

News of Friends of Grasslands

Supporting native grassy ecosystems

November-December 2008

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Program

November

SAT 1 NOV 10am to 3pm **Sun Moth Count workshop**. See page 2 and enclosed brochure.

THURS 6 NOV (9.30-3.30) **FOG Monitoring at Scotts-dale** with Peter Saunders. Contact Sarah (02 6251 2228/sarah.hnatiuk@fog.org.au) for more information.

SUN 9 NOV 10am to 3pm Wildflower wander at Goorooyarroo See page 2.

15 NOV 10.30am **Visit to Alan Ford's garden**, a local grassland garden. For more information, contact Janet - details back page.

SAT 22 NOV **Old Cooma Common working bee** See page 2.

December

SAT & SUN 6 & 7 DEC **Kiandra grasslands and Long Plain walk** with Roger Farrow and Warwick Daniels. See page 2.

SAT 13 DEC Visit to **Harold Cross**, near Braidwood. See page 2.

MON 15 DEC 10am-1pm. Morning tea and grassland walk at Quartz Hill, near Cooma This will be a great opportunity to visit the magnificent basalt grasslands with their floristic diversity at Quartz Hill.

January

3 & 4 JAN **Alpine ecosystems** with the ANBG. Please book early. See page 2.

It is membership renewal time

A membership renewal form for 2009 is enclosed. 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 deductable, 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

Cooma: a melting pot

FOG gospel workshop

Woorndo grassland listing

Narrawallee (long grass) country

Austral toadflax: inconspicuous and unspectacular, but threatened







FOG's visit to Bristlecone (12 Oct) top, Wellington Common and Nanima Common (15 Oct) middle, and University of NSW site, Wellington (16 Oct) bottom. See page 4.

More program information

Wildflowers at Goorooyarroo

SUN 9 NOV FOG is joining Field Naturalists for a visit to Old Jones Hill (Goorooyarroo) to see what we hope will be a good grassland wildflower display. We plan to meet at the entrance on Horse Park Drive - bring your own lunch. For further details contact Tony on tony.lawson@fog.org.au or 6161 9430.

Old Cooma Common

SAT 22 NOV The next working bee at Old Cooma Common (OCC) is on 22 November, 9:30 to 3:30pm. Attending a working bee provides a good opportunity to visit a good example of one of the most interesting and diverse basalt grasslands on the Southern Tablelands, with expansive views over the Monaro landscape, develop skills, and catch up with other FOG members.

OCC is a grassland reserve, located off the southern end of Polo Flat Road, Cooma, and has been established by FOG and Cooma Monaro Shire Council. It is fascinating to visit any time. It contains two threatened and one rare plant species.

FOG holds working bees there in March and November each year which may involve control of St John's wort and African lovegrass, cutting and daubing briars, seed removal, mapping weeds, and applying monitoring procedures. Some tasks do not involve working with herbicides. Taking part in the bees, is a good way to learn about grassland management.

FOG has recently helped Council win substantial funding assistance from the NSW Environmental Trust to embark on an innovative new management regime for the reserve. This new project will involve FOG members in some new management activities in addition to the ongoing background weed control. We are optimistic that this

will herald an improved future for this high profile grassland.

At lunchtime we buy lunch and retreat to a more shaded area. Enquiries and car pooling: Margaret Ning and David Eddy, see contact details back page.

Sun Moth Count Workshop 10-3pm, 1 Nov Canberra University

FOG has won the grant to assist in research on the Golden Sun Moth. So please make time to attend the workshop and become a moth counter. Alternative workshop times available. See enclosed brochure.

Kiandra and Long Plain walks

SAT/SUN 6 & 7 DEC Easy walks, spectacular scenery and showy wild-flowers will be on the agenda when Roger Farrow and Warwick Daniels take FOG and ANPS members to see Kiandra and Long Plain grasslands. We plan to start from the old Kiandra Hotel now Main Roads depot at 9.30am on the Saturday. This is a 2.5 hr drive from Canberra.

The general plan is to spend the first day at Kiandra grasslands and the second day at Long Plain possibly venturing as far as Blue Holes and the Cooleman Plain (karst landscape). Some 4 WD drivers will possibly be returning on the Monday via the Broken Cart FT and Barnett's Road to the Canberra Tumut Road (the Brindabella road being closed). On Friday and Saturday night non-campers can stay at Talbingo where there is a motel and only 37k from the Long Plain Road and few clicks more to our proposed camping area at Long Plain Hut. Roger and Warwick will be going down on the Friday to set up camp. For more details please contact Roger 02 6236 3105, 0427 431 275, or r.farrow@iimetro.com.au.

Visit to Harold Cross

SAT 13 DEC FOG plans a visit to a 40 acre property in the Harold's

Cross area, near Braidwood. The owner Libby would welcome opinions/advice on documenting and managing it. The property consists of a rocky stretch of Harold's Cross Creek, with black-sallee and ribbongum/peppermint woodland, plus a fair bit of native grassland and boggy patches running down to the creek. It's quite high, about 800+m. We plan to arrive at 9.30am Harold's Cross which is about an hour's drive from Canberra/Queanbeyan. There are three ways to get there: a quick (50 minute) but slightly tricky route through the Tallaganda forest via Rossi, which is very scenic and interesting, or more directly via Captain's Flat, and thirdly from Braidwood. Please either bring your lunch/thermos, or buy stuff in Braidwood on the way. For inquiries, to register your interest, and for further information, please contact Janet, details back page.

Alpine ecosystems visit

SAT/SUN 3 & 4 JAN At the July slide afternoon, Joe McAuliffe described the Australian National Botanic Gardens (ANBG) project to record the plants in each alpine community and to collect and test seed as part of the research to see how alpine vegetation may adapt to climate change. As promised, Joe will show FOG members and friends these different communities. Joe is arranging access to the planned sites.

