



# News of Friends of Grasslands

*Supporting native grassy ecosystems*

*July-August 2004*



25 APRIL. "On to Nunnock Swamp for lunch in horizontal drizzle at the new but still unfinished campground." FOG members rug up against cold and slightly wet weather. Story page 6.

## *Program*

**Sat 24 July (2pm to 4pm) - FOG slide afternoon.** David Tongway will show slides on *Desert ecosystems*, while Mark Imber will discuss his research into grassland burning. More information by Mark is given on page 2. Venue: Mugga-Mugga Education Centre, Narrabundah Lane, Symonston ACT (opposite Therapeutic Goods Administration). Afternoon tea provided.

**Sat 28 August (9am to 3pm) - Leaf, feather, fur and scale workshop:** exploring the relationship between Southern Tablelands ecosystems and their bird, mammal and reptile inhabitants. The workshop, organised by Friends of Grasslands and Southern Tablelands Ecosystems Park, will describe our region's ecosystems and vegetation, identifying various animals and their habitats, and practical conservation. The emphasis will be on how to present this material to the broader community. Speakers include Andrew Claridge on mammals, Jenny Bounds on birds, and Geoff Robertson on daisies and reptiles. Rainer Rehwinkel will describe recent work on the classification of Southern Tablelands ecosystems. There will be a discussion on how to improve and promote the presentations made at the workshop. Venue: Mugga-Mugga Education Centre, Narrabundah Lane, Symonston ACT (opposite Therapeutic Goods Administration). Lunch provided. To register send payment of \$10 to Geoff Robertson, 4 Wellington Street Ngunnawal ACT 2913. Geoff's phone and e-mail details on back page.

**Sat-Sun 18-19 September - Eden heathland weekend.** With Jackie Miles we will visit far south coast heathlands.

**Sat 9 Oct, 2pm - Plant ID at Sutton.** FOG will visit Sarah and Adrian Fether's 25 acre property to assist in plant ID.

**Sat 23 October - Braidwood orchids.** With Dave Mallinson we shall visit a site near Braidwood that has 56 orchid species. We hope to see a goodly number of those orchids including some uncommon species.

**Saturday 30 October 2004 (9am to 3pm) - Field day visiting Bungendore biodiversity hotspots and becoming a FOG buddy.** FOG is supporting the *Sustainable Bungendore* project, organised by the Southern Tablelands Grassy Ecosystems CMN, see previous newsletter. Rainer Rehwinkel is inviting experienced FOG members to act as mentors and/or buddies and team up with local residents and/or not-so-experienced FOG members, to impart to their "buddies" a better understanding of the biodiversity and other values of grassy ecosystems by visiting two or three sites around Bungendore. More detail in next issue.

**Sat 13 November - FOG's Tenth Birthday** - we are planning something special.

## News Roundup

### Native grassland in exotic location

Margaret Ning

To reach Bronwyn Johnson's property on Saturday 29 May, we travelled along Little Bombay Road just out of Braidwood. Of course, we would have preferred that it was raining, but if that was not to be, a cloudless sunny sky was an acceptable alternative, and it stayed like that for the few hours we were at the property. "Ridgeway" consists of 130 acres of Yellow Box secondary grassland. It was either only lightly grazed before Bronwyn purchased it two and a half years ago or only grazed intermittently, as it had comprehensive grass cover all over, plus very few weeds and very little of the highly invasive *Kunzea parvifolia* evident on surrounding properties. Essentially it has been in drought all the time that Bronwyn has owned it.

It was very easy to walk around and get a sample of the different plant communities on Ridgeway, and even at this time of the year it was apparent that the property would contain good quality grassy areas once the rains come. We could see the skeletal remains of Onion Orchids, Parsons Bands and Chocolate Lilies from the previous season - only three of the 32 forb species we saw that day. We also saw around 20 grass, sedge and rush species; 14 woody natives; and 16 trees - these numbers would be substantially added to in a normal season. Eucalypts and acacias are regenerating all over the property and it is obvious that some clearing has been undertaken in past years. Bronwyn is interested in encouraging this regeneration with some strategic fencing if possible. The eight or so eucalypt species caused a lot of head scratching on occasions, and everyone (including those normally in the know) concluded that some hybrids were present.

Many thanks to Bronwyn for hosting a dozen Foggers on her place, to Rebecca Hall for sharing her experience with us, to Roger Farrow for leading the activity, and to Geoff without whose contributions my species list would only be half its size.

### Joan Goodrum, a winner

Steve Welch, Parkcare Coordinator  
Environment ACT

Joan Goodrum won the NRMA/Volunteering ACT Volunteer of the Year Awards, in the Environment category. She was Environment ACT's nominee.

Many of you would know Joan, who has been actively involved with protecting our local environment since 1968. Joan's first experience as a volunteer was with the Woman's Voluntary Service in India during 1944 and she has been involved in a variety of volunteering situations since.

Joan is a member of and a regular participant in the activities of Canberra Archaeological Association, Friends of Grasslands, Minders of Tuggeranong Homestead, Friends of Tidbinbilla Nature Reserve (since its inception), Gudgenby Bush Regeneration Group, Waterwatch, Frogwatch, and Southern ACT Catchment Group.

### In this issue

- News roundup
- Wadbilliga weekend
- ACT threatened species update
- Native grasses ID field day
- An out-of-area experience: STIPA visits Clancy of the Overflow Country
- Blue Devil - pretty but prickly

Often working closely with the local Ngunnawal people, Joan is a tireless worker for cross-cultural awareness. She believes 'the environment and the original culture are one and the same' and that for her, 'Volunteering is Caring for Country'.

I congratulate Joan for her efforts and thank the outgoing recipient of this award, Rosemary Blemings for her continuing work against weeds.

*Friends of Grasslands would like to add its deepest congratulations. Apart from her tireless efforts, Joan's close contact with our Indigenous people and her understanding of the close links between landscape, people, and biodiversity make her a very valued member of Friends of Grasslands.*

### Alan Ford hangs up hat

Di Chambers

After many years as Treasurer and active committee member, Alan is hanging up his hat. The committee wishes to thank Alan for the many hours that he has put in, and for his enthusiasm and leadership. We will miss his insights and contributions at committee meetings. Sandra Hand is taking over as Treasurer and I

will pick up Alan's Public Officer responsibilities.

### To burn or not to burn - is that the question? Mark Imber

In working on my honours thesis on the impact of fire in natural temperate *Danthonia* grassland, I have been able to examine some of the long-term and short-term impacts of fire on *Danthonia* grassland at the Majura Field Firing Range. In the long-term, fire does not appear to change species diversity. However, there do appear to be some short-term responses.

I have found that in a species rich *Danthonia* dominated grassland in the ACT, burns in November and April significantly increase species richness, whereas burns in January do not. Also, species richness increases significantly with an increase in bare ground.

My tentative conclusion is that the practice of burning/grazing by domestic stock in *Danthonia* dominated grasslands in the ACT is probably not necessary to maintain species richness, especially if kangaroos are present.

I did not measure the kangaroo impact as it was outside the scope of my thesis. However, I did observe their grazing impact (ie a reduction in biomass and canopy coverage) especially during the drought, and also the sliding impact resulting in bare ground and subsequent germination.

