



News of Friends of Grasslands

Supporting native grassy ecosystems

March-April 2005

Program

SAT 12 MARCH 9AM – 4PM FOG display at the Australian National Botanic Gardens This is an excellent way to learn about grassy ecosystems, and/or assist FOG. FOG will have on hand its posters, a selection of grasses and forbs, and other materials on grassy ecosystems. Members can help by advertising this activity, supplying plants and/or handouts, etc., and/or being on a roster for an hour or two. Contact Roger Farrow or Rosemary Blemings (details back page) if you can help.

SAT 26/SUN 27 MARCH Coastal sea grasses at Narrooma POSTPONED. This has been postponed to 20-21 August.

SAT 2 APRIL 9:30AM to 3:30PM Old Cooma Common Working Bee Targeting woody weeds (hawthorns and briars). Contact Margaret Ning.

SUN 10 APRIL 9AM to 2:00PM Greening Australia free bus tour and barbeque at Cotter Lori Gould or Susie Wilson will show FOG members the restoration work being undertaken around Pierces and Dry Creeks following the January 2003 fire. It is planned to visit Holden's Creek, Mount McDonald, and possibly a private lease, and GA will provide plant lists for each site. Meeting point Kubura Place, Aranda at 9am, or along the way. To book, contact Margaret Ning.

SAT 21 MAY 9:00AM to 3:00PM FOG and Field Naturalists Grassland fungi workshop with Heino Lepp. See page 2 for more details.

If coloured dot on label, last newsletter for non renewals

For those of you who have not renewed, we are enclosing a further renewal notice. Please complete it and send it in, otherwise this will be your last newsletter. If you have received a renewal form and think you have already sent us a cheque (unless it has been in the last few days), or with any other inquiries, please contact Margaret on 6241 4065.

Cover pictures: up close and personal to grassland earless dragon at the ACT Herpetological Display held in the Australian National Botanic Garden in January. Also see page 11.



Changes to FOG 2005 program

In the last issues, we published the FOG program for 2005. There have been some amendments, which readers should note in their diaries and attempt to get to. The reward will be yours. Included below are dates not included on cover page.

SAT 18 JUNE 1:30 to 4:00PM
Winter ACT grassland tour

SAT 30 JULY 2:00 to 4:30PM
FOG winter slide afternoon

SAT 20/SUN 21 AUGUST
**Coastal sea grasses at Na-
rooma**

SAT 17 SEPTEMBER 9:30AM
to 3:30PM **Old Cooma Com-
mon Working Bee**

THURS-SAT 13 to 15 OCTO-
BER **FOG grassy ecosystem
tour of SA**

SAT 22 OCTOBER 10am to
noon **Boorowa TSR.**

SUN MORNING 7:30AM 23
OCT **Canberra Ornithologists
Group and FOG, Jerra-
bomberra Grassland Reserve**

SAT 12 NOV 2:00pm to
4:40PM **Workshop on basic
grassy ecosystem ecology and
plant identification**

SUN 13 (Not SAT 12) NOV
2:00pm **Mugga Mugga grass-
land walk**

SAT-SUN 19-20 (not 20-21)
NOVEMBER **Canberra Orni-
thologists Group and FOG,**

Friends of the Aranda Bushland

FROST HOLLOW TO FOREST ART COMPETITION

Now closing 30 May 2005

Entry forms

and information at:

**[www.friendsofarandabushla
nd.org.au](http://www.friendsofarandabushland.org.au)**

**Supported by Environment
ACT funding**

FOG and Field Naturalists Grassland fungi workshop

SAT 21 MAY 9:00AM to 3:00PM

with Heino Lepp.

Heino will provide a short indoor introduction giving the basics of what fungi are and what they do, as well as something about knowledge of Australian fungi. He then plans to look for some fungi in the open, with some discussion about the habitats and ecology of those we see. If we see a reasonable variety of species it would be useful to collect samples for permanent herbarium storage. Grassland fungi are not well documented in Australia. Heino will give some guidance on how to collect (responsibly) and write up a collection for later scientific study. It's not difficult. He strongly advises participants to bring a 10x hand lens or a magnifying glass. If you are interested in participating in collecting specimens, bring a small knife as well. For more fungi information see <http://www.anbg.gov.au/fun-gi/> Venue: Mugga-Mugga Education Centre, Narrabundah Lane, Symonston ACT (opposite Therapeutic Goods Administration). Lunch provided. Enquiries Geoff Robertson or Benj Whitworth (details back page). To register send payment of \$10 to FOG, PO Box 44, Majors Creek NSW 2622.

PLANTS OF THE ACT

A Guide to the Indigenous and Naturalised Vascular Plants of the ACT excluding Jervis Bay

2 CD-ROM SET

- Over 4000 full-colour photographs of 1300 species of the 1350 species found in the ACT
- Information on how to identify each plant species, and how to tell it apart from similar species
- Information by field botanist with 20 years experience
- Requires 1.2GB hard drive space to download to your computer

Full Licence \$150 (student and quantity discounts avail – ask us). Send payment made out to 'Wildwood Flora', Wildwood, 367 Koppin Yarratt Road, Upper Lansdowne NSW 2430

Stipa

Fourth Native Grasses Conference

*Grasslands for production
and conservation:
both sides of the fence
11-13 October 2005
Burra SA*

The sub themes are: where we have come from, where we are now, healthy landscapes - healthy profits, healthy landscapes - healthy biodiversity, establishment of healthy grasses, and healthy systems - a burning issue.

Inquiries: Sue Rahilly, suerailly@bigpond.com.

News Roundup

Subalpine grassland

Roger Farrow

28-30 JANUARY A small but intrepid band assembled at the Blue Holes camping ground on Friday evening for the field trip to Cave Creek and Blue Holes limestone grasslands and gorges.

Some of us managed to arrive before sunset (Roger, Christine, Katie, Dierk and Rosemary and friends Alice and Chris) and set up in daylight, while others (Pierre and Sophie) arrived later by an excellent feat of night driving across Long Plain.