The plan is to spend one day at Merrit's Creek and another on the Ridgeline. We plan to stay at the Lake Jindabyne Hotel on the Friday and Saturday nights, but people can join the group for any part of the weekend that they choose. We propose to meet at the hotel at 9.30am on the Saturday and 8.15am on the Sunday. The cost of a room at the lodge per night, including a hot breakfast, is: Double/twin - \$90.00/night, 3/4 share - \$125.00/ night, and 5/6 share - \$150.00/night. For more information (e.g. car pooling, accommodation and food) contact Janet (before Xmas): details back page.

FOG working bee at Hall

SAT 20 SEPT Eight FOG members attended the third working bee at Hall Cemetery and work continued on cutting, daubing and removal of woody weeds in the southern woodland area and the removal of lignotubers, some very large, from the secondary grassland area. Work was leisurely in the mild weather but a break for morning tea and chit chat was welcome. Afterwards, several participants joined in the wander to indentify the many plants in flower.



Graeme and Jenny Clarke

The fourth working bee was held 11 October and on this occasion five people attended. As the Hall (Tarengo) leek orchid was in flower, no lignotubers were removed. Another working bee is planned for **Sunday 16 November** (contact Janet, details back page) for more information. On 10 December, the FOG Hall group will welcome students from St Francis Xavier's College who will assist with weeding.

Ingrid's workshop

12 SEPT FOG members who attended Ingrid Adler's workshop on propagation by division, seeds and cuttings found it very beneficial. This was organised by FOG's Conservation and Cultivation Group. The next visit is to Alan Ford's garden (see cover page for details).

News Roundup

Tuggeranong Homestead *Jenny Horsfield*

FRI 29 AUG I was pleased that Geoff Robertson was able to make a return visit to Tuggeranong Homestead. Southern ACT Catchment Group Coordinator, Steve Welch, joined us, as well as Rebecca Lamb from Minders of Tuggeranong Homestead (MOTH) and Michael Bedingfield, a MOTH and FOG member. It is about six years now since Geoff gave MOTH invaluable advice about the protection of our remnant grassy woodland and suggested a draft plan of management for this area.

We are still no closer to having a plan of management. However, the whole property is now protected by a full ACT Heritage citation. In the woodland there are wide and flourishing tracts of native grasses whose survival the drought has favoured, and there is some vigorous regeneration of Blakely's red gum and yellow box eucalypts. There are also plenty of weeds! But the grazing of horses has ceased as has the use of the woodland by a local beekeeper. On the whole, MOTH is confident that the woodland is in better shape than it was six years ago when there were huge blackberry and rabbit infestations.

Geoff advised that selective grazing of Pikes Paddock, the area to the north west of the woodland, would be a good fire control measure and also in the long run reduce weeds. He was keen to check out an old tree which he remembered from the previous visit, which was very likely a remnant black sally (Eucalyptus stellulata) growing along the original Tuggeranong creekline. The tree is well and truly dead now but we were excited to find that at least four healthy young seedlings are growing in the vicinity- surely a rare find in the Tuggeranong Valley.

Geoff also gave MOTH some useful advice for our forthcoming project *Returning Life to Tuggeranong*

Creek. Through the efforts of Steve Welch we have obtained an ACT Environment grant of \$17,050 to regenerate the banks of the old Tuggeranong Creek, removing woody weeds and encroaching regrowth from the adjacent orchard. Some major clearing of dead trees and regrowth in the orchard itself will take place, with a few scattered historic orchard trees and oaks left in situ.

Both Geoff and Michael gave us some very helpful advice about plantings in the orchard, including sowing of native seed on selected cleared sites and a variety of understorey plants that would help improve the biodiversity of the area.

MOTH is very grateful to Friends of Grasslands for their continuing interest and support.

Project management workshop *Sarah Hnatiuk*

10 AUG Tony Lawson and I attended a workshop on project management that was sponsored by Toyota and run by Conservation Volunteers. It started with a practical exercise, during which we constructed various items with children's building blocks and saw the different ways in which teams can operate.

The presenter then outlined the necessary components for any successful project which she captured with the acronym: SMART: understanding the Situation in which the project is to be carried out, having a clearly defined Mission, establishing criteria against which the project will be Assessed, listing the Resources needed, and setting up a Time Frame with key milestones.

We were then asked to fill in worksheets on these in relation to our own projects, in our case, the FOG Sun Moth Count, and to describe the results to the other attendees. We also looked at risk management and the stakeholders in our project. It was a well-presented, useful and interesting workshop.

We've been everywhere

Sometimes the FOG program gets a little busy. Here is an example -Sat 11 Oct, Hall Cemetery working bee, then to Richlands near Taralga (same day), Bristlecone near Wombeyan Caves (12 Oct), FOG on-ground and extension meeting (13 Oct), Wellington (Nanima and Uni of NSW site (14-16 Oct), Major's Creek Cemetery and Back Creek TRS (18 Oct) and Dunlop Grassland (19 Oct). Some photos may be found on the cover page, with Back Creek below. More complete reports on these activities are planned for future issues.



ACT State of the Environment Report 2007/08 Naarilla Hirsch

The ACT State of the Environment Report 2007/08 was tabled in the ACT Legislative Assembly on 7 August 2008. The report covers the period from 1 July 2003 to 30 June 2007, and contains a number of recommendations of relevance to FOG's work in its Conserving Biodiversity section.

The report acknowledges that grasslands continue to be under great pressure with several areas destroyed or under threat at the airport and/or threatened by overgrazing from kangaroos on Defence land at Belconnen and Majura. It also notes that it is too early to report whether the severe decline of the Majura population of the grassland earless dragon (be it due to the recent drought and/or overgrazing by kangaroos or some other reasons) will lead to local extinction. However, recovery of the grassland habitat and improved management of this important area

will be vital to the survival of this species and possibly others dependent on this type of habitat.

