

News of Friends of Grasslands

Supporting native grassy ecosystems

January-February 2009

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Program

January

3 & 4 JAN **Alpine ecosystems** with the ANBG. More detail was given in the last newsletter. For late inquiries, contact Geoff and Margaret on 6454 6064 or 0403 221 117 or 0427 788 304. (Phones may be unattended/out of range during day).

SAT/SUN/MON 24, 25 & 26 JAN **Kiandra grasslands and Long Plain walk** with Roger Farrow and Warwick Daniels. This walk has been rescheduled from Nov. More detail was given in the last newsletter. To enquire/register, please contact Roger 02 6236 3105, 0427 431 275, or r.farrow@iimetro.com.au.

February

SAT 21 FEB 4 to 7:30pm **FOG AGM and barbeque, Mugga Mugga**. Short but enjoyable AGM, presentation on FOG activities for 2008 and 2009, and the traditional barbeque. This is an important annual event for FOG to discuss its broad directions, elect a new committee, and relax and enjoy the comfortable environs of Mugga. Old and new members are particularly welcome and no one is expected to join the committee. Barbeque is free but please bring own beverages. For catering purposes, please contact Janet: details back page. Venue: Mugga Mugga Education Centre, Narrabundah Lane, Symonston ACT (opposite the Therapeutic Goods Administration).

SAT 14 FEB **Sun Moth Count Wrap-up**. 2.00 to 4.45 (see details on page 2) For catering purposes, please contact Sarah (02 6251 2228/sarah.hnatiuk@fog.org.au).

Membership renewal time

A membership renewal form for 2009 is enclosed, if you have not already renewed. Please complete it carefully. You may pay by cheque, money order or EFT. Annual rates are only \$20 for families/individuals, \$5 for students/concessions, and \$50 for organisations. Donations, while not tax deductible, are very welcome. The form is also on our website (www.fog.org.au). For any queries contact Margaret on 02 6241 4065.

In this issue

Program
News roundup
FOG advocacy
Cultivation corner
Goorooyaroo
FOG visit to Wellington Common and UNSW farm
Eastern grey kangaroos and dingoes
Chilean needlegrass survey and its aftermath
Redgrass (Bothriochloa macra), an adaptable native



Images of moth counters: Michael, Anett and Dana at Dudley Street (top); Anett the project facilitator talking on moths at the first workshop (middle); and Sybil and Margaret measuring up at Mulanggarri Grassland Reserve (bottom).

News Roundup

Sun moth count

Like the frenzy of golden sun moths flying above the grassland, the sun moth count project organized by the Institute for Applied Ecology at the University of Canberra and FOG has been a frenzy of activity. The coordinating committee of Will Osborne, Anett Richter, Sarah Hnatiuk and Geoff Robertson has taken responsibility for guiding the project with its many volunteers.

So far much has been accomplished. The initial steps in applying for the grant took much effort and Bernadette O'Leary did a tremendous task in organizing and guiding the application. The flyer on the project was distributed widely attracting much interest. Many individuals, particularly Tony Lawson and Will, widely promoted the project and recruited many volunteers. Very good training material was prepared by Anett and Will and three training workshops involving theory and practice were delivered to over 35 volunteers. In all, each volunteer undertook about five hours of training.

Well over thirty sites have been selected and work at most of them is now nearing completion. At each site twelve plots were selected using random sampling methods, and for each plot, a thorough vegetation survey was conducted, pupae cases collected and moths counted. Most sites have required the efforts of two people at least for the setting up and vegetation survey components. In addition to training, most volunteers have put in around 15-20 hours of volunteer time.

Coordinating the activity has proved to be a major task, and Sarah has put in a tremendous number of hours keeping in touch with volunteers, and producing and distributing four moth newsletters. Anett has visited many volunteers in the field and assisted with set-

ting up sites, as well as undertaking complementary survey work. She has been ably assisted by her compatriots, Dana Weinhold, herself a moth expert, and Sylvio Teubert, who has set up the webpage. Margaret Ning assisted in a number of vegetation surveys and Geoff in establishing sites. But a special thanks must go to the volunteers who have persisted in their efforts.

Sun Moth Count Wrap-up

**Sat 14 Feb 2009
2-4.45pm**

CSIRO Discovery Centre
Clunies Ross Street
Black Mountain ACT

For all sun moth counters and those interested, please attend the wrap-up of this project and provide your feedback.

Afternoon tea provided.

For catering purposes please contact Sarah 6251 2228
sarah.hnatiuk@fog.org.au

There have been many good moth sightings and new moth sites found. There have been confrontations with animals not anxious to assist the counters, and some other unforeseen obstacles. Many sites have proved difficult to survey and few or no moths sighted. However, all this tests the viability of the pilot study which aims to evaluate the protocols which have been designed to count moths and evaluate their habitat requirements.

Additional tasks still to come to fruition are greater publicity, completion of evaluation forms by volunteers, analysis of results, evaluation of the methodology, production of a training handbook, and writing up and publicizing the results. FOG is also holding a wrap-up session - see insert.

FOG is very pleased to be able to participate in this exercise which will provide valuable insights into a threatened grassland species, and grasslands more generally. It is expected that findings from the survey will contribute directly to our scientific knowledge and assist in improving grassland management sites.

And please don't forget to check out the moth count webpage at <http://aerg.canberra.edu.au/teams/osborne/moth-count>.

C&C Network *Grasscover*

The FOG Cultivation and Conservation Group was formed in late 2007 to facilitate discussion amongst FOG members interested in growing local native grasses and forbs, especially from seed, in their gardens. A meeting of the group was held in 2007 and a visit to Janet's and Andy's garden was made. In 2008 a number of members' gardens were visited, including Katie's (25 Jan), Margaret's and Geoff's (17 Mar), Rainer's (9 May) and Alan's (15 Nov) - see photo page 3. There was a meeting at Janet's and Andy's (28 June) to discuss what else the group might do, and of course this was another opportunity to visit their garden. On 12 September there was a visit to Ingrid's to workshop growing plants by seed and division.