The next day started fine but with a very heavy dew, and we made our way up Nicole Gorge through thick wet tussocks of river tussock (*Poa labillardieri*) and thickets of the poison rice flower shrub (*Pimelea pauciflora*), which despite its name carried abundant edible fruit and passed Dierk's taste test. Our first stop was the Coolamon cave where Pierre identified the rare fern *Cystopteris tasmanica* in the entrance and I found some interesting cave crickets in the twilight zone.

Armed with torches we penetrated about 100 m into the cave to see the formations, unfortunately most of the stalagmites had been souvenired as short-lived garden ornaments in Queanbeyan in the nineteenth century. We continued between limestone cliffs adorned with clumps of *Sedum*

Microseris, *Brachycome*, *Podolepis* and the orchid *Prasophyllum suttoni*.

After lunch we left the Creek to continue south west to the edge of the limestone plain and pick up Harris Hut fire trail. A number of creeks and swamps drain this area where we

found *Wahlenbergia ceracea* and *Pratia surrepens*.

It was a long weary return to camp via the Blue Holes Fire trail and by this time the storm clouds were building up.

Other impressions of this day were the severe impact of the wild horses from grazing and trampling (we saw a mob galloping across the plains) and the number of environmental weeds probably

dating from the period when the plains were grazed.

Our convivial evening was interrupted by rain which persisted most of the night although the next morning dawned clear and bright.

Cave Creek fills with underground water near the camp ground and we planned to follow the creek through Clark Gorge as far as possible towards the Goodradigbee junction. The track follows a spectacular route through the upper gorge before opening out into snow gum woodland with a colourful understorey of *Chrysocephalum semipapposum* and leading to a spectacular waterfall where a granite intrusion occurs.

After a scramble down the side of the falls the trail became progressively more rugged across boulders and rock walls as we approached the lower limestone gorge which is trackless and can only be traversed by lilo. This was the time to stop for lunch



Roger Farrow showing a cave to some of the group on subalpine weekend. Photo on page 5 is Cave Creek Gorge. Photos by Pierre Cochard.

acre (exotic) and *Rhodanthe anthemoides* and blue drifts of *Linum marginale*. The boulders along the dry creek bed were home to a number of lizards, including jacky lizard (*Amphibolurus muricatus*), Cunningham's skink (*Egernia cunninghami*), White's skink (*E. whitii*) and blotched blue tongue (*Tiliqua nigrolutea*). Pierre and I took the opportunity to photograph some new species of grasshopper which were very numerous underfoot.

We took a diversion into Murray's cave where the formations were much superior and we walked about 200m to an impassable sump. Still following the creek we emerged into a large grassy plain dominated by kangaroo grass and covered with colourful swathes of *Craspedia*, *Xerochrysum*, *Rhodanthe*, and scattered

In this issue

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- Back to nature with native grass pasture
- Vice-president's report
- Book review: Australian butterflies
- Proposed ACT component of CMN
- Yellow box (*Eucalyptus melliodora*), watching over an endangered ecological community

and admire the view and swat the horseflies. A large number of creek crossings is involved on this trip using stepping stones and a few wet feet were inevitable despite Dierk's assistance as he sensibly wore sandals for wading.

The uphill return became quite hot and we cooled off in the creek near the camp at a numbing 16C before returning to pack up and adjourn for liquid refreshment at the Adaminaby pub.

Monitoring and evaluation in ACT *Hanna Jaireth*

15 FEBRUARY Environment ACT has received NHT funding to develop vegetation survey and monitoring guidelines, and protocols for monitoring and evaluation activities in the ACT, Sarah Sharp, of Wildlife Research and Monitoring, Environment ACT, said as guest speaker following the Friends of Aranda Bushland's AGM. Sarah said that during 2005 Environment ACT would be inviting tenders for the preparation of guidelines that will assist in providing a consistency of approach to project planning and evaluation, including projects undertaken by community groups. Environment ACT recognised that monitoring and evaluation was difficult to do, but if it was done effectively, it provided useful data, she said.

Delivering a PowerPoint presentation on *The Management of Woodlands with Special Reference to the Frost Hollow Snow Gum Woodlands*, Sarah said that the general aims of woodland management were to retain biodiversity, connectivity, and control weeds. Available management tools included regeneration, the control of weeds and soil disturbance, the management of biomass to improve dynamic processes (e.g. through fire, slashing and grazing), strategic revegetation if required, and the enhancement of habitat diversity for fauna.

Sarah is the lead author of a publication likely to be released in March 2005 entitled *Grassy Ecosystem Management Kit: a Guide to Developing Conservation Management*

Plans (with Josh Dorrough, Rainer Rehwinkle, David Eddy and Anne Breckwolddt). This kit will assist landholders to assess conservation values, develop and implement a plan of management, monitor and review the results.

She noted that Environment ACT was about seventy percent through its review of vegetation communities in the ACT. She said the Aranda snow gums were probably the best example of a tableland frost hollow snow gum woodland in the ACT. Although only 0.6ha, it is still relatively large compared with other remnants in the ACT. Environment ACT was currently negotiating with the rural lessee about the best way to manage the adjacent area of woodland, including its tiny population of the endangered small purple pea (*Swainsona recta*).

Lessons from East O'Malley *Geoff Robertson*

The ACT Legislative Assembly Standing Committee on Planning and Environment has made an important recommendation which may influence future planning in relation to biodiversity protection and ecological corridors (East O'Malley).

In a January 2005 report it recommends that the Mount Mugga Mugga Nature Reserve be extended to include those parts of East O'Malley that were originally earmarked as urban areas in the Canberra Plan but which previous Liberal governments decided would not be developed and instead be included in Canberra Nature Park. That was a foregone decision, although it should be remembered that it was through past advocacy efforts by the Conservation Council, Canberra Ornithologists Group, FOG and others that these important yellow box/red gum areas, which form part of a broader corridor, were kept intact. Much ill feeling was generated because the ACT Labor Government stopped short of protecting all the woodland areas of East O'Malley – this has perhaps clouded the fact that not all was lost.

