News of Friends of Grasslands

Supporting native grassy ecosystems *July-August 2013*

ISSN 1832-6315

Program - take the diary out now

SAT 13 JULY, 2.00 pm – 4.30 pm. **Midwinter Presentation** and **Special General Meeting**. Mugga-Mugga Education Centre.

SUN 28 JULY, 9.00 am – 12.00 noon. **Stirling Park work party**. Register with jamie.pittock@fog.org.au.

SUN 25 AUG., 9.00 am – 12.00 noon. **Stirling Park work party**. Register with jamie.pittock@fog.org.au.

TUES 27 AUGUST, 5.30 pm. **Newsletter collation.** New Conservation Council office at 15/28 Barry Drive Acton.

See p. 2 for further details.

Photo: Participants at Barry Sampson's biological control field day at Mount Oak (Geoff Robertson).

See p. 4 for Geoff's article.

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Coming FOG Events

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

Midwinter Presentation

Saturday 13 July,

2.00 pm – 4.30 pm

Mugga-Mugga Education Centre

129 Narrabundah Lane, Symonston ACT.

Join us for two illustrated talks and afternoon tea, either side of a Special General Meeting (see below): David Shorthouse on 'STEP ten years on - how are we growing', and Rainer Rehwinkel on 'Who said there is no wildlife left in the UK? - Rainer and Marianne's trip to England and Wales, 2012'.

Please register with sarah.sharp@fog.org.au. There'll be plenty of opportunity to catch up with FOG friends.

Special General Meeting

Saturday 13 July,

3.00 pm

Mugga-Mugga Education Centre

Members are requested to attend this Special General Meeting to vote on changes to FOG membership and related rules, so that we may then vote on the election of our first proposed life member.

Please forward apologies or enquiries to FOG secretary kris.nash@fog.org.au or to PO Box 440, Jamison Centre, ACT 2614.

Agenda:

1) Special Resolution: Changes to FOG Rules as listed below. It is a formal requirement that, to accept the changes, at least three-quarters of members at the meeting have voted in favour of the resolution.

2) If this Special Resolution is accepted, a proposal from the Committee for the first FOG Honorary Life Member will be presented for approval.

Summary of proposed rule changes:

a) Membership - update to reflect current practices
b) Life Membership - create two new categories
c) Communicating with members - allow electronic notices to be sent to members who have consented
d) Elections and votes - Nominations by voice for elected positions at the AGM considered equal to written nominations. Proxy voting discontinued.

Members who have not already recieved a notice about this by post should contact John Fitz Gerald at john.fitzgerald@fog.org.au.

Stirling Park work parties

Sunday 28 July and 25 August,

9.00 am – 12.00 noon.

Bring drinking water, sun and eye protection and sturdy footwear. A thermos of hot water for morning tea would also be useful.

Please register with Jamie Pittock jamie.pittock@fog.org.au.

Newsletter collation

Tuesday 27 August,

5.30 – 7.00 pm

15/28 Barry Drive. Ground Floor, northern side of Lena Karmel Lodge

Please put aside an hour to help despatch the newsletter at the new Conservation Council office. We start at 5.30 pm, so you can do something else later! It would be really helpful if you would let Margaret know if you will join us, either by email margaret.ning@fog.org.au or 'phone 6241 4065 or 0427 788 304.

The Conservation Council has moved to 15/28 Barry Drive (Ground Floor, northern side of Lena Karmel Lodge, see map at <http://goo.gl/maps/JpAxU>).

Parking is available in Watson Street.

Other Events

Revitalising Grasslands to Sustain our Communities

22nd International Grasslands Congress

15-19 September 2013

Sydney Convention & Exhibition Centre, on the waterfront at Darling Harbour.

For more information visit <http://www.igc2013.com>, 'phone 02 9213 4010 or write to 547 Harris Street, Ultimo, NSW, 2009.

Black Mountain Wildflower Ramble

Saturday 12 October 2013

9.30 am sharp – 12 noon (or later)

Belconnen Way entry, just before Caswell Drive turnoff (look for the balloons).

Join wildflower lovers for the Burbidge/Chippendale tradition of celebrating the spring flowering with the 42nd annual Black Mountain wildflower ramble.

Discover the surprising diversity of tiny orchids, bush peas, wattles and billy buttons with experienced guides, easy bush tracks and good company.

All welcome, especially those new to plant identification. BYO morning tea, hat, sunblock, water and stout shoes.

Please book: 'phone Jean Geue 6251 1601 or email <friendsofblackmountain@gmail.com> so we have enough guides.

ACT Centenary Bioblitz

25 – 27 October 2013

organised by the Molonglo Catchment Group

FOG has offered to help with vegetation monitoring in the grassy woodland and secondary grassland on the lower south-western slopes of Black Mountain.

Please contact Sarah Sharp if you would like to help: sarah.sharp@fog.org.au.

