type of *Acacia* is now Australian, Australia uses the name, and the African and American *Acacias* need another name, one of which is in existence already, it's *Vachelia*, but there are some other possible names which could be more acceptable to general users in Africa, such as *Afroacacia* or *Acanthacacia*, which means spiny acacia.

Robyn Williams: And everyone is cool about this?

Kevin Thiele: I think that in any type of decision like this, many will be disappointed. So of course in Australia we are very pleased. Principally we are pleased that the rules that the botanical community takes a lot of pains to maintain so that we have an internationally agreed way of naming plants, those rules have been endorsed and supported and ratified. The name itself is actually of less importance than the rules by which we name things. So yes, without doubt the African and American botanists are disappointed, but nevertheless there was strong international endorsement of the process that we've been through, and that's very important. It was a very clear vote, and importantly it was a vote by the world's assembled botanists, the meeting wasn't stacked by the Australians, despite being in Melbourne.

Robyn Williams: If only botanists ran the rest of the world as well.

Kevin Thiele: If you can work out a system by which botanists could run the world, I'd vote for you.

Reducing the fauna road toll

Are we too accepting of the number of animals killed and injured on our roads? Perhaps we don't realise how high the toll really is? Identifying fauna black spots and reducing driving speed may help significantly.

An obvious sign of potential human impact on animal populations is roadkill. In Tasmania, this impact is perceived as relatively greater than in other Australian states, and is often noted by visitors and locals alike, such that calls for management action are common in the popular press.

Dr Alistair Hobday featured a recent segment on the ABC's Catalyst program: Roadkill Rescue. Over three years and 15000 kilometres, he and his family counted more than 5000 fatalities as they drove around the state. By mapping the abundance and distribution of roadkill, he found more than half occurred on roads where speeds exceeded 80 kph.

In Dr Hobday's words *"Living in Tasmania with a lot of wildlife, it's a real privilege to be exposed to that. However, that requires a responsibility I think as drivers to be more careful when you are using the roads. If you live near a school, you wouldn't think it was acceptable to run over a lot of schoolchildren. We modify our behaviour to the environment, and we should be doing that for wildlife. We noticed there was a very high correlation between the density of dead animals and the speed at which vehicles are travelling. And one of the really common management solutions would be to modify human behaviour by changing their speeds.*

The density of roadkill in Tasmania—about one dead animal every three kilometres—is unprecedented worldwide.

In total, we recorded over 60 different types of animals dead on Tasmanian roads" (From www.abc.net.au/catalyst/stories/3198257.htm).

The organisation roadkilltas.com provides more information roadkill and what is being done.

Information for drivers

From www.roadkilltas.com

Around 300,000 animals are killed on Tasmania's roads every year. The death toll includes 3,000 Tasmanian Devils a year. Roadkill is a major threat to the survival of the species now that it is depleted by facial tumour disease.

Tasmanian drivers are injured and killed from collisions with wildlife every year. And over \$5,000,000 worth of damage to vehicles is reported from hitting wild animals each year.

Dawn and dusk, and the first few hours of the night, are the times you are most likely to encounter animals on the road.

Where are animals most likely to cross?

Look for animals on the side of the road where there is vegetation, or where a creek bed might cross under the road.

Animals may leap out suddenly. Watch for the reflection of their eyes in the headlights.

Young animals don't recognise cars as a threat, and don't know how to get out of the way—look out and give them time to cross.

Where one animal is crossing, there may be more—they will follow their mother or a mate across, even if cars are coming.

Never throw food or any litter out of your car—it attracts animals to roadsides.

How can I avoid wildlife safely?

The best way to avoid hitting wildlife is to drive slower from dusk to dawn. This gives you more time to spot an animal and to slow down to avoid hitting it.

Driving slower is safer for both humans and wildlife. If you drive at 60 km/hr or slower on roads where wildlife is likely to be present, you have a good chance of seeing an animal if it runs into the road, and being able to slow down to avoid it.