Another recommendation urges that "Environment ACT works with interested community stakeholders to

restore woodland habitat ... as a matter of priority. Whether weeding and natural regeneration, or some revegetation is required, should be assessed." The Standing Committee also recommends that "the ACT Park Care Coordinator consult with the Red Hill Regenerators Park Care Group about possible community interest in a new Park Care group for Mount Mugga Mugga Nature Reserve and the support that Environment ACT could provide to such a group. Environment ACT should also consider letterboxing in suburbs adjacent to Mount Mugga Mugga Nature Reserve about effective cat management, and the role and function of Park Care groups in the ACT."

All three are excellent recommendations, but the most far-sighted is Recommendation One. It states that for "all future draft variations that concern the expansion of residential areas, or impact on Canberra Nature Park, maps and data that demonstrate how the proposed variation will contribute to ecological connectivity and regional targets for protection of species should be included in the public documentation produced by the ACT Planning and Land Authority. This would be consistent with Objective 4 of the ACT Lowland Woodland Conservation Strategy. Map 7 of the Canberra Spatial Plan shows wildlife

Late News

A new publication, entitled *Managing Native Pastures for Agriculture and Conservation* has just been released. Written by Col Langford, Peter Simpson, Denys Garden, David Eddy, Mike Keys, Rainer Rehwinkel and Bill Johnston (and with substantial contribution from Sarah Sharp), this is a useful guide that fulfils a great need. A joint publication with NHT funding and Hawkesbury-Nepean CMA support, the authors are from NSW Primary Industries, DIPNR and NSW Environment and Conservation. More information next issue.

corridors for biodiversity conserva-

tion and it would be helpful if proposed variations were to locate the land affected in that larger context for public education purposes and to demonstrate the ecological impacts of the proposed variation." This is a very good expression of what biodiversity groups have been advocating.

The Committee, which consists of three new members of the Legislative Assembly: Mick Gentleman (Chair, ALP), Zed Seselja (Deputy Chair, Liberal) and Mary Porter (ALP) should be congratulated for its sound recommendations and approach. The report recognises the community divide that occurred around East O'Malley and identifies some of the losses to biodiversity that have occurred there. The report provides a summary of some of the actions taken to stop development, which eventually failed.

On 18 January 2005, the Standing Committee met on-site David Shorthouse (Manager, Wildlife Research and Monitoring, Environment ACT, Chief Minister's Department (CMD)), Jenny Bounds (Vice President, Conservation Council (CC), and Conservation Officer, Canberra Ornithologists Group (COG)), Geoff Robertson (President, CC), Trish Harrup (Director, CC) and David Jongeneel (Assistant Manager, Tree Protection, Environment ACT, CMD). Their views on what was lost in the development at East O'Malley and what should be done to manage what is left are quoted at length in the report.

The report states that the Committee sees the three main priorities, namely to build on the lessons learnt from decisions already made and to apply this learning to future decision-making; to assess whether habitat for woodland birds in the Mount Mugga Mugga Nature Reserve can be re-

stored; and to make sure that existing connectivity is maintained.

The report states that the Committee is aware that the ACT Government is currently reviewing the ACT planning and land administration system through the Planning System Reform Project, and encourages interested



Subalpine weekend. Photo of Cave Creek Gorge by Pierre Cochard.

stakeholders to engage fully and cooperatively in that project, and to raise during reform discussions, the lessons learnt during the East O'Malley process.

"In the Committee's view, biodiversity conservation is a fundamental consideration in planning for the future development of Canberra as a bush capital/Garden City, and it must be taken into account particularly in the early stages of strategic planning. How The Canberra Spatial Plan is used in strategic planning and the development of draft variations, needs to be better demonstrated in ACT Planning and Land Authority documents.

"The Committee shares the concern expressed by the Conservation Council that with the expansion of private residences adjacent to high value protected areas, the threat of predation by domestic pets increases. The ACT Government has been working with the Conservation Council and other

organisations to address this issue in the new suburbs of Forde and Bonner and agrees with the Conservation Council that community education about effective control measures could be beneficial in suburbs adjacent to Mount Mugga Mugga Nature Reserve and Canberra Nature Park more generally.

Dunlop grassland *Rosemary Blemings*

6 FEBRUARY. I took the chance to have a look at another area of Dunlop Grassland today. I entered from a being-developed area off Kerrigan Street, Dunlop.

The perimeter has been mown beside a reasonably good-looking wire-netting fence that appears to be partly buried and is barb-wire topped. There were a

couple of blackberry patches with notices presumably saying they had been sprayed. Houses are being built as part of The Meadows estate and are close to this fence or the equestrian trail. I noticed nodding thistles, saffron thistles, flat weed, patersons curse around the fence line occasionally and a small patch of st. john's wort which I pulled-up and took home.

Even in late-summer mode this area of the grasslands looks wonderfully 'pure' with numerous grass and forb species. I only walked in the area bound by building and not beyond (north of) the easement towards the West Belconnen Ponds.

It would be great to think that contact could be made with people as they move in so they could be given, for

example, Helen Fitzgerald's poster and have the grasslands promoted for its own value before someone suggests it would be "nice to have some trees planted there for us to look at".

Mexican menace

The Land, 25 November

The discovery of a second outbreak of one of the worst noxious weeds imported here, Mexican feather grass (*Nassella tenuissima*), has been made in northern NSW, this time at a Uralla plant nursery.

The find was verified by New England Weeds Authority district weeds officer, David Bubb, who was also responsible for discovering the plant growing at a pre-school garden in Tamworth.

He said both infestations were in confined areas and effective control would not be difficult. Mexican feather grass is a "notifiable noxious weed" in NSW, classified in the highest category, WI. "If it became

naturalised it would have devastating economic and environmental affects on grazing and/or native areas," Mr Bubb said.

Mexican feather grass is potentially rated as twice as destructive as its close relation, serrated tussock (*Nassella trichotoma*), which has devastated a large section of the NSW tablelands.

A vigilant resident, aware of the publicity surrounding the Tamworth discovery, reported seeing it in the Uralla nursery. Grasses such as Mexican feather grass had been promoted recently as an easy-care ornamental, Mr. Bubb said.

Grave threat to Chinese grasslands

9 AUGUST REUTERS reported that locusts, caterpillars and grubs are munching away in grasslands in China's impoverished western province of Gansu, posing the gravest threat to the area from bugs in 20 years, Xinhua news agency said yesterday.