The future challenges that I think could be explored are the persistence of the seedbed in *Danthonia* community species, the ability for seed to be dispersed by the same species, and whether better native germination occurs in linear or elliptical burns. The literature considers native grassland species to be inept at long distance seed dispersal relative to the typical exotic species found in grasslands.

Also it may be worthwhile for grassland ecology to understand the role that kangaroos play in the germination process and whether this is important in the continuum of germination/regeneration.

*Mark is the Assistant Director Environmental Stewardship Environment, Heritage and Risk Branch, Dept of Defence. He will be summarising his work at the FOG slide afternoon on 24 July.*

### Shared vision for CNP

5 MAY, the Conservation Council and Environment ACT held their third community forum *Shared Vision for Canberra Nature Park*. Seventy people, including many FOG members, attended.

Following presentations on fire protection, weeds, recreation, conservation management, heritage, and Parkcare, participants divided into groups to discuss their vision and a range of related issues. Outcomes of the group discussions will be posted on various web sites and follow-up work is envisaged.

### Final ACT Woodland Strategy Groundcover

29 APRIL. Chief Minister Jon Stanhope released the *Woodlands for Wildlife: ACT Lowland Woodland Conservation Strategy*. The draft strategy was reviewed in the FOG newsletter, July-August 2003, and all the comments made there are still totally relevant. However, the final version is better and takes account of comments made on the draft version. For anyone wanting to understand grassy ecosystem ecology in the ACT region, this document is a must read.

The *Strategy* requires some in-depth study to fully appreciate its recommendations which are somewhat muted but could be teased out with effort. For example, it divides the ACT woodlands into units, namely Gungahlin, Majura-Kowen, Callum Brae, Tuggeranong-Naas, and North Murrumbidgee-Lower Molongo. Taking one of those areas, namely Gungahlin, the *Strategy* mentions that some 4435ha of woodland remaining of which 1920 is classified as Yellow Box-Red Gum grassy woodland (threatened ecological community). These figures are broken down into further detail and by three further subregions. For Gungahlin as a whole, and for each subregion, the *Strategy* mentions the planning and conservation issues that need to be resolved.

The *Strategy* has therefore taken the Government to the water's edge, but it hasn't said that there is the extra step.

So it will be up to groups such as FOG to press the government to ensure that planning decisions are made in favour of biodiversity. So far the government's track record on biodiversity falls well short of the mark, and some decisions have taken us backwards.



On the same date (29 April), Chief Minister Jon Stanhope also named the newest nature conservation reserve, Goorooyarroo.

Margaret and Roger at the FOG stall at the Burra Fair on 28 March. Story on page 2 of last issue.



## Woodland flora and fauna

### Groundcover

The *Woodlands for Wildlife: ACT Lowland Woodland Strategy* covers ACT woodlands, as well as the plants and animals that inhabit them, especially those that are threatened.

The characteristic trees, shrubs, forbs, sub-shrubs, cryptogams, and various weeds are mentioned. The *Strategy* states that "more than 600 native species (of plants) have been found during surveys conducted since 1991 by ACT and NSW government agencies in the Southern Tablelands of NSW and ACT", Dare we add, and also by members of community groups such as FOG.

To define the different quality of woodland sites, and even to distinguish what is and isn't included in the definition of the threatened ecological community, various categories of native plants are mentioned. These are: *disturbance sensitive species* (orchids, lilies and the like), *moderately disturbance tolerant species*, *disturbance tolerant (forb) species*, and *disturbance tolerant native grasses*. This is a useful distinction. Unfortunately the full list of what is included in each category has not been included.

The *Strategy* also encompasses action plans for the threatened woodland plants: Tarengo Leek Orchid, Small Purple Pea, and Austral Toadflax, as well as some other unusual and rare plants in the ACT.

The *Strategy* also provides much information on the fauna of ACT woodlands and encompasses the action plans for the eight listed birds associated with ACT woodlands.

The *Strategy* provides a very good benchmarking focus for threatened, rare and uncommon species. However, we know from experience that this is not enough, because both major political parties have plans to continue to reduce woodlands areas, and as the urban edge gets closer to remnant vegetation areas, plant and habitat values will further diminished. So the *Strategy* is only slowing the demise, not outlining strategies to reverse it.

## Woodland ecosystems of the ACT

### Geoff Robertson

The *Woodlands for Wildlife: ACT Lowland Woodland Strategy* provides some advances in the classification of wood-

land ecosystems in the ACT by defining the boundaries between Yellow Box-Red Gum Woodlands and other communities of native vegetation.

First, the *Strategy* reconciles the definition of 'woodland' used by it with the more traditional measures. Traditionally, tree foliage cover on the ground has been the measure, and woodlands have been defined to have ten to thirty percent tree foliage cover - ie the shadow cast on the ground by foliage at noon. In a more recent measure, which treats the whole tree crown as opaque, woodlands are defined as having 20-50 percent crown density cover. The *Strategy* broadens the definition of woodland to include 'open woodland', ie crown density cover of 2-20 percent (*Strategy*, page 3).

The definition of woodlands includes areas of regeneration of woodland communities, where the foliage or crown

threatened community) and Yellow Box and Blakely's Red Gum (listed as threatened in the ACT).

Fourth, the *Strategy* describes the woodlands in the ACT, which in turn have been integrated into the broader Southern Region Comprehensive Regional Assessment study (Page 13) - a welcome advance. The ACT woodlands include subalpine, mountain foothills, dry hillslopes, low hills and plains, and river fringes.

Three woodland communities come within scope of the *Strategy*, namely *Tablelands and slopes Yellow Box-Red Gum Grassy Woodland*, *Tablelands Dry Shrubby Box Woodlands adjacent to Yellow Box-Red Gum Grassy Woodland* (dominated by Bundy, and/or Mealy Bundy, Red Box, Apple Box, Broad-leaved Peppermint), and *Tableland Valley Snow Gum Grassy woodland*.

Woodlands outside the scope of the *Strategy* include three communities of alpine, sub-alpine and montane woodland (largely dominated by various Snow Gum species and Mountain Swamp Gum); *Tablelands Brittle Gum Dry Forest* (dominated by Red Stringybark, Scribble Gum and Brittle Gum) and two river-fringing communities: *Slopes and Tablelands Riparian She-oak Woodland*, and *Tablelands Riparian Ribbon Gum Woodland*.

Fifth, the *Strategy* distinguishes between Yellow Box-Red Gum Grassy Woodland, the threatened ecological community, and other remnants of Yellow-box Red Gum Grassy Woodlands. Here the *Strategy* looks at the degree of modification that has taken place to the original vegetation and includes in the definition "partially and moderately modified lowland woodland", including secondary grassland. "Groups of Yellow Box-Red Gum trees where the understorey has been lost", or "single trees in exotic/mixed pasture" are excluded from the definition of the threatened ecological community. This somewhat narrow definition has drawn much criticism from many conservation groups for a variety of reasons.

## Common name convention

### Editor

*One of the joys of being editor is the many delightful things that cross my desktop. The following is a query by Margaret and reply by our esteemed Wal Walley. I thought I would report it.*

It may be advisable to register quickly for the:

### FOG/STEP

**Leaf, feather, fur and scale workshop:**  
exploring Southern Tablelands ecosystems, and their birds, mammals and reptiles inhabitants.

