News of Friends of Grasslands

Supporting native grassy ecosystems *January-February 2013*

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Program - take the diary out now

THURS 17 & 24 JAN, from 7.30 am – **Turallo Grassland monitoring**. Register with Rainer Rehwinkel at home rrehwink@bigpond.net.au.

SUN 3 FEB, 9.00 am – 4.00 pm **Scriveners Hut work party**. Register with jamie.pittock@fog.org.au.

TUES – WED 19 – 20 FEB, **K2C Myer Grasslands forum & workshop**. See p. 2 for details.

SUN 24 FEB, 9.00 am – 12.00 pm **Stirling Park work party**. Register with jamie.pittock@fog.org.au.

Photo: Rainer Rehwinkel and Sarah Sharp leading a FOG outing through Snow Gum Woodland at Rowes Lagoon (Geoff Robertson). See p. 7.

It's membership renewal time!

Membership renewals are due on 1 January 2013.

The annual fee is:

$50 organisations; $20 single person or family; or

$5 student, pensioner or other concession holder.

The form is on our website www.fog.org.au.

Please fill it out and return with payment, either by email to membership@fog.org.au, or by post (see below).

Payment options:

by electronic funds transfer to A/c 124770835, BSB 633 000 (**please** include your name in the reference/description); or

by cheque or money order, payable to Friends of Grasslands Inc., PO Box 987, Civic Square, ACT 2608.

Any queries, please contact (Mr) Kim Pullen, 0400 447 958 or membership@fog.org.au.

In this issue

Coming Events

Snakes Alive!

Thursday 17 – Sunday 20 January,

10.00 am – 4.00 pm Thursday and Friday, and
10.00 am – 6.00 pm Saturday and Sunday.

Australian National Botanic Gardens Crosbie Morrison Building

$2 child, $5 adult ($4 concession) (see p 12).

'phone 6250 9540 or e-info@actha.org.au.

Ginninderra Catchment Group Annual Trivia Night

Friday 15 February,

7.30 – 9.30 pm.

Belconnen Labor Club

Hosted by Tim the Yowie Man.

Tickets $25 per head, with 8 people per table.

To book, for more information, or any other queries, please contact 6278 3309 or visit our website www.ginninderralandcare.org.au.

The Valley Avenue wetland and grassland, Gungahlin

Sunday 17 February,

10.00 am – 12.00 pm.

Join Edwina Robinson, Urban Waterways Coordinator for the ACT Government on a tour of this newly constructed wetland and adjoining remnant grassland. It is bounded by Gundaroo Drive, Gungahlin Drive and The Valley Way.

Please check FOG e-Bulletin for further details.

K2C Grasslands Project - forum and workshops

Tuesday 19 & Wednesday 20 February

The K2C Myer Foundation Grasslands Project, encompassing four projects from Victoria, NSW and the ACT, will be hosting a two hour forum for grassland specialists and managers on the Tuesday. The forum will discuss grassland management issues and related projects. More specific site meetings and discussions will be held on the Wednesday. Venues and times will be advised. If you are interested, please contact John Fitz Gerald at john.fitzgerald@fog.org.au.

Friends of Grasslands Sales

FOG T-shirts

We still have white and camel T-shirts, in all sizes. We are ordering more small and medium, and, by popular demand, some green ones, as well as more camel. Note that the sizes are larger than normal, so I suggest you order a size smaller than you usually would. Let me know which colour you want. The price is $15, plus $5 postage.

We can also obtain long-sleeved Polo shirts. Because demand is expected to be low, we will order only those paid for in advance. The price is $25, which is cost price, plus $5 postage. Let me know which colour you want.

Grassy Ecosystems Management Kit

This was written some years ago, and although it is not necessarily out of date, we have decided to remainder our stock.

The price is $3 postage for the CD and/or workbook, or $16 for the kit ($6 to cover the cost of the ring binder + postage $10).

Grassland Flora

Still selling well, price remains at $20, postage varies with the number sold ($5 for one, $10 for two to seven, poa for larger orders. Large orders (>25) are $12 per book.

Payment

By cheque to 'Friends of Grasslands' or direct debit to BSB 633 000, Acc. 139 018 204. Please write in the description 'T shirt sale' or 'book sale'.

Please send orders to Sarah Sharp sarah.sharp@fog.org.au.

Grasslands on National Capital Authority Lands

Jamie Pittock

This spring saw a magnificent display of wildflowers at Stirling Park and Yarramundi Reach where FOG has been working and where the National Capital Authority (NCA) has reinstated controlled burning. At Stirling Park new populations of the endangered Button Wrinklewort have been located. FOG made a huge effort in 2012 to improve the conservation status of grassy ecosystems on NCA lands on the ground, with money and through advocacy.