Nearly 75,000 hectares of grasslands in five counties and cities were being attacked by the insects, an official with the local livestock and grassland protection department said. "The plague is the most harmful over the past 20 years," the official, Wang Wei, was quoted as saying. "The population density in some places even reaches to 220 insects per square metre," he said.

Experts predicted 20,000 domestic animals would face difficulty surviving the winter because of the insect attack, Wang said. Insects had eaten almost all of the grass in three towns in Maqu County, dubbed "the best natural meadow in Asia", Xinhua said. If the growth in the amount of grasslands being eaten by bugs in southern Gansu is not stopped, the region's entire grasslands will be under threat in about 12 years, it said.

Back to nature with native grass pastures

Sue Rahilly,

Stipa Native Grasses Association

You only have to drive over the entrance ramp to George and Chad Taylor's property in the hilly grazing country at Wuuluman, east of Wellington in the NSW Central West, to sense that things are done differently here.

In the thick of the worst drought for at least 20 years, green grass is still in evidence, the sheep are fat and healthy, and there's not a feed trough or bale of hay to be seen. In fact, George has not hand fed stock in 35 years and he doesn't intend to start now.

This is despite the fact that the Taylor's property aggregation is home to the historic Mumblebone Merino Stud and a breeding and preparation ground for upwards of 1000 rams.

Admittedly there are fewer stock on the properties in drought, but any reduction is of wethers, dry ewes and cattle. The all important Merino breeding flock is kept intact and in full production.

It's all in keeping with the lifelong adherence by George to a policy of conservative stocking even in "good" seasons. This policy, inherited from his father John, was developed from a practice of putting a few old ewes with twin lambs in wheat during droughts in the 1940s. John observed that the lambs did exceptionally well, not just

on the wheat, but stood out from the flock for the rest of their lives.

George has always considered pasture and soil, rather than livestock, as the core assets of a successful grazing operation. George does not dramatically increase stocking rates in better seasons. Any excess grass not eaten by stock assists in regenerating the soil by building up litter and organic matter. Despite light stocking rates, dry grass is broken down rapidly by microbial activity, speeding up the nutrient cycle.

With cattle and retained wethers the stocking rate is normally 3.75 dse/ha, somewhat below the typical district rate of 5-6 dse/ha.

By not having to feed during droughts, the Taylors do not go backwards financially and the ecology of their country does not deteriorate. This means that they do not have to "flog" their country in good years to pay back debt accumulated in drought.

In fact, they have not had a year of negative cash flow in 35 years, and the net value of their business has compounded by 13 percent per annum over 30 years. This record has nothing to do with "old money" or canny off-

farm investment, but everything to do with conservative stocking and keeping costs down.

Conservative stocking means they don't see their hard won pasture eaten into the ground and eroding slopes laid bare by too many mouths.

This approach has seen the Taylors' country transformed over 35 years from bare, overgrazed (by domestic stock and rabbits) and tired cropping country to a highly productive yet ecologically sound grazing operation based on native perennial pastures.

George and Chad are respectively fourth and fifth generation members of a pioneering family that has been farming in the Wellington district for more than a century. However, John Taylor, George's father had to start from scratch, borrowing all the capital to purchase his first 900 acres in 1935.

In 1956 John started buying property in the Wuuluman area. In partnership with sons, Bruce and George, he put together 8,800 ha in the area - much of it infested with rabbits, bare of any pasture and badly eroded. Since their partnership was divided in 2001, Chad and George now control 4,400 ha in Wuuluman and a further 800 ha west of Wellington, where John started.

In keeping with the practice of the time, the Taylors began "improving" the country in the 1960s by seeding with subterranean clover backed up by annual applications of superphosphate.

Chad believes that a sheep breeding operation such as theirs results in only minor net export of nutrients from the soil (compared to cash cropping), which means it shouldn't be necessary to apply large volumes of fertilizer on a regular basis.

"If you need to keep adding fertilizer to maintain the operation, then something else is wrong - like an absence of biological activity in the soil" he says. "Our objective has been to develop a system that is self-sustaining and low-intensity, yet still profitable".

The key to this system was managing the stocking rates and the grazing program in such a way as to encourage the return of the more valuable native grasses and native legumes, which had largely disappeared in the face of cultivation and the "sub and super" barrage.

As on many successful family farms, George and Chad operate well in tandem as a synergistic blend of "old hand" experience and youthful innovation. George has the experience of 35 years of observing the responses of native and exotic pastures to different farming and grazing regimes, while Chad brings to the team the planning and monitoring tools picked up at Grazing for Profit schools.

What they've found is that the reason native grasses are held in such low esteem by many (perhaps most) graziers, is that few people these days are prepared to wait for results.

"People want full productivity from pastures immediately, which is fine if you want to spend \$100 an acre on seed and fertilizer, but we prefer to wait for a more sustainable system to evolve," says Chad.

"Native grasses have had a bad name because people tend to judge them on the basis of the less palatable ones that are always the first to establish, or are the ones left in an eaten out paddock. The trick is to manage your grazing pressure and timing so as to keep the less palatable grasses in check while encouraging the more palatable species.

"The better grasses such as microlaena re-emerge as soil organic matter builds up over a period of years. Once you'd only find microlaena growing along fence lines or around logs where the organic matter is higher, now it's thriving over wide areas."

In the case of the Taylor's country, this low intensity management approach has resulted in the previous mix of introduced annual grasses, legumes and weeds being replaced by a native perennial grass community which includes weeping grass (*Microlaena stipoides*), wallaby grasses (*Austrodanthonia* spp.), wheat grass (*Elymus scaber*), Warrego summer grass (*Paspalidium jubiflorum*),



Cunningham's skink and camel cricket seen on the FOG subalpine trip. In remnant areas Cunningham skinks thrive on rocky outcrops. Camel crickets (*Cavernotettix* sp.) live in cave entrances and feed at night. Photos by Pierre Co-chard.

redgrass (*Bothriochloa macra*), Queensland blue grass (*Dicanthium sericeum*), silky browntop (*Eulalia aurea*), cotton panic (*Digitaria brownii*), curly windmill grass (*Enteropogon ramosus*), windmill grass (*Chloris truncata*), slender rat's tail grass (*Sporobolus creber*), and a native legume (*Glycine* sp.).