Potential of Native Grasses

Eighth National Stipa Native Grasslands Conference

5 – 8 November 2013

Murray Bridge Town Hall, Murray Bridge, SA

Keynote speaker: Professor Bill Gammage on *The Untapped Potential of Native Grasses.*

Register and download program online at <https://sites.google.com/site/nationalgrasslandsconference/>

FOG Membership

To join or renew

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

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

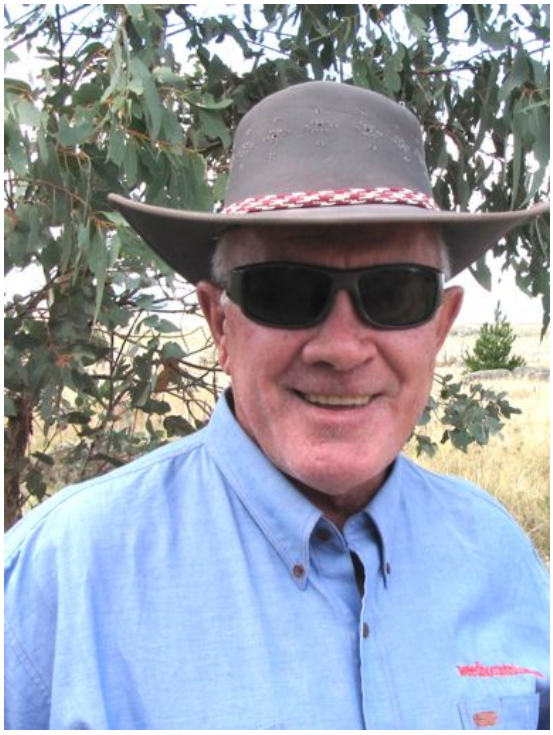
Membership forms are available on our website: www.fog.org.au.

For inquiries contact membership@fog.org.au.

News Roundup

Is Biocontrol the answer?

Geoff Robertson



On Thursday 4 April Barry Sampson addressed a workshop at Bredbo on the use of biological agents to control weeds. It was sponsored by Mount Oak Community Association, Kosciuszko to Coast and FOG.

Barry started his business, WeedBioControl, after 30 years with the NSW Department of Primary Industries as a weeds biological control officer. He provides integrated weed management plans and supplies biological agents, including weevils, moths, mites, beetles and rusts, for St John's Wort, Horehound, Paterson's Curse, Bridal Creeper, thistle, dock, prickly pear, Blackberry, Heliotrope and Thorn Apple. He stressed that biocontrol is not a magic bullet and advocates the use of herbicides, mechanical weeding and replacement planting.

His talk, after his initial salvos, discussed some major weeds and the agents that attack them. Barry explained how each agent plays a different role by attacking different parts of the plant. It was like listening to a pharmacologist discussing different diseases and the dosages, impacts and side effects of various drugs. He illustrated the different effects of the mite and the *Chrysolina* beetle which both feed on St John's Wort. He showed photos taken over time of how particular treatments reduce weed populations, and illustrated how St John's Wort is dramatically reduced over a five year period using the mite. Agents can take time to establish but are effective over longer periods.

These agents are now established and widespread, although they may die out if host plant populations diminish. So before Barry supplies agents, he encourages farmers to send him plant specimens which he checks for control agents. During the field trip, he illustrated how to detect agents. Supplies are often garnished from the wild by taking foliage from plants which are host to agents. At Mount Oak, Barry showed how the St John's Wort mite is released by placing infected material in contact with existing plants.

Barry told many fascinating anecdotes. He is a great observer and experimenter. WeedBioControl provides a fantastic service, and prices are reasonable. Barry may be contacted at <weedbiocontrol@bigpond.com.au>.

Although biocontrol is an important part of weed management, with the stop-start funding that we have in this country, it is neither widely promoted nor adequately researched.

Photos (Geoff Robertson):
Above: Barry Sampson at Mount Oak.

Right: Recently harvested St. John's Wort infected by mite, hence its droopiness.

Page 1: Some of the 30 field day participants at Mount Oak.

News Roundup (con.)

Capertee Valley Visit

Eight FOG attendees

On April 19, after a comfortable day's drive to the Capertee Valley, we still had ample light to set up camp for the weekend.

Day two, and off we set with the weather looking very pleasant. First a grasses stop: *Themeda triandra, Rhytidosperma (Danthonia)* sp., *Bothriochloa macra, Microlaena stipoides*, *Sporobolus creber*, *Eragrostis leptostachya* and *E. brownii, Elymus scaber*, a couple of *Austrostipa* spp., an *Aristida*, possibly a native *Digitaria*, all keeping some less desirable exotic grasses and a suspect *Senecio* company along a dusty roadside. We also had occasional roadside sightings of Blady Grass *Imperata cylindrica*.