**Sat 28 August (9am to 3pm)**

Speakers: Andrew Claridge, Jenny Bounds, Geoff Robertson and Rainer Rehwinkel. Lunch provided. Cost \$10. See details on cover page.

density cover may exceed the limits just mentioned, and secondary grassland, where trees have been removed but the ground layer remains largely intact.

Second, the *Strategy* defines 'grassy woodlands' as woodlands in which 'the next tallest vegetation stratum with a projected foliage cover more than ten percent is dominated by grasses' (Page 3).

Third, it places temperate woodlands into a regional context (map Page 12) by showing the pre-European distribution of "temperate woodlands dominated by Yellow Box, Blakely's Red Gum and White Box in South-eastern Australia" subdivided between Yellow/Box Red Gum community and White Box community. The latter may contain areas dominated by Yellow Box and Blakely's Red Gum. This discussion would seem to align three important listings. These are the Box Woodland listing (NSW Threatened ecological community) and its two sub-components: White Box Woodland, not present in the ACT (listed by the Commonwealth as a

So contributors we shall be following the master's advice from the next edition.

hi Wal A short time ago I noticed that David Eddy is now spelling the common names of plants with lower case letters. He told me that you have let him know that this is now the correct way of doing things. We would like to put something about this in the next FOG newsletter, and I was wondering if there are a couple of paragraphs somewhere that we could use for this purpose? Hope you can help - best regards, Margaret

Morning Margaret,  
Good to hear from you. I do enjoy the e-mails telling me what FOG is doing from time to time, even though there is no chance of me being in the right place at the right time to be part of your activities.

The convention is to use lower case for the common names of plants except when the plant has a proper noun in its name. Therefore we use eucalypts but Mitchell grass and Queensland blue grass. Not everyone agrees with this convention but I have used it for many years. One of the reasons for this approach is to distinguish between common and scientific names when they are the same. For instance, if you are referring to phalaris as a common name, lower case is used but if you use it as the name of the genus, then it is written *Phalaris*. Once you get the hang of the system it is very simple and logical, particularly when writing for a range of different audiences. For instance, if you are writing for a mixed audience, you might say:

"One of the commonly sown pasture grasses that is causing concern as an environmental weed on the Southern Tablelands is *phalaris* (*Phalaris aquatica*). Seven species of *Phalaris* have been introduced into NSW, one of which (paradoxa grass - *Phalaris paradoxa*), is a weed of cropping land and pastures in the north west in Mitchell grass country. The other species do not appear to have much weed potential in this state."

I first came across this convention from the American Society for Range Management in the 1960s and I thought it a good one. I don't think it has become an issue much in Australia although I use it when writing, and editing material for *The Rangeland Journal*. Prompted by your e-mail, I looked up the section

\$31.2m, down \$2.1m on 2003-04. It represents about one per cent of the total ACT budget.

The Council welcomes a number of biodiversity initiatives:

- Threatened species recovery research (\$0.140m over four years)
  - A second Northern Corroboree Frog captive habitat facility at Tidbinbilla
  - Allocating half a million for post-graduate scholarships in threatened species research
  - Announcement of new nature reserves for Natural Temperate Grasslands.
- There is a need for research to find out why



*A field of everlasting daisies and Gentian as seen at Gentian Grassland in Wadbilliga NP 24 April. Story next page.*

on botanical nomenclature in the 3<sup>rd</sup> Edition of *Grasses of NSW* and found that we have them mixed up with lower case in the second paragraph but capitalised in the section under 'Common names'!!! However, we do use the convention in the 2<sup>nd</sup> edition of *Pasture Plants of the Slopes and Tablelands*.

I'm happy for you to use any or all of this e-mail in the FOG Newsletter, as you think fit. I hope this helps. Cheers, Wal

**ACT budget - where is the vision?**  
Trish Harrup

*This is an extract from an article in Sustainable Times. Trish is the Director of the Conservation Council for South East Region and Canberra.*

The Conservation Council greeted the 2004-05 ACT Budget with mixed feelings. This budget contains a number of positive environmental initiatives but on the whole it will not bring about the changes required to make Canberra sustainable. Yet again the budget tries to spread environmental spending too thinly when we need to spend more money in this important area. The total environment budget for 2004-05 is

threatened bird species continue to decline, even in our largest woodland reserves, and what remedies or recovery actions are possible to improve their condition. The funded research allocated is a good start in that direction. Overall, however, the funding for threatened species and natural ecosystems is disappointing, especially when the government can commit \$10m for an arboretum of exotic tree species, which will do nothing for local biodiversity.

**Airport Environment Strategy**  
Groundcover

On 23 APRIL Canberra International Airport released its 2004 Preliminary Draft Environment Strategy with comments required by 22 July.

As long-time readers will know, the Airport is home to an area of natural temperate grassland and threatened species, Grassland Earless Dragon and Golden Sun Moth. It is a little sad to read one boast that "the landscape development has transformed the South West precinct from its former 'Treeless Plain' status to its current parkland setting." Other issues covered are hazardous products, indigenous heritage, airport noise, soil pollution, waste management and community involvement.

The key issue for FOG is how intent is the airport in maintaining areas of natural temperate grasslands and habitat for endangered grassland species. To date, the record has not been particularly proactive and the airport has not yet signed an MOU with Environment ACT. FOG has been disappointed that the airport has not had a display for example on the Grassland Earless Dragon (GED) - it has the opportunity to promote some biodiversity issues.

The *Preliminary Draft* is a very comprehensive document, however, there is some very disturbing information presented. The map on page 21 divides the grassland into very high, high, medium, low and very low quality. Combined, the first four categories show extensive areas of natural grassland. On page 22, a map shows the bottom three categories dropping out leaving a very fragmented grassland map, with the comment on page 23 that "in general, the aim at the airport will be to protect areas of high to very high diversity grassland from development as far as possible."

Some interesting information is included on the GED. As readers will know a number of GEDs were removed in July 2001. The *Preliminary Draft* sees this as

a useful precedent where GED habitat is needed for airport development.

#### **New Commissioner for Environment** *Geoff Robertson*

Following the retirement of Dr Joe Baker as Commissioner for the Environment, the ACT government has announced that Dr Rosemary Purdie will take his place.

Rosemary is well qualified for the position through the combination of an academic and professional career, and community work all associated with the environment. Rosemary is currently head of the ACT Fauna and Flora Committee.

She will have big shoes to fill as Joe has set an outstanding example as the initial Commissioner, a position he held for ten years. Joe will be remembered as a fearless ombudsman for the environment and an excellent author of many State of the Environment (SoE) Reports.

I reviewed Joe's most recent ACT SoE in the latest edition of *Sustainable Times* (May 2004). It is a comprehensive and high quality document with spot-on insights and excellent information.

FOG wishes both Rosemary and Joe the very best in their new challenges.

#### **Small equipment grant**

FOG was successful in its second attempt to obtain a Department of Family and Community Services grant for small equipment. It applied for money to obtain a computer projector that can be used for power point displays.