On the ground, with money

FOG was grateful to received grants of $26,965 from the ACT NRM Council's *Weeds of National Significance* program (WONS) for conservation at key sites. The Button Wrinklewort habitat was greatly improved. Extensive Blackberry and Chilean Needle Grass infestations were significantly reduced and our volunteers can now maintain control over key areas of habitat. Small infestations of other weeds such as African Lovegrass have also been controlled.

FOG weed control work was at Stirling Park (52 ha; Yarralumla), including subsidiary sites at Scriveners Hut and Attunga Point, as well as at Yarramundi Reach (23 ha; Acton). These sites in central Canberra, managed by the NCA, are large remnants of White Box – Yellow Box – Blakely's Red Gum Grassy Woodland (Box – Gum Grassy Woodland) and Natural Temperate Grassland (NTG), listed in the ACT and nationally as endangered ecological communities. Stirling Park has the second largest population of the endangered daisy, Button Wrinklewort. Both sites are being overrun by Blackberry, Chilean Needle Grass and St John's Wort, and secondarily by Serrated Tussock and African Lovegrass.

Work at the Stirling Park Box – Gum Grassy Woodland focussed on restoring and linking prime Button Wrinklewort habitat. Work at the Yarramundi Reach NTG focussed on spraying Chilean Needle Grass exposed by a control burn in the central portion in winter 2012. Work done at these sites is detailed below and accords with NCA conservation management plans by Sharp (2009). Our volunteers also cut an estimated 1,014 m^3 of green woody weeds in 2012.

Spraying was planned using maps of Blackberry and African Lovegrass infestations prepared by FOG volunteers John Bruggeman and Naomi Cassilles-Southgate. Chilean Needle Grass in grasslands was visible on Google Earth images and too extensive to map. FOG monitoring includes photo points at both sites, GPS records of Blackberry and African Lovegrass infestations and transects at Yarramundi Reach and Stirling Park. Lessons from the weed control work in 2012 include the value of spraying after control burns when weeds are easier to see, using good quality contractors and having FOG volunteers work with the contractors to help them target their efforts (John Fitz Gerald in particular assisted with this).

Receipt of the WONS grants has leveraged considerable additional resources, as detailed below. FOG increased the number of its planned work parties from 8 to 12 and this generated matching voluntary labour. The increased tempo of work parties at Stirling Park has contributed to more Yarralumla residents volunteering for our weed control work. FOG volunteer hours doubled in 2012 to 1,083, compared to 2011. The NCA has supported FOG with additional weed control work scheduled in FY2013 of $20,000 and a grant to FOG of $4,210 in 2012 to support work parties with herbicides and equipment. Further, FOG now has the opportunity in collaboration with Greening Australia Capital Region to enrich diversity of herb species by further planting in depauperate locations at both Yarramundi Reach and Stirling Park chosen through an ACT Government supported program.

Under our agreement with the NCA, FOG has held over 30 work parties since 2009, contributing over 2,000 volunteer hours to conservation of these lands. In 2013 FOG expects to be supported again by the NCA to undertake another 10 work parties.

Through advocacy

FOG has also been advocating for Yarramundi Reach and Stirling Park to be designated for nature conservation, and for enhanced management by the Federal Government through meeting with the NCA and federal politicians and via publications in *The Canberra Times*. In October 2012 the NCA proposed

Grasslands on National Capital Authority Lands (cont.)

two draft amendments to the *National Capital Plan*. FOG welcomed Draft Amendment 80 which proposes to change the land use at Yarramundi Reach from 'National Capital Use' – a potential development zone – to 'Open Space'. This will assist the conservation of the NTG. Removal of the notation on the *National Capital Plan,* stating that the needs of the National Museum of Australia must be taken into account before a decision is made about the use of the site, is both timely and welcome. FOG is asking that this be replaced with a notation that the area rezoned 'Open Space' is to be managed primarily for natural and indigenous heritage conservation purposes, that only local indigenous species are to be planted on the site in future, and that management continue to require control burning.

Draft Amendment 78 covering Stirling Ridge (section 22) and Attunga Point (section 128) is more mixed. Securing much of Stirling Ridge by changing its land use from 'National Capital Use' to 'Open Space' is a most welcome proposal, but FOG does not support the proposed construction of five to six embassies at Stirling Park. While a large part of the land to be developed does not have significant ecological values, it is considered very likely that the long term impacts of this development (such as construction sprawl, weeds, fire control and recreational use) will spill over and degrade the high conservation value land immediately adjoining the proposed embassies. We urge the NCA to consider alternative ways of housing the greater number of diplomatic missions, as 25 were originally said to be required in the next 30 years. These options could include the use of existing, undeveloped blocks, incentives for missions to sub-divide their current blocks, and a strata title development tfor smaller missions along Constitution Avenue and in the Russell area.

