



News of Friends of Grasslands

Supporting native grassy ecosystems

July - August 2012

ISSN 1832-6315

Program - take the diary out now

July

SAT JULY 21, 2.00-4.00 pm **FOG Midwinter presentation, Mugga Mugga Education Centre**, Rare and Threatened Plants of the ACT. Details on page 2.

SAT JULY 28, 9.30am-12.30pm **FOG/Fenner work party, Stirling Park Meet on Fitzgerald Street** half-way between Hunter and Clarke streets in Yarralumla. Register with Jamie Pittock jamie.pittock@fog.org.au Details on page 2.

Photos: (above right) A Red Track sign on the summit of Red Hill (Andrew Zelnik), story page 10, (below right) volunteers take a hard-earned rest at Stirling Park and (below) images from the Photographic Workshop at the ANBG, a clustered everlasting and red spider flower (John Fitz Gerald) .



In this issue

Program

News roundup

FOG advocacy

2011 Reports cont.

Cultivation corner - carbon advantage landscapes

The Red Track

Australian bindweed, a pretty weed or pretty flower?

Upcoming FOG Events

Please register for FOG activities with the **FOG contact person** who can assist with directions and possibly car pooling. By registering, you assist FOG to organise any catering and to provide you with other information you may need.

FOG Midwinter presentation, Mugga Mugga Education Centre,

Sat July 21, 2.00-4.00 pm
Rare and Threatened Plants ACT

Firstly, Betty Wood will present case studies of eleven rare plants of the ACT - their status under Commonwealth, ACT, and NSW conservation acts, a short look at their ecology, and the ups and downs of their population sizes. She will look at the contrasting reproductive strategies of Button Wrinklewort (*Rutidosia leptorhynchoidea*) and Small Purple Pea (*Swainsona recta*) and how these affect small inbred populations.

Then, following an afternoon tea break, Amy Macris (Fenner School) will tackle the question "Is fire an appropriate management tool for the Button Wrinklewort?" using data from two student projects completed last year alongside FOG's conservation work on National Capital Lands at Stirling Park.

Please register with john.fitzgerald@fog.org.au to provide some idea of numbers attending. Volunteers are needed to help with afternoon tea.

FOG/FennerWork party, Stirling Park

Sat July 28, 9.30am to 12.30 pm

Volunteers are wanted for a critical work party at Stirling Park on Saturday morning July 28th. We will meet on Fitzgerald Street halfway between Hunter and Clarke streets in Yarralumla. The work party will be held in conjunction with local residents and focus on clearing out woody weeds in a very nice patch of yellow box grassy woodland adjacent to an area that is at risk of embassy development. To participate please register with Jamie Pittock: jamie.pittock@fog.org.au The work party will be led by Peter McGhie.

In June the National Capital Authority released a consultants report into three prospective sites from new embassy developments. Fortunately a site at Red Hill was ruled out but nearly 5 ha of Stirling Park remains at grave risk even though the local community and FOG support redevelopment of a third site at the old brickworks.

FOG is changing our work parties at Stirling Park after consultation with local residents to hold more frequent half day events on the last Saturday morning of each month. The currently scheduled work parties will be re-oriented to the Yarramundi Reach and Scrivener's Hut sites.

A Call to FOG Photographers

Ginninderra Catchment Group (GCG) is producing a brochure on Natural Temperate Grassland Species of the ACT and Region, to be distributed through environmental groups in the ACT and surrounding

region. This durable brochure will fit in your glovebox or pocket, and is aimed at improving knowledge about grassland species in people's 'backyards'.

FOG has assisted in narrowing down a species list, and now high quality plant photographs are needed, ideally images showing the growth habit of the plant, not just its attractive flowers. Many FOG members have good photo collections and are warmly encouraged to submit an image or even more! GCG is not profiting from this brochure, nor has it been funded or sponsored at this stage, so no payment can be offered for photos accepted, but the photographer will be named on every image in the brochure.

GCG has a web page from which you can download the species list, as well as more information about image formats, plus the following link to a related brochure from Victoria to provide inspiration. <http://www.ginninderralandcare.org.au/landcare/projects/natural-temperate-grasslands-act-and-region-brochure> For more detail, contact john.fitzgerald@fog.org.au or phone the GCG Coordinator Kelly Behrens on 6278 3309.

Photoecology Exhibition CSIRO Discovery, Clunies Ross Street, Acton ACT

24 July 2012, 6:30pm - 12 August 2012, 3:00pm

Ian Fraser will open the exhibition of photo images of Mulligan's Flat on Tuesday, 24 July at 6:30 pm.

For more information, visit <http://www.csiro.au/Portals/Education/Programs/Discovery-Centre/Discovery-Events/Photoecology-Mulligans-Flat.aspx>

FOG Membership To join or renew

FOG membership entitles you to receive our newsletter and e-Bulletin, to attend FOG's many and diverse activities, and much more.

The cost is small: \$20 for individuals and families, \$5 for students/concessions and \$50 for organisations, due on 1 January each year.