The Commissioner for the Environment and Sustainability has recommended protection of the few remaining areas of high conservation value including natural temperate grasslands in the Majura and Jerrabomberra valleys, yellow box—red gum grassy woodlands at Kinlyside, Kama and Molonglo Valley, and the snow gum—candlebark tableland woodland. Lands identified for nature conservation should be protected under the Territory Plan in a timely manner, with priority given to

Jerrabomberra East native grassland nature reserves.

The Commissioner has also recommended consideration of Goorooyarroo and Mulligans Flat nature reserves for designation as a national park, perhaps as part of a network of areas considered for designation as a national park or be given

additional protection and recognition by some other overarching designation.

The report notes that use of native species, particularly native grasses, in the ACT's conservation, restoration and landscaping projects has the potential to make an important contribution to recovery of native ecological communities and maintenance of their ecological integrity. The Commissioner has recommended that an interim policy to allow for limited commercial seed collection on selected unleased sites be developed and implemented, pending completion of the review of the Nature Conservation Act.

The report also notes the recent contention about management of eastern grey kangaroo populations in some areas of the ACT under continuing dry conditions. The Commissioner has recommended finalising, implementing and monitoring the kangaroo management plan for the whole Territory, in consultation with the

community occurring at the planning stage.

Another recommendation is to improve the scientific knowledge of managers and custodians of the ACT nature conservation estate by continuing existing research, monitoring and evaluation programs, and also by ensuring threatened species and communities, and river biodiversity are the subject of research and monitoring programs, with results from these informing management actions.

The full report can be found at http://www.envcomm.act.gov.au/soe/2007actreport.

New orchid species

Jim Kelton has reported to FOG that two more leek orchids have been declared as Critically Endangered by the NSW Scientific Committee.

These are *Prasophyllum innubum* and *P. keltonii*. *P keltonii* is only known from the Brandy Marys

Leases. These were nominated by Peter Branwhite.

P. innubum has a couple of populations in Bago State Forest but the largest known population occurs on the Brandy Marys leases. These add to the already significant number of Scientific Committee listed Endangered species occurring within the leases, some extending onto adjacent parts of McPhersons Plain, including P. bagoensis, Diuris pedunculatum, Pterostylis oreophila, and Thelymitra atronitida.

Jim is disappointed that six other nominations may not go ahead because too little is known of their distribution to complete their assessment, despite extensive searches for more populations of species over many years. There are some eight other undescribed species that Peter and he have found in the area.

Correction

The photo on the cover page of the previous newsletter wrongly described the shell as a trilobite fossil, whereas it was a brachiopod valves fossil.

Threats to biosecurity

Sarah Hnatiuk

16 SEPT Tony Lawson and I attended a Science Café on how to get more people interested and involved in monitoring for the pests, weeds and exotic diseases that might threaten Australia's biosecurity. The full title of the café was Threats to Australia's biosecurity: how community science by volunteers can help. It was held at the National Museum as part of a research project called Community Detectives being run by the ANU's National Centre for Epidemiology and Population. The proceedings were led by ABC666 presenter, Genevieve Jacobs, and Jason Alexandra of the Murray Darling Basin Commission with a panel of experts, Denis Saunders, President of the World Wildlife Fund, Lorraine Higgins, CEO of Volunteering ACT, and Drew English, Conservation Volunteers Australia.

The discussion was lively and canvassed a wide range of ideas from how to define biosecurity threats, 'sleeper' threats that climate change might trigger, and what role there is for the public to contribute. Participants drew on their experience of a variety of community science projects to define what is needed if these projects are to contribute to Australia's biosecurity. Some projects rely on local people so familiar with their environment that they can recognise when something unusual appears, while others target a specific threat already here, such as the Argentine ant. Some of the elements for successful contributions from the community are: first, enthusiastic individuals, groups and networks able to detect threats as a result of their training or familiarity with the local environment, second, awareness campaigns about where to report unusual plants, pests or diseases, third, a central agency that acts in response to information provided, and fourth, light-handed oversight of, and feedback to the volunteers.

As we arrived at the start of the café, we were each handed a device that allowed us to transmit answers to questions displayed on the screen, such questions as 'can the community contribute to Australia's biosecurity?' The questions we answered at the start of the session were asked again at the end, the answers showing a decided shift among the audience to a more positive view of how far the community can contribute.

Visit to Yellow bellied glider Jim Kelton

The endangered population nomination by High Country Conservation Alliance Inc (HCCA) for the Bago Plateau population of yellow bellied gliders has had a Preliminary Determination by NSW Scientific Committee (16 May 2008). HCCA should be congratulated on their outstanding effort - some members of FOG are also members of HCCA.

Meanwhile the destruction of habitat continues at the hands of Forests NSW under the shameful terms of the Southern Regional Forest Agreement for the Tumut Subregion. It will be interesting to see what additional conditions will be put on forest operations, if any!

FOG advocacy

Bernadette O'Leary

I have included summary information on recent advocacy below. Copies of submissions and related letters are made available on the FOG website at www.fog.org.au.

September

FOG made a submission on the EPBC referred **proposed taxiway** extension at the Canberra International Airport. FOG expressed its appreciation of the quality of the report, but supported the recommendations reluctantly, in principle, recognising that this action is one of a series of actions which has over time allowed the CIA to destroy areas of Natural Temperate Grassland, and habitat for grassland earless dragon and other threatened species. FOG welcomed the requirement, as it had

advocated that suitable offsets (provided these are substantial) be agreed to before approval to proceed is given. Such offsets could ensure permanent protection of grasslands and grassland threatened species elsewhere.