Next was a *'Prostanthera* stop', sussed out by Janet and Andy on their recce a few weeks earlier. It was a small shrub with a handful of small *Prostanthera*-like flowers but, having failed to smell the Mint Bush scent, we left the area none the wiser. Then it was a morning tea spot, with *Macrozamia*, *Xanthorrhoea* and an *Acacia* with pretty wavy leaf margins, but no birds of note.

Finally we were inside Capertee National Park's sophisticated code-based entry gate. Initially we walked along a track in a riparian zone for nearly a kilometre, but on finding little joy there, we cut our losses and returned to the parking area for lunch. The only plant sighting of interest was a huge *Echinopogon* grass.

Next we adventurously 4WDed up a steep track to a large open area on top of a ridge cleared for an airstrip in a former life. The highlights of this secondary grassland were *Fimbristylis dichotoma, Astroloma humifusum* with a lovely bluish-purple tinge, the view, rock shelters, and a possible *Eucalyptus albens*. It was nice quality grassland, with the exception of occasional St John's Wort *Hypericum perforatum* and Prickly Pear *Opuntia* sp., Paterson's Curse *Echium plantagineum*, and Fleabane *Conyza* sp.. We saw an interesting narrow-leaved very tussocky *Lomandra* with a fine divided leaf apex and flower stems almost a foot high, possibly a form of *L. longifolia*, plus a thick tussocky sedge in flower, and only 10 cm tall.

Then we travelled the Wallaby Creek management trail and found *Callitris*, ironbarks, *Xanthorrhoea* again, a very tall *Olearia* with shiny leaves, an unknown *Bossiaea* very similar to *B. buxifolia* but more robust, flowering *Goodenia hederacea* var. *hederacea, Calotis lappulacea* and Narrow-leaved Geebung *Persoonia linearis*, and a small white-flowered forb (a mint?), and heaps of what was probably Vanilla Lily *Arthropodium minus* rosettes. Finally, our first orchid: a hayed off, fertilised, single-flowered Greenhood. Andrew discussed with us how the many ant nests were affecting bioturbation and how ants replace earthworms in drier climates. (Read more at http://www.australiangeographic.com.au/journal/termites-and-ants-boost-crop-yields-.htm.)

Our final stop was back at the gate to the national park, where we saw a very attractive Urn Heath with leaves more blue and pointy than the Southern Tablelands *Melichrus urceolatus*, and *Grevillea obtusiflora* ssp. *fecunda,* no more than a foot high and listed as endangered nationally and in NSW. *Wahlenbergia* were flowering at all Capertee sites, and the *Dichondra repens* in most places was trying to take over the earth! Away from the riparian areas, the Park was all pretty clean except for the Prickly Pear, which was widespread but either being sprayed or preyed upon by the *Cactoblastis* Moth.

The next day, with the weather even more perfect, we headed for nearby Rylestone for a morning coffee. Then, on the way into our main destination of Ferntree Gully Reserve, we had a impromptu flower stop, initially for *Styphelia triflora*, but it also yielded flowering *Monotoca scoparia, Persoonia myrtilloides* ssp. *myrtilloides* and a *Hibbertia* sp..

Ferntree Gully Reserve contains a scenic rainforest area, accessed via 100 steps, not for the faint hearted in damper times. Along the 2.5 km walk we saw Mountain Grey Gum *Eucalyptus cypellocarpa, Microlaena* that

News Roundup (con.)

Capertee Valley Visit (con.)

was generally taunted by the lack of light but growing as a carpet where light and moisture were sufficient, conglomerate sandstone formations, and at least a dozen fern species and two tree fern species. Ferns included Fragrant Fern *Microsorum scandens*, Common Bracken *Pteridium esculentum*, Necklace Fern *Asplenium flabellifolium*, one or more *Blechnum* spp., Sickle Fern *Pellaea falcata*, Prickly Rasp Fern *Doodia aspera*, Creeping Shield Fern *Lastreopsis acuminata*, Bat's Wing Fern *Histiopteris incisa*, Rough Maidenhair Fern *Adiantum hispidulum*, Soft Tree Fern *Dicksonia antarctica*, and King Fern *Todea barbara*.

Our lunch spot on the rainforest floor was warm and sunny with a *Microlaena* lawn to die for. Interesting plants included a spiky *Richea*-like plant, beautiful soft weeping *Lomandra montana*, and pretty pink Common Heath *Epacris impressa*. After lunch, we saw the mother of all Cassinias, a 5 m high *C. trinerva*, a first for us all, and which had us all agog. And then there were another 150 steps to return to the top. Climbing, we saw a *Ficus* canopy from above, two *Zieria* species including *Z. cytisoides,* tiny blue *Lomandra glauca*, and *Pseudanthus pimeleoides* in flower (another first for most of us), *Baeckea utilis* and a proteaceous species.

Above is an overview of plants that caught our eye. Many are unnamed as we were out of our area. We hope to have conveyed the message that the trip was still very enjoyable.

