

# News of Friends of Grasslands

supporting native grassy ecosystems

March-April 1999



## FOG'S COMING EVENTS

**Saturday 6 March, 2pm - Yarrowlumla Shire Council Greenway Network** Geoff Butler will show us around parts of the Yarrowlumla Shire Council Greenway Network. The network is based on existing crown road reserves that have been put aside as multi-use trails for conservation purposes (a primary aim) but also for recreational activities. The trails so far declared are some 22 km long and further extensions are proposed. They are managed by a community based committee working for the Shire Council. The trails traverse many interesting areas, which include forest, woodland and secondary grasslands. It is a very interesting and very forward thinking project by Council and one day the trails are hoped to cover the whole shire. Meet at Geoff Butler's, 38 Birchmans Grove, Wamboin (6239-9158). (Turn right off the Federal Hwy onto Mac's Reef Rd, right onto Denley Dr, and finally right onto Birchman's Grove. Geoff's is on the right, with a sign saying Weereewa Native Plants on the gate. Ring Margaret for a mud map or for carpooling.)

**Saturday 20 March, 1pm - Majors Creek Common** Meet at the Majors Creek Hotel for an afternoon wander over the town common, known as Long Flat Reserve. It has grassland as well as woodland areas and is relatively weed free. Majors Creek is 10 kms from Braidwood. If you'd like to spend the weekend exploring the area, you're welcome to camp on the nearby property of one of our members. (Ring Margaret for more details or for carpooling.)

**Saturday 10 April - Weed killing at Bredbo** This will be our fourth visit to this Bredbo property to kill African Love Grass. It's an opportunity to see a quality Monaro grassland and to learn a thing or two about grassland management. Jim always provides a great lunch. We'll carpool from the government carpark next to St Mark's, Blackall St, Barton; meeting at 7.30am for 7.45am departure. Alternatively, travel south on the Monaro Highway; drive 14 kms south of the Bredbo

Hotel, turn left at the gate across the road from a large stand of poplars, and you'll find us a couple of kilometres along the track (if you reach the railway line you've gone too far).

**Saturday 17 April, 1pm - Grassland Conservation Workshop: the role of government, parkcare and the community** This is a major FOG workshop which will look at ACT grassland conservation strategy, the role of parkcare groups, and the community. It will be followed by a barbecue, BYO everything. Cost free but a small donation to cover tea and coffee appreciated. Location is Mugga Mugga, Symonston ACT. More details on page 2.

**Saturday 5 June - Members' slide afternoon** Several members have been undertaking some interesting research and/or taking some wonderful photos. This is a chance to hear from them.

**August - Workshop: Maintaining Pas-**

### Important notes on COMING EVENTS:

- *Please put firm dates in your calendar.*
- *For outdoor activities, don't forget your hat, sunblock and drinking water.*
- *For insurance purposes, sign in/out at activities.*
- *For any information about activities (including times and venues), please contact Margaret Ning on 6241 4065 (home) or 6252 7374 (work).*
- *To make program suggestions, contact Margaret.*

**ture Mass for Profit, Catchment and Conservation** This will be a one-day workshop to look at the work being done on minimum pasture coverage and its implications for increased profit and conservation. The workshop will target pastoralists, researchers and conservationists. It will be FOG's second major workshop for 1999. Leon Horsnell is the workshop convenor.

**Spring 1999** - As with last year we shall have a fairly full program in spring.

**Saturday 30 October - Halloween Cemeteries Tour** Pages 4-5 describe the 1998 northern cemeteries tour which we plan to repeat this year.

**November - St Mark's Grassland Open Day** This grassland open day at St Mark's, Barton will bring together church, conservation, government and community groups to focus on the beauty of a grassland and its conservation.

**November - Common grasses identification workshop**

**4-5 December - Southern Tablelands Grassland Hotspots** Our recent southern cemeteries tour is described on pages 6-7. We plan something similar this year.

**February 2000 - Y2K Bug Identification in the Southern Tablelands**

## ALSO OF INTEREST

**Thursday 4 March, 8pm - BOZO Building, ANU** The topic for the Field Naturalists' monthly meeting is "Paterson's Curse across the Australian landscape". Matthew Smyth is a CSIRO Entomologist who has been working on the biological control of PC for 10 years. He will include biology of the plant, why it is a weed, biological controls and associated insects and the weed control research being carried out by CSIRO. FOG members welcome.

**Sunday 7 March, 9-12pm - Clean-up Australia Day/Parkcare activity, Fisher** Also includes some planting, and FOG has been invited to guide a walk around a newly discovered grassland there. The site is on Namatjira Drive, Fisher, opposite the Kambah Pool Road turn-off near the BMX track.

**Sunday 21 March - ACT Parks and Conservation's Kambah Pool activity** Planned to include some shrub planting, a willow-control activity, picking up litter and a Ranger-guided walk. The aim is to accomplish on-ground work and also to recruit new members. As some details are not yet finalised, please call Ann Connolly (6207 2193) for more information.

**Thursday 8 April, 8pm - SGAP monthly meeting** Another chance to view David Eddy's grassland slides when he shows them to the Society for Growing Australian Plants at the Hughes Community Centre. FOG members are invited.

## FOG VISIT TO QUEANBEYAN NATURE RESERVE AND LETCHWORTH GRASSLAND

On 6 February, FOG and the Queanbeyan Landcare Group (a FOG member) visited Queanbeyan Nature Reserve, a small site (2.241 ha) adjoining the racecourse and western suburbs of Queanbeyan.

The visit was exciting. Even while waiting for everyone to turn up we witnessed a Peregrine Falcon or Hobby pluck a Starling from the air, drop to the ground with its prey and look us up and down before it took off.

The visit was timely, because FOG is preparing a submission on the Draft Plan of Management for the site. The draft plan is a very readable document which gives much good information, especially on the threatened species Button Wrinklewort (*Rutidosia leptorhynchoidea*) which was in flower and in some abundance on the site.