According to George, it's a mix that ensures one hundred percent ground cover, year-round feed and rapid response to light rains if conservatively stocked and only periodically top-dressed. In recent years rotational grazing has been used to help achieve the desired pasture responses, and plans are now in hand for a further progression to cell grazing – moving large mobs through smaller paddocks at frequent intervals.

George and Chad believe adoption of cell grazing will enable them to exercise better control over the pasture mix (in particular to keep the prolific redgrass in check), while keeping sheep on an even plane of nutrition – critical for wool production.

As well as cell grazing, the Taylors are looking seriously into pasture cropping – sowing winter cereals directly into summer growing native pastures after a light knock down spray – as a way of boosting cash flow after drought without serious loss of grazing production.

Chad believes that pasture cropping, pioneered by Gulgong farmers Darryl Cluff and Col Seis, can achieve profitable crops by simply managing existing resources more holistically.

It has the advantage of enabling paddocks to be grazed right up to the time of sowing, and again straight after harvest – by which time the stubble will be underlain by new summer growth of native perennials. Farmers who have carried out pasture cropping for a number of years have found that the quality, diversity and perennial nature of their pastures all improve. So not only do farmers get a crop, but the grazing gets better and better.

Under this regime of low fertilizer rates and conservative stocking rates, the Taylors have achieved some of the best, most diverse and most productive native grass stands in central west NSW. They have found that their management regime is not only “beyond sustainability” but is also “beyond conservation” in that the grasslands are improving with more and more species appearing.

This contribution is based on an article by Peter Austen in The Furrow, Edition No1 2003, and reproduced with permission.

Vice President's Report

Di Chambers

FOG's AGM on 26 February will be held after finalising this newsletter. However, we have obtained an advance copy of the vice-president's report.

Summary

Over the past year, FOG has continued its important role in advocacy, education, research and on-ground work in support of grassy ecosystems. We have continued to provide workshops, visits to members' properties, and a wide variety of activities that assist members in learning about grassy ecosystems and plants.

The year commenced with Margaret and Geoff announcing their intention to pull back somewhat from their intense workloads within FOG. However, while their 'official' capacity has been diminished somewhat, they continue to be a driving force and incredibly active over the past year. From attendance at almost all activities, (as well as organising many); coordinating, pulling together, contributing and distributing the FOG newsletter; representing FOG at other forums; preparing FOG submissions and so on, Margaret and Geoff, despite all intentions, remain integral to the success of FOG. I for one would like to note 'where would we be without them', but on the other hand, I urge other members to continue to step up and contribute, so that the load is shared over future years.

Geoff's contributions to FOG and the Conservation Council, and to conservation in the ACT generally, were rewarded with an honorary ACT ambassadorship by the ACT government in May 2004.

Achievements

Turning 10: FOG's tenth birthday was celebrated by a walk through the Sweeny's TSR near Bungendore (the planned visit to the more exposed Turallo Grassland Reserve came undone due to bad weather). This was followed by a dinner at the 'Gib Street Cafe', which featured a slide show from Geoff covering FOG's past ten years. One of Michael Bedingfield's beautiful drawings (*Brachycome rigidula*), along with a couple of FOG t-shirts, were supplied as lucky door prizes.

In recognition of all the people and organisations that have contributed to FOG newsletters, lobbying, research, on-ground work, organisation of activities, Geoff prepared an 'honour role' which featured in our September-October newsletter.

Grants

FOG successfully applied for a small grant equipment award from the Department of Family and Community Services to purchase a computer projector. The projector has received a lot of use from FOG and other groups.

FOG also supported an initiative from member Margaret Strong, by making a donation of \$300 to the 2005 Science Fair. This will go towards an award for students contributing to a project relating to grassy ecology. FOG has also expressed its willingness to assist teachers and students in gaining an understanding of grassy ecosystems in the area.

Activities

Margaret Ning and Roger Farrow were the driving forces behind another very successful year of activities which included:

- 7-8 January: Tasmanian midlands tour.
- 6 March: Boggy ecosystem trip to Gingera Road, led by Geoff Hope
- 20 March: FOG display at ANBG
- 3 April: Working bee at Old Cooma Common
- 24-5 April: Gentian Swamp and Grasslands in Wadbilliga National Park.
- 29 May: Managing regeneration of grassy woodland - a visit to Bronwyn Johnson's property led by Roger Farrow
- 26 June: Winter tour of Canberra Grasslands - to Gooroo Nature Reserve, led by Alan Ford
- 24 July: Slide afternoon - Desert ecosystems (of the Middle East) with David Tongway and Grassland burning with Mark Imber.
- 28 August: Leaf, feather, fur and scale workshop
- 17 September: a visit to some Sydney grassy woodlands, led by Geoff Robertson
- 9 October: plant identification day at Sutton
- 23 October: A visit to a Braidwood property containing numerous orchid species, led by Dave Mallinson
- 30 October: Field day visiting Bungendore biodiversity hotspots
- 13 November: FOG's tenth birthday celebration
- 14 November: FOG grassland walk at Mugga Mugga
- 11 December: Working bee at Old Cooma Common
- 29-30 Jan 2005: Sub-alpine grassland visit to Long Plain and Blue Holes, led by Roger Farrow.

Submissions

- FOG's comments on the ACT government's Draft *Woodlands for Wildlife: ACT Lowland Woodland Conservation Strategy* (submitted in late 2003) were incorporated into the final strategy/version released in April 2004.
- May 2004: Support for the ACT Conservation Council's application to develop a program leading to the listing of places of natural heritage on the ACT Heritage Register.
- July 2004: Canberra Airport submission.

Newsletter "feature articles have included: Michael Bedingfield's on-going series of exquisite drawings and word sketches on native (and some non-native) plants of the area". This drawing of Long Plain by Michael is included as part of the story of FOG's January trip there.

- December 2004: FOG provided comments on the draft *Natural Temperate Grassland Conservation Strategy (Action Plan 28)*.