Capertee Valley is well known for birding, and we saw over fifty species. Highlights were Turquoise Parrot, a Marsh Harrier a mere 6 m away, two dozen Straw-necked Ibis festooning a large dead Eucalypt (uncommon in the area), and seven species of honeyeater, including flocks of Yellow-tufted Honeyeaters.

Many thanks to Janet and Andy for liaising with the property owner, for doing a recce weekend, and for being tour leaders, and to our absent host Merle, without whom the trip would not have happened.

Photo above: A very attractive Urn Heath *Melichrus* sp. near the gate to Capertee National Park (Naarilla Hirsch).

Photo below: *Grevillea obtusiflora* ssp. *fecunda* at the same location. It is listed as endangered nationally and in NSW (Naarilla Hirsch).

News Roundup (con.)

Hall Cemetery working bees

Janet Russell

In April, ten of us turned out for our first 2013 working bee, including Sarah Sharp, our new President. She has a personal and professional interest in Hall Cemetery as she developed the original management plan. It was a fine morning and a few butterflies, female Common Browns and Australian Painted Ladies were still flying. Crimson and Eastern Rosellas, and Noisy Miners also made their presence known and we found a wombat hole. There was plenty of evidence of kangaroos.

We cut and dabbed the Briar regrowth, Tall Fleabane and Scotch Thistle and removed Briar seedlings and fruiting Blackberry Nightshade. We sprayed Bridal Creeper *Asparagus asparagoides* and Phalaris. We had not before seen Bridal Creeper, a declared weed of national significance, and are hoping to eradicate this small patch. It was good to record little Briar and no Hawthorn was found. The spraying previously done near the gate to the south side woodland has allowed the native Weeping Grass to thrive.

In May, Andy Russell led the six members of the working bee for the last time. We were greeted by five kangaroos including a joey, the first time I have been aware of so many of them. Perhaps in these dry times, they are looking for new pastures.

We brush-cut the exotic grasses. This, together with targeted spraying, has worked well to reduce re-growth. We worked on Briar and Hawthorn re-growth, focussing mainly on the northern side this time, and found sufficient to keep us busy. Half a dozen Serrated Tussock were sprayed. This species appears from time to time but is not a major problem because the site has such good ground cover. After morning tea we decided to tackle the old Cleavers *Galium aparine*. The fruit is covered in tiny hooks which caught on our clothes as we collected and bagged the spent canes. We had left it a little late to tackle them as the fruit fell easily from the canes. It did, however, enable us to expose the new season's growth which we sprayed. This will be another war of attrition that we shall have to wage.

The site is relatively small and it is pleasing to see that we are making a difference. We found three new species for the Cemetery list, Slender Tick-trefoil with a seed pod, a Bear's Ear and four poor-looking Austral Indigo that had survived browsing. There is pleasure in being out in the fresh air and also doing something useful to repair our environment, albeit on a small scale.

We lunched together in Hall Village to mark Andy Russell's retirement from coordinating the working bees, and were joined by Bob Richardson, Sub-editor of the *Rural Fringe,* the journal of the Hall district. Bob is preparing an article on our work in the cemetery and interviewed us over an enjoyable lunch.

John Fitz Gerald is the new co-ordinator of the group. If you would like to join us, watch for news of the next working bee this coming spring.

Seed Production Workshop, May 2013

Naarilla Hirsch

In 2012 the Australian National Botanic Gardens (ANBG) secured a *Caring for our Country* grant to work with CSIRO and Greening Australia on seed production for grassland restoration. The project aims to produce seed of species for local grassland restoration, provide genetic testing to determine seed quality, and to engage with the community through volunteering, sharing results and supplying seed. The project is building on work done in Victoria, and has set up seed production areas at ANBG and Greening Australia. The workshop *Producing Seed for the Restoration of Threatened Grassland Communities Workshop* was part of this project. Participants came from as far afield as Orange and Bega.

Presentations discussed collection and harvesting, storage, dormancy and germination, the importance of good data collection and recording, and marketing.

I was particularly interested in the presentation by Linda Broadhurst (CSIRO) on the importance of applying genetics to seed production, with examples from two endangered species. Button Wrinklewort is self-incompatible, i.e. cannot mate with close relatives. Therefore, in a small population where genetic diversity is low, seed set is poor, leading to poor restoration outcomes and poor long term persistence. On the other hand, Small Purple-pea is self-compatible, but small populations are still in decline,

News Roundup (con.)

Seed Production Workshop (con.)

because inbreeding produces poor quality seedlings.

We visited the seed production area at the ANBG. Working at this small scale, some steps to achieve good results were relatively easy to implement, e.g. fencing to exclude larger animals, weed-free sand from quarry by-products, and germination of seed in the Garden's nursery before seedlings are transferred to the seed production area. Different techniques might be needed for larger scale production or in the field. Staging and timing are important as it is best to plant the seedlings just before their peak growing season.

Three case studies were presented. The first investigated the impact and importance of these seed production areas to the improvement of Natural Temperate Grassland at Canberra airport. Here Greening Australia is trying to enhance Stipa and Wallaby Grass patches with forbs.