Members of the group are interested in exploring a number of issues. By focusing on local grassy ecosystem plants, they hope to discover more about the ecology of individual species. In a garden situation, members are interested in learning what conditions certain plants grow in, and why some plants thrive and others not, or even why a particular species thrives in one member's garden but not in another's. This might also help us understand more about the ecology of particular plants in the wild. Individual members have attempted to undertake desk top research on individual plants, but this has only progressed slowly. Janet, the group's

coordinator, writes a regular piece on Cultivation Corner in the FOG newsletter, which informs members on the theme of the group, which is learning about growing local native grasses and forbs.

Members of the group have enjoyed visits to other members' gardens, and have learnt and gained insights into growing local grasses and forbs. Ingrid's workshop was particularly useful and informative. There have been a number of members who have been unable to attend meetings so it may be more appropriate to regard the group as a loose network that can share information. While it is uncertain what the group might do in 2009, it will respond to members' interests whether it is visiting gardens and nurseries which may assist in learning about growing local plants, or any other activities which would further the group's aims. If you want more information or have suggestions, please contact Janet (details back page).

ALG control workshop

12 DECEMBER Kosciuszko to Coast (K2C) African Love Grass (*Eragrostis curvula*) (ALG) workshop held at Scottsdale was well attended by ALG and weed experts, local land owners and K2C stakeholders, including many members of FOG. ALG, a gazetted Class 4 weed under the *Noxious Weed Act 1993*, has in a short space of time successfully colonized many thousands of hectares of the Monaro replacing much of the region's open grassy woodlands and native grasslands. Yet, this African import serves as a protective basal cover preventing soil nutrient loss and provides a reliable source of green pick for stock over summer.

Jennifer Firn from Spatial Ecology Lab, the Ecology Centre, University of Queensland, was the keynote speaker and reported on her results on multiple ALG trials conducted under natural and controlled conditions. Other presenters

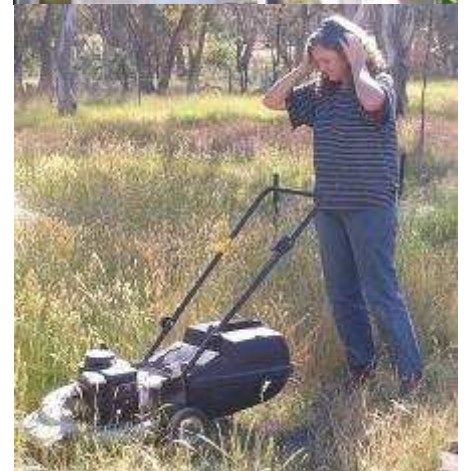
were Lauren van Dyke (K2C Facilitator), Matt Appleby/Sandy Gilmore (Bush Heritage), John Buma (spray contractor) and Peter Saunders (stock agistor, Scottsdale).

Following the presentations there was an open and lively discussion on what could and should be done to control ALG at Scottsdale and in the region. After an excellent lunch, there was a walk in pouring rain across ALG sites (including those to be used in trials).

The K2C partners hope to gather and record critical information on ALG from attendees, establish a work-group for future dialogue on ALG, and possibly develop ALG trial methodologies for use at Scottsdale and other suitable properties. For more information, contact Lauren Van Dyke, facilitator@k2c.org.au, 02 6454 4388, 0411 402 978

Fireweed has reached the ACT

Whatever you might think about weed control, a consensus maxim is that prevention is better than cure, i.e. eradicate weeds before they get a stronghold. The problem with this is that most threatening weeds go unrecognised until they get established. One weed that is creeping into our environment and has now been spotted in the ACT is an exotic fireweed, Madagascan fireweed (*Senecio madagascariensis*), which is an invasive weed of coastal eastern Australia. It has been declared a noxious weed on the Monaro where, apart from small areas of heavy infestation on the eastern Monaro fringe, it is only known from a few isolated plants. Margaret Ning has found seven isolated plants over the past three years, on her property at Garuwanga, which she considers must be wind or animal borne. She says that this suggests that it is more widespread than people believe, waiting to build in numbers.



Some FOG images: Alan Ford's grassland garden, Sarah Hnatiuk promoting FOG at Ginninderra Fair and Emily Read mowing sweet vernal grass at 5th Hall Cemetery Working Bee

A large plant was seen along Sulwood Drive earlier this year. The Madagascan fireweed has distinctive bright yellow daisy like flowers with thirteen petals. It is very important that any suspected specimens are reported to Parks Conservation and Lands (02) 6207 2511. Fireweed is a member of the daisy family, and there are many local, magnificent species.

STEPing forward

While the Southern Tablelands Ecosystems Park (STEP) has been quiet for some time, it is now planning a planting at Block 100 at the International Arboretum and Gardens. FOG with the Australian Native Plant Society, Canberra Region, established STEP in 2003 to create a regional botanic garden and ecological restoration centre.

STEP President, Catherine Robertson said "it has taken many years for STEP but now we have a site and will plant 12 species of local native trees on 15 March 2009".

On 13 December, STEP held its first potting up working bee to have plants to go in the ground in March. Catherine said that STEP is grateful to FOG and ANPS which have supported STEP over many years, to Chief Minister Jon Stanhope for his consistent support of the STEP concept, staff of the Chief Minister's Department, and more recently to the Friends of the Arboretum who have provided very valuable behind the scenes help. Seeds and Plants Australia owner Warren Saunders has been a long term supporter and is providing much of the material for the proposed planting.

For more information, contact Cathy Robertson on 6257 1951 or email: limestone@grapevine.com.au.

Seed collection in ACT

30 OCTOBER Research and Planning (R&P), ACT Parks, Conservation and Lands (ACT PC&L) released an interim policy on seed collection, as well as the provenance guidelines produced by Greening Australia (GA). These outline the location criteria the ACT Government would like to see used for sourcing seed in for use revegetation projects. The criteria differ depending upon the conservation values of the revegetation area in question.

Briefly, the interim policy would allow seed to be collected in some

unleased areas, still requiring a scientific licence, but with less strict restrictions in defining the projects that the seed will be used for. The outcome, R&P hopes, is that a larger amount of seed will be available at any one time, so that the number of projects using local native species will increase. R&P describes this as a win-win - fewer constraints for collectors, a more stable and larger market, and the ability to enhance our natural environment.

The policy is interim, as it will need to be reviewed over time to see how it is faring, and also in relation to changes that may occur in the *Nature Conservation Act* as a result of the review that is currently under way.