Membership forms are available on our website: www.fog.org.au

For inquiries contact membership@fog.org.au

FOG/Fenner School/Yarralumla Residents Working Party, Stirling Park

Sarah Sharp



SUN APRIL 22 More than 35 volunteers attended a working party at Stirling Park. The day was warm, with occasional showers in the morning, but it cleared into a pleasant afternoon. It was great to see so many of the local residents volunteering their time. The working parties cleared woody weeds mainly in two areas – around the sewer vent and to the south-east and near the entrance of the mosque. In addition five volunteers removed seven mature Coot-amundra Wattle trees from the Finnish Embassy and planted 5 native shrubs in their place. Staff from the Embassy helped, and will hopefully look after those new shrubs, which in time will provide habitat in that very diverse patch of woodland with Kangaroo Grass understorey.

In total, 202.5 volunteer hours were put in, 0.7 ha cleared of woody weeds and 340 m³ of cut material produced. That equates to 50 m³ of material removed in each 0.1 ha (10 x 10 m area). Not a bad effort, belying the evidential lack of activity in the photos!



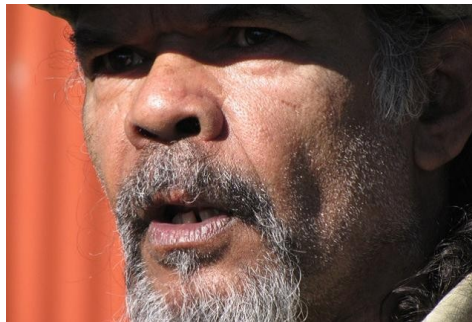
News Roundup

Final Indigenous Values Workshop

Geoff Robertson

19 and 20 APRIL The final FOG workshop on Indigenous Values in the Landscape was held at Garuwanga, near Nimmitabel. As usual there was a varied contingent of participants. A large group of participants came from the Canberra National Parks Association keen to learn Traditional approaches to land management.

The FOG Project, “Indigenous Values in the Landscape” delivered five (two day) workshops and two half field day work-shops. Rod Mason delivered the workshops which gave him an opportunity to share his knowledge. This knowledge was based on his own upbringing as well as his family. The knowledge was of the Traditional way of life and in particular Traditional land management experiences.



This project was generously funded by the Murrumbidgee Catchment Management Authority, a K2C partner, which also helped to design the project, under Caring for our Country.

Photos: (middle) Rod Mason (Geoff Robertson), (left & above left) enjoying the Stirling Park work party and (above right) a macro image of a *Brachyscome* (John Fitz Gerald)

Joint Meeting with the Photographic Group of the ANBG Friends,

John Fitz Gerald



FRI APRIL 27 Three FOG members joined the enthusiasts from ANBG at their monthly meeting in April. The main attraction was a lecture by David Wong about getting better results from Macrophotography, from the viewpoints of having both the right equipment and the best approaches. Following the lecture, David led those interested out to the sunny ANBG rock gardens with their own cameras and invited everyone to put their improved knowledge to work. He patiently helped those with questions, and solved quite a few difficulties through helpful tips and demonstrations.

Many thanks to David for generously giving us his time and attention, and thanks to the ANBG group for hosting FOG's participation. Let's hope if we do it again that we attract a few more participants.

Do you want to advertise an event, job, etc through FOG?

The FOG e-Bulletin advertises both FOG and non-FOG activities, which may be of interest to FOG members, and appears frequently (usually before a major FOG activity).

To publicise an activity, etc., please provide a short description to FOG e-Bulletin editor (see back page).

News Roundup *cont.*



Hall cemetery working bee

Janet Russell

SAT 12 MAY Andy Russell led a band of six workers including two Hall identities Bob Richardson & Bill Pearson. We worked mostly on the northern side as not much work has been done there before. Our main focus has been on the southern side where considerable work has been done on briar, hawthorn and scotch thistle. We de-headed flea-bane and scotch thistles and pulled or cut and daubed them. Over 100 hawthorn seedlings were removed from around two stumps of previously poisoned mature hawthorns. We found a significant number of deadly nightshade plants with mature berries and briar seedlings or re-growth. We removed some blackberry plants and a couple of *Potentilla recta* plants that were well-established and flowering. John whippet-snipped phalaris on the southern side as well. As we were leaving we noticed a couple of vetch-like plants not far from the fence to the cemetery proper.

I have included a photo of bracket fungi that I found growing on one of the hawthorn stumps. You never can tell what you may find.



Swainsona recta planting

Naarilla Hirsch

On a dull winter's morning, a couple of FOG members joined a group that included ACTEW, Australian National Botanic Gardens (ANBG) and NSW Office of Environment and Heritage staff to plant endangered *Swainsona recta* in the biodiversity offset block for the Murrumbidgee to Googong (M2G) pipeline project. The block is one of three adjoining offset blocks of medium to high quality box-gum woodland near Williamsdale. The offset block is being rehabilitated as part of the conditions of approval for the M2G project. The main part of the rehabilitation includes control of weeds, feral animals and erosion. Another component is a project ACTEW is undertaking in collaboration with the ANBG to grow *S. recta* and expand the population already in the Williamsdale area.