Membership

Membership remains strong with 196 memberships at the end of 2004, including many corporate and family memberships. In recognition of their contributions to FOG and conservation generally, the FOG committee decided to award one-year honorary memberships to Rosemary Blemings, Alan Ford and Joan Goodrum.

Committee

Over the year, the committee has changed a little with the resignation of Alan Ford from the Treasurer's position (many thanks to Sandra Hand for stepping very ably into

the role). Janet Russell has joined the committee and taken on responsibility for minutes.

Newsletter

FOG's bimonthly newsletter continues to inform members of coming events, and holds great reviews of previous activities. Feature articles have included: Michael Bedingfield's on-going series of exquisite drawings and word sketches on native (and some non-native) plants of the area; and extracts from Peter Austin's articles, highlighting contributions to the *Third native grasses conference* (conducted jointly by STIPA and FOG in November 2003). Our thanks to those who made contributions over the past year.

Involvement with other groups

Examples include:

- March 2004: FOG members attended a Community Forum on Grassland Conservation in the ACT (to assist participants in gaining an understanding of the framework for the *Natural Temperate Grassland Conservation Strategy (Action Plan 28)*)
- May 2004: FOG members attended the Fourth Community Forum conducted by the Conservation Council and Environment ACT.
- Continued close relationship with STEP, with our joint vision of creating a regional botanic garden, education and ecosystem recovery centre for the Southern Tablelands. To date, this has culminated in the design and early beginnings of a demonstration garden at the Birrigai school. It is hoped that this site will provide a facility that helps to develop a more permanent garden in the future, as well as help stu-

dents at the school to learn about regional ecosystems.

Websites

Stephen Selden has been very active over the last year, in encouraging us to use this medium. He started by setting up a *Grassland forum* to the existing *Envirotalk* website. In Stephen's words, this is "... an excellent place for us to discuss issues and a really good way to help spread the word to others about us and grasslands." The address of this site is <http://www.envirotalk.com.au/forum/index.php> - scroll down to the Group and Society Meeting Rooms. You will see:

Native Grasslands Meeting Room.

Friends of Grasslands (FOG) and all wishing to preserve and restore our grassy ecosystems.

Forum led by: Stephen Selden

Later in the year, Stephen set up a yahoo site for FOG members called FOG-HORN at <http://au.groups.yahoo.com/group/FOG-HORN/> FOG members can use this site to exchange ideas, and hold on-line discussions. You can also upload photos and files, create links to other websites, etc.

2005 and beyond

Planning is well under way for 2005 and beyond. As well as our usual program. The Fourth Native Grasses Conference is planned for October 2005 and will be held in Burringai (S.A.). The Australian Naturalists Network (ANN) get together in January 2006, and FOG has agreed to support the Canberra Field Naturalists Association in advertising and planning this event, which is to be held around the Alpine/High country regions of Victoria (Harrietville) and NSW (Jindabyne).

Book Review: Australian Butterflies

Rosemary Blemings

Following Sarah Starbridge's reviews in Issue 47 there's good news for Wildlife & Native Plants Study Group members who enjoy and observe the relationships between Australian native plants and butterflies.

Michael Braby spent many years drawing together information for his 976-page *Butterflies of Australia Their Identification, Biology and Distribution* published in 2000. He has now used this extensive data, which includes his own studies and photographs to produce *The Complete Guide to Butterflies of Australia*.

One of Australia's foremost lepidopterists, Michael is also a versatile naturalist who has an extensive knowledge of birds and their distribution. He has just completed a survey along an ACT creek's degraded floodplain finding significant numbers of the endangered golden sun moth, *Synemon plana*. It appears to be surviving amongst *Austrostipa bigeniculata* rather than the usual *Austrodanthonia* species.

The guide offers readers detailed, illustrated information on butterflies' structure. There are photographs of basic habitat types and each species' description includes notes on the food plants targeted by the butterflies for their larvae.

The expert student of butterflies would not be disappointed in the descriptions of the 416 species and yet the more novice enthusiast can readily extract the data needed for their identification efforts. Males and females of each species are shown in colour. Variations are mentioned. The text on each records behaviour, habitat and status. Maps indicate distribution with graphs above each showing when the butterflies are likely to be seen.

The 340-page Field Guide is arranged in family groups (skippers, swallowtails, whites and yellows, nymphs and metalmarks) whose general lifecycles and behaviour are described in the "How to use this book" section. A

glossary, indices to scientific and common names and a bibliography complete the book.

The quality of the paper probably increases the weight of the Guide but ensures that the brilliance of butterflies' colours are captured. The recommended retail price for the Guide is \$39.95 but the accomplished volunteer man-

ager of our Australian Native Plants Society book stall managed a price of just under \$30 for members.

We have successfully 'test-driven' the Guide through 2004's spring and summer armed with a home-made butterfly net (doweling with a bent coat-hanger supporting the netting) and a five-year-old's indefatigable energy.

Proposed ACT Component of CMN

Benj Whitworth

A conservation management network (CMN) is a group of people that own, manage or are interested in an ecological community. A network is intended to bring together interested people to foster conservation sympathetic management and protection of the ecological community (Environment ACT, 2004; Rehwinkel 2002; Eddy pers com 2005).

One of the proposed strategies in the Draft ACT Grassland Strategy is to encourage the formation of a regional CMN for natural temperate grasslands.¹ I believe FOG should actively support this initiative through input into the CMN generally, as well as playing a more active role in community volunteer identification and coordination for individual sites.

A role for FOG in a grassland CMN

FOG should encourage Environment ACT to begin this process of building an ACT grassland/grassy ecosystem CMN and ensure that it builds on, and links to, grassland CMNs in the region, such as through the NSW CMN for grassy ecosystems of the Southern Tablelands and the Monaro Grassland CMN. An ACT CMN may achieve its outcomes through methods such as communication, education, skills exchange, research, on-ground assistance, raising funds and publicity. I believe FOG could provide assistance to a Regional Grassy CMN through these

methods, with some examples described in more detail below:

- *Communication/publicity*- FOG has links to extensive community networks that could help publicise and educate the community on the CMN. In addition, FOG plays an active role in advocacy which will ensure the CMN has a strong and effective voice on grassland issues.
- *Liaison*- FOG could assist the CMN link to other networks, particularly parkcare and landcare. This should improve connections and reduce potential overlaps or indeed potential contradictory actions.
- *Skills exchange*- FOG members have extensive expertise in a variety of areas that may be of use to the CMN, particularly plant propagation, revegetation, education, and weeding or other on-ground assistance, plus many other areas.
- *Research*- FOG members have expertise in research and monitoring. In a regional grassy ecosystem CMN this would tend to be the domain of Environment

A striped legless lizard at the ACT Herpetological Display held in the Australian National Botanic Garden in January. Also see cover page. Both the dragon and legless lizard are threatened grassland specialists.