R&P is currently developing a short list of local species recommended for planting in conservation areas. This will replace the design standards list for specific sites or projects that R&P currently identifies. It should help collectors know which species are most demand by developers and others.

The GA provenance guidelines have been developed with R&P and many other stakeholders.

For more information, species lists and the guidelines, please contact Janet Russell (details back page).

Touching orchids

Margaret Ning

Some time ago, I heard David Jones say that people should **not** touch orchids in the wild as it makes them more susceptible to being grazed by kangaroos or wallabies. According to a recent comment by David (via a friend), his view is "It's been my experience on countless occasions that when people handle an orchid, more often than not it gets eaten very shortly after. The cause/effect came to me after watching roos/wallabies in a national park sniffing/exploring where people had been earlier, even nibbling on the grass where they had been sitting." David considers this to have happened on too many occasions for it to be a coincidence and

he considers that many other people have observed this.

What a nuisance! Many of us like to take those close up photos and often need to manipulate the plant to get the image just right. If you feel the need to do this, you might consider manipulating the plant or the grass near it with a twig or a leaf - but try to avoid physical contact. Perhaps you already have a good enough photo of that particular orchid!

It seems a particularly good time to let people know about this concern given that normal spring/summer time activities are upon us. I have personally found it a little difficult to change my ways on this issue, but I am getting there and if a little re-training will help our orchid numbers along in these dry times, that has to be a good thing.

Managing climate risk

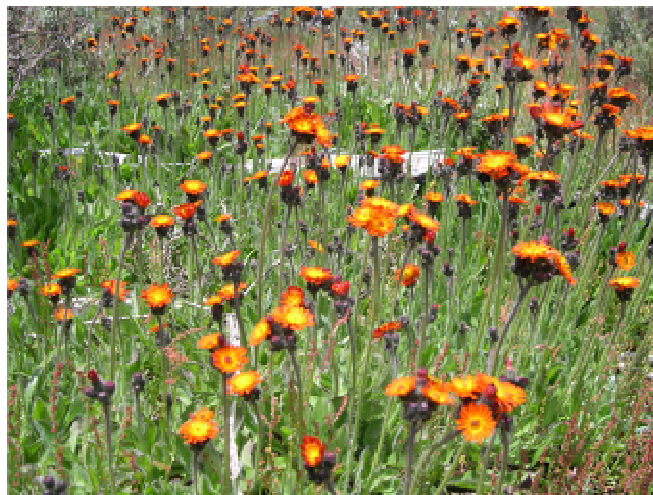
In October the Murrumbidgee Catchment Management Authority (CMA) organised a series of workshops *Farmer's Guide to Managing Climate Risk* aimed at managers of agricultural businesses and rural land. It covered: understanding how weather works, reading and interpreting weather maps, analysing local and regional climate history, examining the relevance of seasonal climate influences, understanding climate change, interpreting scenarios, and exploring possible business impacts, using forecasts for practical decisions. It also covered where to find weather and climate information, and managing climate risk.

The workshop was well attended and a great deal of positive feedback was received from the participants. Margaret Ning, who attended, spoke highly of the workshop. Felicity Collins, a Cooma-based Catchment Officer, says a workshop may be run between March and July next year at a location central to those attending, if there is sufficient interest. If you are interested in attending, Felicity (felicity.collins@cma.nsw.gov.au) would like to hear from you. You don't have to be a land owner to attend.

Grassland day success

Lauren van Dyke

SUNDAY 30 NOVEMBER The Grassland Extravaganza Field Day, following a week's postponement, held on Thistlebrook Park in Bredbo was enjoyed by over fifty people. A number of plant species were stumbled upon. Even the grassland experts were impressed at seeing three rare legumes, the pink austral trefoil (*Lotus australis*), the purple mountain psoralea (*Cullen microcephalum*), and zornia (*Zornia dyctiocarpa*). Many other grassland species were admired and the attendees engaged in quality networking throughout the day with dissemination of material from over thirteen groups. Over lunch Owen Whitaker provided a demonstration of what the Bredbo Landcare blow seeder is capable of (see top photo) giving us hope for the future restoration of grasslands.



New European immigrant

28 Nov NSW Department of Environment and Climate Change issued a press statement on international scientists gathering in Kosciuszko to discuss weed menace and climate change. The Mountain Invasion Re-

tions in Victoria with the State government investing more \$200,000 this year in an effort to contain it.

The weed has also recently been found at a handful of locations within Kosciuszko National Park and DECC is now making every effort to contain its spread. This weed has enormous potential to spread rapidly and has devastated parts of New Zealand where it covers more than six million hectares. It loves mountain landscapes and has the potential to spread across the Alps as well as the surrounding lowlands such as the Monaro. In Australia it has frightening potential to change the whole appearance of the Alps, smothering native vegetation and impacting on wildlife reliant on a native understorey. This weed even has the potential to get into the bog systems and wipe out the critically endangered Southern Corroboree Frog. They have so many cunning strategies for reproduction, including not needing sex to produce seeds."

Mexican feather grass

Steve Welch, the Coordinator for Southern ACT Catchment Group has reported that that over 300 plants of Mexican feather grass (*Nassella tenuissima*) have been sold through Canberra nursery outlets. It was probably labelled as *Stipa*. He has asked members of the Canberra community to report any purchase of *Stipa* plants from any nursery outlets in the ACT or region within the last twelve months if at all uncertain whether it is native or introduced. There are many good illustrated website descriptions available eg: [http://www.weeds.or-g.au/cgi-bin/weedident.cgi?](http://www.weeds.or-g.au/cgi-bin/weedident.cgi?tpl=plant&tpl&ibra=all&card=G13)

Steve says "this species has the potential to be as bad as serrated tussock as an agricultural and environmental weed. It is not yet established in the ACT, and we don't want it here either!" For further information, contact the ACT Weeds Officer, Steve Taylor, on 6207 2278, or Geoff Butler (Conservation Council Weed Officer) on 6236 9158.