FOG opposes allocation of Attunga Point as a possible future location for the Prime Minister's Residence. The fenced area at Attunga Point and the knoll immediately south of Alexandrina Drive have high numbers of Button Wrinklewort and the vegetation is the critically endangered Box-Gum Grassy Woodland in very good condition. The Residence and mooted partial realignment of Alexandrina Drive could not proceed without destroying part of the daisy population and of the woodland, and further segmenting the remaining Button Wrinklewort population. FOG believes that, because a new Prime Minister's Residence could be built within Lodge Park, it is not necessary to retain either Attunga Point or Stirling Park as alternative options. We also consider that there may be an opportunity to develop such a residence within the current grounds of Government House.

However the NCA does plan to remove (at FOG's request) the 'National Capital Use' designation of an area intended to extend Empire Circuit, passing through part of Stirling Ridge and the former Westlake community to connect with Alexandrina Drive. Road development would destroy a portion of and further segment the remaining Button Wrinklewort population and the Box-Gum Grassy Woodland. The eastern end of Stirling Park, Section 128, is still zoned 'National Capital Use'. The conservation values of this land are similar to those of Stirling Ridge in that they contain part of the same Button Wrinklewort population and Box – Gum Grassy Woodland. So FOG is asking that this land also be rezoned 'Open Space'.

The land zoned 'Parliamentary Purposes', between State and Capital Circles (western side of Capital Hill), contains another Button Wrinklewort population and Box – Gum Grassy Woodland. It should also be rezoned 'Open Space' and be annotated to acknowledge that these lands are to be managed primarily for natural and indigenous heritage conservation, and that this may continue to require burning for ecological and fire fuel management. We are calling for these lands to be given a suitable formal title on the Plan, for example, 'Nature Park'.

In November 2012, a Parliamentary National Capital and External Territories Committee hearing saw Gai Brodtmann MHR initiate an inquiry into management of the diplomatic estates in Canberra to respond to the changing needs of our city and our diplomatic community. This should ascertain how many new embassy sites are required. The NCA has therefore said it will not make a final decision on DA78 until the inquiry has concluded.

Submissions to the enquiry are sought by 1 February 2013. Terms of reference and advice are available from www.aph.gov.au/ncet, 'phone 02 6277 4355 or email jscncet@aph.gov.au.

News Roundup

Visit to *Wooleen* WA July 2012

Janet Russell

JULY 2012 *Wooleen* is a pastoral property about 40 km south-east of Murchison Roadhouse and has frontage to the Murchison River. The Shire of Murchison consists of 26 pastoral properties and Aboriginal and other reserves. It has no gazetted town within its boundaries. The property name *Wooleen* is an Aboriginal place name.

The names of David Pollock and Frances Jones will be familiar to those who have seen the two episodes of Australian Story outlining their vision for this property and the progress they are making. David studied Environmental Conservation at university and is applying what he has learned to this property of half a million acres of rangelands. The WA Department of WA defines rangelands as

> 'areas of land considered to receive insufficient rainfall to support the economic production of broadacre cereal crops on an annual basis'. Rangelands typically contain shrubs, grasses, spinifex and annual and perennial wildflowers.

A high proportion of rangeland plants are members of the chenopod family such as Maireana and Atriplex species which are often the most nutritious and palatable shrubs for stock. The grass cover is often sparse on the properties but the roadsides are lined with Kerosene Grass *Aristida contorta*. David is hoping for more natural increase of this grass as well as Feather Speargrass *Austrostipa elegantissima* both of which occur on their property.

Andy and I with two other couples did a tour of the farm with David. He spoke of the problem with goats and he has found since stocking only with cattle, the dingos now take the goat kids rather than the lambs and this has led to the reduction of goats and contributed to the success of the revegetation of the land.

He took us to various monitoring markers to see how the land has changed since they started their work. David's view is that they don't repair the landscape, rather that the landscape repairs itself. It must take enormous patience to let this process take its course and resist the temptation to re-stock too soon. In the meantime income from their Eco-tourism venture and a minimal stocking rate of cattle is supporting them. We were interested to see how much vegetation there was in places that once were bare ground. On our travels we have become used to seeing only chenopods and red earth and no or very little grass cover. The increase in shrub cover that has occurred captures the earth that blows around in dust storms helping to prevent further erosion. This is where the process of regeneration starts.

Wooleen also has Mulga shrublands. One of the most interesting sites from our perspective was the 'Mulga Grassland'. Mulga typically has no grassy understorey, but mostly bare ground with some scattered shrubs. Silky Browntop *Eulalia aurea* is flourishing here. Initially there were no more than a few plants and the growth has been exponential since this area was destocked six years ago. David also showed us some Cotton Panic Grass *Digitaria brownii* which had become established under a fallen mulga which had protected it from grazing. This grass had not been seen on the property before, and is not mentioned in *Arid Shrubland Plants of Western Australia*, by Mitchell & Wilcox (1988). This is the local plant bible and is unfortunately out of print. David says he would like to leave this area for 15 years before restocking. Mulga Grassland has been proposed as a new endangered ecosystem.