#### **ACT Liberals support native grasses**

7 JUNE. FOG welcomes the ACT Liberal Opposition's pledge to provide \$500,000 to help develop a native grass industry, as part of a series of business development plans leading up to the October election.

Opposition leader Brendan Smyth says it would help diversify the ACT's economic base. "We know that some people are working on developing this, and we want to support this because one, it's good to have an additional industry in the region," he said. "It would be great for Canberra gardens when, instead of planting northern hemisphere-type grasses in the ACT, we can actually plant native grasses which will survive the extreme weather much better than existing lawns currently do."

## *Wadbilliga Weekend*

*Margaret Ning*

For the Anzac weekend (24-25 April), we planned to visit the swamps draining the Kydra ranges in Wadbilliga National Park (NP), followed by Packers and Nunnock Swamps in Tantawangalo, with an overnight camp in the new Nunnock Swamp camping area. It appears however that Geoff R is destined never to experience the delights of camping, as, once again, the weather intervened to force us indoors for the Saturday night. Nevertheless, the swamp visits proceeded smoothly and we were able to cover quite a few sites although the wind chill factor curtailed our activity levels somewhat.

We were on the edge of the Great Escarpment, the largest geomorphic feature in Australia, where climates vary from torrid to rainshadow over a few kilometres and the geology is a mosaic of granodiorites, Permian sandstones, older shales and Tertiary basalts. Climate change over the past million years has also treated this area to a range of alpine and sub-tropical experiences, so it is not surprising that there is a large number of microendemics and high diversity there.

At 10am on Saturday, 21 people in ten vehicles assembled on the Nimmitabel-Braidwood road near the Tuross River for our entry into Wadbilliga NP. Our first objective was to see the extent of the flowering of the gentians which a few of us had come across last Easter, and which we expected to be in full flower. Our route followed the South Kydra fire trail which was in pretty good condition and had been diverted along an

electric fence line erected a few years ago by NPWS to contain wild dogs.

We made a diversion at the very start, a short drive up the north Wadbilliga fire trail with Steve Douglas to see a population of *Acacia lucasii*, a rare and localised shrubby Acacia. We returned to the Kydra fire trail and crossed the Tuross River which was lined with another localised Acacia, *A. kybeanensis*.

At the first Gentian grassland, we were probably marginally early for the Gentians (*Chionogentias cunninghamii* subsp. *cunninghamii*), although these made a wonderful display over a hectare of Poa grassland. As a bonus we were also able to view *Xerochrysum palustre* which was even more prevalent at the site than the Gentians. The combination of yellow and white was a stunning sight two weeks earlier when Geoff R and I did a bit of a reconnaissance.

The site was even drier than the previous year but that doesn't seem to have had any detrimental effect on the flowering, although the overcast weather prevented the flowers from fully opening. A few remnant mounds of Sphagnum were hidden under *Leptospermum grandifolium* around the perimeter, but low peat rises under the grasses suggested they were once much more extensive. Geoff Hope explained that cattle grazing and a creek diversion had caused the grasses to become dominant. Ironically, there was not much else flowering on the

site (only a *Brachycome* and a *Craspedia* come to mind), although at different times of the year there would be heaps more to see - definitely a place for future visits! One negative at the site was the many patches of goat scats.

The next stop was at a hanging swamp (with a Permian sandstone base), which was still dominated by clumps of spongy *Sphagnum* and elevated several metres above the cleared area beyond it. This spring-fed bog area was fringed by large clumps of coral fern *Gleichenia dicarpa* (the only place we saw it all day), and also contained another fern *Blechnum penna-marina* and some *Phragmites australis*. A large-flowered *Geranium neglectum* with its deeply dissected leaves stood out as not much else was flowering there.

Continuing further, we stopped to investigate an unusual glaucous-foliaged, box type eucalypt, similar to broad leaved peppermint (*E. dives*) in some ways, which the Wednesday Walkers had come across at Mt Dowling Nature Reserve.

The map showed more swamp land five kilometres further south on Mowitts Swamp Creek. After a challenging descent to the creek we decided to make this our lunch spot. This swamp was dominated by tea tree (*Leptospermum* sp. and *Baeckea utilis*) growing through the mounds of *Sphagnum*, and was quite heavily grazed by wallabies, rabbits and occasional larger stock. Some of the *Sphagnum* was bleached, presumably by the drought. There were some very interesting geological (sandstone conglomerate) formations up the side of nearby Mt Kydra for those of us prepared to do mountain goat impressions to see them! There were a few waxberry shrubs in this area (*Gaultheria appressa*, one of our few native Ericaceae), and Alan Scrymgeour pointed out the many claw marks of different species of gliders on nearby trees.

Retracing our route back north along the fire trail, we made a few more brief stops. The first was at a hill totally covered by *Allocasuarina nana*. Warren couldn't resist the challenge and bush-bashed his way to the top followed by a more reluctant line of FOGGERS. The view was worth the climb: the escarpment of the main Kydra range to the east, covered in more *C. nana* heathland, the headwaters of the Tuross River to the south west, and greenhood orchid rosettes and a tiny glaucous *Lomandra* under our feet! Alan stayed behind but was able to show us a male funnel-web spider that he found under a log.

Next we paid a visit to another large swamp which had dried out, but was a wet heath of *Leptospermum* sp., *Baeckea utilis* and *Epacris paludosa* with clays over granite. Here we found *Sphagnum* and more gentian and everlastings which looked even more impressive as the sun had come out and it was later in the day. This swamp proved to connect with the swamp we first visited that morning.

The next site was a swampy area dominated by large bushes of Silver Banksia *Banksia marginata* (locally known as "subsp.

*Nimmitabel*") which was alive with Honeyeaters attracted to the supply of nectar. There were also the heaths *Epacris paludosa* and *Baeckea utilis*, the small fruited hakea, *Hakea microcarpa*, the eucalypts *Eucalyptus sieberi* and *E. cypellocarpa*, the cord rush *Baloskion* (*Restio*) *australe*, and the rope rush, *Empodisma minus*, but



Spreading out looking for Rough Eyebright (*Euphrasia scabra*) in Packer's swamp. Photo of flower by Jackie Miles.

no *Sphagnum*.

At that stage, the fading light defeated us and most of us headed for Garuwanga for our 'camping-replacement' evening, although three of our group braved the wind and cold to tent it.



The next morning the weather remained cold and windy and 15 of us lined up for our drive to Packers and Nunnock swamps in the Tanta-wangalo forests where we were met by Jackie Miles. These two swamps are quite different: Packers is a sedge/grass swamp with a permanent flowing creek and surrounded by manna gum forest while Nunnock is an anastomotic (multiple connected branches!) heath swamp with no well defined exit, islands of swamp gum and, in wetter years, ponds of open water.

Our first mission for the day was at Packers Swamp to see if we could add to the numbers of the very rare yellow flowered Eye-bright, *Euphrasia scabra* (*Scrophulariaceae*) found a year earlier by Jackie while working for NPWS. It is a late-flowering species and we were excited to discover many more plants than Jackie had previously seen and even gave up counting them. We virtually took turns locating new little clusters of the *Euphrasia* which appeared to be

having a good year.