Seed for the project was collected mostly from the Mt Taylor *S. recta* population, with some coming from the Williamsdale area. The ANBG has grown the seed, and found this fairly easy to do. On this occasion 66 plants were put in, with a further 50 less advanced plants to go in by spring. The plants are going into three plots, which have been fenced temporarily to exclude animals. The plots are all in box-gum woodland, with each site being a bit different in terms of soil condition and ground level vegetation. The plots will be monitored to determine both survival and recruitment rates. I'm looking forward to hearing about the results of this project and whether *S. recta* can be returned easily to more areas where it once occurred.

Managing grassy woodlands

Geoff Robertson

A good summary of what practitioners need to know about managing grassy woodlands may be found in *A Guide to Managing Box Gum Grassy Woodlands*, by Kimberlie Rawlings, David Freudenberger and David Carr which was published in 2010. This is a Greening Australia project with funding under the Caring for Country program.

The book is divided into three sections: our current understanding of box gum woodlands, getting organised, and management. The first section is a good description of woodlands, their structure, ecology, ecological function, and their current state of conservation. The second section is devoted to planning and monitoring. The final section is about how to manage box gum woodlands and talks about grazing approaches, use of fire, weeding, changing soil characteristics, revegetation and restoration. It also has some good material on providing habitat and reintroductions of plants. What I like about the book is that the descriptions are generally pretty good and not too lengthy and it has many good diagrams and illustrations and many good tips. It is certainly a good summary of the current state of knowledge and approaches.

Apparently it is not for sale but may be downloaded from the web: <http://www.nrm.gov.au/resources/publications/stewardship/bggw-handbook.html>. Thanks to Toni McLeish for drawing this to my attention.

Photos: a bracket fungus at Hall cemetery (Janet Russell) and Roger on the shovel planting *Swainsona recta* at Williamsdale (Naarilla Hirsch).

Newsletter available electronically

You can receive the newsletter electronically. The electronic version is in colour. To arrange, contact membership@fog.org.au.

Hope for endangered native woodland birds

Researchers from the ARC Centre of Excellence for Environmental Decisions (CEED), the Commonwealth Government's National Environmental Research Program (NERP) and ANU have found that many native birds which were feared headed for extinction have shown remarkable rates of recovery on farms where regrowth and plantings of native trees are flourishing.

The team's research, published in the online journal *PloS One*, saw the biggest return of native birds in areas of plantings and regrowth, where grazing pressure had been reduced, – compared with 'old growth' areas still being heavily grazed.

In both new planting and regrowth areas, there is an under-storey of young, vigorous trees and shrubs which is attractive to many woodland birds. In heavily-grazed old-growth areas, on the other hand the ground between the trees is more open and less attractive to woodland birds.

The team's findings suggest that a range of vegetation growth types are likely to be required in a given farmland area to support the diverse array of bird species that inhabit Australian temperate woodland ecosystems.

The results also highlight the inherent conservation value of regrowth woodland and suggest that current policies which allow it to be cleared or thinned need to be re-examined.

FOG e-Bulletin

The FOG e-Bulletin contains the latest information on FOG happenings and more. It contains no pictures so its size is minimal.

If you want to receive it, please send an e-mail to membership@fog.org.au. Also, please let us know of address changes.

FOG advocacy

Naarilla Hirsch

In February we wrote to the ACT Minister for the Environment and Sustainable Development, Simon Corbell MLA raising concerns about environmental offsets in relation to grasslands and box-gum grassy woodlands in the ACT. One question we asked was that the Minister release the ACT Government's Environmental Offsets Policy to the public shortly, or at least before any further development proposals impacting on our native grassy ecosystems and dependent species are progressed. In his response, the Minister advised that, to ensure consistency with the national approach, the ACT offset policy will not be finalised until the Council of Australian Government's reform of environmental regulation is complete which is unlikely to occur this year.

April 2012

Another proposal in the Gungahlin area has been released for public comment under the EPBC Act, this time for development of future urban areas Jacka (North), Taylor and Kinlyside. In its response, FOG noted appreciation for the potential impact of the proposed development being reduced by exclusion of Kinlyside and parts of the northern areas of Jacka and Taylor from development, although no indication of their proposed long term status was provided. FOG then repeated views expressed in other recent submissions for this area, such as concerns about piecemeal development proposals, the need for a strategic approach to developments in the Gungahlin area, and lack of public scrutiny of the ACT Government's offset policy and *Gungahlin Strategic Offsets Package*.

The NCA asked for public comment on draft amendment 75: Australian Defence Force Academy and Royal Military College Duntroon Master Plan. FOG was pleased to note that the objectives of the Master Plan include conservation of significant natural heritage values, and that an area of box-gum woodland and natural temperate grassland has been marked as a constraint. However, FOG was disappointed to see that some of this endangered grassy ecosystem area has been zoned for future development, and asked that it instead be added to the adjoining open space area and be managed for conservation in perpetuity.