The introduced Buffel Grass *Cenchrus ciliaris* is prevalent in WA and has reduced many areas to a monoculture. David believes a certain amount of Buffel Grass can be advantageous if managed well. He considers it a nursery plant under which more nutritious native plants can establish and be protected from grazing. This will assist the growth of a more biodiverse landscape. Rat's Tail Couch *Sporobolus mitchellii* is now increasing on the floodplain (Lake Wooleen) which six years ago was completely bare. This grass is now moving into the Murchison River and is starting to move out to some of the drier areas.

David and Frances' story is an inspiration. A visit to the property only increases the respect you feel for them as you see close-up the challenge of what they are trying to achieve.

News Roundup (cont.)

Old Cooma Common on a Sunny Day

Geoff Robertson

FRI-SAT NOV 2-3 We visited Old Cooma Common Grassland Reserve (OCCGR) as part of the Australian Network for Plant Conservation field trip to Monaro grasslands. Other sites visited were Kuma Nature Reserve and Scottsdale. David Eddy spoke to the 40 or so people about FOG's efforts at OCCGR to manage weeds over the years. He explained the progress made against certain categories of weeds and future plans to graze the site to control biomass and manage weeds.

As I wandered around, I was struck by how uplifting it is to visit this place when showing it to others, and naming and describing the plants and FOG's efforts over the years. When one goes there for a working bee, the weeds seem overwhelming and one is left with a sense of losing the battle.

The next day (Saturday 3 Nov) was a working bee but this time I was less impressed by weed victories and more amazed by the high tech battle that FOG undertook on that day. Margaret Ning, the mainstay of the weeding effort over many years, had arranged to borrow Cooma-Monaro Shire Council's spray trailer. Council also donated some herbicide to supplement FOG's, and so the troops engaged. The temperature and light were also just perfect for weeding.

From the trailer, with its 400 l of herbicide, Andrew, Warren and Margaret used the 20 m hoses. Jim took his bike to spot and boom spray and used 150 l of herbicide. Sandra, Leon, Trish and I donned backpacks and between us used 16 backpacks of spray. John did weed chipping, and Sandra and I also chipped when not spraying (we shared a backpack). Overall about 600 l of weedicide were used.

Over the years, we have carefully spot sprayed and chipped (including seed removal) in the high quality areas with their rich collection of forbs, and have boom sprayed the very weedy areas. The effectiveness of boom spraying, when managed by someone as experienced as Jim, is that the boom can be switched off and on so that only dense patches are boomed, and isolated plants are spot sprayed.

As I wandered around the good quality grassland patches, first chipping and later spot spraying, it was nice to observe the many forbs in flower. A Monaro Golden Daisy was very showy, all one plant of it, leading the rest into the season! We all agreed it seems to be increasing in number and extent.

I also thought about the weed losers and winners over the years. The losers have been woody weeds, plus African Love Grass, St John's Wort and thistles. None has been conquered, but generally they have been severely set back. However, without vigilance, they will reemerge quickly.

One weed that has been increasing its numbers drastically at OCCGR and throughout the Monaro, is Great Mullein *Verbascum thapsus*, which goes by many other fascinating common names such as Aaron's Rod and Lamb's Ear. It is a declared weed in Victoria and WA. It requires well-drained, low fertility, and high pH soils, where rainfall is over 500 mm and summers are moderate. It is avoided by stock, and disappears when fertility is improved. Its numerous seeds produce new plants mostly within a metre or so of the parent.

Another nasty is Viper's Bugloss *Echium vulgare,* a declared weed of pastures in ACT, NSW, Victoria, WA and Tasmania. It prefers drier, lighter soils, and is avoided by cattle and horses but eaten by sheep at least when young. It is less palatable than its near relative Paterson's Curse.

As I searched for information on weeds, I came across the Australian Government site*, Weeds in Australia* (www.environment.gov.au/biodiversity/invasive/weeds/index.html). It has a wealth of information and I highly recommend it.

Some of Geoff's photographs follow (p. 7).

News Roundup (cont.)

Photos from the Old Cooma Common Grassland Reserve November working bee, by Geoff Robertson:
Margaret and Roger from Cooma-Monaro Shire Council at the Council's trailer (top left);
Andrew spot spraying (lower left); and
Andrew mixing spray (above).

Temperate Grasslands Conservation Initiative (TGCI)

The TGCI aims to foster global communications and cooperation to enable the increased conservation and protection of indigenous temperate grasslands.

It is an undertaking of the Grasslands Specialist Group, within the World Commission on Protected Areas of the International Union for the Conservation of Nature.

TGCI documents are now available on Google Drive. To indicate your desire to access TCGI publications and information, please contact Naomi Doak at nomes06@gmail.com, as your first access requires permission.

News Roundup (cont.)

Rowes Lagoon

Sarah Sharp

SUN NOV 11 Robert and Elaine Hunt lease Rowes Lagoon, 7 km north of Collector, and the woodland to its west. They manage it for conservation and their management plan includes ecological burns, weed control, and possibly grazing in the woodland if the biomass gets too dense. No stock will be grazed on the lagoon or its banks.