Despite being high summer, the day was warm but not hot and there was a wide variety of grasses and forbs to see. Some indicators of a good grassland, Lemon Beauty-heads (*Calocephalus citreus*), Blue Devil (*Eryngium rostratum*), and Yellow Rush-lily (*Tricoryne elatior*), were present and a host of other favourites. While not there for serious plant identification, we noted 32 forb, nine grass, and six shrub species. It should be worthy of a visit in spring.

Queanbeyan Nature Reserve is a grassy woodland and grassland site. The overstorey is largely Blakely's Red Gum (*Eucalyptus Blakelyi*) and Yellow Box (*E. melliodora*).

Tom Baker from the Monaro Conservation Society talked about his experiences in growing Button wrinklewort for use in regeneration and gardens. However, so far no sites have been chosen for reestablishing this plant.

Nicky Webb, who organised the visit, provided a lot of history on the site and background to the management plan.

Philip Selmes, Queanbeyan Landcare, described the many activities of that group, obviously an energetic and well directed one. FOG hopes that the group will take an active interest in this site and the grassland site at Letchworth.

Given that the Queanbeyan Nature Reserve kept our interest so long we were not able to give the second site, Letchworth Grassland, much time. It is an open grassland reserve and even a quick visit readily showed that it too was a highly diverse area. It is the home of both the endangered Striped Legless Lizard (*Delma impar*) and the Eastern Lined Earless Dragon (*Tympanocryptis lineata pingui-colla*). Some of you may recall a FOG visit there several years ago. Rainer Rehwinkel prepared an assessment of the site in October 1995.

A big thanks to Nicky for organising the visit and the information, and also to Tom and Philip for their wealth of information and insights - keep up the good work.

## EARLESS DRAGON GETS A LITTLE HEARING

In our November 1998 issue, Art Langston, FOG's overseer on Canberra Airport issues, outlined developments at the airport and his attendance at the first public meeting (24 September). The closing date for submissions to Capital Airports Group (CAG) on the Draft Master Plan (DMP) and the Draft Environmental Strategy (DES) is early March 1999.

FOG believes that the CAG has been positive in its handling of environmental issues. It applauds its establishment of two consultative reference groups, one on noise and one on the environment. Dierk von Behrens is FOG's appointee to the Environmental Reference Group whose first meeting was held on 9 February.

A second public meeting was held on 11 February and Geoff Robertson attended on behalf of FOG. When question time came, the meeting was dominated by questions on noise, a lot of which was fairly emotive stuff.

Geoff mentioned FOG's concerns, especially the proposed road developments at the northern end of the airport and their likely detrimental impact on both the grassland and the Eastern Lined Earless Dragon. He said he was concerned that the CAG saw the dragon and the grassland as a liability rather than an asset. He encouraged CAG to do more to publicise the dragon and even to use it as a logo. Dierk had mentioned these points at the reference group two days earlier.

FOG is concerned that CAG may eventually compromise conservation and development. It is also concerned that noise not be seen as the only environmental issue. So let us hear it for the dragon and the grassland.

## HIGHLIGHTS OF AGM

The AGM held on Saturday 20 February, followed last year's successful meeting formulae. It lasted ninety minutes and was followed by supper. There was plenty to see and do. Michael Bedingfield brought along a number of grasses he has been growing in pots. Each was a magnificent specimen. He also brought along a wonderful collection of his drawings. There was a fair amount of FOG material on display, including a photo album and a complete set of newsletters. Microscopes were also available for looking at specimens. David Eddy showed us some of his recent grassland slides and gave a wonderful informal talk. Many thanks to Rosemary and Dierk von Behrens for their hospitality AGAIN.

Twenty people attended. Most of the old committee was returned. Naarilla Hirsch became Secretary and Dierk von Behrens became Vice President. New faces are Will Inveen and Michael Treanor. A list of the committee is given on page 12.

In his Treasurer's report, Art Langston reported that FOG was in sound financial shape for the present. Margaret Ning reported on membership and said that FOG had 101 financial members at the end of December 1998, but a renewal rate of only 32% since then. She also reported on past and planned activities. In his President's report, Geoff Robertson reviewed a successful year, discussed plans for 1999 and the overall philosophy and objectives FOG was pursuing.

There were a number of other reports, including: Art Langston on the Canberra Airport, David Eddy on FOG's establishing two conservation reserves (see page 11) and the new book *Grassland Flora* (also see page 11), Geoff Robertson on the 17 April workshop (see next page) and the project on FOG registered sites (see page 11), Leon Horsnell on the proposed August workshop (see front page), and Michael Bedingfield on developments at the Conder grassy woodland sites.

**IMPORTANT FOG WORK-SHOP, SATURDAY 17 APRIL**

This will be a major activity for FOG which will include many grassland and landcare/parkcare experts.

The workshop is being held at the Mugga-Mugga Memorial Environmental Education Centre which is also sponsoring the workshop. Space at Mugga-Mugga is limited to fifty persons and so we need to know ahead of time if you plan to come.

FOG draws many of its members from parkcare and landcare groups who are important because they:

- have a thirst for information about grasslands and grassy woodlands

- are applying this knowledge in their important hands-on conservation work in their patches,
- have links to other conservation groups and the community, and
- are often very influential.

Last year in March FOG visited five parkcare groups in one day. That activity was very successful and helped to facilitate cross-fertilisation of ideas. FOG is becoming increasingly involved in visits to parkcare and landcare sites and remnant areas on farms. In some cases it is providing assistance in plant identification, grassland management and other issues.

Parkcare in the ACT may not always be

linked to the best quality grassland conservation sites, although this may be changing. Nevertheless, it is important that parkcare members have a good understanding of grassland conservation where it is relevant. The aim of the workshop is to show the important link between the ACT grassland conservation framework and parkcare.

The timetable is shown in the box. Within each session there will be time for questions and the final session will allow wide ranging discussion. The workshop will be followed by a barbecue which should be a nice wrap up and allow networking and discussion etc.