May 2012

In May FOG wrote to the Commissioner for Sustainability and the Environment concerning offsets in the Commissioner's 2011 ACT State of Environment (SoE) Report. FOG sees the inclusion of two pages on offsets as a welcome addition to the report, but had some questions about definitions of an offset and what had been included and excluded. FOG expressed concerns about the newness of the use of offsets in the ACT, that on-ground gains from offsets are not guaranteed, and about the use of offset monies to fund research. For these reasons, FOG recommended that future SoE reports include in the offset section some information about actual outcomes from offset projects, e.g. research outcomes, land added to reserves or acquiring improved conservation status, results of rehabilitation programs etc. This would be of great assistance in terms of reviewing the progress of the different offset packages and whether they are delivering what they are supposed to, or whether in fact net loss is registered in our endangered grassy ecosystems.

The full text of FOG submissions appears on our website.

Advocacy 2011 Report

Naarilla Hirsch

The last year has been a busy one for the advocacy group. At the start of the year the group met to discuss several concerns. A particular issue was the changing roles of advocacy group members, as John Fitz Gerald took over from Geoff Robertson as president. Over the year Geoff Robertson has stepped back from his previous enormous input to the advocacy group – thanks, Geoff, for all of your help over the years. On the other hand, two new members have joined the group – thank you to Barbara Payne and Evelyn Chia. As a result of this discussion, the process for agreeing on and putting in submissions was modified, and is working quite well, when we aren't being completely swamped by issues to comment on.

The group has continued to keep an eye out for development proposals that might impact on grassy ecosystems via its networks and a regular search of selected websites. In 2011 we responded to 32 invitations to comment on a range of subjects. Some were development proposals impacting on higher quality grassy ecosystems, mostly within the ACT, but also some in nearby NSW. Others were comments on government legislation, policies and strategies undergoing review, both at the Commonwealth level and at the State/Territory level. We provided comments on papers that were part of the ACT Commissioner for Sustainability and the Environment's Investigation into the Canberra Nature Park (nature reserves); the Molonglo River Corridor (nature reserves); and Googong Foreshores.

It is a little difficult to determine the success of these submissions. For the most part, development applications are approved. However, for those considered under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999, the Commonwealth often imposes conditions. For example,

at York Park the proposed road (into a future car park) has been approved, but conditions include a permanent fence to exclude access to the natural temperate grassland at York Park, and no construction is to occur during the months when the golden sun moth is flying. In other instances, significant rehabilitation and offset areas are part of the conditions of approval, e.g. the Murrumbidgee to Googong pipeline development. A few are subject to considerable negotiation between many of the interested parties, an example being the proposed playing fields at Throsby.

Another major role for the group is networking with other environmental and community groups. Advocacy group members attend meetings of groups such as both the Gungahlin and Molonglo Bush on the Boundary, the Conservation Council's biodiversity working group, K2C and the Parkcare coordinators meetings. The group also provides letters of support for other like-minded organisations and individuals applying for grant funding, such as the Conservation Council and the Invasive Species Network.

The group continues its dialogue with government. Members have met with both ACT and Commonwealth government areas to discuss grassland conservation issues, and also the Commissioner for Sustainability and the Environment (CSE), as well as the National Capital Authority concerning issues arising in relation to the Yarramundi Reach and Stirling Ridge sites.

An emerging role for the group is monitoring of and involvement in environmental offset projects and construction mitigation work. The group continues to meet regularly with the Canberra Airport Group to discuss environmental concerns and work in relation to developments at the airport. Members represent FOG on the Environmental Reference Group for the Murrumbidgee to Googong pipeline development. Visits to the TransACT and Airport offset sites (at Williamsdale and the

Parlour Grasslands) have occurred recently, and we have provided input to a couple of management plans. Given the increasing number of development proposals that are being approved with conditions (e.g. mitigation, rehabilitation, offsets) under the Commonwealth EPBC Act 1999, this will be an expanding role in the years to come.

In May, the advocacy group held a workshop to discuss a range of issues in relation to environmental offsets. This was useful in terms of clarifying our views on the offset question, and came up with a number of ways to progress our understanding of the effectiveness of offsets and what might be acceptable. Of course our view remains that in principle there should be no damage to high value native grassy ecosystems (in which case we shouldn't need offsets at all). The group has managed to progress some of the ideas coming out of the workshop, although others still remain on our "to do" list.

The advocacy group has already started to look ahead to 2013, having held a meeting to discuss priorities for the year and some of the significant issues the group faces. Input to both overall priorities and to specific issues is always welcome from any FOG member – just email advocacy@fog.org.au.

My thanks to all advocacy group members for your work over the past year – John Fitz Gerald, Sarah Sharp, Tony Lawson, Jamie Pittock, Geoff Robertson, Barbara Payne and Evelyn Chia. Everyone has contributed in different ways; without your help we couldn't manage to achieve what we do.

FOG website

The FOG website (www.fog.org.au) attracts over 2,000 visits per month. If there is anything you'd like to contribute to the site, let us know: webmanager@fog.org.au.

Bush on the Boundary Molonglo 2011 Report

Sarah Sharp

The group has met at 2 monthly intervals throughout 2011. There is a diversity of members in the group, including Molonglo Catchment Group, Conservation Council, FOG, STEP, LDA, Parks and Conservation Service and several researchers from ANU. The agreed protocol of not minuting meeting outcomes has resulted in frank and open discussions. The other protocol is that Bush on the Boundary does not respond as a group to issues, but that members get the opportunity to discuss issues which their groups can follow up. There were several guests providing background to development in Molonglo, and BoB members were invited to several information sessions with ACTPLA.