The vegetation is Snow Gum Woodland (photo p. 1), Yellow Box – Blakely's Red Gum Woodland, and possibly one patch of Natural Temperate Grassland, all endangered communities, plus some Scribbly Gum open forest. Some trees are hundreds of years old. There is a high diversity of plants and birds, and after the lagoon filled last summer, many waterbirds bred.

Nineteen of us spent the morning in the different habitats, checking the endangered Dwarf Kerrawang *Rulingia prostrata* on the edge of the lagoon (many now underwater). There were large patches of Nodding Chocolate Lilies, Bulbine Lilies and Scaly Buttons, providing a lovely vista of yellow and purple. We also saw Tiger Orchids, a Sun Orchid, Button Everlastings *Coronidium scorpioides* and Fringed Lilies. Margaret Ning recorded c. 100 native plant species, and Rainer Rehwinkel recorded 9 waterbirds, 29 other bird species, 2 frogs and 2 reptiles.

After lunch about half the group assisted Robert with monitoring. Four plots have been established, to record changes in vegetation and habitat diversity, and in some areas, to see if some bare areas become more vegetated. He is also establishing photomonitoring points. In one site with a high cover of Sweet Vernal Grass, Robert is keen to trial some control, including slashing (before seed set) and wick-wiping.

We finished up at 'Wimbaliri', my nearby forest block, for late afternoon drinks on the verandah. It was a great day, and fantastic to see so many people: thanks to you all. I hope you enjoyed it as much as I did. Robert loved showing the site to everyone.

Photo: Sandra Hand at the FOG display at the Braidwood *Biodiversity and Farming Fair* on 30 November 2012 (Geoff Robertson).

***Warreen*, Harolds Cross**

Libby Keen

SAT NOV 17 Seven FOG members visited Libby and Ian Keen's 40 acres on the edge of Tallaganda State Forest, south-west of Braidwood. The altitude is 700 to 1000 m, and Harolds Cross Creek traverses it. The good variety of habitats includes riverine, woodland, boggy areas, native pasture and many granite boulders.

The weather was just right for walking, creek-leaping and picnicking under the snowgums among a carpet of emerging forbs and grasses. Cameras were kept busy by birds as well as plants, and Swamp Wallaby, an unidentified Antechinus and large lizard were seen. The day was a non-stop marathon of plant identification and discussion of minute distinctions between species. Thanks to the id. skills of Margaret and Geoff, with input from Sandra, Andrew, Naarilla and Linda, the plant list is long, interesting, and the amazing product of a few hours on a single spring day.

We are grateful for the generous advice on managing a springtime surge of Yorkshire Fog and Sweet Vernal Grass. We have been controlling Blackberry along the creek for a few years, and with the help of Margaret's 'dauber doovers' and several pairs of secateurs (they kept disappearing into the undergrowth) it is taking effect slowly but surely. With advice on more tools and methods to experiment with, we are now even better equipped to tackle the problem. All we want for Christmas is a tanked-up quad bike! Many thanks for a most enjoyable and productive day.

News Roundup (cont.)

Mcleods Creek *Lepidium* translocation

Rainer Rehwinkel

In April 2012, with the help of volunteers from FOG and the Gundaroo community, I arranged a translocation of Aromatic Peppercress *Lepidium hyssopifolium* to OEH's new nature reserve, Mcleods Creek, near Gundaroo on the Southern Tablelands. Despite the cold and wintry weather, there was a sizeable crowd, including some younger local people.

The seedlings were grown at Bathurst, some from seed of the their population, now apparently extinct, and some from the Bungendore population. It is hoped that they might combine to produce a more robust population.

Four plots of about 100 plants each were planted. Two were under trees in the woodland and two in the secondary grassland (see photo). After planting and watering, the plants were left to their own devices. When I counted in June, I recorded minimal losses.

In mid-November, I estimated that 80% of the plants were alive, and attributed the losses to the dry conditions. Despite this, the survivors have hardened up and some are starting to flower. Clearly, this project cannot be considered a success until we have a second generation of self-recruits. I have my fingers crossed.

I have another 50 plants to be planted out in autumn, and am deciding on locations for them.

I express my gratitude to FOG members who participated in the planting.

Photo: Some of the cold but enthusiastic volunteers who assisted with the Mcleods Creek *Lepidium* translocation last April (R. Rehwinkel).

Adrian Starkey presentation to Salisbury Council: highly recommended

'Understanding pre-European Adelaide plains and foothills vegetation associations – managing remnants and recreating grasslands'
www.salisbury.sa.gov.au/files/2a55002a-f8a1-4767-b042-a03d00967855/Understanding-pre-European-Adelaide-plains-and-foothills-vegetation-associations.pdf

Environmental powers to be kept by Federal Government, pro temp.