You can download GPS co-ordinates for roadkill black spots around Tasmania here www.roadkilltas.com

What should I do if I do hit an animal?

If you do hit an animal, stop if it is safe to do so. The casualty may be able to be treated. Female marsupials may have young in their pouches that can be saved.

Injured and orphaned animals need special treatment. Keep the animal in a warm, dark, quiet place when transporting it and contact the Parks and Wildlife Service as soon as possible.

Tasmanian roadkill statistics

- Estimated roadkill per year: 293,000
- Brushtailed possum: 108,543
- Pademelon: 28,854
- Wallaby: 15,829
- Tasmanian devil: 3,392
- Average roadkill density: 1 animal every 3 kms
- Average roadkill per driver per year: 1
- 32 animals killed every hour (average for the year)
- 50% of roadkill happens where vehicles travel over 80 km/hr

What you can do to make your next roadtrip wildlife friendly

Most of the wildlife killed on Tasmanian roads is hit between dusk and dawn.

Driving at 60km/hr or less on country roads between dusk and dawn will give you a good chance of seeing an animal and being able to slow down safely to avoid it.

Roadkilltas.com provides information and tools for drivers to help them avoid hitting wildlife. We aim to reduce the impact of wildlife collisions on both people and animals.

- find out where the roadkill black spots are on your planned trip, or if you have an in-car GPS or SatNav, download GPS 'Point of Interest' locations for roadkill black spots
- read our information for drivers on avoiding wildlife, and what to do if you find injured wildlife on the road
- find out more about roadkill research in Tasmania
- watch 'Tasmania; Your Roadkill State' video
- support our efforts to reduce roadkill in Tasmania—spread the message—borrow our new banners for your open day.

New Landcare grants and a new corridor project

From Landcare Australia www.landcareonline.com.au/news/archive/borland-conservation-connecting-community-to-the-land/

The Durness-Borland Landcare corridor

Landcare Australia invited the local Port Stephens community to celebrate Landcare Week 2011 by launching the Durness-Borland Landcare Corridor project at a community planting day just outside Tea Gardens on Sunday, September 11th.

The Durness-Borland Landcare corridor is a substantial biodiversity corridor that is being established in the coastal hinterland of the lower Myall River, partly funded by a generous philanthropic bequest from the estate of the late Raymond Borland to Landcare Australia.

The project is a partnership between Landcare Australia, Durness Station (a subsidiary of Nepean), Hunter-Central Rivers CMA and Great Lakes Council, and will connect areas of high conservation value for native fauna and flora habitat. It will also rehabilitate and revegetate degraded grazing areas to reconnect remnant vegetation of high conservation value near the lower Myall River and Port Stephens with an extensive area of remnant swamp forest.

The corridor will extend from the coastal lowlands to the coastal ranges over 70 kilometres, and rise from sea-level to an elevation of 650 metres. The majority of habitat revegetation and regeneration is being undertaken on Durness Station, a large 4,000 hectare beef grazing property owned by Nepean, which lies just north and west of Tea Gardens on Myall Way and Viney Creek Road.

One of the key components of the Corridor is the Kore Kore Conservation Area which is 120 hectares of elevated high value remnant habitat overlooking Tea Gardens, Port Stephens and offshore islands. The area was purchased by Great Lakes Council and the Hunter-Central Rivers CMA to provide community access, environmental amenities and education. Mathew Bell, the senior ecologist for Great Lakes Council is very enthusiastic about the value of this area within the project, commenting that, "the Conservation Area is an important link in the overall project containing habitat for many species including koalas, squirrel gliders and the powerful owl."

Landcare Australia Limited is overseeing the project and contributing funding through the Raymond Borland Bequest. Heather Campbell, CEO of Landcare Australia, recognises the significance of working on such a huge project in partnership with local authorities and the community.

"The Durness-Borland Landcare Corridor is a fantastic project and an excellent example of how willing partners can create a great community outcome. It also shows how a bequest can make an important difference and protect the environment that we all enjoy.