Mugga-Mugga (Symonston ACT) can be a little hard to find. The map and additional information below should ensure you get there without forgetting anything.

**Grassland Conservation Workshop  
Government, Landcare/Parkcare and the Community  
Program**

1:00 pm **Opening** - *Geoff Robertson* (Please arrive by 12:50 pm)

1:05 pm **Session 1: ACT Government Conservation Strategy** (*chair Will Inveen*)

- Policy framework, action plans, recovery teams, and community consultation - *David Shorthouse*
- Management guidelines for natural temperate grasslands - *Sarah Sharp*
- FOG perspective - *Art Langston*

2:15 pm **Session 2: Our Patches** (*chair Naarilla Hirsch*) The role of Parkcare and Landcare in Grassland Conservation. Contributions will come from a number of Landcare and Parkcare groups. They will address their grassland conservation and regeneration objectives, experience, issues and needs for assistance.

3:30 pm Afternoon tea (provided)

3:50 pm **Session 3: Some New Initiatives** (*chair Isobel Crawford*)

- Researching individual plant species - *Andrew Young*
- Grassland conservation on the Monaro - *David Eddy*
- A grassland framework for the Southern Tablelands - *Rainer Rehwinkel*

4:30 pm **Session 4: Grassland forum** (*chair Kim Pullen*) Panel question and answer session - Working together for better grassland conservation outcomes. Panel members are David Shorthouse, Isobel Crawford, Alison Elvin, Mary Ormay and Dierk von Behrens.

5:30 pm **Close** - *Geoff Robertson*

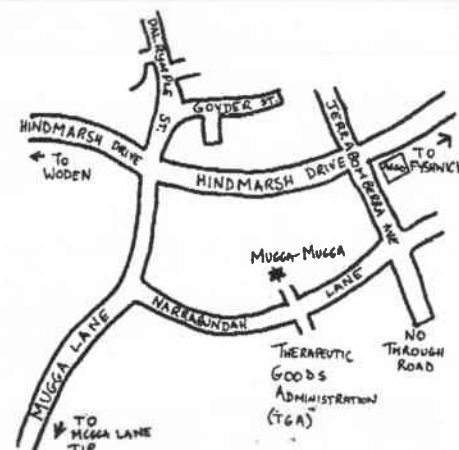
5:40 pm **Barbecue** bring your own everything except tea and coffee.

7:30 pm **Finish**

**Cost:** Participants are asked to make a small donation of \$2 towards cost of tea, coffee, etc. **But please register with Geoff Robertson or Margaret Ning, as soon as possible, if you are coming (contact details on page 12).**

**Displays are welcome** Set up time 11:45 pm. Discuss with Geoff Robertson

**Location:** Mugga-Mugga Memorial Environmental Education Centre. As Mugga Mugga is a grassland site you may wish to bring your lunch and take the opportunity to be shown around the site. Again, tea and coffee provided at lunch time.



The gate for Mugga-Mugga is located on Narrabundah Lane which comes off Mugga Lane. The entrance is directly opposite the large entrance to TGA (Therapeutic Goods Administration) as well as next to an ACTION bus stop. TGA is a high green building with lots of chimneys.

Please shut the gate when you enter. If it has been raining and the area is wet, you may need to leave your car at the gate and take a short walk to the centre. For enquiries to the Mugga-Mugga Centre, contact 6239 5607 or fax 6239 7012.



## CEMETERIES AT HALLOWEEN

*We held over our material on cemeteries from the last newsletter, but we hope you may recall last spring as you relax and enjoy autumn. Some of the sites seen on our Northern Cemeteries Tour at Halloween were described by one founding FOG member as "Unbelievable. I have never seen such colour in a grassland, nor did I think it was possible." While next spring may not be as good - plan to keep this time aside for a similar trip this year. As the news about this trip is being spread - we expect more takers in 1999.*

### MEMORIES CAN GENERATE BEAUTIFUL LEGACIES

*Rosemary Blemings*

In some country towns the local cemetery has a heritage value that goes beyond reverence for the dead and the appeal of historical research. Cemeteries, including those at Hall and Gundaroo, are well worth a visit by those who enjoy the beauty of spring flowering Australian plants.

Rarely grazed and sometimes sensitively mown, these cemeteries offer an ideal

chance for the study of grassland species and glimpses into the past to illustrate what our woodlands and grasslands were like prior to the rush into farming. There are also fascinating variations to the species list as distance from the ACT increases.

Friends of Grasslands recently offered a Northern Cemeteries Tour which included Gundaroo, Binda and Bigga cemeteries and the Pudman Creek travelling stock reserve (I suspect the latter would also be a wonderful birding spot). We were fortunate to have the expertise of Rainer Rehwinkel and David Eddy to help us identify what was there and to prepare us for what might be found.

### A SECOND MEMORY OF THE NORTHERN CEMETERIES TOUR

*David Eddy*

It was the last day of October, the morning was cool, clear and bright - perfect for photography. I was running late (how unusual) and I had no film. Fortunately I knew the group's first destination, Gundaroo, though I'd never been to the cemetery before. I found the cemetery just to the east of the village, thanks to a small sign in the main street, through a pair of

steel gates and at the western edge of the town common. I found the FOG group too, which gave me some relief.

Gundaroo cemetery is sizeable and has relatively few graves and few trees, leaving lots of room for grass (and other plants). The Kangaroo Grass was in early flower, about knee high and 'wall to wall' in distribution. There were many other grasses too: Wallaby Grasses, Spear-grasses, Plumegrasses and Wheatgrass to name but a few. Apparently the town common adjoining the cemetery to the east is several hundred acres and contains a mixture of grassy woodland and grassland in quite good condition, but we had visits to make 'further out'.