JOB ADVERTISEMENT

PROJECT MANAGER, Australian Network for Plant Conservation Inc, Canberra Salary range: \$55,000 – 65,000 p.a. Fulltime or near fulltime until October 2010 (with review six months after appointment). Requirements: knowledge of native plant conservation issues in Australia and excellent organisational, project management, communication and networking skills. A good knowledge of plant conservation techniques and rehabilitation procedures is desirable as are web publishing skills. Further information: www.anpc.asn.au, or Bob Makinson on 0408 116 488 or bob.makinson@rbgsyd.nsw.gov.au. Closing date: cob 19 Jan 2009.

search Network (MIREN) is a collaborative venture between international research institutions, universities and land management agencies like DECC, which is focused on the impact of weeds and how to control them in mountain environments.

The gathering looked at a new threat to the Australian Alps, hawkweed (see bottom photo).

Spokesperson Keith MacDougall said, "hawkweed is an iridescent mountain daisy from Europe which was first found at Falls Creek in where it is believed to have escaped from a domestic garden. Hawkweed was soon found at another 10 sites and despite huge efforts to contain it hawkweed is now found at 125 loca-

Developments in FOG

In recent years, FOG has workshopped its management so that new activities could be undertaken and the workload distributed more effectively. Now tasks are carried out very ably by a number of individuals, who are either office bearers or have agreed to individual responsibilities including : Secretary (including correspondence, Bernadette O'Leary), Treasurer (Sandra Hand), Membership (Margaret Ning and Janet Russell), Information (Janet Russell and Geoff Robertson), Webmaster (Richard Bomford), e-Bulletin (Tony Lawson), newsletter including collation/distribution (Margaret Ning and Geoff Robertson), and public officer (Andy Russell). All positions will be declared vacant at the AGM (Feb 2009), although some member may continue to be available in these roles, the Secretary position will be available.

In addition, a number of groups have been developed to coordinate activities. These groups, together with their coordinators, are shown below. Individual members are encouraged to find out more about these activities and participate if they can, by either contacting

those mentioned above or the group/project coordinators mentioned below. Most contact details can be found on back page.

FOG advocacy

Bernadette O'Leary

I've included summary information on recent advocacy below. Copies of submissions and related letters are made available on the FoG website.

November

FOG made a submission on the **expanded role of the Office of the Commissioner for Sustainability and the Environment**, based on participation in processes in recent years. The submission provided information in a format sought by the Office including: what FOG members like best about living in the ACT and the surrounding region; what FOG thinks are five big sustainability issues facing us (FOG said biodiversity conservation, management of cumulative impacts, landscape management, continuing policies of growth, and the need for ecosystem function to underlie understanding/planning/decision making); how urgent FOG thinks it is to take action; action that should be taken by government and business; and FOG's view on the importance

of having an independent Office.

Other things raised in the submission included the need for: a range of new policies including via updated legislation; support for FOG to participate; accreditation to ensure quality ecological assessment; clarity on what 'ecologically sustainable' is; and new approaches by government *with* others to improve awareness by, and support from, the broader community.

FOG also provided feedback sought by the **Environmental Defender's Office** about legal/advocacy training needs.

December

FOG has written to the **new ACT Government**, about a number of matters, including its arrangement with the ACT Greens, highlighting its ongoing concerns re conservation and management of grassy ecosystems in the ACT.

FOG will make a submission on the environmental impact statement for a proposed **gas-fired power station and data centre** at Tuggeranong under ACT legislation.

FOG will make a submission to the independent inquiry into the **EPBC Act** (Commonwealth).

Group	Purpose	How	Coordinator
Advocacy	Advocate grassy ecosystem issues	Research opportunities/issues with stakeholders, prepare submissions, and follow up.	Bernadette O'Leary [til AGM]
Communication	Develop FOG communication strategies and products	Publish FOG newsletter, e-Bulletin, and media material, manage website and FOG displays. Contribute to 2XX	To be determined
On-ground and extension	Develop and oversight FOG's on-ground and extension activities	Meet irregularly and plan and supervise on-ground activities. Plan FOG fact sheets and education activities.	Geoff Robertson
On-ground and extension projects	ANU students (proposed)	Volunteer work on National Capital Authority sites	Jamie Pittock
	Cultivation and conservation	Learn about local grasses and forbs and how to grow them.	Janet Russell
	Golden sun moth monitoring	Special research project aimed at testing community monitoring techniques.	Anett Richter & Sarah Hnatiuk
	Hall Cemetery	Hold regular working bees	Andy Russell
	Old Cooma Common	Hold regular weeding working bees	David Eddy & Margaret Ning
	Scottsdale African love grass monitoring	Twice yearly monitoring at Scottsdale	Sarah Hnatiuk & Peter Saunders
	Visits to members' sites. Assist members with flora and fauna identification and management issues. Those assisting can also learn much.	Arrange visits to sites which members own/manage/volunteer at. Help with documentation.	Margaret Ning
Program and publicity	Develop FOG program of field trips and workshops.	Organise, coordinate and advertise FOG activities. Ensure people sign on and that activities run well.	Geoff Robertson & Janet Russell



Cultivation Corner:

Aussie bindweed - Janet Russell

From late spring to summer, you see quite a lot of Australian bindweed (*Convolvulus erubescens*) growing on median strips and on waste ground. They are cheerful remnant native vegetation, receiving no water other than rainfall, and they seem to return consistently each year. They have a thick taproot which allows them to survive the dry times, although in dry conditions the foliage gets sparse. The flowers of the wild specimens seem to be larger and a deeper pink than the pale specimens we have bought and planted from time to time and which so far we have not managed to sustain. This may have been because we lost track of them.

The Australian National Botanical Gardens (ANBG) hosts an interest-

ing site called *Aboriginal Plant Use* – *NSW Southern Tablelands* which is new to me. It says that Indigenous people cooked bindweed roots in baskets and kneaded them into dough. They also boiled parts of the plant and strained them using the liquid for diarrhoea and indigestion. I have also read that the roots were used as a substitute for yam daisy (*Microseris lanceolata*) roots when Yam daisies were in short supply. I gather that the bindweed roots are not particularly tasty which probably explains why yam daisies were preferred.

It is not only Indigenous people who have used them as a source of food, as according to *Plants of Western New South Wales*, bindweed is “readily grazed by stock without ill-effect and is one of the more useful summer-growing native perennial foods”.