The second was McLeods Creek Nature Reserve near Gundaroo. The restoration guidelines developed for partially cleared sections of the reserve initially focussed on trees and shrubs, but rare or threatened forbs have also been planted, including Aromatic Peppercress *Lepidium hyssopifolium*.

The third was work by Greening Australia (Capital Region) at ten sites across the ACT. Tubestock of 3-5 species has been planted at three sites. The plants have flowered, set seed and resprouted. This project includes propagation and possible translocation of Ginninderra Peppercress *Lepidium ginninderrense*.

In answer to a question about provenance, it was noted that although provenance considerations currently restrict where seed can be moved to, there is little evidence so far of out-breeding depression. Some work suggests that the best source of seed is a large population with similar site characteristics to the target site, even though this may be distant from the target site. Another point raised was that the minimum size for a viable population is thought to be about 500, although this may vary with the landscape and the availability of pollinators.

Bindi Vanzella from Greening Australia has kindly provided the following link to a video of some of the day's highlights: <http://www.youtube.com/watch?

Grassland Earless Dragon Brochure

In the May-June FOG newsletter (p. 4), Geoff Robertson alluded to this pamphlet, organised by Tim McGrath and supported by the ACT Herpetological Association, FOG, Kosciuszko to Coast, NSW Office of Environment and Heritage and the University of Canberra Institute of Applied Ecology.

This excellent 4-page brochure has now been printed and is available (page 1 is shown below). It describes the species' biology, conservation status, distribution and habitat, and the contribution to their conservation made by the Cassidy family on the Monaro.

For further information, copies of the brochure, or to report sightings, please contact grasslandearlessdragon@gmail.com.

The brochure is also available online at <k2c.org.au/files/lauren_van_dyke/grasslands_dragons_final_for_webupload.pdf>.

FOG Advocacy

Naarilla Hirsch

Gungahlin Strategic Assessment

The ACT Government released for public comment a strategic environmental assessment under the EPBC Act of all land in Gungahlin proposed for release. The keypoints of FOG's substantial submission follow.

FOG welcomed the strategic approach, something we have long sought, to avoid piecemeal consideration of conservation impacts. FOG reiterated its view that no areas containing threatened species or ecological communities should be developed but, recognising that requirements for urban development will lead to some areas being lost, was supportive of many facets of the Plan. Some positive features are the addition of 298 ha to the Mulligan's Flat–Goorooyarroo Nature Reserve and its improved shape (which reduces edge effects), the creation of nature reserves in Kenny and Kinlyside, the proposed improved connectivity in Box-Gum Woodland through the northern edge of the ACT, and many of the proposed governance measures. On the other hand, impacts on the Golden Sun Moth are significant, and FOG was concerned about the offset package. We suggested additional changes that could be made to help avoid net loss to the threatened species and ecological communities impacted by the proposal.

Significant issues raised in FOG's submission included:

- No areas previously set aside for protection of Matters of National Environmental Significance should be included in this offset package;
- The offset package for the Golden Sun Moth is inadequate and will diminish Moth populations in Gungahlin;
- Establishment of some sort of long term funding and financial arrangements (e.g. a trust fund) must be added to the list of mandatory offset actions in the Gungahlin Biodiversity Plan;
- Outer Asset Protection Zones for bushfire risk management should
    - always be outside reserve boundaries;
    - be outside the 100 m buffer for Superb Parrot habitat protection, even if this results in a larger area not being developed in south-eastern Throsby;
- The Plan Implementation Team should include non-agency ecologists, and reports and plans should be peer reviewed;
- The Precautionary Principle should be more stringently applied to ensure actions identified as offsets will achieve at least no net loss; and
- Criteria to assess strategic conservation outcomes should be appended to the Gungahlin Biodiversity Plan.

The full text of the submission is on our website.

Soil Carbon Storage: *SoilSense*™ Field Trials

Australian Soil Management Pty Ltd (ASM) is looking for farmers in eastern Australia to be part of a project to evaluate a new soil management program called *SoilSense*™.

It aims to achieve:
Better soil structure to increase water holding capacity and aeration; and
Improved plant and animal nutrition with more soil organic matter including nutrients for soil biota. Soil biota make nutrients available to plant roots.

ASM is currently applying for grants and looking for farmers to support their funding proposals.

If you wish to become involved in this program, or for more information, please 'phone Dr Greg Bender on 02 6198 3292 or 0410 480 165, or email gregbender@grapevine.com.au

The Evolution of 'Pasture Cropping'

Margaret Ning

A friend recently sent me an *Aljazeera* article on 'pasture cropping': <http://www.aljazeera.com/indepth/opinion/2013/02/201322755128538804.html>. This Australian method of planting a cereal crop into perennial pasture during the dormant period, using no-till drilling, was developed by Col Seis and Daryl Clough. It was then promoted by the Stipa Native Grasses Association. The *Aljazeera* article focusses on Col Seis' land in Central Western NSW and summarises the evolution of the method.