October

FOG made a submission on the EPBC referred proposed remediation work at the Belconnen Naval Transmission Station, a high quality grassland remnant, and home for several threatened species including the Golden Sun Moth. FOG expressed concern that the proposed works were intended to bring the site to a standard suitable for housing development, when the clear intention of both the Commonwealth and ACT governments was to create a grassland reserve on at least part of the site. FOG's stated view was that the proposed works would destroy or degrade areas of threatened ecological communities and species without sufficient justification and that, before any remediation occurs, the proposal should be reworked to protect those significant conservation val-

FOG also provided comments towards draft terms of reference for a strategic environmental assessment jointly by Australian and ACT governments - for the proposed development of Molonglo and North Weston. FOG welcomed such an assessment, which it sought in earlier comment phases.



Sixth Conference

Town Hall Horsham, Victoria, 9-11 November.

Contact Sally.brown@uq.net.au, Telephone 07 3201 2808,

Cultivation Corner:

Understanding our plants and our patch - Janet Russell

The rain and warmer weather has brought renewal in the garden. There are more weeds than we have ever had. The challenge is going to be to ensure that we properly identify them and not pull out anything precious. Some of the



daisies we have planted such as the golden and sticky everlasting daisies (*Xerochrysum bracteatum* and *X. viscosa*) and *Ammobium alatum* have self-seeded. The *Ammobium* did not produce any seedlings last year but it looks as though they will not need any propagation assistance from now on. They seem to persist as rosettes even if they do not flower. The grasses will nearly all need a flower-head before we can tell what we have.

The hoary sunrays (Leucochrysum albicans var. tricolor) which are the white and yellow variety (I only have one plant of the yellow one) are looking bright and healthy. They are one of the most attractive grassland species we have put in. According to various sources on the web, which include abstracts from scientific papers, I have found out more information about this plant which is listed as endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The species do not self-pollinate but they do produce plenty of viable seed even in relatively small populations (74 individuals was the minimum mentioned in the populations studied). For this species to continue to thrive, management that





ASTERACEAE/ Leucochrysum_albicans_ssp_albicans_var_tric olor.html.

It is a challenge to understand the

unique requirements of native plants and how to maximise the opportunity for them to thrive and reproduce. One of the other factors in the larger scheme of things in growing plants is maturing gardens which change the conditions and microclimate in which the plants live. The amount of cover provided by the established eucalypts in our garden, for example, has increased markedly since 2000 when we first created our garden. We are also continually finding acacias germinating, either from the neighbourhood or from a seed bank in the soil. Some are welcome like the early wattle (A. genistifolia) which can provide cover for small birds. If however we are not vigilant, our garden could become a forest of acacias and we may find that our sunrays and other grassland plants will be struggling in this new environment.

L.albicans var. tricolor top and L.albicans var. albicians bettom)

maintains open, and preferably, disturbed ground is needed and presumably enough other specimens to provide for cross-fertilisation.

On the face of it, it seems to be easy to meet the needs of this species and grow them in gardens. This is the theory. We have only two self-sown seedlings and they were the progeny of about three plants at that time unless they were pollinated from another source. I do not know of any other plants locally. I could only find one reference to their pollinators and they are assumed to be insects. Further information on flowering, seed and sowing can be found at: http://www.understorey-network.org.au/

FOG website

The FOG web site (www.fog.org.au) is now well established and attracting 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 the paper copy. To arrange, contact Margaret, details back page.

Cooma: a melting pot Tony Lawson

SUN14 SEPT Eighteen members of FOG and Canberra Field Naturalists and local residents had a very successful field trip to study the world famous geology of the Cooma region.

On the drive down, the clouds were so dark that they were indistinguishable from the Tinderry Mountain Range. Fortunately the strong winds gradually dispersed the clouds during the morning and quite good weather was experienced for the remainder of the day.

It was fortunate to be able to escape those strong winds by enjoying the terrific hospitality of Bob and June Wilkinson, who had a warm fire and provided us with tea and cakes, while listening to Dennis Dyer. He yet again gave an entertaining and informative explanation of how geological time was set up, discussed

the relevant periods and concluded with a discussion of the key geological features of the region.

As with Canberra, the oldest rocks were deposited during the Ordovician period (505 - 434 million years ago (mya)). These Adaminaby Beds consist of deep marine interbedded siltstone and fine sandstone together with some submarine basalt flows. These were tightly folded at the end of the Ordovician and those located in the Cooma area were subjected to high temperatures and pressure due to deep subduction resulting in high grade regional metamorphism.

The region is therefore internationally well known as one can observe the effects of increasing temperature and pressure on the sedimentary and volcanic rocks found there. Regional metamorphism occurs when the rocks are subjected to increased temperature and pressure. The increased temperature in this case is due to the rocks being pushed deep into the crust and the pressure is due to the plates in the crust being thrust against each other. For examples, shale and siltstone are converted to slate, phyllite, schist and gneiss. In the Cooma area, the temperature was sufficiently high (~550oC) for the sandstone and siltstone to melt to produce migmatite and 'S' type granite (when the melt finally solidifies).

The other type of metamorphism is known as *contact*

or *thermal* metamorphism which occurs when the existing rocks are subjected to increasing temperatures. This is caused by the existing rocks coming into contact with intruding magma or lava. For example, limestone is converted to marble or sandstone to quartzite.

Following the morning tea and talk, the group set off for the ten sites at which the rock exposures would illustrate the features that Dennis had discussed. The first site was located on a ridge along Myall Road, south of Cooma

> where the intermediate plutonic rock identified as syenite, was exposed (see photo). It was intruded during the Jurassic period (213 - 144 mya). The group accessed the site by walking through a field and ascending the ridge. The hot magma had heated the adjacent rocks. During the discussion there was a

loud bang as the high winds brought down a large tree branch. As well as Dennis' geological pearls, at each stop we were informed about the accompanying vegetation by Geoff Robertson.

The remainder of the stops were in road cuttings. This consisted of one on the return to Cooma, two in Cooma and another six on the road out towards Berridale. The first stop was at an exposure of basalt which had been formed from lava that had erupted towards the end of the Tertiary period (66 - 5 mya). The basalt flows had filled in the valleys and subsequent erosion has resulted in flat topped hills scattered throughout the region.