Other species in flower included several daisies (*Brachycome* sp., *Craspedia* sp., *Helichrysum rutidolepis*, *Leptorhynchus squamatus*, *Podolepis hieracioides*, *Senecio laetus* subsp. *lan- ceolatus* and *S. linearifolius*), the bluebell *Wahlenbergia cera-*

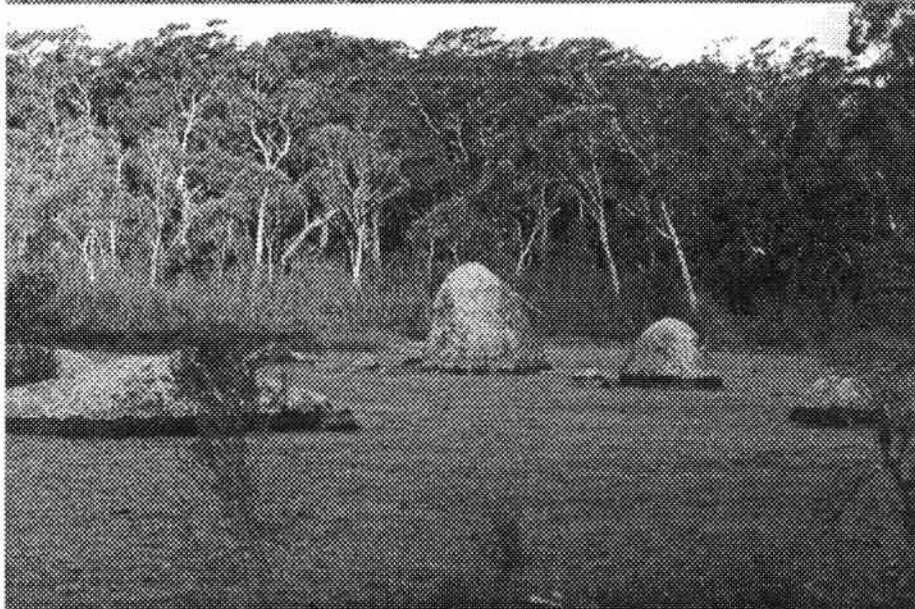


cea, the geraniums *Geranium neglectum* and *Geum urbanum* (the latter unflowering on the creek bank), the questionable native, Self-heal, *Prunella vulgaris* and a few colonies of the same gentian *Chionogentias cunninghamii* subsp. *cunninghamii* s with the everlasting *X. palustre*.

Other highlights included some very past it midge orchids, *Genoplesium* sp.; one specimen of tree fern (*Dicksonia*) sheltering in some *Carex appressa*; and for the second time in two months Pierre located the rarely seen fern *Botrychium australe*

above the ground rather than above water. Unfortunately vandals had decided to make a statement about what they thought of the park by making dozens of wheelies in the dirt in front of the platform which flooding will eventually repair.

A large expanse of the spike rush *Eleocharis sphacelata* had browned off to a russet colour in protest at the drought; the marshwort *Nymphoides* sp. just sat there on the dry mud with its leaves still quite green; and the milfoil, *Myriophyllum* sp. was still hanging on.



We took an extensive tour of the heathy part of the swamp and saw many interesting plants. *Sphagnum* mounds only bordered the swamp edges where water presumably drains into the swamp. We recorded the rope rush *Empodisma minus* and the cord rush *Baloskion australe* which did not seem to be doing it too tough at all. Flowering plants, either in the swamp or close to it, included the daisies, *Brachycome scapigera* and *Craspedia* sp., Swamp Phebalium, *Leionema phyllicifolium*, and the obligatory patches of the gentian *Chionogentias cunninghamii* subsp. *cunninghamii* and everlasting *X. palustre*.

Species seen at Nunnock that we had not seen elsewhere that weekend were Swamp Pennywort, *Centella asiatica*, as

well as the stands of *Eucalyptus ovata* scattered around the edges of the swamp with their pinkish bark looking very attractive.

Other highlights included quite a few plants of a (non-flowering) snow daisy *Celmisia* sp. (to eventually be named *pulchella* when described) with its tell-tale very narrow silvery leaves. We came across one pond with sentinel columns of granite and tell-tale water level marks at their base, which provided a great photo opportunity. At least the lack of water in the swamp made exploring much easier, although our walk was quite extensive and at times we needed the walkie talkies both to communicate amongst ourselves and to keep tabs on everyone so no-one got lost. Unfortunately the prints and scats of deer in many parts of the swamp

suggested there was a large population of this pest grazing in the swamp.

Once again, I was overwhelmed by the amount of professional expertise amongst our participants. Many thanks to Roger Farrow and Jackie Miles for their leadership; to Geoff Hope for his many insights into the swamps and surrounding geology; to Steve Douglas for help with plant ID on many occasions when we were stumped; and to Alan Scrymgeour for his contribution on the naturalistic side of things. Additional thanks to Roger, Geoff H. and Jackie for their editing help with this write-up, which makes me sound much more knowledgeable than I am, or implies that I took much better notes than I did!!!!

Top: on the margins of a swamp in Wadbilliga NP.  
Bottom: part of Nunnock Swamp, totally dry.

with a large sporulating frond. Geoff R. was in his element here, monopod in phallic pose and ready to take pictures of all the new species of grassland plants.

On to Nunnock Swamp for lunch in horizontal drizzle at the new but still unfinished campground (photo on cover page). We walked into the main swamp to find it totally dried out due to the prolonged drought. Last year this part was covered in about 10 cm of water but in wetter seasons that part would normally have been covered with about 25 cm of water, so the newly erected viewing platform stood incongruously a metre



## ACT Threatened Species Update

Groundcover Reporter

Friends of Grasslands recently received a copy of the Flora and Fauna Committee Annual Report for the year ended January 2004 which provides an update on threatened species in the ACT. The committee advises the ACT Environment Minister on declaration of species as endangered or vulnerable, declaration of ecological communities as endangered, and declaration of threatening processes. Once species or communities are declared, the Conservator of Flora and Fauna is obliged to prepare an action plan. The committee is closely involved in the preparation of such action plans - most have been described in the *Friends of Grasslands Newsletter* over the years. The report makes interesting reading and the following are some highlights.

The ACT now has fifteen declared endangered species, twelve declared vulnerable species and two declared endangered ecological communities. During the period it received twelve nominations which it did not recommend for listing. It has created two "working categories" which it will monitor - a "rare species" category and an "insufficiently known species" category. No threatening process has been listed.

During the year, the Northern Corroboree Frog changed status from vulnerable to endangered as "monitoring data suggested an extreme threat of extinction for subalpine populations." Not mentioned in the report is the interesting work being undertaken by Environment ACT at Tidbinbilla. In this project Northern Corroboree Frogs' eggs are being removed from the wild and the plan is to re-release young and adult frogs - Rob Jansen gave a fascinating talk on this subject to the ACT Herpetological Association at its April meeting.

Three new species were declared as vulnerable, the Spotted-tailed Quoll, the Varied Sitella, and the White-winged Triller. The author understands that an important population of Varied Sitella is found on the proposed route of the Gungahlin Drive Extension (GDE) - but the declaration of the species has not led to a rethink of the GDE.