The Understorey Network web site provides cultivation information. It indicates that bindweed is hardy, and tolerant to dry and exposed sites and frost. Its soil requirements seem non-specific but for cultivation purposes it recommends that you grow them in a well-drained and sunny situation. I always try to grow what I call nursery plants, from which I hope to gather seed at the appropriate time. This means that I usually take care to ensure that they get a reasonable supply of water through the year so that they flower and fruit properly. Seed should be collected in January. There is more specific cultivation in-

Aussie bindweed on road verge in Belconnen.

formation if you would like to follow it up, and it can be found at: www.understorey-network.org.au/family-index.html?species=Convolvulus%20angustissimus

Just a note on the species name, the ANBG site indicates that there has been a revision of bindweed and there seems to have been misidentification of species. There is evidence of *C. angustissimus* crossing with *C. erubescens* producing hybrids. The local bindweed has been grown and labelled *C. erubescens* for some years and I think as far as cultivation is concerned, the information supplied would apply to either species.

FOG website

The FOG website (www.fog.org.au) is now well established and attracts around 500 visits per month. If there is anything you'd like to contribute to the site, let us know: webmanager@fog.org.au.

Newsletter available electronically

You can receive the newsletter in colour, electronically, instead of a paper copy. To arrange, contact Margaret, details back page.

Goorooyaroo by Kris Nash

Nine members of FOG, Field Nats and the Ginninderra Catchment Group (GCG) met on Sunday morning (9 Nov) for a stroll through Goorooyaroo seeking wildflowers and to climb Old Jones Hill. Before we started, we heard a little about what each group was up to. Field Nats see themselves as a generalist group (you know – not FOG members who always run into obstacles as they are looking down all the time and not COG members who trip over everything as they are always looking up!!). They are hoping to become more involved in on-ground projects. GCG is involved in a project examining issues to do with the effects of human development on the edge of nature reserves (Bush on the Boundary Reference Group).



Almost immediately we saw superb parrots (*Polytelis swainsonii*), listed as vulnerable under ACT, NSW and Commonwealth legislation. There were many other birds and some interesting discussions about various thornbills, but as I am not so experienced with birds, my notes (and spelling) are too poor to decipher. Hopefully one of those Field Nats will oblige with a more complete list. I do remember the cheerful rufus whistler and the pallid cuckoo.

As we walked through the kangaroo exclusion area, we noticed how well the native grasses were recovering and many were in flower. We saw wallaby grasses including *Austrodanthonia carphoides*, tall spear grass (*Austrostipa bigeniculata*), corkscrew (*A. scabra*), *A. densiflora* (looks a bit like a plume grass), wheatgrass (*Elymus scaber*), purple wiregrass (*Aristida ramosa*), redanther wallaby grass (*Joycea pallida* – much admired), a *Poa* grass, some kangaroo grass (*Themeda australis*), hairy panic (*Panicum effusum*), weeping grass (*Microlaena stipoides*) and redleg grass (*Bothriochloa macra*). It was interesting to note how the vegetation changed across the site, from the scribbly gum dry forest to the yellow box woodland and into the areas of secondary grassland. Occasionally we

would find a patch of grasses and forbs that grew nowhere else except in that one small patch.

Although there were not as many wildflowers as we had hoped, we did find ivy goodenia (*Goodenia hederacea*) or maybe scabbled eggs (*G. pinnatifida*), austral bears-ear (*Cymbonotus lawsonianus*) although not yet flowering, curved rice flower (*Pimelea curviflora*) and sticky everlasting (*Xerochrysum viscosum*). The weeds were more noticeable once we moved out of the kangaroo exclusion area but we did see native flax (*Linum marginale*), a very dark purple vanilla glycine (*Glycine tabacina*), wattle mat-rush (*Lomandra filiformis*), Australian bindweed (*Convolvulus erubescens*), sweet hound's tongue (*Cynoglossum suaveolens*), common everlasting (*Chrysocephalum apiculatum*), a few blue devil (*Eryngium ovinum*), bluebells (*Wahlenbergia* spp.), bulbine lily (*Bulbine bulbosa*), austral sunray (*Triptilodiscus pygmaeus*) and more goodenias.

We were all really entranced with our major find – amongst a patch of wallaby grass, scaly buttons (*Leptorhynchos squamatus*) and yellow rush lily (*Tricoryne elatior*) we noticed a few dark coloured moths flying above the grasses. Having recently been involved in a golden sun moth project, we were alerted by the flying pattern and the habitat and tracked down the moths for a closer look. We saw several male golden sun moths and were privileged to see a female moth depositing eggs amongst the wallaby grass tussocks. She must be the most photographed moth! We practised our counting techniques and found some spent pupa cases. It was obviously a case of being in the right place at the right time. The golden sun moth is listed as critically endangered (Commonwealth) and as endangered in the ACT.

To top it all off, we saw some hoary sunray (*Leucochrysum albicans* var. *tricolour*), which is listed as endangered under Commonwealth legislation. Lunch was beside a shady dam while the group discussed the climbing of Old Joes Hill. That's when I left, but not because of the hill – truly! Apparently a white-winged triller (listed as vulnerable in the ACT) was seen by the group. That's four threatened species – not bad in one day. I really enjoyed the trip and would encourage others to come along to these types of visits. The people are friendly and welcoming and there is always something

new to learn about the environment in which we live.



Moth hunting with a camera, and success—a picture of a female moth.

FOG Visit to Wellington Common and UNSW Farm *Grasscover*

The Common

15 OCT Four FOG members visited the 180ha Wellington Town Common at the invitation of Rose Chown, who requested that FOG assist with plant identification so that the community could formulate its land restoration activity. The Common is managed by the Namima (Wiradjuri) community. The FOG party,



joined by Sue Stevens (Uni NSW) and Rose (see photo), spent the day identifying and recording plants. Given that Wellington had been blessed with recent heavy rains, the vegetation was thriving and many native and exotic species were in flower, making plant identification relatively easy.