The group reassembled and travelled north through Gunning and Crookwell to Binda. Just north of that village on the east side of the road is a small cemetery of unusual character. It's positioned over two small ridges with a narrow gully separating them and another damp flat in the far corner. The graves are clustered on the dry ground of the ridges leaving the slopes and low lying land for flora. This provides a variety of slope angles, aspects, soil depths and moisture regimes within a rather small area. The altitude and rainfall

here are also quite high resulting in very moist conditions in the little wet areas.

The ridges and slopes are dominated by Kangaroo Grass while the lower areas harbour more Snow-grass, Blown Grass, sedges and other moisture loving plants. A wide variety of non-grasses were also on show. A profusion of Billy Buttons (*Craspedia* sp.) was beginning to seed, while the Showy Copper-wire Daisies (*Podolepis jaceoides*) were just beginning to open. There were the



*Amongst the flowers at Bigga Cemetery. We hope you get some impression of their density.*

usual common forbs scattered around and some more 'special' species like; Native Flax (*Linum marginale*), Donkey Orchids (*Diuris* sp.), Yam Daisies (*Microseris lanceolata*), Onion Orchids (*Microtis unifolia*), Creamy Candles (*Stackhousia monogyna*), Milkmaids (*Burchardia umbellata*), Bulbine Lilies (*Bulbine bulbosa*) and Button Everlastings (*Helichrysum scorpioides*). The feast of flora was making us hungry and the Bigga Store beckoned another 35 km toward to the north.

The Bigga Store was a bit of a step back in time, not a quick one either, but refreshing in its own way. We managed to procure some comestibles and we were on our way again.

Just south of this village a small track wends its way to the east through an ave-

nue of Stringybarks (from memory) to the rather prim and proper looking cemetery. Beyond the modern facade though lies a remnant of ancient vegetation. Toward the front of the cemetery, again on higher ground, most of the graves are clustered in a fairly short mown grassland, but its composition was still diverse and fairly weed free.

Further down the slope, among scattered trees, the herb layer was unmown and displayed another spring array of flowering forbs. Milkmaids, Buttercups (*Ranunculus lappaceus*), Chocolate Lilies (*Arthropodium strictum*) and Bulbine Lilies were everywhere. Some other less common species were also found including Hairy Buttons (*Leptorhynchus elongatus*) and the threatened Yass Daisy (*Ammobium craspedioides*). Having eaten, drunk, explored and photographed, it was time to begin the return journey, by a different route and past the last spot for the day.

From Bigga we headed west and crossed the "mighty" Lachlan River to Reid's Flat. Here we turned south, and passing through Rugby and Rye Park found the travelling stock reserve at Pudman Creek. This is a large unfenced grassy woodland

contrast between grasslands in this area and the Monaro was also worth seeing.

Thanks Rainer from all of us.



Also, Bigga Cemetery. A better photo of the mass of flowers.

area in good condition on a quiet back road within easy reach of Canberra. We parked in a delightful 'natural' clearing and within metres found ourselves among a carpet of Yass Daisies between scattered Blakely's Redgums. Pudman Creek meanders along the western boundary of the reserve, which consists of undulating creek flats of open woodland.

The reserve is large enough to spend a day in exploring a diversity of habitats and vegetation among the trees, sometimes scattered, sometimes close. This site was quite different to the cemeteries we visited and well worth a visit of its own. However we couldn't stay as long as we would've liked as the day was waning and my hay fever was becoming most irksome, as it does in the late afternoon in October.

I think everybody enjoyed the trip and saw something new, I certainly enjoyed the opportunity to get into a part of the country I haven't visited for several years. The

## NEW NEWSLETTER NAME

As mentioned in our last edition we are looking for a new name for the FOG newsletter. Suggestions include:

- Grassy views
- Themeda
- Ground cover
- Foggy dew
- Fog lights
- In the grasslands
- Watching the Grass Grow

Give us your comments on the above or suggest something new. Think hard - the Field Naturalists have renamed their newsletter "Field Natter" which will take a lot of beating!!

Contact a committee member with any further suggestions. We hope to make a decision by the next newsletter.



## AND NOW FOR SOMETHING COMPLETELY DIFFERENT - SOUTHERN CEMETERIES

Geoff Robertson

For two days (5-6 December) a convoy of five cars (four on the second day) snaked its way through the Monaro grasslands.

As David Eddy said in his article, sites on the Monaro are very different to those on the Northern Cemeteries Tour. Plants and colours differ and the higher altitude means spring comes somewhat later.

The first destinations were three sites near Adaminaby which were reached from Canberra (via Tharwa). These included a road-side cutting on Bolero Road, the Adaminaby Cemetery, and the Adaminaby Golf Course.

The grassland beside the roadside cutting, essentially a hilltop 200 metres by five metres (sometimes much narrower) was the first delight of the trip and we counted twenty four species. Mauve Burr-daisy (*Calotis glandulosa*), Monaro Golden Daisy (*Rutidosia leirolepis*) and Hoary Sunray (*Leucochrysum albicans* var. *tricolor*) were the most memorable.

The structure of each site we visited dif-

fered. The road cutting site being a hilltop, there were gaps between plants for new ones to take hold. On the side of the cutting plants were recolonising. It is my impression that higher and poorer soil country and disturbed sites often seem more diverse.

At most sites a number of members ticked off the species, but it would be impractical to list them. I shall give a rough species count for some sites visited, which will understate the species present because plant identification was not a goal and we missed many plants not in flower at the time. I hope that in future articles in the newsletter, we concentrate more on the preferred habitats of individual species.

At Adaminaby Cemetery we recorded 30 species including an orchid (*Diuris* sp.). This was a level site, the only one we visited. I was a little disappointed by the variability of the quality of the site, some parts needed better weed management - this is a big ask since these sites often receive little attention, despite, in recent times, the responsiveness of local authorities in adopting best mowing practice as advised by grassland experts.

The Golf Course and the adjoining road-side verges contained 30 species. The

verges were somewhat more spectacular than the actual site. Calling it a golf course is a misnomer, certainly there are no greens. This site is largely on a hill side sloping to a wet flatter area. Vegetation was a little more sparse on the higher slopes and thick in the wetter area. This is one of two sites where FOG has applied for a grant (see article on page 11). After that inspection it was approaching lunchtime.