Reports that Prime Minister Gillard has stepped back from a COAG proposal to hand federal environmental powers to the states are encouraging, but must be followed by a commitment to rule out similar proposals in future, according to Conservation Council ACT Region's Director, Clare Henderson.

The Federal Government should now act to remove the provisions of the Environmental Protection and Biodiversity Conservation Act that still enable such a transfer to occur.

There is broad community support for the Commonwealth to retain these powers. Polling by Lonergan Research released November 2012 found that 85% of Australians believed the Federal Government should be able to block or change major projects that could damage the environment.The ACT Parliamentary Agreement supports the Commonwealth retaining approvals for matters of National Environmental Significance.

see also : http://www.smh.com.au/opinion/political-news/environmental-powers-to-be-kept-by-canberra-20121205-2avw7.html#ixzz2FSGZDIO2

Check Those Dead Bits! Or Finding the Ginninderra Peppercress

Nicki Taws Project Manager Greening Australia Capital Region

For the native grassland aficionado travelling past the forlorn looking block known as North Mitchell in the fledgling suburb of Franklin, there seems little to tempt one. Chest-high Phalaris and dense *Austrostipa bigeniculata* greet you at the gate and if you forge onwards to the lonely stand of Yellow Box – Blakely's Red Gum at the northern edge you will be impressed by the vigour of the weeds.

I had reason to visit North Mitchell in March 2012 as part of the *Local Native Groundcover Challenge* which I run for Greening Australia. We are seeking to enhance 10 local grassland or grassy woodlands with a range of forb species. My initial impressions of the North Mitchell site improved slightly once we arrived at the highest point of the grassland in the centre of the paddock and the grass thickets gave way to patches of rosette forbs, some of which were *Goodenia pinnatifida* (many others were just *Hypochaeris radic*ata and *Plantago lanceolata*). The occasional clump of *Calocephalus citreus* and skeletal remains of *Eryngium ovinum* added value to the site, and the species list from the monitoring quadrat recorded a few more forbs of interest.

I didn't get back to the site until August to look for a specific area for enhancement and collected a few plant bits and pieces to check species, e.g. *Danthonia* (sorry, *Rytidosperma*). Included were a few small dried seed heads of what looked like a Peppercress (*Lepidium* sp.). I'm not particularly enthusiastic about keying out the Brassicaceae so I parked the specimen in the rainy-day basket until I returned a few weeks later and looked for the *Lepidium*. By this time, new shoots were arising from the base of the dried seed heads. They did not look like any of the exotic *Lepidium* that I had been expecting to see. Suddenly the plant became more interesting and I was able to collect a better specimen with one shoot carrying flower buds. After checking references at home it became apparent that this could be the Ginninderra Peppercress *Lepidium ginninderrense* of which there was only one known extant population at the Belconnen Naval Station. North Mitchell is not very far from the Naval Station but seemed a somewhat unlikely site for *L. ginninderrense* mainly because of its disturbed condition.

I tried to find someone familiar with the species (I've never actually been to the Naval Station) but it seemed everyone who might know was away, including Brendan Lepschi the Brassicaceae curator at the Herbarium. I lodged the specimen there to await his return then took Greg Baines out to the site so that at least it could be protected until the plant's identity was confirmed. A couple of weeks later Brendan was able to confirm the specimen as *L. ginninderrense*.

The plants have since been counted and tagged. There are only a few dozen in this small patch, however the whole North Mitchell paddock should be more thoroughly searched in case there are others. The finding of this second population is encouraging for conservation of the species, not only because it provides a bit more insurance should something happen to the main population, but also because it raises the possibility that there might be other populations lurking inconspicuously in the region's grasslands. So next time you are in a grassland, remember to check those dead flower heads or seed heads – do you really know what they are?

Ginninderra Peppercress *Lepidium ginninderrense*, drawn by Kim Neubauer for the ACT Government's *Action Plan* for this endangered ACT endemic species.

The Grassland Earless Dragon

Summary by Mandy Conway of a talk by Will Osborne to ACT Herpetological Association in February 2012, edited by Will Osborne.

The Grassland Earless Dragon *Tympanocryptis pinguicolla* (meaning 'hidden-ear thick neck') is now found only in the ACT region and near Cooma. There are also two records from Bathurst 20 years ago.

When Will first moved to Canberra in 1977, herpetologists Hank Jenkins, Ric Longmore, John Wombey and Gavin Young spoke of seeing Dragons in Canberra in the early 1960s. However none had been seen for about 30 years, and the species was thought perhaps to be locally extinct. Will was delighted when he saw his first specimen at the *Poplars* near Queanbeyan. With his Parks Service colleague Kruno Kukolic, he embarked on a series of surveys for the species in the ACT and managed to find additional populations in the Jerrabomberra Valley, and in the Majura Valley at the airport and adjoining Defence land (Majura Training Area). So, the species had been rediscovered in the ACT and a few years later was also recorded by Will, with the help of Peter Ormay, in travelling stock reserves near Cooma.