Rose provided FOG with a copy of the *Wellington Town Common Feasibility Study*

for the Wiradjuri Wellington Aboriginal Town Common Committee (November 1998), prepared by Dillon and Savage Architects and Evans Oates and Associates. As the report explained, as repeated by Rose, “members of the Wiradjuri Wellington Aboriginal Town Common Committee (WWATCC) wish to return to the land where generations of their families lived, and where many of them spent their childhood. The Common has both cultural and emotional significance to the group and they wish to plan the future development so that the area is enhanced and protected, not further degraded by weeds. Any development of the Common would provide a showcase for Aboriginal culture and environmentally sustainable projects.” Rose recounted some of her early memories of the Common and the gathering and use of plants such as chocolate lily.

Many years ago the Common was taken from the Namima community. “In 1993, the WWATCC applied for a determination of Native Title on the land and have since signed a Native Title Agreement acknowledging that the Wiradjuri people were the indigenous people to occupy the Common and other lands in and around Wellington, and that according to their traditional laws and customs, it is still part of their traditional land. The

Agreement entitles the Wiradjuri people to use the Common for traditional pursuits and for cultural education.”

Land management principles to be used, according to the report, are those that “that would help re-establish the indigenous eco-system, eradicate weeds and feral animals, maintain and protect the existing character of the site, control stock and vehicles, and enhance public recreation facilities.” Rose explained her vision of how community training and work on land restoration could greatly assist the community to gain skills and restore the land, and recreate the traditional link to the land. She stressed that a well trained ranger was required to identify an appropriate strategy to remove weeds and bring back the indigenous vegetation.

Originally the Common, as the FOG team observed, would have comprised riparian vegetation dominated by river red gum (*Eucalyptus camaldulensis*) and river oak (*Casuarina cunninghamiana*) and white box grassy woodland, as well as patches dominated by callitris pine (*Callitris* sp.).

Large areas of the Common were almost purely comprised of exotic species. However, in many areas there was a mix of exotic and native species, and there were a few areas which were outstanding examples of native grasslands or riparian vegetation. Interestingly, cattle grazing has been removed from the Common in recent years, and while it was difficult to say what the condition of the Common would have been like before grazing removal, it appeared that plants looked healthy, and, overall there was a greater composition of native plants and less Paterson’s curse compared to the adjoining horse-grazed paddocks. However, in the Common’s paddocks there was possibly a greater proliferation of some weeds such as St John’s wort and thistles.

Several sites, in particular, were very impressive. Along the river, there was substantial regeneration of river red gum and the ground layer was largely dominated by native rushes, sedges and forbs. A second site, which Andy referred to as the Lane Way was a fine example of a native grassland dominated largely by wallaby grasses with patches of scrambled egg, chocolate lily, Australian bindweed, blue bells, and matrush (*Lomandra filiformis*). Overall, there were 23 native grassland species in the Lane Way. On another site on the edge of a gully, there were 31 native grassland species, including, apart from those already mentioned, bulbine lily, woodruff, vanilla lily, rock fern and scaly button.

Interestingly, vanilla lily were numerous and were often found in weedy spots. The group also found several plants of yellow burr-daisy in otherwise weedy areas. After some searching, many patches of kangaroo grass were found. The group found many small patches dominated by various wallaby grasses and tall spear grass. Redleg grass was very extensive throughout.

There were some occasional examples of natural tree regeneration in the woodland areas.

That evening we were first in the pub and then back at the cabin sorting through the specimens. The barmaid was most interested in what the group was doing, placing specimens in newspapers. On the following day, the group provided Rose with a herbarium, broadly separated into native grasses, native sedges and rushes, native forbs, weed species, and a category requiring further investigation.

Overall, the group recorded four tree species (river red gum, white box, river oak, and callitris pine), one shrub (hop bush), 11 native grasses, six native sedges and rushes, 32 native forbs and 40 exotic species.

The FOG group agreed with Rose that there was great potential to restore much of the Common to its original indigenous vegetation. However, as Rose pointed out, this would require someone who had a good knowledge of land restoration practice and who could inspire and lead the local community. Suitable equipment and machinery, e.g. four wheel drive bike and slasher, should also be sought. Obviously any strategy should focus on several fronts: careful weeding of high and mid quality conservation sites (including grassland, woodland and riparian sites), targeting highly invasive weeds such as woody weeds, St John's wort and Bathurst burr, and slashing tall herbaceous weeds. Care would need to be taken in areas that, while weedy, contain precious plants such as chocolate lilies and yellow burr daisy. Issues such as retaining some small bird habitat would need to be considered. Tree planting of indigenous trees (e.g. white box) and some patches of indigenous wattles, would also help to restore a better woodland structure.

The Common covers a somewhat diverse landscape from an alluvial plain in the riparian zone along the Macquarie River, to gentle slopes and some rocky outcrops. It cries out for restoration as it has many areas of high quality indigenous vegetation and potentially a community which could participate in and gain substantially from such a project. Another important conclusion by the FOG group is that the Common is an excellent source of seed for indigenous plants which could be used in other restoration projects in the Wellington area.

The Wellington Field Station

16 OCTOBER A small FOG contingent was joined by Sue Stevens (University of NSW) to explore the woodlands and riparian areas of the UNSW Wellington Field Station. More or less the same contingent had visited the property in October 2007. On page 10 of the March-April 2008 newsletter it was stated that "we returned to Wellington for lunch and then we visited a property near Wellington managed by the NSW FATE program of the NSW Institute of Environmental Studies. Alex

Baumber, who had joined us on the trip, was our host. The Institute is interested in what vegetation is present and how it might be restored to native grasslands/grassy woodlands. This was a highly modified property but we did manage to discover a dozen or so isolated native grasses and forbs."



We had been invited back to participate in a workshop to talk about the restoration of the ground storey areas of white box woodland. The UNSW had now established the Field Station as the Wellington Working Farms Project, and hopes to use the former field station as a model community farm and to restore the ecological communities that were formerly present. The project has provided a *Strategic Plan for the Wellington Working Farms Project*. For those interested in what is planned FOG has a copy of the *Plan*.

For various reasons, the workshop had not eventuated. However, we wasted no time as we could see from looking over the fence where we had been the previous year, the grassy storey had been transformed. In 2007, in the woodland of scattered white box, the grassy storey looked almost totally uninteresting, and while we had counted about twelve native grasses and forbs, these were isolated plants – definitely not that impressive. This year the flowering in the grassy storey of the woodland was spectacular and we counted over forty native grass and forb species in one paddock. By climbing a very high fence we saw this replicated in another paddock. So it would appear that the woodland area does not need to be restored apart from the isolated patch of weeds. When looking at an old aerial photograph over lunch, we could see that the area of woodland is extensive and we had only looked at one small part of it. We look forward to a return trip and possibly the establishment of a more formal monitoring system, although it might be some years before a similar flowering reoccurs. The riparian areas are somewhat degraded, but with the plans being developed, they might also be restored to something akin to the former selves over time.