Vittles were bought in Adaminaby and lunch was taken at Old Adaminaby Cemetery. Views were amazing. To our left and down the hill were the old graves. Further down the hill and stretching many miles was Lake Eucumbene with the hills and mountains beyond. To our right were old pine trees. So even though this landscape had many introduced features it was powerful and impressive. Many birds kept our interest as we chatted over what we had seen that morning and the many plants around us.

Then it was time to explore the grassland. Many grasses and forbs were present and they were now becoming familiar to us. Showy Copper-wire Daisies (*Podolepis jaceoides*) were also there in some abundance. Soils at this site seemed better and vegetation thicker. The variability of the mini ecosystems as we moved around the site was fascinating.

It was a longish drive but a pleasant meander to Round Plain. While it is directly south of Old Adaminaby one has to travel southeast then southwest to get around Lake Eucumbene.

Round Plain Cemetery was an amazing site - a church surrounded by the most stunning show of Showy Copper-wire Daisies. Vegetation was very thick at this site. The photo of this site in our last newsletter, we hope, captures some of the awe we felt. At the back of the church was the cemetery and also an area



First stop a road-side verge near Adaminaby. The photo does not show the rich plant diversity.

not normally mown. There the vegetation changed again and we saw our first Australian Anchor Plant (*Discaria pubescens*). Twenty other species were recorded at the site.

Time was pressing. So we decided not to visit some of the other sites in this area but to move on. While travelling to the next site, we stopped when we saw the most amazing carpet of Mauve Burr-daisies by the roadside growing over a three foot slope. While this plant and many others we saw are threatened or rare, it seems amazing that one sometimes sees them in such profusion.

The next stop was a travelling stock reserve (TSR) near Jindabyne but to get there again meant travelling west to Rocky Plain, south through Jindabyne toward Ingebyra. Here we recorded 27 species. This was again a different type of grassland - treeless with some interesting rocky outcrops. The contrast between the wet and dry areas was again reinforced. This was the second site where we saw Australian Anchor Plants. This was the high point of the day.

Next stop was south east to a TSR at Beloka. We kept this stop short because it was well after 6pm. Here we saw Blue Devils (*Eryngium rostratum*) which seem very uncommon on the Monaro.

It was a long journey to Gurawanga (the Ning/Robertson property east of Nimmitabel) where most of the group stayed overnight. It was well after dark when we arrived but there was still much energy to enjoy a pleasant barbecue. Spread out on mattresses on the floor, most slept well.

After wandering around the property for an hour or so in the morning, the convoy travelled to Carthcart Cemetery via

Nimmitabel and Bibbenluke. It was a profusion of pink (Trigger Plants, *Stylidium graminifolium*) and yellow. We counted 37 species, mostly thickly matted, here.

It was then a short journey to Black Lake TSR where we counted 28 species. This was more a treed grassland. Australian

Thanks to David, we saw the very best. One of the most amazing aspects of the trip was the many miles we drove and walked. Yet it seemed a good balance because there were no complaints and even the kids enjoyed themselves.

Thanks from all of us.



Our mentor, David Eddy, falls to his knees when he observes a large patch of *Calotis glandulosa*

Anchor Plants were here in abundance, as were Bulbine Lilies (*Bulbine bulbosa* and *B. glauca*). This is the first time I have seen the two Bulbines side by side.

While there had been discussion of travelling to a site near Delegate, the distance and reports that things were a bit ordinary ruled out the trip. So the convoy headed north to the Nimmitabel cemetery.

This was not such an impressive site, although still a good example of a grassland. There were some interesting features, including the results of a recent fire which made many of the *Poa* Tussocks appear to take on the form of grass trees. Then it was time to travel home.

Our guide and mentor on this trip was David Eddy who chose the sites after travelling through them (or getting reports on them) in the week before the visit.

## BOTANICAL NAMES

Since the last FOG newsletter we have received a couple of queries from members regarding the botanical name changes contained in Iain Dawson and Susan Walker's article, *Native Grass Seed Germination*. Many view name changes as an irritant, but of course they are the results of better understanding. One of the small pleasures in putting the newsletter together is finding out about these changes and the reasons behind them. David Eddy has become a bit of a guru on names of grasses and grassland forbs and has many an interesting story to tell. Our normal practice is to follow Harden's *Flora of NSW* and consult David who may do a phone around of fellow experts. In areas of controversy, we are inclined to leave it to the author's choice.

## ACTION PLANS FOR ENDANGERED AND VULNERABLE SPECIES

Naarilla Hirsch

This is the next in a series discussing action plans for endangered and vulnerable species in the ACT.

### Action plan for the Eastern Lined Earless Dragon

The Eastern Lined Earless Dragon (*Tympanocryptis lineata pinguicollis*) is found in natural temperate grasslands. It was declared endangered in the ACT because it is at risk of premature extinction in the ACT in the medium term due to

- decline in quality and quantity of habitat, and serious threats from herbivores, predators, parasites, pathogens or competitors;
- seriously fragmented distribution for a species currently occurring over a moderately small range or having a moderately small area of occupancy within its range; and
- extremely small population.

Conservation objectives are to increase understanding of the biology and ecology of the species as the basis for managing its habitat, and protecting several viable populations in native grasslands across the ACT.

Intended management actions cover a range of activities. Where possible, further fragmentation of populations will be minimized and habitat linkages maintained. Continued survey work will identify all populations. The impact on the species of changes in management practices (eg. grazing, mowing, fire and weed control) will be monitored. Priorities for research are radio-tracking to determine movement patterns, identification of precise habitat requirements, fire management studies, long population studies, dietary and energetics work, the relative impacts of predation, and behavioural studies.

Education and liaison activities include compilation and distribution of management guidelines to land managers, distribution of information to appropriate target audiences, and consideration of the use of salvaged animals as the basis for community education and captive display programs.