Col, Daryl and Stipa have done some fantastic work re-establishing native pastures on very degraded, often previously improved, pastures. They used crash grazing, cell grazing, and careful timing of grazing to favour the re-establishment of native and the exclusion of non-native grasses. Many stories recorded by Stipa folk illustrate how, from one or two plants of Red-leg Grass, whole paddocks have been converted to native pasture. Then came the pasture cropping innovation, i.e. sowing a crop into the native pasture using zero or no-till. The guidelines are:

i) Never Never Plough.
ii) Never kill perennial species.
iii) Perennial pastures can be native or introduced. Better results are achieved from native grass species.
iv) Weeds are controlled by creating large quantities of thick litter by using correct grazing management of livestock.
v) Weeds may also be controlled with very careful herbicide use.

By following these, sunlight is harvested and productive ground cover remains throughout the year. Their results have been amazing, and demonstrate how native vegetation can be used sustainably in agriculture.

There are some reservations about how well the method works in lower rainfall areas such as the Monaro, but Stipa CEO, Graeme Hand, provided his photo of the Mosleys who have regenerated their place using planned grazing and pasture cropping in an annual rainfall of c. 200 mm, south of Cobar.

Photo: A & M Mosley's Foxys Grassland, south of Cobar, 21 March 2010. (Graeme Hand).

FOG AGM 2013 Reports, March 2013

Secretary's Report

Kris Nash

In 2012, the FOG secretary moved overseas and, as the position was not filled, the secretary's duties were split among several committee and non-committee members. In addition, a great deal of progress was made on records management and other record keeping initiatives during 2011-12. Although I filled the secretary's position following the AGM in Mar 2012, many parts of the role stayed with the members who took them up in 2012. This, together with the massive effort made to reorganise the filing system and rationalise the records kept (in 2011-12), enabled a simplified approach to the secretarial duties for 2012-13.

The main duties relate to the receipt of communications (mostly via email) and the subsequent filing or forwarding to the relevant party. Details of all communications received and the corresponding action (including the file location) are kept and published each month. The monthly records are stored in the common Dropbox folder and are available to committee members. The communications are stored in appropriate folders on the secretary's email server (email correspondence), on a hard drive which is regularly backed up (PDF items for long term storage), as hard copies in an organised folder, or in temporary files deleted once the reference to the record has ceased, as per the record disposals policy.

Communications generally consist of emails or letters:

- outgoing to various parties including politicians, contractors, government agencies and other organisations;
- incoming from various parties requesting information or support;
- correspondence to/from members and ongoing projects; and
- newsletters, flyers and other printed matter.

Approximately 340 communications were handled by the secretaries between Feb 2012 and Feb 2013. This includes mail collected and distributed by Janet Russell. The total does not generally include communications held by other committee members relating to specific roles, such as advocacy or accounts.

Treasurer's Report

Stephen Horn

In 2012, FOG had an income of $10,797, expenses of $7,951, producing a surplus of $2,845 which increased FOG's net assets. At the end of 2012, FOG had assets of $26,442 and liabilities of $4,610, leaving net assets of $21,831.

A number of tables describe the main account entries in a form that was introduced in FOG's 2011 report package. This more detailed statement is available from the Treasurer on request.

Income was dominated by memberships, by a few most generous donations, by fees paid to FOG for representation on the pipeline reference group, and by administrative charges levied on grants.

Expenditure was dominated by newsletter and postage, on-ground activities (not grant funded) and FOG's first payment to support an external conservation project.

In addition to special purpose accounts, significant sales of books and major activities in grants (particularly with two WONS grants) contributed to the large figures in the Grants table (available from stephen.horn@fog.org.au).

FOG is grateful to Pauline Hoare for auditing FOG accounts and Financial Summary pages.

Membership

Kim Pullen

FOG membership at 5th February 2013 was 134 members, of which six were corporate and seven honorary. There are 80 additional 2012 members that we have retained on our current list: we expect that the majority of these will renew.

We continue to be a Canberra-centred organisation, with two-thirds of current members living in the ACT. Thirty per cent have NSW addresses and 4% are Victorian. The postcode with the most FOG members (17) covers the inner northern suburbs of Canberra. The eastern suburbs of Belconnen have 14 members, followed by the Queanbeyan district in NSW, with 11.

We also send our newsletter gratis to 14 organisations. These include libraries, government bodies and NGOs involved with nature conservation, environment and natural history, and regional land management authorities.

I have to thank fellow committee members for continuing support in my role as Membership Officer. In particular Margaret Ning, who was long in the role and seems to know almost everyone who has ever been a member, is an extremely useful team mate. Janet Russell has been very helpful in tabulating member payments as they arrive in the post office box.

FOG AGM 2013 Reports, March 2013 (con.)