Raymond Borland greatly valued the Australian landscape and requested that his bequest be used for the restoration of degraded non-urban lands and non-tidal river systems in NSW. "Through this biodiversity corridor and conservation area his generous bequest is being put to the best possible use," she added.

When completed, the Corridor will be a regional focus to demonstrate practical methods for integrating agricultural productivity with conservation. It will also provide enhanced opportunities for community education and awareness relating to biodiversity conservation, wildlife connectivity and sustainable grazing programs, including the establishment of best management practice on Durness Station, and through the provision of technical information and field days.

This large-scale project emerged from a successful partnership between the local community, private landholders and local government to create a regional green corridor for the protection of biodiversity against climate change.

Raymond Borland Bequest Grant Program now open

Individual grants of up to \$30,000 are now available to support community groups and other organisations undertake projects that will repair and rehabilitate degraded non-urban land and non-tidal waterways in NSW. Landcare Australia and the Raymond Borland Bequest are providing total of \$300,000 (excluding GST)

The Raymond Borland Bequest

During extended journeys through country NSW, Raymond Borland, a Sydney businessman, became gravely concerned about the extent and severity of landscape and water quality degradation that he often encountered. He was also impressed by the outstanding achievements of local Landcare groups in repairing degraded areas, such as eroded gullies and riparian areas, and protecting the biodiversity of native habitat. Raymond Borland resolved to assist future generations preserve and enjoy the integrity of our natural assets. His estate provided a bequest to Landcare Australia to be used for rehabilitating degraded natural environments in rural and non-tidal areas.

Who can apply?

All community groups or organisations involved in caring for and managing our landscapes and rivers are invited to apply. The grants are particularly targeted towards established local community-based organisations that are successfully delivering projects to protect and improve the natural environment in non-urban areas.

Individuals and commercial business organisations are ineligible.

There is no requirement for applicants to be Landcare groups. All community groups and organisations that are committed to repairing and protecting land and waterways, and biodiverse habitat are encouraged to apply. There is no expectation that applicants will create or become a Landcare group as a result of a successfully funded application. If you would like support from your local Landcare group, please check the National Landcare Directory to find details of your local group.

We request that all groups and organisations ensure that they have registered the details of their group on the National Landcare Directory

What's happening

October 17 -18

Conserving Native Grasses in rural cemeteries.

Watershed Landcare and the DPI are running field trips to Wollar Cemetery (17th Oct) and Ilford & Tannabutta Cemeteries (18th Oct). Small rural cemeteries are often refuges for plants that are no longer common in the surrounding landscape.

Contact Thea at info@watershedlandcare.com.au or 0417 074 673.

Wednesday October 26

Biodiversity Professionals Network - Sydney Region

10am-1pm (followed by lunch and networking)

Where Level 7, 10 Valentine Avenue, Parramatta

The SMCMA is hosting regular network and professional development meetings for local and state government biodiversity professionals in the Sydney area. These professional development opportunities will occur twice a year and include presentations from experts in various fields and relevant updates from local and state government agencies. Topics will be influenced by the needs of the attendees and the meetings will also offer an opportunity for networking and discussion.

- Presentation from Prof. Lesley Hughes: Practical considerations for managing local biodiversity in a changing climate.
- Update from OEI on the Priorities Action Statement (PAS) review.
- Round table and discussion about what attendees would like from future meetings. Please bring your ideas or pressing concerns so that they can be included in future meetings.

Who Local Council and State Government officers involved in biodiversity management and planning (e.g. Biodiversity Officers, Threatened Species Officers, Environmental Planners, etc).

Cost Free

RSVP: by 21/10/2011

Contact Jenna Hore 02 9895 7856 or jenna.hore@cma.nsw.gov.au. Please advise of any food requirements.

The venue is a 1-2 minute walk from Parramatta train station. Alternatively paid parking is available in Valentine Ave or Wentworth St car parks.