Source: ACT Government, 1997. *Eastern Lined Earless Dragon* (*Tympanocryptis lineata pinguicollis*): *An endangered species*. Action Plan No. 3. Environment ACT, Canberra.

### Action plan for Natural Temperate Grassland

This action plan defines natural temperate grassland as a native ecological community that is dominated by native species of perennial grasses, with a diversity of native herbaceous plants (forbs) present. Such communities are naturally treeless, or have less than 10% projective foliage cover of trees, shrubs and sedges in its tallest stratum. Five floristic associations have been defined for natural temperate grassland in the ACT: wet *Themeda*, *Poa labillardieri*, *Danthonia*, dry *Themeda* and *Stipa*.

Natural temperate grassland was declared an endangered ecological community because it is at risk of premature extinction in the ACT, due to

- severe decline in distribution; and
- marked alteration of composition or structure.

The major conservation objective is to maintain natural temperate grassland as a viable and well represented ecological community in the ACT in perpetuity. There are a number of supporting objectives. All remaining natural grassland sites of high conservation value should be conserved, and a system of reserves (or equivalent) that is comprehensive (ie. including all the five floristic associations), adequate and representative should be established. All populations of listed threatened grassland species are to be maintained as viable populations. The conservation of viable remnants of natural temperate grassland should be integrated, wherever possible, within the matrix of other land uses in the ACT.

Management actions cover a range of activities. An experimental process will be used to investigate the impact of management practices on the biodiversity and dynamics of grasslands. By default, previous management practices will be continued at a specific site until better alternative practices are found. Wherever possible, further fragmentation of natural temperate grassland sites will be avoided, and

habitat linkages between sites will be re-established and maintained.

Grassland surveys are needed, especially for uncommon and threatened species, grassland invertebrate species, additional grassland sites and sites that require special protection. Long term monitoring should include the impact of management



*Bulbinopsis bulbosa*  
'Golden Lily' or 'Native Lark'  
Woolloomooloo September 1958

Bulbine Lilies which can be an abundant grassland beauty in spring.

Drawing by Ann Smith

practices (and changes to these practices) on natural grassland values. Priorities for research are floristic analysis, regional differences in the ecological communities to understand the significance of particular localities, understanding the dynamic response of the ecological community and its constituent species to management practices, including burning, grazing, mowing, soil disturbance, and the use of reservations to protect these communities.



The action plan considers that a regional approach is needed for effective and efficient conservation of natural temperate grassland in the ACT and identifies liaison and collaboration with New South Wales and with Commonwealth agencies as important. Ongoing liaison and education activities are critically important to promote and maintain a high level of community awareness of the conservation needs of natural temperate grassland. These activities will include government agencies, planners, developers, utility companies, landholders, community groups, school children and the general public. Information material is to include a regional field guide [which is about to be published]. Grassland databases will be maintained and expanded, with a long term aim of encouraging land managers, landholders and others to use these databases and contribute additional relevant information.

Source: ACT Government, 1997. *Natural Temperate Grassland - an endangered ecological community*. Action Plan No. 1. Environment ACT, Canberra.

## ACHIEVING OFF-RESERVE CONSERVATION GOALS IN THE BARKLY TABLELAND

Alaric Fisher

*This article appeared in the Australian Farm Journal's BUSH, August 1998 issue, published by Rural Press Magazines in conjunction with Environment Australia*

The Barkly Tableland is a major feature of semi-arid northern Australia, extending from Elliott in the NT to the south of Mt Isa in Queensland. Within the Northern Territory, it occupies approximately one hundred thousand square kilometres. The landscape is dominated by 'downs' country, a flat or undulating treeless grassland on dark cracking clay soils. The dominant vegetation is Mitchell grassland, along with Bluebush swamps, Coolibah woodlands along creeks, and large non-permanent lakes.

The grasslands can contain up to 60 plant species within a single hectare. Recent wildlife surveys have revealed they also hide an interesting collection of animal life. Cracking clay soils provide shelter for small mammals and reptiles, including

the tiny Long-tailed Planigale and an alarming collection of poisonous snakes. Many of the common reptiles, including the large thickset Spencer's Goanna, are unique to this environment.

Abundant seeds from grasses and herbs provide food to many bird species, including the Flock Pigeon. Other birds, such as Button-quails and Bushlarks, shelter in the grass, while flocks of Bustards are still common. A large number of raptors (eagles, falcons, kites, etc) hunt over the grasslands. The swamps and large intermittent lakes are extremely important for waterbirds and migrant shorebirds, and have international conservation value.

As recognised in the recent Northern Territory Parks Master Plan, a number of vegetation types of the Barkly Tableland are inadequately represented in our current reserve system, as are many of the individual plant and animal species.

This is the most important country for pastoral production in the Northern Territory. With little permanent surface water on the Tableland, the success of pastoral use is due to the comprehensive network of bores that feed raised earth dams ('turkey-nests') for watering cattle. Patterns of grazing by stock are largely determined by the distribution of these watering points.

The spread of artificial watering points throughout inland Australia means that most of the country is now open to grazing by stock. A recent CSIRO study in arid rangelands found that up to a quarter of native plants and animals in that region were more abundant at sites further from water. Some species were found only in the sites furthest from water, suggesting they can no longer survive in much of the rangelands due to grazing, or other factors associated with the increased numbers of watering points.

Our research results suggest the best way to protect all native species of the Barkly region is to maintain a network of areas of different distances from water and different levels of grazing. Keeping some land lightly grazed may be important to ensure disadvantaged species survive through extended dry periods when impacts of grazing are most pronounced. Such areas may also act as seed reserves and help to re-establish desirable pasture species following drought.

The Parks and Wildlife Commission is starting a new project called 'Biograzing: Waterpoints and Wildlife', in partnership with CSIRO and the SA Department of the Environment. Funded by the Land and Water Resources Research and Development Corporation, Biograzing looks at actions to promote sustainable rangeland management while minimising impacts on economic return. It has two main components in the Barkly Tableland:

- determining which native species have been advantaged or disadvantaged by pastoral development; and
- developing example plans (eg. low stocking rates in certain areas) to ensure continued conservation of disadvantaged species, and assessing economic costs of such plans.