Three members of the group have prepared a planting list to go to Government, developers and residents to ensure that non-invasive introduced species and native species that will provide habitat are used in the Molonglo development area, on roadsides, parks and in gardens. A subset of this planting list is to be prepared as a brochure for new residents of Coombs and Wright.

Community engagement has not yet begun, as there are not yet any residents in the Molonglo area.

BoB Gungahlin 2011 Report

Tony Lawson

FOG is represented on the BoB Gungahlin group. The main focus of that group until recently has been on the interface of developments with the Mulligans Flat Nature Reserve and Sanctuary.

This focus has meant that there has been very broad representation on the group, including environmental and community groups, government – both conservationists and developers, private developers, scientists and academics.

During 2011 a lot of work was done to modify proposed roadworks through the Nature Reserve so that it would have less of an environmental impact. Work is also being undertaken to try and modify a proposed playing field complex that will adjoin the Nature Reserve, and a proposed school next to that. More broadly the group is concerned about development in the proposed suburb of Throsby which will impact on threatened species and the adjoining Nature Reserve and sanctuary.

Also during 2011 the group has extended its focus to boundary issues all along the Northern edge of Gungahlin, including the new suburb of Casey which adjoins the proposed Nature Reserve at Kinlyside – separated by a narrow strip of rural leased land. (The Casey housing development is being undertaken by the same group that developed Forde alongside Mulligans Flat NR.) The impact of developments on the nearby rural leases is a current concern.

One effect of any change of focus away from Mulligans Flat is likely to be the dropping out of some representatives. This problem will need to be addressed, as will filling the role of convenor, since the sad death of John Hibberd.

Scottsdale Monitoring

Linda Spinaze

A small group of mostly FOG members, but also some Bush Heritage members, continue to spend an enjoyable day in October at this Bush Heritage-owned property near Bredbo.

We have 3 different monitoring programs active at the moment connected with the disturbing amount of African lovegrass (ALG) that has invaded mainly lowland areas of Scottsdale. The initial monitoring program started in 2008, using a step-point method over 100m in 5 different areas to assess the effect of various grazing regimes on ALG abundance in previously cropped paddocks.

The second monitoring method started in 2009. This is an intercept method of monitoring, and we look at 9 sites. The aim is to measure the change in the relative dominance of native grass and ALG in the absence of stock grazing. These sites are subject to (currently) low levels of kangaroo grazing, and herbicide treatment of serrated tussock.

The most recent monitoring started in April 2010, on the request of Peter Saunders, the manager of Scottsdale. Peter wanted to see what happens to the density of ALG with various active interventions eg slashing, grazing, sowing with rye and/or subclover. The method used here is a point-intercept method, which involves the random throw of a pointed stick, and recording what the pointed stick touches on landing.

The monitoring group is very grateful to Sarah Sharp who takes all the data and photos, collates them and makes sense of it. She has recently finished the preliminary report of the three studies, but is awaiting some further information before presenting them to FOG.

The monitoring is still in its early days as we will need at least a few more years, preferably 10 years in total, to be able to recognise firm trends. At the moment all we can say is that, although there have been some changes to the ALG over the years, the replacement species have generally been disappointingly exotic rather than native. Time will tell!

Many thanks to those who assisted in monitoring, and I hope to see you again this year.

Woodlands Restoration Group 2011 Report

Sarah Sharp

\$250,000 annually has been provided by the ACT Government for restoration activities over the next 4 years. Kate Boyd was appointed to a part-time position funded by ACT Government in September to coordinate this restoration program. The steering committee, of which I am a member, assist Kate in setting priorities and higher-level work directives. Greening Australia has been funded from the project to implement the first stage - a planting program across the Belconnen Hills, which was identified by the steering group as its highest priority. The second priority was identified to be the Majura links - Mt Majura and Ainslie linking into the Majura Valley and down to the Molonglo River. Complementing and guiding this work is a connectivity study, that is in progress, and which will assist in the identification of where on-ground activities can best be focused.

Planting has begun on Mt Painter and The Pinnacle. Proposed planting in Kama Nature Reserve has been postponed as the Plan of Management for the Molonglo Valley, which includes Kama NR, will incorporate recommendations and funding to undertake restoration there.

FOG Website 2011 Report

Richard Bomford

The FOG website continued to attract significant attention on the internet.

Pages we added were primarily advocacy submissions: over 30 were added in 2011. Other areas were tweaked as required, e.g. updates to the activities page, adding newsletters to the newsletter archive; much of the website material remains unchanged for extended periods.

We only have usage statistics since May 2011, when the site moved to new servers. In the 8 months to the end of 2011, there were 7,700 unique visitors who made 13,000 visits and downloaded 4.4 GB of material. 88% of those visitors stayed for less than 30 seconds, so 'real' visitors were probably closer to 700 people. 85% of visitors came via a link from an email, another website, a bookmark or typed in the address; 15% came from search engines. The most popular page, apart from the home page, was Grasses of NSW, which has topped the www.fog.org.au popularity chart for some time. Brochures, Activities, Indicator Species and Advocacy were also sought-after pages.