October 29 -30

Nature Conservation Council of NSW Annual Conference

Where Sydney University Law Foyer

The Conference is an opportunity for NCC member groups to gather from across the state and formulate council policy. Not a member group but want to have a say in NCC's policies? Contact NCC for more information!

The NCC Annual Conference allows member groups to learn about NCC's work and achievements over the past year; discuss and debate key environmental policy issues for New South Wales; hear NSW politicians from Liberal, Labor and Greens parties outline their commitment to the environment; participate in workshops specially run for Annual Conference participants; celebrate the achievements of conservationists from across the state; and participate in the 2011 NSW Environment Awards

Business matters over the two days will: consider motions submitted by NCC member groups and executive; review NCC's Annual Report 2010-11; undertake the 2011-12 Executive Election.

More information www.nccnsw.org.au/events/ncc-annual-conference-2011

Saturday November 12

Telling your bush regen stories (see page 10)

Organiser AABR northern region sub-committee.

November 29 -30

NRM Conference: Tools & Methods for Monitoring & Evaluating in NRM

Frameworks, on-ground methodologies & new opportunities

Where Citigate Central, Sydney

Monitoring and evaluating to report the impact of the investment made in land, biodiversity and water continues to be challenging and fragmented across programs and regional, state and national scales.

While robust systems are in place to ensure accountability for investment in activities, the outcomes from this investment are more difficult to account for. Program managers clearly understand the benefits of the work they do, and at a site scale can often gather strong evidence. However, their ability to convey the benefits at national, state and regional scale is very limited.

This has meant that, while a large volume of information exists, its collection has been driven through unrelated processes, using different methods and standards.

This conference will discuss projects in light of the need for consistency and integration, with the objective of enabling NRM programs to report more effectively about the impact of the investment they make.

More information www.nrmoutcomes.com/index.php

November 21-25

ESA Annual Conference. Ecology in Changing Landscapes

Where Hobart, Tasmania

Contact <http://esa2011.org.au/index.asp?IntCatId=14>

The Ecological Society of Australia Conference is the pre-eminent conference in ecology in the southern hemisphere, bringing together the best and brightest ecologists from academic, government and non-government backgrounds in Australia, New Zealand and internationally. We welcome practitioners and students from a range of disciplines to facilitate broad conversation within the areas of natural resource management, conservation biology and ecological science.

The aim is to inspire challenging dialogue across all fields of ecology and to link research with practical conservation biology. We hope to stimulate debate and challenge current thinking, particularly with reference to the need to mainstream climate change ecology. Are the ecological questions and methods of the past still relevant and are they up to the questions of the future?

Sunday December 4 2-5

AABR AGM

Where National Trust Centre, Observatory Hill, Sydney. Free parking available. A 15 minute walk from Wynyard Station.

Come at 12:30 to have lunch together (BYO) before the meeting at 2. If the weather permits we will go to Observatory Park (next to National Trust)—otherwise in the Annie Wyatt room.

AABR NSW

President

Tein McDonald
president@aabr.org.au

Vice President

Matt Springall

Treasurer

Paul Ibbetson

Membership Officer

membership@aabr.org.au

Secretary

Jane Gye

Committee

Heather Stolle
Elisabeth Dark
Danny Hirschfeld

Northeast NSW/Southeast

QLD sub committee

Mike Delaney 02 6621 9588
miked@envite.org.au

Hunter sub committee

Trisha Barker 0425 346 330

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
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**www.aabr.org.au
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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.

\$20:00	p.a	AABR Newsletter Subscription	(all interested people)
\$10:00	p.a	AABR Newsletter Subscription	(email for 1 year for students of Certificate III CLM-Natural Area Restoration)
\$25:00	p.a	AABR Membership	(appropriately qualified & experienced bush regenerators)
\$50-400	p.a	AABR Contractors & Consultants List	(appropriately qualified & experienced bush regenerators)

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