A key feature will be establishing a dialogue with land owners and managers (through workshops, field days and personal contact) to exchange information and discuss issues that concern them.

The ultimate goal of Biograzing is to promote the idea that conservation and pastoral production can be successfully integrated, through practical actions and the collaboration of landholders, scientists and government agencies.

*For further information contact Alaric Fisher, Parks and Wildlife Commission of the Northern Territory (08) 89448471. For further information on Bushcare in the NT contact the NT Bushcare Coordinator Bill Panton (08) 8999 4477.*

## WETLAND BREAKFAST

Margaret Ning

On 2 February, I attended Breakfast with the Birds at Jerrabomberra Wetlands (Dairy Road, Fyshwick) to celebrate World Wetlands Day. FOG had been invited there by the Murray-Darling Basin Ministerial Council, to mark the launch of the Council's Floodplain Wetlands Management Strategy for the Murray-Darling Basin.

Distinguished guests included Mr Mark Vaile MP (Minister for Agriculture, Fisheries and Forestry), Mr Brendan Smyth MLA (Minister for Urban Services), Professor John Lovering (President, Murray-Darling Basin Commission), Mr Tom Stacey (Chair of Murrumbidgee Catch-

fessor John Lovering (President, Murray-Darling Basin Commission), Mr Tom Stacey (Chair of Murrumbidgee Catchment Management Committee) and Professor Peter Cullen (Director of the Cooperative Research Centre for Freshwater Ecology).

David Rush, a ranger with ACT Parks and Conservation Service, provided background on the wetlands in a talk to the audience of around 50 guests. Much of David's role is to assist in the day to day management of Canberra Nature Park nature reserves including Jerrabomberra Wetlands, along with responsibility for things such as fire management, advice and attendance with urban wildlife issues, ranger guided activities, etc.

David explained why Jerrabomberra Wetlands was chosen for the launch. It has over 77 recorded water bird species including Latham's Snipe and the Green-shank (migratory waders subject to conservation treaties between Australia, Japan and China); 96 terrestrial birds (many of which are breeding birds); plus a number of other wildlife - a good record for a wetland which did not exist 35 years ago.

Jerrabomberra Wetlands came into existence in 1964 when Lake Burley Griffin filled. It is subject to upstream urban, industrial and rural runoff, urban development, many years of grazing and has been used as a dumpsite, even containing material from construction of the New Parliament House.

There was debate among other speakers as to the history of the wetlands, and perhaps David settled things by labelling them 'ephemeral wetlands' as parts would have been subject to inundation during periods of flooding. Most of Jerrabomberra Wetlands lies below the one in 100 year flood level. Habitat types at the wetlands include open permanent water, open permanent water margins, reed beds, marshlands, wet grasslands, drowned grasslands, nutrient rich waters, sand or gravel beaches, short grassy banks, emergent dead trees or logs, shrub and tree banks and mudflats.

The wetland provides food, shelter and breeding sites for native species of both terrestrial and water birds locally, regionally and internationally. The area also contributes to agriculture, recreation, tourism, scientific research and education.

Current management includes a joint venture between Canberra Nature Park South and the Australian Trust for Conservation Volunteers Green Corps team. They have planted and mulched over 800 native shrubs, enhancing the biodiversity of the wetlands by providing food, nesting sites and shelter for many native wildlife species. The project also includes weed control especially of African Boxthorn and Fennel, and of some willows.

Work has also begun to improve the amenity area around Kelly's Swamp, Jerrabomberra Pool and the entrance to the western side of the wetlands off Mundaring Drive. Visitors can escape the pressures of city life in a semi rural landscape and observe water birds from one of the several bird hides or observe platypus, long-necked tortoises, water rats, frogs, reptiles and other wildlife along the water's edge. It is indeed, an oasis in the urban desert.

After guests had enjoyed a very appetising breakfast, David took them on a guided tour of the wetlands. It was an extremely pleasant start to the day, even if one inevitably had to take one's leave and return to the office.

## ARTISTS APPRECIATE GRASSLANDS

On Monday 8 February, Geoff Robertson gave a talk to the Wildlife and Botanical Artists (ACT) on his views on art and conservation, stressing his very amateur experience in both fields.

He also outlined some of the field activities of FOG where it is possible to see at first hand wonderful examples of native grasses and forbs.

This was followed by David Eddy who showed some of his superb slides on grasslands and plants. Much interest was shown in both the talk and the slides. For some artists, this provided a new and thrilling insight.

The group expressed an interest in visits to grassland sites so that they may also capture some of these wonderful plants in their works. FOG and the Artist Group look forward to further cooperative efforts.

## FOG APPLIES TO ESTABLISH CONSERVATION RESERVES

Friends of Grasslands has applied under the Threatened Species Network Community Grants to establish two conservation reserves on the Monaro to protect two high quality native grassland areas.

The first site is Radio Hill (Cooma) currently unmanaged vacant Crown Land under Trusteeship of the Cooma-Monaro Shire Council. FOG visited this site on 10 October 1998 (see our November issue).

The second site is Adaminaby Golf Course currently reserved for recreational purposes but operating as a Crown grazing lease. FOG visited this site on the Southern Cemeteries Tour (see page 6).

The proposed project will establish formally recognised conservation reserves at both sites, raise public awareness and change the public perception and expectation of these sites.

The reserves will:

- protect the grassland vegetation communities and their associated threatened species on publicly owned land,
- establish background knowledge essential for the recovery of the Monaro Golden Daisy (*Rutidosis leiolepis*),
- act as education resources for local people and tourists and
- provide a resource for further scientific research into native grassland species and ecology.

Both sites have additional high quality areas directly adjoining them.