In Cooma itself we encountered the location of the maximum temperature and pressure during the Ordovician regional metamorphism. The temperature caused the sedimentary rocks to melt and later cool to 'S'type granite with xenoliths of gneiss that did not melt. A nearby location exposed amphibolite that was formed by the Ordovician basalts changing to this but not melting.

As we headed towards Berridale after lunch, the regular wayside stops illustrated the impacts of reducing heat and pressure (regional metamorphism) on the Ordovician rocks. We successively saw migmatite (a rock that is partially melted), gneiss (a banded rock with light and dark coloured bands), schist (a rock with visible flaky biotite crystals) and phyllite (a rock exhibiting a greenish coloured sheen).

As Berridale was approached, the impact of another granite intrusion could be seen. First we observed an aureole, which was caused by the Berridale granite of Silurian period age heating the adjacent Ordovician rocks (contact metamorphism). This produced rocks such as quartzite and hornfels that have resisted weathering and erosion more than the surrounding rocks to produce a prominent ridge. The Berridale granite is a large intrusive body and hence could be called a batholith, whereas the intrusion of the syenite was much smaller in overall volume and it is therefore called a pluton. The Berridale granite has weathered on the surface to produce tors which are a feature of this area.

All in all a very enjoyable day for the participants. This included the then Mayor of Cooma who now can visualise a new tourism opportunity for the region. Many thanks to our leaders Dennis and Geoff and to our kind hosts June and Bob.



FOG gospel workshop Grasscover

SAT 30 AUGUST Eighteen FOG members and friends participated in the *Grassland Gospel According to FOG* at the Mugga Mugga Education Centre. The aim was to provide FOG members with the knowledge to be more informed, involved and confident.

Tony Lawson facilitated the workshop, and said that its purpose was to look at how FOG might build individual member's capacity to achieve his/her purpose, which may be to better understand conservation management, advocacy, and/or flora and fauna, etc., and to build the organisation's capacity to deliver services. He pointed out that FOG works with many audiences from which it draws its membership and which it tries to influence, including private and public native grassland managers, public authority policy/decision makers, community NRM groups/ conservation NGOs (including larger groups with staff and smaller groups with volunteers only), students (primary schools, high schools, universities), public funding providers, and the general community. He said that we needed to identify how to build capacity in members and FOG as an organisation, to address what our key messages are, and how we develop and deliver them, and what resources we have and need to develop. The attendees then introduced themselves and stated what they wanted to achieve from the workshop.

Isobel Crawford spoke on how we might build capacity in individuals and FOG as an organisation. She addressed the question: to whom are we trying to impart skills, i.e. what are the different audiences and their needs. She outlined the skills that we are trying to develop such as plant and fauna identification, site assessment and management planning, on-ground management skills such as weeding and baiting, and govern-

ance skills. She next addressed how individuals and the group might learn these skills and the obstacles to learning. She gave examples of how individuals can develop a very high standard of knowledge (e.g. one could learn more about plant identification by becoming a volunteer at the National Herbarium or the Botanic Gardens). She posed the question of what are the possible strategies for building FOG's and its members' capacity.

Julie Palmer spoke on what FOG has to offer other groups. As the recently appointed facilitator to Ginninderra Catchment Group, she had found FOG skills and assistance to be of great benefit to her in her work and in developing her own skills.

David Eddy spoke on FOG's key messages. First, native grasslands are natural communities and form part of a mosaic of vegetation formations. Each vegetation formation (grassland, woodland, wetland, forest, riparian, heath) is driven by its physical environment, external influences and internal ecological forces, and provides ecosystem services to organisms within the community, beyond the community and to human communities. Second, grassy ecosystems have been largely removed or highly modified. Third, grasslands and grassy woodlands are threatened with extinction. Legislation now exists to provide a framework for their protection and recovery. Fourth, grassy ecosystems are dynamic systems, requiring active management, including some form of herbage management, as the natural herbage management processes have been removed or disturbed. Fifth, grassy ecosystems provide habitat for flora and fauna, hence conservation of the whole ecosystem is more efficient and arguably more important than 'conservation' of single species. Finally, he outlined FOG's various roles in articulating these messages.

Geoff Robertson then spoke on the services that FOG provides and the resources it has to deliver them.

FOG provides:

- i. an advocacy role, and although this was outside the scope of the workshop he pointed out that advocates need to be well informed and authoritative and therefore everything FOG does contributes to building advocacy capacity.
- ii. education through a range of activities such as the newsletter, website, sales of *Grassland Flora*, education material, talks to students and groups, a program of site visits and workshops, and participation in other groups.
- iii. on-ground work, e.g. at Old Cooma Common Grassland Reserve and Hall Cemetery.
- iv. extension services include visits to properties and help with flora and fauna identification and management planning.
- v. research assistance, e.g. Scottsdale grassland monitoring, plant and reptile surveys, and the Sun Moth Count project.
- vi. assistance to other groups in governance (sitting on boards), expert knowledge, and assisting in strengthening links to resource people (e.g. Kosciuszko to Coast, Bush on the Boundary, Parkcare, Monaro Grassland CMN, Southern Tablelands Grassy Ecosystems CMN).
- vii. support for other groups to obtain resources (funding applications) and in-kind services.

viii.assistance to the general public by providing assistance to government and industry, students, land managers, and interested members of the public, usually in response to inquiries about grassy ecosystems, plant and fauna ID, and how to access materials and people with particular skills.

Geoff pointed out that FOG has a number of resources: FOG newsletters, fact sheets, posters, brochures, other literature, various Powerpoint presentations and a slide projector. It can also offer assistance on key messages, plant and fauna identification and management planning skills, and how to build capacity and governance skills. FOG also has access to a powerful network of experts. Nevertheless, FOG has its own shortcomings and there are obstacles to service delivery. The point of the workshop was to explore what resources we need to develop.