¹ It is unclear exactly what the draft Grassland Strategy is proposing. Page 89 refers to "ACT native grasslands are part of a regional Conservation Management Network." It is likely that the CMN would cover grassy woodlands and natural temperate grassland, in NSW and ACT. Whatever form it takes, I believe that there should be an element that focuses on the specific management issues associated with ACT natural temperate grasslands. Currently, there are a number of ACT parkcare groups involved in caring for various woodland remnants, but to date generally no parkcare/landcare groups specifically associated with grassland sites have been formed. This needs some qualification. ACT subcatchment groups are in a sense responsible for remnant grasslands in their area and Ginninderra Catchment and member groups have shown particular attention to the management of Dunlop, Latham and Aranda grasslands. Other important players would be institutions with large grassland holdings, eg Canberra International Airport and Department of Defence, and rural lessees who own grassland sites, or who manage grassland for the ACT government sites using conservation grazing.



ACT and NSW government agencies, but FOG could provide volunteers for assistance, particularly for 'on-ground' practical research.

- *Fundraising*- FOG can potentially raise money to fund on-ground work or other work to support a regional grassy ecosystem CMN.

FOG's input into specific grassland sites

FOG could play a positive and active role in a CMN by identifying community representatives (not public or private land managers) for each endangered grassland site. Currently within the ACT there are about 40-50 native grassland sites. FOG could play an active role for the CMN by identifying community volunteers who would like to be involved in these sites. Ideally volunteers would be identified for each site, but this is not likely to be practical, some sites are not near suburbs, are on private land (minimising community volunteer involvement), or already have community groups (therefore it would be a 'doubling up' of effort). Nevertheless, the goal should be for FOG to identify and assist community volunteers for the CMN for as many sites as possible and/or identify links to community groups that already manage those sites.

Within the draft native grassland strategy the remaining native grassland sites have been grouped into the following five regions: Gungahlin, Majura, Jerrabomberra, Belconnen, and Central Canberra and Tuggeranong. It would make sense for FOG to identify three (up to five) regional community volunteer coordinators and perhaps an overall coordinator. These coordinators would also be within the CMN, but provide additional support for community volunteers at each site to help identify relevant information, funding, links with catchment groups and experts to help site volunteers. The regional coordinators may appear to add an extra layer to a CMN. However this is suggested to ensure more efficient contact between community volunteers and the government, as well as providing additional support for FOG community volunteers. It will also help to maintain a degree of independence and assistance when objectives of FOG may differ from those of the CMN or government.

What Community volunteers might do on each site

In addition to the general FOG input to the CMN stated in the first section above, some examples of specific work that site volunteers may do, might include:

- *Protection/threat abatement*: To identify threats to grassland sites before they become a problem, from long term (eg weeds, impending development, erosion) to short term (eg small disturbances such as dumping waste, cars, motorbikes, fires).
- *Monitoring*: To play a minimal role in assisting ecological monitoring of sites. However, this is mainly carried out by Environment ACT.

- *Communication*: Help inform the local community, gain volunteers and put up signs.
- *Rehabilitation/Management*: To provide assistance with site management, for example through rehabilitation such as weeding, planting, fencing, etc. Rehabilitation is made up of many following components.

Regeneration is basically allowing nature to take its course. *Restoration* is the manual improvement of currently existing native grassland sites, for example through weeding, repairing degradation such as erosion. Through *reinstatement/recreation* in areas adjacent to native grassland it may be possible to assist the extension of native grassland through fencing off areas and encouraging grassland species to recolonise. Reinstatement may include reintroducing threatened species. Additional techniques may include burning, mowing, spreading seeds (appropriate provenance and genetics) and/or planting. Although generally uneconomic, reinstatement may be most useful for threatened species or for kangaroo grass, spear grass, wallaby grass, and daisies. Obviously these techniques should be developed with assistance from the CMN, FOG, and restoration guidelines.

With help through Environment ACT, FOG and land managers, community volunteers could help to identify issues/threats, objectives and actions for particular sites.

Recommendations

- FOG should actively encourage the creation of a regional CMN for the ACT and surrounding regions. This CMN would be run by ACT and NSW government agencies.
- FOG should offer support to a regional native grassland CMN by assisting with communication, education, skills exchange, on-ground assistance, and fund raising.
- FOG should play an active role in the CMN through identifying community volunteers for grassland sites within the ACT (and surrounding regions) and providing assistance and coordination of community volunteers where required.
- Community representatives could provide assistance, in addition to those suggested under bullet 2, for example through identifying threats to their site, assisting with monitoring, communicating and raising awareness of their site, and contributing to on-ground management through rehabilitation of their site.

FOG members please think about potential contributions you can make to a CMN and advise FOG of your interest.

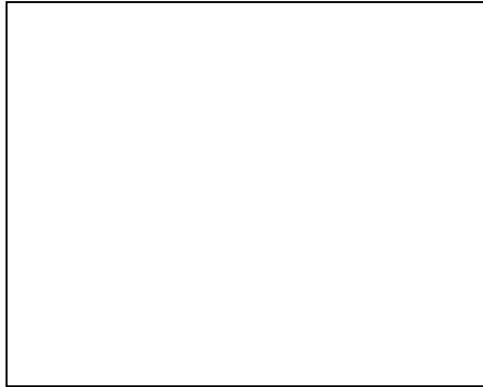
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- Environment ACT (2004) *Action Plan No. 28: Draft ACT low-land native grassland conservation strategy*, Environment ACT, Canberra.
- Rehwinkel, R. (2002) *What is a conservation management ne work?* Austral Bugle

Yellow Box (Eucalyptus melliodora)

Watching over an endangered ecological community

Michael Bedingfield



The yellow box is a woodland eucalypt which is common and widespread within the Canberra region. Its range extends from Victoria through New South Wales to south-eastern Queensland. In company with Blakely's red gum (*Eucalyptus blakelyi*), it is a major member of the tree canopy for the yellow box/red gum grassy woodland, which is an endangered ecological community in the ACT.