As the Common borders the Field Station, the possibility of integrated management of large woodland and riparian areas for conservation and production is promising.

Eastern Grey Kangaroos and Dingoes Grasscover

As reported in the Sept-Oct newsletter, Don Fletcher was one of the presenters at the FOG slide afternoon on 26 July, and he treated us to an update on the eastern grey kangaroo (EGK) and dingo research by the ACT Government, which is undertaken in collaboration with the Institute for Applied Ecology (University of Canberra), and assisted by a grant from the former Marsupial CRC.

The simple answer on why to conduct such research is that we need to know more about the ecology of these animals, and their habitat, if we are to manage them. Certainly, the management of both animals is highly controversial. NSW police attend far more motor vehicle accidents involving kangaroos in the Yass-Goulburn-Canberra triangle than anywhere else in NSW. Canberra is known for kangaroo controversy and the ACT is now surrounded by a zone of commercial harvesting - the most controversial form of kangaroo management. Most of research on kangaroos has involved studying red and western grey kangaroos, which are not ideal for understanding the ecology of the EGK. Studies are now being developed elsewhere on the EGK, and the Canberra region study nicely compliments that.

Don reports to the ACT Kangaroo Advisory Committee (KAC) which aims to base its management decisions using an evidence based model which researches relations between weather, pasture and kangaroos (population dynamics research), and investigates fertility control options. Don's research involves developing models of the population dynamics of EGKs in temperate grasslands, as a strategic basis for management. The roles of dingo predation and food limitation are part of this investigation.

His research therefore involves measuring weather events, herbage mass (he described some simple but effective methods of doing this), and estimating kangaroo densities. From his own work and independent assessments in an area such as Gudgenby, some 9.3 square miles, there are 105 resident people and over 7,000 kangaroos.

In his modelling, kangaroos are assumed to eat down the vegetation until the point that the vegetation can no longer support additional mouths. This means that kangaroos live at the point of starvation. He also models the existing commercial harvesting rules and practice. He largely concludes that commercial harvesting plays much the same role as natural starvation, and in fact the number

of animals killed is about equivalent to those that would starve under a regime of no harvesting. This then is a poor outcome for the vegetation which remains in an overgrazed state and is therefore not allowed to recover, and does not benefit kangaroos which remain at the edge of starvation. Don provides many facts and diagrams to ably illustrate his hypothesis, which are the questions being explored in his research.



Don Fletcher examining a dead kangaroo for sign of a dingo attack.

In the next part of his talk, he described the kangaroo interactions with dingoes, one of the limiting impacts on kangaroo populations.

He showed a number of slides on dingoes and help dispense of myths about the colour and genetics of dingoes. While the dingo gene pool differs from that of other dogs, being part of the same species, there are overlaps in the genetic markers, i.e., 'the pure dingo gene' is a misunderstanding of what genetics is about. The next question is: what is the impact of killing by dingoes on kangaroo populations.

Don show many slides of autopsies of kangaroos found dead as a result of road kill, natural causes, and dingo killing, by investigating pre-mortem bruising and broken bones. Cause of death is not always apparent especially if the kangaroo has been eaten, and in most events can only be determined after skinning the animal. Nevertheless, Don was able to form some opinions about dingo predation.

Don's hypothesis, which is still being tested, is that predation is another way of removing the surplus kangaroos that would otherwise die of starvation, but further, it actually keeps kangaroo numbers below that level and so this may have a positive impact on allowing vegetation to recover.

Chilean Needlegrass Survey and its Aftermath Margaret Ning

My memory is already a little hazy on the subject of the Chilean Needle Grass (CNG) survey that I undertook for the Ginninderra Catchment Group (GCG) between early March and late November 2007. I spent just over 200 hours walking along the main roads of Gungahlin and large stretches of the Barton Highway, and now know every CNG hot-spot worth knowing in the area!

The aim of the survey was to determine how much CNG was in the area, if it had expanded from when an earlier survey detected it a few years ago, and whether it was encroaching on any of the area's grassland reserves (Mulangarri, Crace or Gungahlin) or nature reserves (Mulligans Flat or Goorooyarroo). An additional task was for me to map the CNG I found in order to enable government sprayers to undertake a control program down the track. It should be noted however, that my brief was only to scout the roadsides to the extent of the mowed verges. These verges could vary in size from a couple of metres to 25 metres, sometimes with a median strip in between. Because each 'scan' or 'pass' I made was only two to three metres wide

(depending on the length of the grass, etc.), I covered so very many kilometres overall. It is also worth noting that the mowing regime could vary, so that areas mowed in some months may not have been mowed in others, and obviously this meant that my count was an undercount.

Well, over 200 hours and many kilometres later I had located and mapped tens of thousands of CNG plants, showing that it is rapidly spreading along major arterial roads within the Gungahlin area and that it is well and truly well established along them. Mercifully it only has a 'presence' in one of the reserves (Crace).

Parks, Conservation and Lands has now completed their 2008-09 CNG spraying program in the Gungahlin area and the map outlines the areas where it was treated. The department's priority for this year was to spray along major arterial roads adjacent to conservation areas and within the conservation areas themselves. Over the last

few months visitors to Gungahlin may have seen a hundreds of dead CNG plants on both sides of Gungahlin Drive near Crace Grassland Reserve. I have also seen a few dead ones near the Barton Hwy/Gundaroo Rd roundabout and even a handful not far from the Gundaroo Rd/Nudurr Dr intersection, which are not really near any nature reserve.

I now have a reasonably foolproof identification method for CNG, by running a leaf between one's lips to see whether it is hairy on both sides. To the best of my knowledge, no other grass (native or otherwise) in our region has this characteristic, though a handful of provisos could apply here!