FOG Website
Richard Bomford

The FOG website, www.fog.org.au, continued to provide a public face for FOG. The main additions were the Newsletters and advocacy submissions. The site was reformatted to improve the presentation and make the files quicker to download. Costs continue to be minimal - about $20 a year - and technically both the site and the email system have worked well.

The site attracts about 2,000 unique visitors each month (excluding robots), mostly from Australia, but many from the USA, Italy, the Netherlands and the UK. They make an average of 1.4 visits each and look at 3 pages per visit. The most popular pages were the Newsletter, the home page, the 'grasslands' page, and *Grasses of NSW*. The most popular search which leads visitors to the site is 'What is a grassland'.

Newsletter 2012
Isobel Crawford

Six issues of the FOG Newsletter were produced over the last 12 months, the first three edited by Heather Sweet and the others by Isobel Crawford. Each issue has 10 or 12 pages. There appears never to be a shortage of material. Many thanks to all those members who continue to write for the newsletter and/or to suggest suitable material.

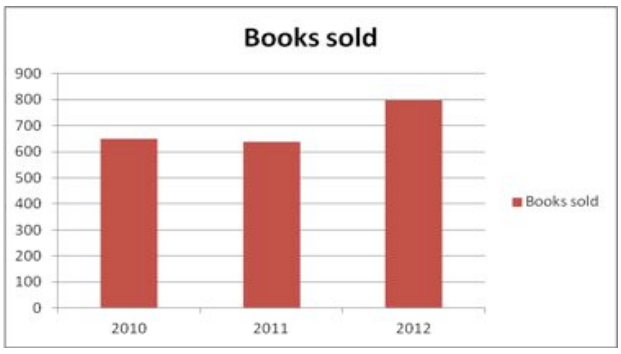
e-Bulletin
Tony Lawson

The e-Bulletin complements the bi-monthly newsletter. It reminds members of FOG activities that will occur soon after the newsletter is distributed, and advises of new events. It also advertises non-FOG events, and the editor welcomes information on such events.

It is distributed more widely to other organisations and government agencies than the newsletter, to encourage an interest in FOG and to keep them informed of FOG's activities.

Publications (Books)
Sarah Sharp

1 Grassland Flora* and the *Grassy Ecosystem Management Kit
790 copies of Grassland Flora were sold in 2012. The NSW CMAs bought over 550, which they give to farmers. Sales remain high and constant. The graph shows sales over the past three years.



Income in 2013 from book sales (sales - [liabilities + book costs + interest on the long term deposit]) was $6363.45. The long term deposit is the grant for producing the *Woodland Flora*.

Only 8 Management Kits were sold or given away in 2012, and only 42 complete sets remain. Late in 2012 it was therefore decided to give the remaining copies away, charging only for postage and binders.

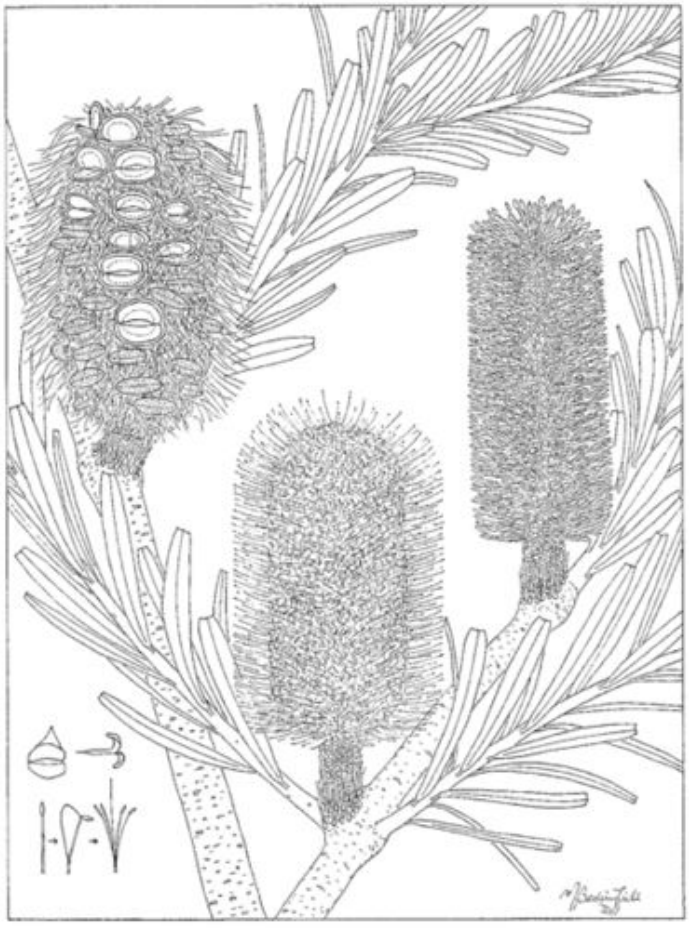
2 Woodland Flora
The first draft of the text has been prepared by Rainer Rehwinkel, David Eddy and I, and Rainer Rehwinkel and Dave Mallinson are currently reviewing entries, before the draft text is compiled, and then edited by external referees. Photos are being collated. We are behind our anticipated completion date, but intend to publish this year. The book covers 385 species, of which there is overlap of approximately 25% with the *Grassland Flora*. Such species are mostly covered very briefly in the *Grassland Flora.* While the two books are related, they are still being developed to be used independently, in the two different habitats.