This ecological community consists of several hundred plants, a great many insects, dozens of birds, and numerous reptiles, frogs, mammals and other living creatures. As a group they seem to enjoy each other's company. The yellow box and Blakely's red gum are the main eucalypts, and their easy visibility makes them useful as icons in the name of the ecological community. It is an open woodland,

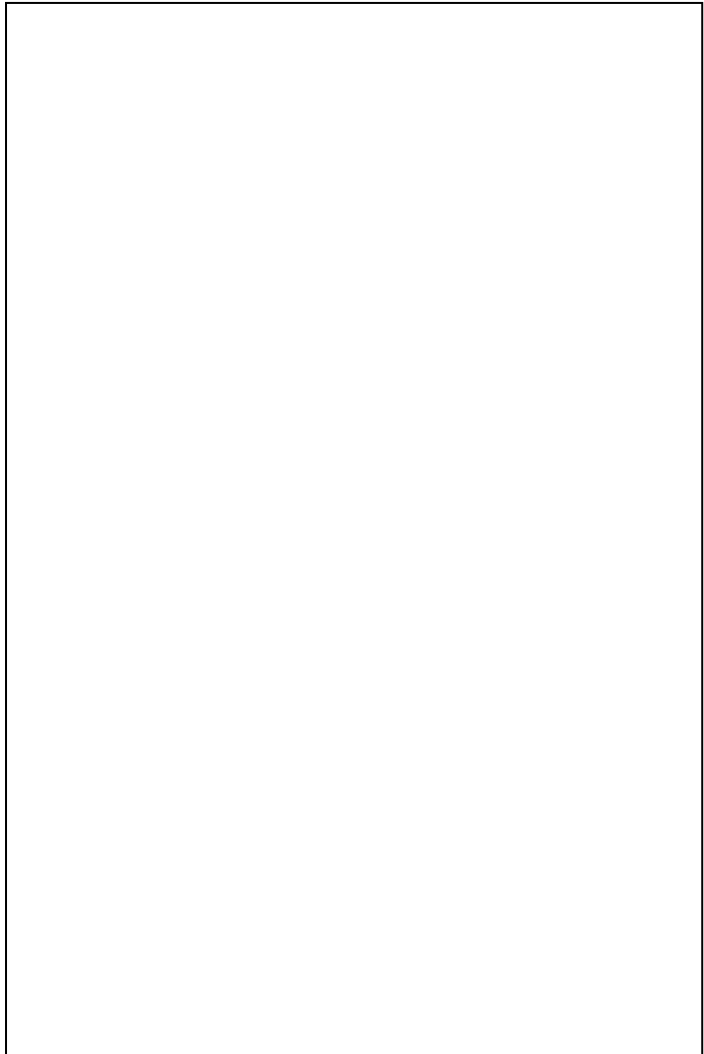
with an understorey consisting of a rich variety of tussock grasses, flowering plants and scattered shrubs. The community is endangered because many of its members have been reduced in numbers or eliminated over the many years since colonisation. So it is not easy to find examples of the community as a whole functioning as a healthy unit. Some members of this ecological community are also classified as endangered, ie, a number of plants and birds.

The yellow box is a large eucalypt which grows up to 30 metres tall. The bark on the trunk is yellow-brown, very rough and flaky, and cracked vertically and horizontally. It is similar to the bark of other box gum trees.

This rough bark merges into the smooth bark of the upper branches, which is variable in the colours cream, white, brown and grey. The leaves are grey-green, with the adult leaves being lanceolate while the juvenile ones have a rounded tip and can be ovate. There are no petals to the flowers but there are many stamens, the outer ones being infertile. The flowers form in small umbels of 3 to 7, and occur on the minor branchlets. The flower buds have a small "cap" which separates and falls off when the flower is ready to bloom. This occurs in November to January with an abundance of flowers. The fruit is roundish, with seeds held in sunken valves, and there is a circular ring at the top. (See drawings, with all plant parts shown at half size, and flowers, buds and fruit shown separately at normal size.)

The scientific name for yellow box is *Eucalyptus melliodora*. "*Eucalyptus*" comes from the Greek, "eu" meaning "well" and "calyptos" meaning "covered" - referring to the flower bud which is "well covered" with a cap, called the "operculum". "*Melliodora*" comes from the Latin, "mel" meaning "honey" and "odor" meaning "fragrance" - referring to the fragrance of the flowers. Of course, this tree is famous for the quality of the honey which is produced from its flowers.

Yellow box - a common but important eucalypt in the woodlands of the Canberra region.



FRIENDS OF GRASSLANDS INC Web address: <http://www.geocities.com/friendsofgrasslands>

Supporting native grassy ecosystems

Address: PO Box 987, Civic Square ACT 2608

Your committee:

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Di Chambers	Vice President (Admin.)
Roger Farrow	Vice Program (Program)
Cathy Robertson	Secretary (Correspondence)
Sandra Hand	Treasurer
Rosemary Blemings	Committee
David Eddy	Committee
Geoff Hope	Committee
Margaret Ning	Committee (Membership)
Kim Pullen	Committee
Geoff Robertson	Committee (Newsletter)
Janet Russell	Committee (Minutes)
Stephen Selden	Committee
Benjamin Whitworth	Committee
Dierk von Behrens	Committee

NOTE: This is the committee before the 2005 AGM. The committee elected at the 2005 AGM will be included in next newsletter.

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

Send us details of your name, address, telephone, fax, and e-mail, etc. You might also indicate your interests in grassland issues. 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. Please make cheques payable to Friends of Grasslands Inc.

If you would like any further information about membership please contact Margaret Ning, or if you would like to discuss FOG issues contact Di Chambers and Roger Farrow. Contact details are given in the box above. We look forward to hearing from you.