The Grassland Earless Dragon (GED) is one of the most threatened species in Australia. Endangered in the ACT and NSW, and thought to be extinct in Victoria, it has experienced gross range contraction and habitat loss. The largest remaining areas are on the Monaro. Although the GED has strong legislative protection, on-ground protection is difficult because most occurrences are on private property.

Recently all ACT populations have collapsed to very low numbers, thought to be the cumulative effect of the recent drought. Wendy Dimond studied this in her PhD. Recent genetic studies indicate that the ACT and Cooma populations are likely to be separate species. Emma Carlson is currently studying this for her honours project, supervised by Stephen Sarre at UC.

Only about 2% of the original grassland community remains, with an estimated 5% left in the ACT. That we still have native grasslands suited to the GED in the ACT is the result of a series of chance events. The grasslands where the species has been found typically were never or rarely ploughed, were not 'improved' with exotic pasture grasses and clovers, and were not overgrazed. On the former *Woden* property leased by Charles Campbell, there were an estimated 1,000 GED as recently as 2006 when Wendy undertook her mark-release-recapture surveys. Mr Campbell said that, because the paddock was used for producing superfine Merino wool, it had never been ploughed in the 140 years his family had been there, and superphosphate had been applied only once, in the 1950s. It thus appears that sheep and dragons can coexist, provided that there is no pasture improvement and that perennial native grass cover is maintained and not over-grazed. In the absence of other means of removing biomass (e.g. kangaroos, patch burning, patch mowing) in wetter years, livestock grazing is likely to be the best way to maintain habitat, provided weeds are controlled.

The GED is cryptic, so field studies are difficult, exacerbated by current low numbers. Despite this, five honours students and two PhDs have studied its ecology. Dr Lisa Doucette has just started investigating to what extent extreme conditions during the recent drought may have influenced the species' rapid decline.

The habitat of the GED consists mainly of native grass species, particularly Wallaby Grasses *Rytidosperma* spp., and Spear Grasses, *Austrostipa* spp.. Open inter-tussock spaces and patches of shorter grass are thought to be essential components of habitat, which is threatened by weeds such as Saffron Thistle, Fleabane and Serrated Tussock. African Lovegrass is a huge concern, as it rapidly outcompetes other species, eventually forming dense infestations. Unless grassland managers and weeds contractors can confidently identify and eradicate invasive weeds, the preservation of remaining habitat will be extremely difficult. (In the Jerrabomberra Grassland Reserve, a weeds contractor is reported to have sprayed Kangaroo Grass, having mistaken it for African Love Grass.) Involvement by knowledgeable groups like *Friends of Grasslands* will assist Government management of habitat.

Hatchling Dragons appear in mid-January. They are so small that they can curl up on a human thumb nail. By April they are sub adults and, following winter spent in a burrow, they rapidly attain adult size and breeding

Grassland Earless Dragon (cont.)

condition. Very few males and females appear to live to a second year. A short life adds to their vulnerability. Adults breed only once, with a clutch of four to seven, and this reduces their capacity to recover from population declines. A catastrophic event that persists for more than two summers (such as the recent drought) could remove the entire breeding population.

With the removal of livestock and exclusion of kangaroos from some sites, the grass has become taller and denser and there is concern that it is becoming difficult for the Dragons to find burrows, find prey or choose sites to lay their eggs. Burrow dwelling invertebrates, e.g. Raspy Crickets and Wolf Spiders, normally common in these grasslands, appear also to have been affected by the change in vegetation structure. Because Dragons shelter in these arthropod burrows and are thought to lay their eggs there, there is now the added concern that this resource has also been depleted. Thus, in just a couple of seasons, the dragons have been faced with extinction due to the complete loss of tussock grass cover, as occurred at the Majura Training Area because of kangaroo over-grazing and now the conversion of this vegetation to overly dense, rank grasslands that lack the thermal properties and open patches that the species may favour.

Why have Dragon populations declined?

The cause of the decline is incompletely understood. At Majura, during the drought when the grass had been eaten to bare ground by kangaroos, there were large flocks of non-territorial Magpies feeding in the paddock. The reduced groundcover at this time could have increased predation by birds. However, no direct manipulative study (magpies versus no magpies) could be undertaken to test this theory, as this would have involved putting in place very large bird proof enclosures. Another, and perhaps more likely, hypothesis that the group at UC is working on (with Stephen Sarre and Lisa Doucette) is that towards the end of the drought the eggs in the burrows in the soil were either getting too hot, or were desiccating. It seems very likely that the extreme crash in the Dragon population was because of the drought, as the species declined across all sites, regardless of management. Wendy Dimond's data show that the numbers crashed first at the over-grazed sites, and the next year at other sites. Unfortunately there has been no sign yet of the population beginning to recover, and, as noted above, this may relate to the two recent very wet summers.