Following afternoon tea, the workshop formed two groups to address whom we should be targeting and what resources should be developed. Some common themes were presented by both groups.

Group one concluded that we should be targeting landholders, residents in sensitive vegetation areas, the general community, the Science Teachers Association, and catchment and parkcare groups. To landholders, FOG should offer extension services, working with CMNs and government agencies, and provide a standard FOG management package to landholders. As part of this, it should provide special extension training to FOG members. For residents around sensitive vegetation areas, FOG could look at targeting nursery associations and providing them with weed information, and we could target schools in those areas, e.g. Crace. In these activities FOG could perhaps work more closely with Greening Australia.

Group one also thought that the website might be further developed by making it more interactive, and linking it more closely to other groups. Possibly FOG could obtain a grant, or form a business alliance to improve and maintain its website. FOG ought to develop a standard kit for stalls, possibly conduct a photographic exhibition for shopping centres, organise a column in the *Chronicle*, and form stronger alliances and partnerships with other groups, e.g. CMNs, community councils and government agencies.

Group two considered the question 'what resources does FOG need and how could it organise these'? Suggestion included: creating a media/communications 'person'/ officer, building a greater public profile/presence (through the media), providing a package of fact sheets, providing more links to our website on issues of common concern (water, lawn, native gardens, and seed), targeting activities to increase membership and thereby increase the 'talent pool', providing a succinct 'grassland publicity' package, and utilising the landcare display trailer. The group didn't offer suggestions on how to achieve these ends: money, people, enthusiasm, organisation and time were all limiting factors. Both groups considered that much of what FOG is doing is also covered by other groups and therefore care should be exercised to work with those groups and to avoid duplication.

Tony Lawson summed up by asking 'where to from here?'. Tony said that the workshop had identified new resources that were needed, and had provided ideas on how we should proceed to obtain those new resources, and suggestions on what should be included in a plan of action. The FOG on-ground and extension group aims to hold a series of meetings about how to realise some of these suggestions.

POSTSCRIPT: at its meeting on 13 October, the FOG on -ground and extension group decided to recommend to the FOG committee, that starting in early 2009, after the Sun Moth Count is winding down, that FOG ought to take on three tasks. First, develop a display that can be used to advertise FOG at suitable events. Second, develop a framework of topics and case studies, to sum up FOG's messages and experience, that could be turned into fact sheets for the website - possibly these could be published. Third, explore publishing suitable material in the media. In each task, FOG seek out potential partners with similar objectives, strategies and skills.

Woorndo grassland listing Deborah Peeters

FOG members will be interested to know that special heritage-listing has been given to the 120ha of Woorndo grassland including the town common, cemetery and roadsides, which FOG visited in Victoria in 2006. According to Heritage Australia, this listing provides excellent examples of the remnant vegetation communities which once dominated the western Victorian basalt plains. These are the kangaroo grass and spear grass grasslands, and the wallaby grass wetlands, which form in depressions on the basalt plains, and the

rough-barked manna gum (*Eucalyptus vimi*nalis ssp. cygnetensis) open woodland community.

Each of the communities is influenced by the varying parent materials, which comprise newer volcanics, laterite, and Grampians Group sediments. Roadsides around the town of Woorndoo and the common and cemetery within Woorndoo are of national botanical significance because they contain rare and threatened species of flora,

and are of state botanical significance for the presence of rare and threatened vegetation communities. The area provides excellent examples of the grassland, woodland and wetland vegetation types which were typical of the western Victorian basalt plains, but which are now rare as a result of agricultural development.

Two rare and threatened floral species occur in the nominated area, clover glycine (*Glycine latrobeana*), rare in Australia and vulnerable in Victoria, and small milkwort (*Comesperma latrobeana*), vulnerable in Victoria. The grassland provides habitat for the nationally vulnerable striped legless lizard (*Delma impar*).

The area has biogeographical significance, with three species reaching the limit of their range, including short wallaby grass (*Danthonia carphoides*), slender goodenia (*Goodenia gracilis*) and a species of Rush (*Juncus* sp. A). Several species on the Grampians Group sediments west of the town are more typical of dry forests than the vegetation of the basalt plains. Of these, slaty she-oak (*Allocasuarina muelleriana*) has a disjunct occurrence, and forms the only known population south of the Great Dividing Range.

It goes without saying that Woorndo is a very special place. Apart from the grasslands, nearby is the biggest

and most beautiful river red gum (*E. camaldulensis*) I have ever seen - estimated to be at least 500 years old. It is worth the trip just to see that.

Remnant grasslands sites, apart from the town common and cemetery (in Greens Lane) and the road reserve, are on either side of the following formed roads:

Woorndoo-Chatsworth Road between AMG eastings: (Zone 54H) 649500m east (being approximate AMG point: 54HXD495064) and 657500m east (54HXD575048),

Mortlake-Ararat Road between AMG northings: (Zone 54H)

5805000m north (being approximate AMG point: 54HXD580050) and 5810100m north (54HXD582101),

Bolac Plains Road between AMG northings (Zone 54H) 5804400m north (being approximate AMG point: 54HXD590044) and 5811600m north (54HXD585116).

Mortlake-Ararat Road between AMG northings (Zone 54H) 5803300m north (being approximate AMG point: 54HXD592033) and 5804400m north (54HXD590044),



Woorndoo-Dundonnell Road between AMG easting (Zone 54H) 659000m east (being approximate AMG point: 54HXD590034) and 661500m east (54HXD615039); and

Streatham Road between AMG northings (Zone 54H) 5803200m north being approximate AMG point: 54HXD578032) and 5804200m north (54HXD580042).

On a different note though was the very exciting news received last night that Natural Temperate Grassland of the Victorian Volcanic Plain has been listed as critically endangered on the EPBC Act 1999 - effective from 21 June 2008. This is by far the most important listing in Victoria due to the extremely limited extent of this significant community and its overlap with areas currently being actively developed around the Melbourne metropolitan area.