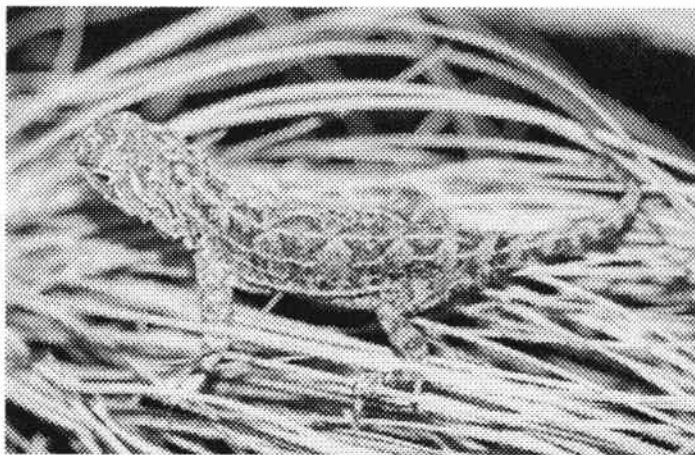
Four species were placed in the "rare species" working category (this provides a watching brief). These include Powerful Owl, White-bellied Sea-eagle, Masked Owl, and Large Bent-wing Bat. Four species were placed in the "insufficiently known species" category - Diamond Firetail, Flame Robin, Dusky Woodswallow, and Crested Shrike-tit. Nominations considered but not recommended for declaration or inclusion in working categories, include Square-tail Kite, Whistling Kite, Jacky Winter, Eastern Falsistrelle, Southern Myotis, Yellow-bellied Sheath-tail Bat, and Scarlet Robin.

Nine action plans were reviewed during the year and comments on these are of some interest.

- Natural temperate grasslands (AP1) - concerns were that no Memorandum of Understanding is yet in place with Canberra Airport about significant grassland areas (and habitat for Grassland Earless Dragon) that it manages, and development pressures in the Majura and Jerrabomberra Valleys. The committee recommended greater community education about grasslands.
- Striped Legless Lizard (AP2) - concerns were lack of protection for the species in Jerrabomberra and Lawson,

and possible extinction of population at Yarramundi site. (The population at Lawson is a new discovery.) No mention of the impact of the GDE on Kaleen population.

- Grassland Earless Dragon (AP3) - concerns were no reserves being created for this species, and the threat to it posed by developments in the Majura and Jerrabomberra Valleys. This has been somewhat addressed by the announcement of new grassland reserves in the ACT budget.
- Leek orchid (*Prasophyllum petilum*), also known as Tarengo Leek Orchid (AP4) - concern was inadequate management of the cemetery where population is located. Recommendations made about extending the cemetery and better control of exotic weeds.
- Subalpine herb (*Gentiana baeuerlenii*) (AP5) - noted that species has not been recorded since 1998, and recommended work to protect the site.
- Golden Sun Moth (AP7) - noted no monitoring had been undertaken for two years, the most important site at Lawson remains unprotected formally, the York Park population may come under development threat in future, new populations have been found in NSW, and the Commonwealth has declared the moth critically endangered.
- Button Wrinklewort (AP8) - noted that general improvement in recruitment of species following removal of grazing, and possibility of downgrading species from endangered to vulnerable.
- Small Purple Pea (AP9) - noted that Long Gully Road plant cannot be found, but Mount Taylor population has re-sprouted after fire. Mention of possible reintroduction of species near Long Gully site. No mention made of the discovery of new plants in Aranda.
- Perunga Grasshopper (AP21) - noted no monitoring program is in place, due to difficulties in detecting species, and the importance of managing grassland as habitat.



Grassland Earless Dragon, a threatened grassland species. Photo taken at the ACT Herpetological Display, ANBG, January 2004.

## Native Grasses ID Field Day

Margaret Ning

The Monaro certainly let us know that winter was only around the corner as we assembled on Bibbenluke Common, Friday 30 April, to try to pick up some grass ID hints from the Master! The wind was blowing off the snow and people's hats periodically blew off as strong gusts hit us.

David Eddy was presenting the session as a Monaro Grassland Conservation Management Network (MGCMN) activity, and fifteen keen people were in attendance, including Steve Whan the local NSW MP who is on the mailing list for David's MGCMN newsletter. David had prepared some attractive laminated specimens of eight of the main grass genera found on the Monaro, and he used these to familiarise us with them. He also described and discussed a number of other species before we started to wander around the Common to practise on the real thing.

It was just as well David had prepared the laminated specimens however, as there were not many grasses left intact on the Common. The Common is (lightly) grazed all year around, but the years of drought have taken their toll and there were not many seed-heads still standing. Apparently there is currently discussion as to whether the cattle should be taken off as long as the drought continues. Kangaroo Grass (*Themeda australis*) is the dominant grass on part of the Common and it was still very apparent. David wanted to illustrate the main identifying features of the vegetative and flowering parts of all the local grass species, and, one way or another, he managed to locate every species that he had expected to see with the exception of Redleg Grass (*Bothriochloa macra*). Weeping Grass (*Microstachya stipoides*) was also absent but it normally grows in shadier habitat.

Although we occasionally digressed on to forbs, the grasses remained our main focus and we managed to find Kangaroo Grass (*Themeda australis*), Wallaby Grasses (*Austrodanthonia* spp.), Speargrasses (*Austrostipa* spp.), Snowgrasses (*Poa* spp), Wheatgrass (*Elymus scaber*), Plumegrass (*Dichelachne* sp.), Hairy Panic (*Panicum effusum*), a native Lovegrass species (*Eragrostis* sp.), and Nineawn Grass (*Enneapogon nigricans*). After a while we moved slightly further afield to the Bibbenluke Cemetery

where David hoped to locate some plants of Wild Sorghum (*Sorghum leiocladum*) which is not widely found on the Monaro, especially in areas grazed by livestock. A few plants were found and their identifying features were duly examined and discussed.

Here are a few background and diagnostic notes from the day – many thanks to Jane O'Neill for providing most of them.

### Kangaroo Grass

- reasonably large tussock, warm season growing, grows in grasslands and woodlands
- straight leaf up to 20cm (or more) long, generally strong longitudinal fold, some maroon colouring in warm months; changes from green to orange/brown colour with desiccation or frosting

### Red Grass

- medium sized tufted plants, warm season growing
- leaves similar to *Themeda*, especially when plants are grazed, mostly hairless, up to 12cms – more curved or curly than Kangaroo grass and not folded
- after seed-set only the red-orange stems remain, no glumes remain on dead stalk

### Snowgrasses

- many species on the Monaro in different communities and habitats
- small to large tussocky grasses with noticeable panicles
- small glumes, 1-3mm, often purple spikelets
- leaves narrow, usually rolled and reed-like in appearance

### Speargrasses

- leaf diagnostic – flatten leaf out, upper surface strongly and finely ribbed (also for plume grasses)
- glumes 10-15mm long
- two common species on the Monaro (several less common species);
  - Corkscrew (*Austrostipa scabra*) – small tuft of fine leaves up to 20cms, fine awn bends into a corkscrew shape
  - Tall Speargrass (*A. bigeniculata*) – wider leaves up to 30cms, more foliage, heavier awn with two distinct bends