Administratively, we moved the site from Aushost to HostBig in April 2011, as we'd been having too many downtime problems with Aushost and the email was unreliable. We moved the email service to gmail. We seem to have very few problems under the new arrangements. The total cost for website registration, hosting and email services is of the order of \$30 pa. Everything else is done by volunteers - excellent value for money!

Cultivation Corner:

Barbara Payne

CARBON ADVANTAGE LANDSCAPES

Catherine Neilson and Jennie Curtis on behalf of the Australian Institute of Landscape Architects, with support from the ACT Department of Environment and Sustainable Development, recently presented a series of free seminars on carbon advantage landscapes. The following is a summary of their presentations.

WHAT WE DO IN OUR OWN BACKYARDS AND FRONT YARDS, MATTERS

In the ACT almost two thirds of the urban forest is made up of private residential landscapes – our home gardens. This space has enormous potential for helping to meet the ACT Government's target of 40% reduction in greenhouse gas emissions by 2020 to combat the negative effects of climate change. It's time to move onto the front foot and ask 'what can we do?'

WHY GARDENS AND CARBON?

Climate change is essentially caused by more carbon being present in the earth's atmosphere than can be effectively accommodated by the earth's existing natural processes. Our gardens can build on natural processes which store and sequester carbon.

In the case of plants, *carbon storage* is the amount of carbon that is currently held in plant tissue (tree trunks, branches and roots). Roughly half of a tree's dry weight is carbon; so size matters. *Carbon sequestration* capacity refers to the estimated amount of carbon which is actively removed from the atmosphere annually by plants, via the process of photosynthesis. Again, size matters; large trees with fast growth rates will remove more carbon annually than small trees with slow growth rates. Age also matters, as young, actively growing trees will remove more carbon annually than older mature trees which have slowed down their rate of growth and are now functioning predominantly as carbon reservoirs.

ANU research in 2008 indicated that in the ACT, 98% of current carbon stock and 28% of future sequestration was in the non urban estate. By contrast the urban estate (which excluded residential space) holds 1% of current carbon stock and 48% of future sequestration capacity for the entire ACT region. CSIRO research, using recently developed mapping techniques which include all urban vegetation, demonstrates that original estimates of assumed ACT urban greenspace can be increased by three times. It is reasonable to extrapolate from this research that Canberra's urban landscape estate could potentially be capable of sequestering up to three times more carbon than that estimated by the ANU Carbon audit. Being an efficient and climate responsive city is more than having efficient transport and densification – it is also about the carbon sequestration potential of our urban landscapes.

So, what we grow in our residential gardens does matter – but there is more to it than that. How we design and construct our gardens has potential to affect the carbon outcome. Carbon advantage landscape strategies can make a difference at backyard, neighbourhood and metropolitan levels.

TAKING ACTION ONE GARDEN AT A TIME

Trees, together with a range of carbon advantage landscape strategies can be used to create beautiful, productive spaces in our own gardens and public places – and it doesn't have to be expensive.

Conserve energy

Wisely selected and well placed vegetation reduces the urban heat island effect; it also reduces heating and cooling costs. Aim to

- maximize summer shade
- harness winter sun
- buffer against hot and cold winds
- harness summer breezes
- use resources efficiently by recycling, minimising waste and energy intensive maintenance

Sequester carbon

Plant trees (remember size and age matter) and select species suitable for the space and position.

Seek biodiversity

Maximize opportunities to increase biodiversity by planting a range of local native species to mimic the preferred habitat structure for local flora and fauna. Wherever possible consider opportunities to provide for threatened species.

Conserve and clean water

It is important to treat water contamination close to the source and reduce peak water flows so that clean water reaches the streams gradually. Aim to minimise lawn areas and high water use plants. Mulch garden beds and minimise irrigation, if it is needed, use efficient systems.

Techniques for cleaning water, managing flooding and slowing down the water so it has more time to soak into the soil include:

- Rocky Swales capture runoff and look attractive when dry
- Vegetated swales planted with species that tolerate flooding and drying out help to clean the water
- Soaks at the end of stormwater diversions help to clean water and allow it infiltrate the soil
- Ponds and raingardens can be used to collect and filter runoff at the end of a swale with excess water sent from the pond into urban stormwater. Be aware that exotic plants and fish can escape from ponds and become pests
- Plant trees.

Produce food

Maximize opportunities to produce food on site wherever possible and give priority to areas receiving full to part-sun for at least 6 hours per day for optimal growth.

Plant a diverse mix of perennial and annual edible plants including fruit trees, to maximise seasonal availability and nutritional variety. Favour plants which thrive in local climate conditions as well as experimenting with varieties at extremes of existing climatic tolerance to test suitability for emerging climate regimes. Also favour heirloom varieties for genetic diversity.

Think about a vegetable garden in the front yard to encourage more interaction with neighbours and passers-by and look for other opportunities to increase the value of spaces that connect residential areas, such as street gardens.