I have just joined FOG. I live on the edge of the Western Volcanic Plain (65 Old Ballarat Road, Batesford) in south-west Victoria, and my husband and I have a small but diverse remnant patch of western (basalt) plains grassland on our property and are very keen to learn everything we can to ensure its ongoing survival. If you are in the area and want to contact me, my details are (03) 5276 1272 or enviro-hort@vic.chariot.net.au.

Photo: FOG at Woorndo Common 26 Oct 2006

Narrawallee (Long Grass) country



Lauren Van Dyke (K2C Project Facilitator), Sarah Eccles (Bush Heritage) and Alison Elvin (Natural Capital) compiled this article, which they sub-titled: An Indigenous understanding of the Bush Heritage 'Scottsdale' property in context to the wider K2C project area. Narrawallee is the Ngarigo name for the Monaro grasslands.FOG thanks Rod Mason for agreeing to publish this important material.

In 2007 Bush Heritage Australia had the unique opportunity to hear and record valuable indigenous cultural perspectives on 'Scottsdale' Reserve, its 1328ha conservation property 4km north of Bredbo in NSW. The interpretation of country and stories of ancestral connections were generously shared by traditional elders of the local region, who live in and move through the NSW Kosciuszko mountains and coastal escarpment.

The stories of indigenous connections to this region are critical to the work being done in the Kosciuszko to Coast (K2C) Project. K2C works with existing landholders to enhance landscape function and to allow animals to move through the landscape, including habitat for local and migratory mammals, reptiles and birds. The project partners believe indigenous insights will help answer questions about how to manage and restore this fragmented landscape.

The respected neighbouring elder, Ms Matilda House gave the official welcome to country at the launch of Scottsdale Reserve in March this year. She welcomed Bush Heritage, as caretakers, to the country where her great grandfather once moved. In her welcome address Matilda delivered an impassioned speech and named the mountain range on which we stood as Murra Binagai (Path to Laughter) in the presence of the many people gathered on the highest plateau that day.

In September and again in October 2007, Rod Mason (Indigenous Education Liaison Officer, NPWS) and Geoffrey Simpson (Catchment Officer, Indigenous Communities, Murrumbidgee Catchment Management Authority) visited Scottsdale and spent days sharing their cultural interpretations of the country. Information collated from these visits and future meetings will build an ongoing record of indigenous knowledge of the area and its significant cultural resources and values. These values are critical to the Indigenous people who have relied on them for their food, fibre, tools, shelter, medicine, and spiritual/social sustenance.

Rod Mason, an elder, traditional healer and spokesperson for the Ngarigo people explained why his people come to the Narrawallee long grass country of the Southern Tablelands and Monaro. Through the generations they have followed seasonal changes, spending winter on the coast and summer in the tablelands and the Monaro grasslands. Rod's knowledge was passed down to him by his uncles and Murray Jack, his great, great, grand father, a venerated Ngarigo leader, who lived and moved through this tall grass country. Now it is Rod's turn and responsibility to pass on his cultural knowledge and be a custodian for this country.

Rod explained that Scottsdale and the surrounding country are called three different names in Ngarigo language: Wadbillaga (Escarpment country); Narrawallee (Long Grass country); and Tidbillaga (Mountain country). Rod also spoke of Nulaga, the small hilly country beside Tidbillaga and Walaga, the coastal lands. The Indigenous connections to these distinct areas are significant in a range of ways including when people arrive and leave, and the roles different families played as custodians of all the plants, animals and resources. Seasonal changes, for example, bring on the movement of species including sugar gliders, possums, echidna and skinks in the Narrawallee country, providing essential sources of food in specific seasons.

Rod asked us to stand and listen to the land and allow it to reveal what it is missing. The message from his two visits was that the acacias, lomandras and many bird species are missing. When Ngarigo and Ngunnawal people head for the Narrawallee country in spring and summer, they look for an abundance of food, which once included quail, bush turkey, bustards and emus. Now these birds have seriously declined in the region as their food sources and habitat have been removed.

Rod suggested that if we re-plant the fruit bearing shrubs such as wattles, tussock grasses and species like matrush, then over time the natural regeneration processes will restore the tree cover, and appropriate habitats will follow. Birds will assist this process through seed dispersal. In the great journeys and trading systems of Indigenous people across the country, seeds of many species were, and still are, carried long distances for food and medicine, and trade. Sometimes seeds just came along for the ride. As Rod said, 'if the seed from a species currently believed to be non-local isn't in the landscape, it will be on its way!!'

Rod impressed upon us the three great laws which guide his people: the Wind, which blows the country ahead so that people can travel into it; the Rain, made by the Rivers; and Fire, the great cleansing agent.

He said if we observed the weather patterns at Scottsdale very carefully, we would realise that this landscape actually has eight seasons, and our management would do best by responding to that. This would guide when and how we undertake burning, both for regeneration purposes and for fuel load control. Early in the morning



with very low cloud cover and no wind is the ideal time for small burns. He recommends we burn in patches and clumps in mid to late autumn, if there is good moisture.

Abiding by the indisputable laws of wind, rain and fire, the people always search for camp sites which provide food, medicine, fibre, and materials for making tools and shelter. Across the landscape, every plant is given male or female properties, around which specific rules and rituals are observed. Almost every plant has a use for example, the bullrush roots and seeds provide food, the beard heath offers cordial and medicine, as does the rice flower, and the black cypress leaf was crushed and boiled to heal skin sores. Seeds of acacias, hakeas, casuarinas, banksias and persoonias are used extensively for food and sometimes medicine. Tree sap, depending upon the spe-

cies, can also be used for many purposes, ranging from food, to glues and jewellery.