### Wallaby grasses

- smaller tussocks, leaves are the hairiest of the common Monaro native grasses
- more than 12 species on the Monaro, wide variation among species
- the glumes are the most obvious part of the seed head, which emerges green, then matures to fawn/straw colour, becoming grey when older, ~15 to 120mm long
- foliage – pick leaf, open it, and look for a pair of parallel grooves down the middle; dense cluster of fine hairs at the leaf's junction with the stem

### Wheatgrass

- almost ubiquitous in grasslands and woodlands but rarely constitutes more than a few percent of biomass
- apparently a short lived perennial species – only a few years
- high quality forage growing year-round
- usually only few leaves (c. 8), up to 20cms, generally longitudinally twisted and flag leaf is perpendicular to stem, distinct auricles at the leaf junctions (grasp flowering stalk), very short, dense hairs (velvety).
- long awns curl at maturity (similar to cereals)

### Plume grasses

- generally a background species in grasslands, usually amongst *Themeda*
- dense, fluffy, cigar-like panicle
- leaf has fine longitudinal ribbing (like Speargrasses), up to 30cms

### Weeping Grass

- native pasture species, also woodland species
- tussocky, spreading by short rhizomes, long drooping stems, seeds the size of rice grains
- leaves in tufts 5-10cm tall; up to 6mm wide, pointy but pinched 5-10mm behind tip, leaf leaves stem at full width rather than gradually spreading
- grazing and mowing tolerant, highly shade and acid, tolerant, likes higher fertility and moisture

### Hairy Panic

- larger tufted plant, warm season growing
- leaves up to 12cms, long widely-spaced hairs along leaf margins, strongly curled and bone coloured when frosted
- very small florets, one per spikelet, whole seed head beaks off in wind
- spikelets change from green to purply red with maturity

### Nineawn Grass

- small densely tufted warm season grower
- short glumes, compact seed heads similar to Wallaby Grasses but usually greyish at maturity
- leaves very finely velvety, up to 8cms long

### Wild Sorghum

- foliage very similar to *Themeda* but a larger, more drooping plant, warm season growing
- leaves may curl when frosted, fold in leaf more rounded than *Themeda*, midrib translucent when held up to the light
- generally found on least disturbed sites
- ballerina skirt around nodes on stem, seed head narrow elongated orange to russet coloured

### Umbrella Grass

- low growing tufted grass with stiff blue-green leaves
- distinctly digitate panicle (6-9 'fingered'), seed heads come off when mature
- leaves relatively sparse, up to 10cms, hairless, partly folded

## An Out-of-area Experience

### STIPA visits Clancy of the Overflow Country

Margaret Ning

I ventured into unknown territory on 21 April when I travelled to Wellington (NSW!) to join an almost full bus-load making a day visit to a historic property near Nymagee which is close to the geographical centre of New South Wales. I knew I was out-of-area when I left the Yellow Box and Blakely's Red Gum behind, to be replaced by other Box species and the occasional Ironbark. I became determined to use the trip to finally get a grip on the ID of these other eucalypts. There were only very occasional patches of the more familiar Kangaroo Grass and it was more likely to be on roadside verges rather than in adjacent paddocks.

In emerging daylight on 22 April, we made a prompt departure (6.08am!) from Wellington with the promise of breakfast at the Trangie Bakery in a couple of hours, after a couple more pick-ups in Dubbo and Narromine. I settled in and watched the countryside go by – like the Monaro it was very dry and I saw many dry dams. We passed examples of different management practices, the worst of which included pastures chewed to the ground, and burnt stubble which elicited dismayed comments from some of the bus passengers. On a couple of occasions the fire had leapt into the paddock trees.

My Stipa flier promised another 'fantastic Stipa bus trip' to see 'Clancy of the Overflow' Country featuring the Overflow Station buildings, its history, woody weed invasion, pasture management, animal husbandry and cropping program. Our destination was Peter Weston's property of 'Yalgo', and on the bus we were given a couple of articles which gave us really comprehensive background to Peter's story.

The property is 100 km south west of Nyngan and is managed by Peter and his three sons. As I got off the bus at our destina-

tion, I thought to myself 'this is what I save my flextime for', as I was already feeling very at home with the company, and the weather was absolutely glorious. My first impression was one of open areas of grassland with intermittent trees, and I could see Bimble Box (*Eucalyptus populnea*), Red Box (*E. intertexta*) and Wilga (*Geijera parviflora*). This was in immediate contrast to the areas of thick Cypress Pine (*Callitris glaucophylla*) regeneration directly across the road from Peter's property. A few left-over locusts from the recent plague were also apparent.

Peter gave us a history of his property. In its heyday as the Overflow Station, it totalled 664,000 acres which ran up to 225,000 sheep, and had up to 74 employees - there was even an employee to manage the dogs! The Overflow area becomes three creeks after a good rain, and floods Nyngan via the Bogan River. The area is fairly high at around 1000 feet above sea level.

Yalgo is an aggregation of eight former Overflow properties totalling 64,000 acres. It is now running approximately 1.5 sheep per hectare and the Westons have also moved into cattle as Peter sees no future in Merinos. The property is freehold title now and Peter seems very happy that he went against advice to just leave it as 'cheap rent' when he converted the tenure from leasehold to freehold. Each paddock on the property contains a 15,000 yard dam and levels are currently down to about 30'. Peter told us how he had bought the property for around \$50 an acre, and recent sales in the area have been around the \$286 mark for country not as good as his. Peter suggested that it was economic suicide for people to pay these prices.



The original  
Overflow  
homestead.  
Photo by  
Darryl Cluff



We were shown over the old Overflow homestead and stables which both epitomised the old building methods. The homestead was built about 120 years ago, of Cypress Pine log-cabin construction with very classy wood lining inside, as well as 10 foot ceilings, elaborate old metal fittings in the bathroom, and strengthened footings for the full-sized billiard table it used to contain. It was very cool inside, no doubt aided by the reasonably small windows and extensive verandahs along the outside. We also saw the old shearing shed which contained 48 stands and was built in the 1880s, also out of Cypress Pine, of course.

Peter showed us his 'new' 12 stand shearing shed which he basically built himself in the '60s using 1000 Cypress Pines in the foundations. He did this over the period of a year during which time he still managed to get the shearing done! The shed contained evidence of Peter's inventive mind and of his ability to put those ideas into practice. He says he has achieved so much in his life because he has only ever worked - including as a child, when he never played sport. His latest project is the "Westonfence" fencing concept - a speedily erected permanent fence which can be electrified, but remains extremely effective even without power. It is designed to keep farm animals in the correct paddocks as well as to stop plagues of kangaroos invading the property, especially during dry periods.

Peter says that various factors have promoted extensive Cypress Pine regrowth in the area which had originally been described in a 1862 surveyor's report as 'excellent grazing land with areas of timber as well as an abundance of saltbush'. These factors included fire in the 1880s, overgrazing and rabbit plagues. Peter's current management strategy is to first knock down the Cypress Pine regrowth (he's been told that his Cypress Pine is too pithy for milling), then rake it and sow oats, and later he plants a mixture of lucerne, medics and some exotic perennial grasses. That is, Peter uses ploughing as a management tool to control his woody weeds. He also uses goats as follow up to the initial bulldozing, but he doesn't allow them 'to desertify' the property! Peter regards kangaroos as worse than goats and rabbits and says there are a lot more of them these days as "water has brought the roos". He says sheep are worse than goats because the sheep are more selective.