Reduce fossil fuel use

This can be as simple as reducing the use of the lawn mower to favouring living flexible materials over manufactured products especially those those created through high energy use. Reduce paving; where it is the best solution use permeable paving installed in a way that makes it easy to re-use (eg in sand). Try to reuse and salvage materials rather than reprocessing them which uses energy.

Foster human health and wellbeing

Think about design which provides opportunities for social interaction, physical activity, biodiversity, food production, education and learning. Make spaces for reflection that inspire and delight. Don't forget to have fun ... and experiment!

Both Catherine and Jennie are Registered Landscape Architects and their talks will soon be available on the AILA website <http://www.aila.org.au/>. References and attributions have not been included here in the interests of space. For further information contact Catherine at climate@aila.org.au or Jennie at jennie@freshlandscape.com.au.



Jennie's own garden 'Roogulli' in Bywong, established in a drought and thriving, will be open 24-25 November this year as part of the Open Garden Scheme. Roogulli recently received an AILA ACT Award for Land Management

The Red Track

Swainson's Silky Pea



Red Hill Regenerators (RHR) hope that the new sign-posted Red Track on Red Hill will be a fun way of opening the eyes of our fellow Canberrans and any visitors as to what a national treasure its grassy woodlands, and other ACT woodlands like it, are. The walk is located in the north-eastern section. The 3.2km track loop starts at the cafe/restaurant on the summit and then heads south down the ridge line to the saddle. It then travels north-east towards Flinders Way, and then parallel to Mugga Way close to the base of the slope. Near the Mugga Way/Gowrie Road intersection it ascends steeply up to the Parliament House lookout, crosses the summit road after the water tanks and then back to the start on the western side of the ridge line.

The fun starts with Red Hill being one of the few places that you can start and finish your bushwalk imbibing a cappuccino, or tea, while taking in some of the best views in Canberra. Eight interpretive signs distributed along the route showcase themes based on the colour red. They educate track users about Red Hill's human and natural histories, its place in the history of Canberra, its distinct geology, its diverse and regionally significant native flora and fauna, and its past and ongoing environmental management issues. There's also something for kids too. In each sign is a hidden red bird designed for 3 to 6 year olds to spot in a "where's Wally" exercise.

On the walk you will discover why Red Hill is a red hill, what colour scheme Walter Burley Griffin wanted for plantings on its slopes, what Red Hill and Canberra looked like in the 1920s, what regionally rare and threatened plant and animal species it is home to, and its regional and national significance as one of a few large remnants of Red Gum – Yellow Box Grassy

Woodland which once occupied 25,000 sq. km in a belt from Melbourne to Toowoomba, but since European settlement has been mostly (95%) cleared and largely reduced to remnants of less than 10 hectares. It is telling that both red gum and yellow box got their names because of the colour of their firewood rather than their appearance as standing trees.

The Red Track signs and markers were made possible with input and funding from both Red Hill Regenerators and the ACT Government's Parks and Conservation Branch. Since forming in 1989 RHR volunteers have spent over some 20,000 hours in transforming Red Hill from a highly weed infested and degraded reserve to one of the region's and the nation's best remnant areas of temperate eucalypt woodland. This work continues.

RHR actively engages with Red Hill's neighbours, government agencies (ACT and Commonwealth), conservation NGOs, and other community based organisations to protect and enhance its environmental values. This also extends to participation in ACT Government and university flora and fauna monitoring and conservation management programs, for example, kangaroo counts, surveys of its endangered Button Wrinklewort population, and nest box trials. Getting back to the red theme, several recent ongoing issues that have been causing RHR members to see red are the NCA's proposal to clear over 11 hectares of Red Gum – Yellow Box Woodland for embassies at the northern end of the adjoining Federal Golf Club lease, and Territory and Municipal Services Directorate's (ACT Government) proposals to clear well over 1 km of new bike track across the heart of Red Hill's woodland as part of the Centenary Trail project.

We'd appreciate it if you could get along to check out the Red Track and its signs in the joyous magnificent bushland that is "reddy" and waiting for you.

Tell your family and friends as well, take them all on a "wear red" bushwalk.

For more information on Red Hill Nature Park, RHR's achievements, or getting involved with RHR activities check out our website at www.redhillregenerators.org.au. RHR working bees are generally conducted on the first Sunday of each month.

Photos:(Above,left to right) red mite, centipede, flame robin, and king parrot (Miranda Gardner), and (left) one of the signs on the red track explaining some of the natural history (Andrew Zelnik).



Convolvulus erubescens, Australian bindweed – a pretty weed or a pretty flower?

Michael Bedingfield

Convolvulus erubescens has a very pretty, pink, funnel or trumpet shaped flower. It opens very neatly like a tiny umbrella and is up to 20 mm across. But it has the unfortunate common name of Australian bindweed. It doesn't sound very attractive, but the name bindweed indicates its family connections. The bindweed family (or morning glory family) is called *Convolvulaceae*, and is rather large, having over 1600 species worldwide. Our present subject is a native plant that occurs in all parts of Australia, and has the habit of twining around anything that grows in its vicinity, usually grass stems, but also other small plants, and so it too is called bindweed. It is certainly not a problem locally, though it can be for gardens and crops in other parts of Australia. For example, it can be a problem for cotton growers, as it twines through the branches of cotton plants. On the Southern Tablelands it is common and widespread, occurring in native areas as well as in native pastures and some disturbed areas. Even in the growing season it is usually inconspicuous, but when in flower it is more noticeable and is a pleasant find, and one of the simple joys of strolling in our grassy places.