Clay, with its rainbow of colours and minerals, has a multitude of medicinal uses, and is highly prized. The local quartz and chert rocks are especially appropriate for making sharp tools, and the smooth river rocks are perfect for grinding substances such as seeds. Rod pointed out that wherever rock tools and other artefacts have lichens growing on them, they are probably older than 800 years. He says that the tools he found on Scottsdale made from stones like Olivine have actually travelled here with his people on their journeys from a great distance away, many thousands of kilometres. They could have been used in a trading system which occurred from east to west right across the country.

Ceremony is an integral part of Rod's people's culture, telling of food, medicine, fibre, tools and shelter through song and dance, together with the responsibilities, roles and obligations belonging to every member of the community. Ceremony can also create maps of the landscape you have been travelling through, and are heading towards.

For indigenous people looking for food and fibre the Lomandra plants offer a good supply of both. This tough plant grows today in rocky outcrops and provides a habitat for lizards, land snails and grasshoppers (a food source for birds) and is the plant predominantly used for weaving baskets.

Rod observed a dearth of these useful plants on Scottsdale. Cassinia shrubs, which are still well represented on Scottsdale, are used for their antiseptic qualities. The leaves were rolled to release their resin and placed on deep wounds or rubbed in hair to control lice.

Grassland fire management was an important tool. It was used frequently and strategically to encourage fresh growth, which provided food and habitat for animals and people alike. The new growth attracted grazing animals that were hunted for food. In more recent times fire has been sporadic and cultivation has seen the fertile valley floors in the region dominated by African Lovegrass (Eragrostis curvula) which has choked out much of the quality grassland biodiversity. Rod recommended that three consecutive burns might assist a natural restoration process, possibly temporarily covering the area with acacias as they begin to restore the natural grasslands and grassy woodlands. Burning is an integral part of the long term Scottsdale Management Plan in grassland restoration, and it is especially useful in establishing a mosaic of vegetation across the landscape, offering much in shaping greater ecological and thus habitat diversity.

On our journey to the Murrumbidgee River, Rod identified an ancient scar in a Yellow Box tree which would have created a coolamon or shield hundreds of years before. At the river he showed us how to twist a river reed to create rope for weaving nets and bags. Rod took us to a tool making site where he identified an unusual core stone and impressed upon us its age and significance. Core stones were carried from region to region with pieces being chipped away for use as cutting agents or in spears. Rod believed the core stone had been brought in from a long way west. A hammer and anvil set and grinding stones are also present on the site along with many other cherts and flakes. These sites will be managed to prevent disturbance and further documented in the near future.

Deep indigenous culture cannot be relayed in a few short days and so an ongoing dialogue and collaborative friendship with the indigenous people of the area will be pursued. The early history of white settlement and Indigenous displacement on the Monaro is well documented, although we are indeed fortunate there are traditional custodians like Rod Mason who still traverse the cultural pathways between Wadbillaga, Narrawallee and Tidbillaga countries.

PICTURES THIS PAGE: Rod Mason at scar tree on Scottsdale . A spear head cut out from chert material. Core stone from far west. PREVIOUS PAGE Rod giving plateau perspective.

Austral toadflax inconspicuous and unspectacular, but threatened

Michael Bedingfield



Gerald Durrell was a well known English naturalist, who wrote many wonderful books about nature, and did an enormous amount for conservation. He was particularly concerned with what he called "little brown jobs" and "small uglies". This reminded me of the role of FOG, which works to ensure a prosperous future for many rare, small, nondescript creatures, both animals and plants. Examples are the pink-tailed worm lizard (Aprasia parapulchella) and Key's matchstick grasshopper (Keyacris scurra). These tiny and unusual animals, despite their threatened existence, are not well known by the general community. A plant which fits in this grouping is austral toadflax, which is a nationally vulnerable species. It is hard to find growing among the native grasses, even when flowering. It is unglamorous as it is rare, and because of its scarcity, receives

special mention in *Action Plan 27 – ACT Lowland Woodland Conservation Strategy*. This document was produced by Environment ACT and provides a valuable reference.

Austral toadflax is a sprawling plant, which is perennial, hairless and with yellow-green foliage. It can grow up to 40 cm tall, but the specimens I have seen were only 15 to 20 cm high. The flowers are greenish-white or greenish-yellow, star-shaped, with 4 or 5 petals, and only about three mm across. Flowering occurs locally in late spring. The fruit is small, spherical and two to three mm wide. The plant is semi-parasitic, deriving some of its nutrients from the roots of other plants, and has a strong association with kangaroo grass. While it is hard to see at the best of times, during winter the plant is dormant and invisible, and it comes up only in seasons with favourable rainfall. These shy habits make it quite a challenge to find.

The plant grows in grassland, grassy woodland and grassy heath. There are several populations in the ACT, all in nature reserves, such as Mulligan's Flat and Tidbinbilla. The specimens in the photographs were found on Barney's Hill in southern Tuggeranong. It occurs in a small number of scattered locations in our region, and also on the coast and slopes of NSW, as well as in Vic and Qld, and was found in eastern Tasmania in the past. Since the plant is so rare locally, and because of its bashful manners, I wasn't able to get enough good photographs to be able to draw it properly. So, for a change, I've provided just photographs. These are slightly enlarged and on the separate pictures you can see the tiny white flower and round fruit.

The botanical name for austral toadflax is *Thesium australe*. The name is derived from the name of *Theseus*, who is a character of Greek mythology, and *australe* meaning southern. A similar looking plant is creamy candles (*Stackhousia monogyna*), but this sameness occurs only after the candles have finished flowering, started to wither and are faded and yellowish in colour.

When the general public is constantly stimulated with colourful and spectacular images in the media, raising their awareness of the plight of this and other small and modestly dressed forbs and animals is a mammoth task. But if a television show called "Ugly Betty" can be popular, then we can believe that there is hope.



News of Friends of Grasslands, November-December 2008, page 14

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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, 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, or 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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