In the course of the day, Peter touched on many environmental issues - fire, erosion, salinity, biodiversity, and 'edge effects' to name a few. Wal Whalley's name was mentioned, as was Christine Jones for whom Peter also obviously had a high regard. He sees merit in her suggestion that perennial grasses will control salinity better than a tree canopy does - but suggested that bureaucrats don't like her findings even though they all make sense.

The native grass we saw a lot of was Curly Windmill Grass (*Enteropogon acicularis*). Other native grasses on the property are Barbed Wire Grass (*Cymbopogon refractus*), Kangaroo Grass (*Themeda australis*), Windmill Grass (*Chloris truncata*), Box Grass (*Papalidium constrictum*), Cotton Panic (*Digitaria brownii*), Bottlewashers species (*Enneapogon* sp.), Mulga Mitchell (*Thyridolepis mitcheliana*) and Bandicoot Grass (*Monachather paradoxa*). Peter said he had only a little Kangaroo Grass, but questioned those who said it was of no value by asking why it had basically gone in many places? Although I thought I heard Peter say he does not regard native grasses as particularly good for production, the notes I had read earlier in the day about the property said that "the Westons are keenly watching the re-emergence of high quality na-

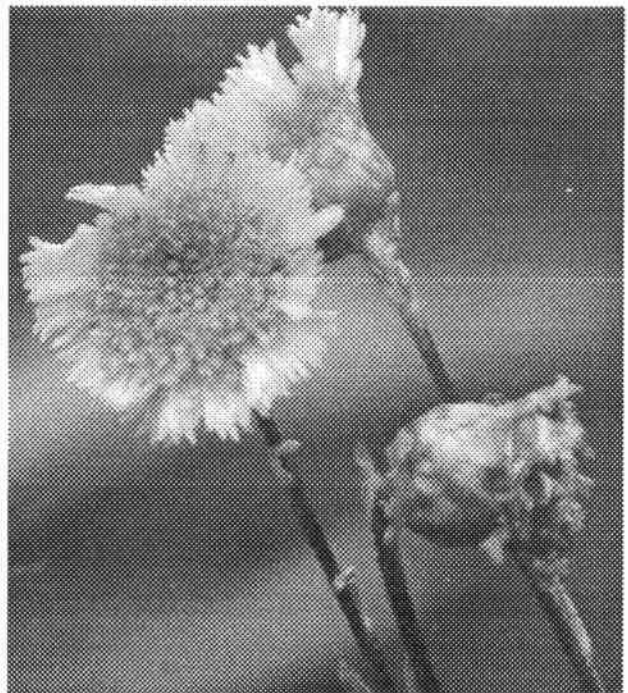
tive grasses, notably Cotton Panic... and Box Grass.... These grasses are persisting through judicious rotational grazing and the Westons are hoping they can achieve long-term regeneration of wide areas of high-quality native pastures.... which will reduce their reliance on sown improved pastures..."<sup>1</sup> Peter has had an association with a couple of the authors of *The Plants of Western New South Wales* - indeed some photos of grasses and trees used in the book were taken on Peter's property - and it was very reassuring to know one could ask for the names of plants and be confident of getting an accurate ID. I was struggling, as even the Kurrajongs (*Brachychiton populneus*) grow differently out that way!

Peter has found a few sacred sites on the property, although he says there is not a lot of evidence of indigenous activity, and suggested the area was too far from water.

While I didn't initially identify with all of the programmed features of the trip (animal husbandry and cropping program come to mind here!), I have to say I thoroughly enjoyed every minute of the day. The property was superb and our host was very accommodating and a constant source of information. I met many people for the first time, not the least of whom was Jan who kindly sat next to me on the bus and tirelessly repeated the names of the trees and shrubs that passed by, helping me in my quest to expand my ID skills. By the time we got back to Wellington at 8pm that evening, so many more places were no longer just names on a map.

Well done Stipa, and many thanks to Peter for his hospitality and giving up his day to show us his property.

Website: [www.westonfence.com.au](http://www.westonfence.com.au)



Alpine Lettuce or Robust Copper-wire Daisy (*Podolepis robusta*), seen on the Wadbilliga trip.

<sup>1</sup> 'Top producers' are inspiration to all farmers, Australian Farm Journal, December 1996.

## Blue Devil - Pretty but Prickly

Michael Bedingfield



Blue Devil is a native plant with a striking blue colour and it looks rather like a thistle. But it belongs to a quite different family, namely to *Apiaceae* which includes carrots, parsley and the native carraway. The thistles are the only local species which are similar to it and this resemblance has been a bit of a handicap, in that sometimes it is mistaken as a pesty weed. However, once you are aware of its distinctive features it is quite easy to recognise. The plant is not well known, but the existence of the soccer club with the name Belconnen Blue Devils may help it gain a bit of publicity!

The Blue Devil is perennial and each spring new growth occurs from the dormant rootstock producing a rosette of spiky but soft, grass-green leaves. From this rosette come forth one or more branches on which the flowers and fruits later form, with the mature plant growing up to sixty centimetres tall.

Soon the leaves become tough and sharp to the touch, the leaves being

larger at the base and smaller on the branches. As the plant gets older both the branches and leaves take on a bright metallic blue-purple colour. The flowers also are a deep blue-purple. They are quite tiny and group together into globular clusters which are studded with many sharp spikes. These spikes are actually called "bracts" - and the flowers form in the angles between these sharp leaf-like structures.

Flowering time for the Blue Devil is in summer in the ACT area, and as the hot weather advances the seed sets and gradually the bright colours fade out of the plant. The mature fruits are small, ovoid in shape and about 4 mm long. When the plant is quite dry the upper stems separate from the underground root with the fruits remaining attached. It is now a dull grey-brown and quite light in weight, and the seeds are thus dispersed with the wind blown plant.

The Blue Devil grows in native grasslands and open woodlands on the tablelands. It also occurs on the coast, slopes and plains of New South Wales, and in all other states. But despite its widespread occurrence, there is some concern for it because it has declined locally, most likely because of land clearing and modification. Its future is also threatened in Tasmania and South Australia. The scientific name is *Eryngium ovinum*. It was formerly known as *Eryngium rostratum* which is a South American plant, but now it is generally regarded as a different species.

*Eryngium ovinum* is said to favour disturbed areas. But it cannot tolerate heavy grazing when it is young, perhaps because at that time the foliage is soft, less offensive and more edible. It is also said to respond well after fire and this was verified for me when I visited Barney's Hill last December. The vegetation on this hill was burnt to ashes in the fires of January 2003. After the good rains of the following spring there was a stunning display of these little Devils, which were much more numerous than in previous years and there was a bluish tinge across the side of the hill.

The framed drawing of a branch of the plant is shown at half natural size, with a flower head shown separately at normal size.

The Blue Devil - a prickly subject with a surprising colour!



*Eryngium ovinum*, Blue Devil

Michael Bedingfield, 2000

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***Friends of Grasslands Newsletter***

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

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

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

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

***How to join Friends of Grasslands***

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 or Roger Farrow. Contact details are given in the box above. We look forward to hearing from you.

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