I would like to thank Shelley, my GCG supervisor who guided me throughout my period of employment, and was very helpful and patient with me while we devel-

oped the whole survey process. I would also like to thank the dozen or so FOG and family members, including Bill the kelpie, who accompanied me on a few occasions to learn what the plant looks like and/or to make suggestions regarding the survey strategy we had developed. Thanks also go to Jenny Conolly, Invertebrate Pest and Weeds Officer, Parks, Conservation and Lands for her input, and for a map of 2008-09 control work.



Photos supplied by Margaret Ning. While not so obvious in black and white, the lighter grass is brown and dead which the other grass (non Chilean needlegrass is green and alive)

Redgrass (*Bothriochloa macra*) an adaptable native

Michael Bedingfield

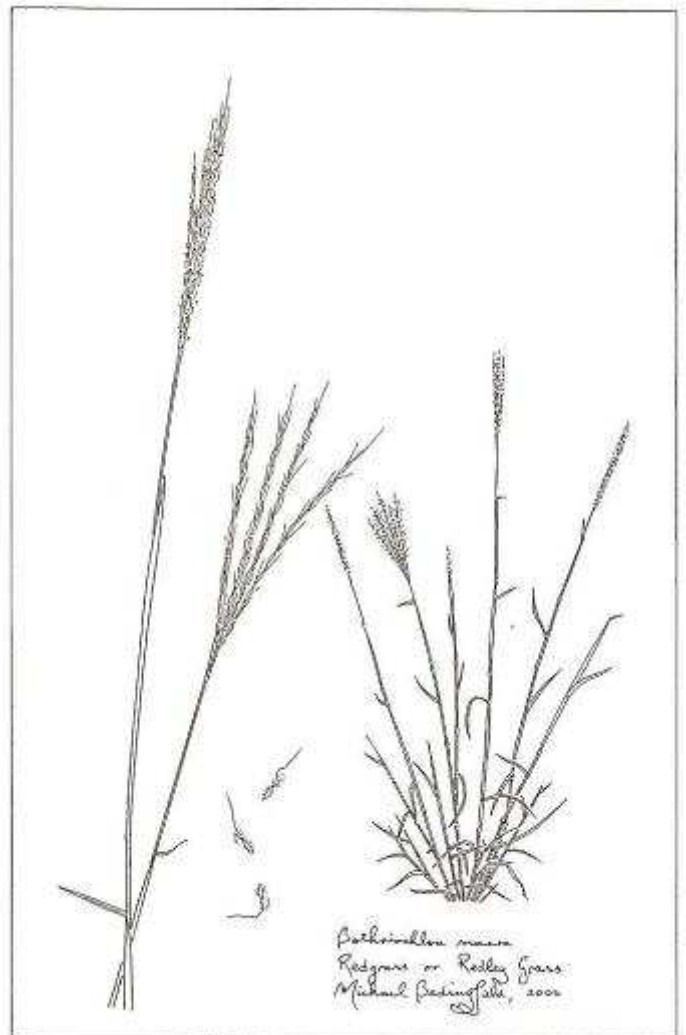


There are lots of plants in grassy ecosystems that are fussy about where they live, so it's good that some are tough and versatile. One of these is redgrass, which also known as redleg grass, and which can be found in various situations. It generally does better in drier conditions, and has a high drought tolerance. It occurs in natural grassy areas, where it prefers grasslands or grassy woodlands, but is usually scattered among the other grasses as a minor component. It does well under grazing in native pastures and tends to increase and become more prominent. This is because stock favour the green leaves but find the seedhead stems and frosted leaves relatively unpalatable. It is also a good colonizer of disturbed areas, and is said to be useful for soil conservation purposes. Small amounts of it can be found growing in suburban Canberra where it copes with mowing, and it would be a handy participant in a native grass lawn. It can even be found growing in the rough gravel on the edges of local country roads, where only the toughest survive. It is moderately common and widespread on the Southern Tablelands and also occurs on the other tablelands, coast and slopes of NSW, as well as in Vic, Qld and SA.

Redgrass is a perennial, with a medium sized basal tuft of leaves, and flowers in summer or autumn. The inflorescence is erect or spreading, typically growing 30 to 60 cm in length, but can be up to a metre. The stem is reddish or maroon in colour and sometimes branched. Each flower-head consists of three to six racemes which are grouped tightly together, producing a compact elongated arrangement which is five to ten cm long. Occasionally the racemes may spread apart a little. The leaves

are green, sometimes with a touch of maroon, and when they brown off and wither they have a reddish tinge to them. So as the growing season comes to an end in our area, patches of this grass have a distinctive colour, worthy of the plants common name.

The botanic name, of course, doesn't sound common at all, and is *Bothriochloa macra*. It is pronounced as follows: both-ree-o-CLO-a mac-ra, with a short "o" in "both", as in "Goth". Please refer to the accompanying drawings where in the rectangle the whole plant is shown at one



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Friends of Grasslands newsletter

Do you want to subscribe to the newsletter? It comes out six times a year, and you can obtain it by joining FOG. You do not need to be an active member - some who join often have many commitments and only wish to receive the newsletter.

However, if you own or lease a property, are a member of a landcare or parkcare group, or actively interested in grassland and woodland conservation or revegetation, we hope we have something to offer you. We may assist by visiting sites and identifying native species and harmful weeds. We can suggest conservation and revegetation goals as well as management options, help document the site, and sometimes support applications for assistance, etc.

Of course you may wish to increase your own understanding of grasslands and woodlands, plant identification skills, etc. and so take a more active interest in our activities. Most activities are free and we also try to arrange transport (or car pool) to activities.

If you are already a member, why not encourage friends to join, or make a gift of membership to someone else? We will also send a complimentary newsletter to anyone who wants to know more about us.

How to join Friends of Grasslands

For membership enquiries or to join FOG, look at our website www.fog.org.au, send us an e-mail to membership@fog.org.au, or contact Margaret Ning on 6241 4065. Membership is \$20 for an individual or family; \$5 for students, unemployed or pensioners; and \$50 for corporations or organisations - the latter can request two newsletters be sent.

For general inquiries about FOG also consult our website. If you would like to discuss FOG issues contact Janet Russell or Geoff Robertson. Contact details are given in the boxes above. For newsletter and e-bulletin matters contact Geoff Robertson or Tony Lawson, respectively. We look forward to hearing from you.

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