It is so easy to forget the simple things in our high technology society. We are exposed to a huge variety of stimuli and no end of exciting bits of information and colourful images. Nature's common and repetitive events are easily overlooked. Yet a wise person once said: "If you don't have time to spend a few minutes each day looking at the sky, what kind of life are you leading?"

Whether it is looking at the sky, or listening to the rain falling on the leaves outside our window, witnessing the play of thunder and lightning during an electrical storm, or listening to the chorus of crickets on a summer evening, these natural things are very fulfilling to us. Similarly, going for a walk in spring to check out the wildflowers can be a rewarding time out.

The name *Convolvulus* means "little twiner", and *erubescens* means "blushing", referring to the flower's colour, and the plant is also known as "blushing bindweed". It is a perennial, with a stout root. It is dormant during winter, and new growth occurs in spring and it will flower throughout the warmer months as long as there is sufficient rain. From the flower a small ovoid fruit develops, which is about 5 mm in diameter. When mature it dries out into a papery capsule, containing four small seeds. The leaves are distinctive, and have a narrow, pointy central part up to about 5 cm long, with smaller lobes on each side of the base, becoming narrower the higher the leaves are on the plant. There is an accompanying drawing of the plant at about half size, with some flowers and leaves at normal size.

Whether you regard *Convolvulus erubescens* as a pretty weed or a pretty flower probably depends on where you live, and it is a case of "the beauty is in the eyes of the beholder". On the Southern Tablelands at least, we can look upon it with favour. It is one of many of the local wildflowers that provide us with sweet and simple joy when going for a ramble among our grassy meadows and hillsides.



FOG groups and projects

General inquiries

Contact info@fog.org.au, Sarah Sharp (0402 576 412) or Janet Russell (6251 8949).

Activities organises FOG field trips, talks, workshops, on-ground works, support to other groups, property visits, and the FOG calendar.

Inquiries: activities@fog.org.au.

Advocacy prepares submissions and advocates for grassy ecosystem issues. It holds occasional meetings and workshops. Inquiries: advocacy@fog.org.au.

Committee & correspondence The Committee organises, coordinates and monitors FOG activities. Members are John Fitz Gerald (Pres.), Sarah Sharp (Vice Pres.) Kris Nash (Sec.), Stephen Horn (Treas.), Kim Pullen, Naarilla Hirsch, Tony Lawson, Isobel Crawford, Margaret Ning, John Buckley and Evelyn Chia. Andy Russell is public officer.

Inquiries/correspondence: committee@fog.org.au.

Postal address: FOG, PO Box 987, Civic Square, ACT 2608.

Communication produces *News of Friends of Grasslands* and *FOG e-Bulletin*. Inquiries: heather.sweet@fog.org.au (newsletter), and tony.lawson@fog.org.au (e-Bulletin).

Cultivation and Conservation encourages growing of local grasses and wild flowers to learn about their horticulture and ecology, and produces *Cultivation Corner*. Inquiries: janet2.russell@fog.org.au.

FOG ANU Fenner School, with the National Capital Authority, holds regular working bees at Yarramundi Reach (grasslands) and Stirling Ridge (woodlands). Inquiries: jamie.pittock@fog.org.au.

Financial matters, excluding membership, contact stephen.horn@fog.org.au.

Grassland Flora FOG is now responsible for sales of *Grassland Flora*. Inquiries: booksales@fog.org.au.

Grassland monitoring, Scottsdale holds monitoring days at the Bush Heritage property at Scottsdale. Inquiries: linda.spinaze@fog.org.au.

Hall Cemetery, with ACT Government, holds regular working bees to protect the Hall leek orchid and generally restore the site. Inquiries: andy.russell@fog.org.au.

Media spokesperson Sarah Sharp (0402 576 412). FOG is a regular contributor on Radio Landcare, Tues 9-10am on (2XX, Canberra 98.3FM).

Membership and newsletter despatch See Membership box (page 2). Newsletter despatch is fourth Tuesday of Feb, Apr, June, Aug, Oct. To help, contact membership@fog.org.au.

Old Cooma Common (OCC) with Cooma Monaro Shire Council manages the OCC Grassland Reserve. Working bees are held twice yearly. Inquiries: margaret.ning@fog.org.au or david.eddy@fog.org.au.

Southern Tablelands Ecosystems Park (STEP) FOG helped establish STEP (at Canberra's International Arboretum), a regional botanic gardens and recovery centre to showcase local ecosystems, especially native grasses and forbs. Inquiries: limestone@grapevine.com.au.

Woodland Flora *Woodland Flora*, the sequel to the popular *Grassland Flora*, is now at advanced production stage. Inquiries: sarah.sharp@fog.org.au.

Website (www.fog.org.au) full of FOG information, back issues of *News of Friends of Grasslands*, and program details. Inquiries: webmanager@fog.org.au.