Both sites are significant native grasslands, ecosystems considered endangered in the ACT. Radio Hill has populations of the Monaro Golden Daisy (declared vulnerable in NSW) and the Hoary Sunray (*Leucochrysum albicans* var *tricolor*), declared endangered nationally) - both species, while not at the Golf Course, are on land adjacent to it. The Adaminaby Golf course has a population of Mauve Burr-daisy (*Calotis glandulosa*, vulnerable in NSW).

There is also the possibility that the vulnerable Striped Legless Lizard (*Delma impar*) and the Eastern Lined Earless

Dragon (*Tympanocryptis lineata pingui-colla*) species may be found there.

The main tasks to be undertaken as part of the project are fencing, sign posting, pest and weed control, funding genetics research into the Monaro Golden Daisy (exciting stuff), establishing networks with local institutions and community groups, producing management guidelines, and producing a brochure and other promotional material.

FOG sees its role as kick-starting these important projects with the aim of having the local communities assume responsibility for their eventual management.

We have letters of support from the Cooma-Monaro Shire Council, the Upper Murrumbidgee Catchment Coordinating Committee, the Department of Land and Water Conservation (NSW), the National Parks and Wildlife Service (NSW) and Cooma Unlimited-Chamber of Commerce.

We will be calling on members for help, but will also be looking for local community involvement and volunteers

## FOG GRASSLAND SITES REGISTER

The FOG Committee has decided to pilot a register of grassland sites (including grassy woodland sites) in which FOG members take an active interest.

The project would encompass many objectives, but it would especially enable FOG members with an active interest in a grassland site to understand it, to document the important features, to develop management strategies, to record what works and what doesn't - in other words this would be a framework for grassland sites. This would also facilitate cross fertilisation of ideas and provide models for others interested in grassland conservation and regeneration.

Participants in the project would be asked to complete a not-too-complex questionnaire which would collect data on the site, such as its structure, native and introduced species, management practices, record keeping practices, photos, maps, etc.

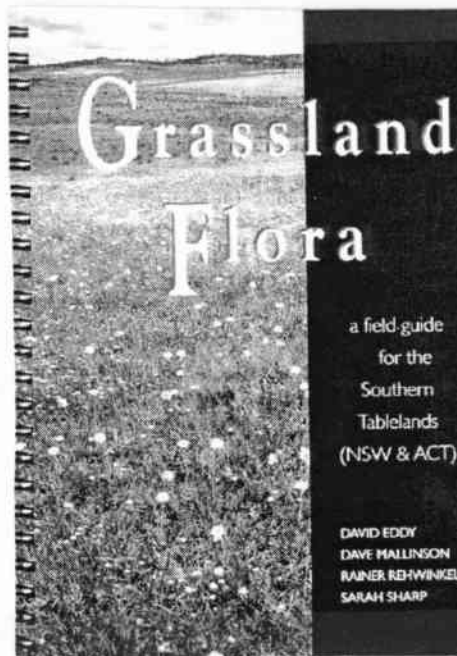
The output would include a standardised readable multi-page report on each site, including species lists. FOG would maintain a collection of all reports which could

be used in various ways for conservation and research.

Because the project is an opportunity for FOG members to learn by doing and share information with others, it is not necessary that the particular site be a high quality grassland site or, for that matter, particularly large.

If you are interested in participating in this project or want to obtain more information, contact Geoff Robertson whose phone numbers appear on the next page.

## IT'S OUT - AT LAST



**Grassland Flora - a field guide for the Southern Tablelands (NSW & ACT)** by David Eddy, Dave Mallinson, Rainer Rehwinkel and Sarah Sharp.

*Background article by one of the authors - David Eddy*

Despite the growing awareness and interest in grassy vegetation, two years ago there were no books describing the flora of these communities, written in plain English and convenient for field use. Even people working in the conservation of grasslands on the Southern Tablelands wanted such a book, to help them become familiar with the species they were seeing in the field. Several of them working for different organisations, on different projects, decided it needed to be written and that a group effort to produce one book would yield a better result than each organisation or project producing a separate publication.

Grassland Flora is the result of funding input from two state government conservation agencies, the Commonwealth Government through the NHT, a state land management agency and an electricity generation corporation. The authors' time was committed by the same state conservation agencies, the world's largest non-government conservation organisation and the Commonwealth Government's premier botanic gardens for native flora. Additional inspiration, technical input and support came from many others working in or with work related to the conservation of grassy ecosystems in the region. While the book was being written two books of a similar ilk were produced in Victoria, now we have three.

Grassland Flora is intended to help people with little or no botanical knowledge or training, to identify and become familiar with the plants they find in the field, within the grassy ecosystems of the Southern Tablelands. The authors have gone to great lengths to use plain English wherever possible, using very few botanical terms. Most species are illustrated by colour photos and in many cases several photos of different parts of the plant or different stages of development are shown. This is done to help identify plants when they are not flowering, or are grazed, mown or burnt short. Most of the herb plants can be identified, at least to genus, using foliage alone, with some experience. It is priced to sell at \$15 and will be available from offices of the authors and funding organisations, selected bookshops and by mail order through Environment ACT.

The authors hope that readers enjoy and benefit from use of the book and thus increase their, and others, appreciation of our herbaceous vegetation.

Good luck.



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Inquiries: Contact Margaret Ning whose details appear above.

**FRIENDS OF GRASSLANDS NEWSLETTER**

You have read this far, so we must have kept your interest. If you are not a member of Friends of Grasslands why not subscribe to the newsletter? It comes out six times a year and contains a lot of information on native grassland issues.

You can get the newsletter by joining Friends of Grasslands. 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 group, or actively interested in grassland conservation or revegetation, we hope we have something to offer you. We may assist by visit-

ing 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, plant identification, 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, you might encourage friends to join, or even make a gift of membership to someone else. We will also send one 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.

If you would like any further information about membership please contact Margaret Ning, or if you would like to talk over FOG issues contact Geoff Robertson. Contact details are given in the box above.

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