Silver Banksia: a small tree or tall shrub with a large 'flower'

Michael Bedingfield

Have you ever wondered how many individual flowers there are on a banksia flower-head? This is something I had to work out to draw this species. The individual flower buds are small and tubular. There are a great many of them, hundreds in fact. They are arranged very carefully and neatly, in pairs at right angles to their woody central column. You can draw lines through the arrangement that are vertical, horizontal, and also in perfect spirals. It is a beautifully precise structure. In the specimen I used, there were approximately 1064 separate flower buds. When the flower-spike is ready, the buds start to open. Each tube-like bud splits down one side, and the wire-like female stigma comes out and eventually stands erect and taller than the original bud. The rest of the tube splits into four sections (or tepals), the tip of each bearing a pollen-laden male anther inside. The buds open one by one, until, eventually, the process of anthesis is complete. Then there is a dense crowd of opened flowers, with the stigmas standing out above the mass of curled tepals and anthers. My drawing shows the flower-spike at this stage in the centre, and at the bud stage on the right. On the left is the mature cone with a small number of seed-bearing fruit, some open.

The botanical name of this plant is *Banksia marginata*, the first part being after the famous botanist Joseph Banks, who came to Australia in 1770 with Captain Cook. The margins of the leaves are "recurved", meaning they are curved downwards, and this explains the word *marginata*. It grows 1-12 m tall, depending on the location, and has rough grey bark. The leaves are 2-20 cm long, less than 1 cm wide, with a truncated tip. The underside of the leaf is silvery, hence the common name. The fruit is a woody cone, covered mostly with the remains of the (mainly sterile) withered flowers, giving it a hairy appearance. The seeds are black, with wings, and have an odd shape, which is best understood by referring to the left lower corner of the drawing. The flower-heads are lemon coloured, cylindrical, 4-10 cm long, and 4-6 cm wide. Flowering occurs from spring through to early winter, depending on location.



The Silver Banksia is the only species of Banksia that occurs naturally in our region. A good place to see it is at Tidbinbilla Nature Reserve, and on the Xanthorrhoea trail there is a patch of them. It occurs in a lot of different habitats, including grassy ecosystems. Because of this there is a lot of variation in its form, for example, the plant size mentioned above. Also the flower-spikes of the trees at Tidbinbilla are smaller than those in my drawing, which was done from a plant I bought at a nursery. The species occurs in the southeast corner of SA, much of Victoria and Tasmania, and in eastern NSW.

In their book "A Field Guide to Banksias", Holliday and Watton (1990) said there were 75 named species of Banksia. Of these, 61 occurred in WA, and the remainder were from the eastern and southern states. However, in 2007, the dryandras, which are exclusive to WA, were recognised as being banksias, and over 90 species were added to the list. According to the Australian National Botanic Gardens' website, there are now 173 species of Banksia, and all but one are endemic to Australia, with the odd one spreading into PNG. They are very common down the coast and are a delightful aspect of any visit there, growing in the forests behind the beaches. But we have our own local species, the Silver Banksia, and maybe you'll see it next time you visit Tidbinbilla.

FOG groups and projects

General inquiries
Contact info@fog.org.au, Sarah Sharp (0402 576 412) or Janet Russell (02 6251 8949).

Activities organises FOG field trips, talks, workshops, on-ground works, support to other groups, property visits, and the FOG calendar. Inquiries: activities@fog.org.au.

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

Committee & correspondence The Committee organises, coordinates and monitors FOG activities. Members are Sarah Sharp (Pres.), John Fitz Gerald (Vice Pres.) Kris Nash (Sec.), Stephen Horn (Treas.), John Buckley, Evelyn Chia, Isobel Crawford, Naarilla Hirsch, Tony Lawson, Katherina Ng, Margaret Ning, Kim Pullen, Rainer Rehwinkel and Andrew Zelnik. Andy Russell is public officer. Inquiries/ correspondence: committee2@fog.org.au.

Postal address: FOG, P.O. Box 440, Jamison Centre ACT 2614.

Communication produces *News of Friends of Grasslands* and *FOG e-Bulletin*. Inquiries: newsletter@fog.org.au or ebulletin@fog.org.au.

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

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

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

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

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

Media spokesperson Sarah Sharp (0402 576 412).

Membership and newsletter despatch. Newsletter despatch is the fourth Tuesday of Feb, Apr, June, Aug, Oct and Dec. To help, contact membership@fog.org.au.

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

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

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

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

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