Hope for the future

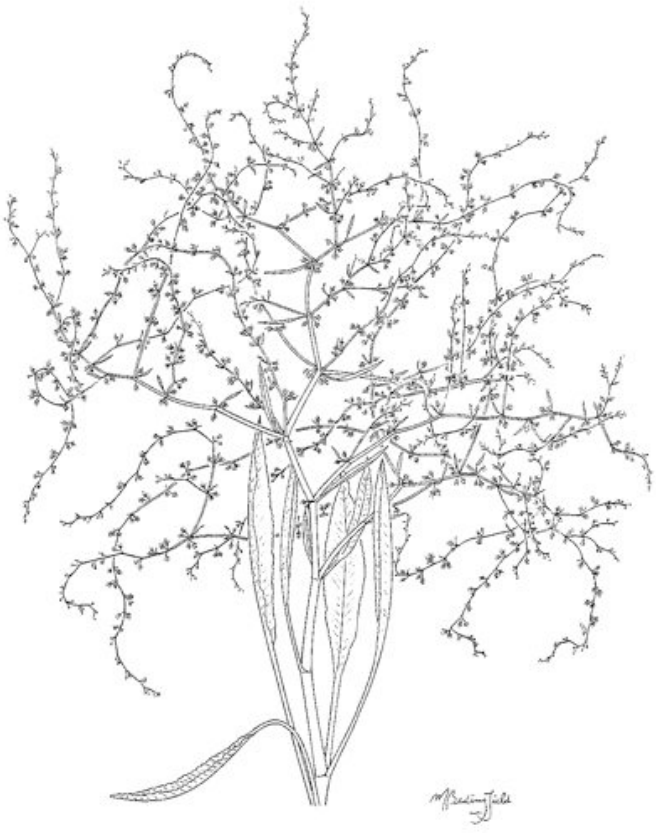
This year Dragons successfully bred at two Natural Temperate Grassland sites where the grass cover was slightly more open: Queanbeyan Nature Reserve had high levels of kangaroo grazing, while the ACT site had moderate levels of sheep grazing leading to a more open grassland. Canberra Nature Park staff have just started an experiment, with advice from Will's group at the University, to try to simulate these processes in the Jerrabomberra Grassland Reserves. Some Dragon sites will be grazed by livestock, some will be grazed at a moderate level by kangaroos, and others not grazed at all. Monitoring over the next few years should start to reveal whether the ACT population is able to recover.

Wiry Dock – an untidy native plant

Michael Bedingfield

The natural world is not renowned for being tidy, and its extraordinary and complex beauty somehow works despite this. For example, our grassy woodlands are particularly unkempt, and need to be that way in order for the many members of these ecological communities to survive. The ground layer is never uniform, but is a patchy and irregular mosaic, with different plants dominating in different places. Shrubs of various sizes dot the landscape without apparent pattern. Fallen logs, branches and eucalypt bark are common, and provide important habitat. Dead trees and old trees with nesting hollows are necessary for the survival of some bird species. Rocky outcrops provide refuge for reptiles and other creatures, and wombats dig holes wherever it suits them. This is just a brief list, which reminds me of one of Charles Schulz's "Peanuts" cartoons. Charlie Brown meets his old friend, Pigpen, whom he hasn't seen for some time. Pigpen was renowned for being dirty and scruffy, and a small cloud of dust followed him wherever he went. After the two exchange cordial greetings, Charlie jokingly points out that his friend's appearance is as messy as ever. Pigpen is justifiably annoyed, and says indignantly, "The world needs messy people, otherwise the neat people will take over!" And indeed, our natural areas need protection from those who would tidy them up!

Rumex dumosus is the botanical name for Wiry Dock. It blends in very well with our dishevelled natural world and produces an array of branches that look similar to a roundish tangle of wire. It has a perennial rosette of base leaves, which are up to 20 cm long including the stalks, and lanceolate in shape. It is from within this base of leaves that the flower stems arise each spring, growing to 50 cm tall. They are many branched, reddish-brown in colour, with the stiff branches growing at roughly right angles to each other. The branches are composed of many segments, with the tiny non-descript flowers occurring at the joints. The leaves on these branches are much smaller than the base leaves. After fertilization, the flowers develop into tiny fruits, with minute barbs that tend to cling to things. When the fruits have matured, the branches dry out, become loose, and eventually separate from the underground stem and leafy base. The ball of wiry branches becomes a tumbleweed, to be blown about by the wind to disperse the seeds.



Wiry Dock prefers grasslands that are less disturbed. It is widespread and moderately common in south-eastern Australia, occurring in NSW, Vic, SA and Tas. A similar and more common native plant is *Rumex brownii*, known as Swamp Dock or Slender Dock. It has a similar base rosette of leaves, but the upper branches are spindly and more sparse. It can grow to about 80 cm, and its simple and more erect branching structure makes it distinguishable from Wiry Dock. It is more resilient to change, and can be found growing even in urban situations. *Rumex crispus*, called Curled Dock or Yellow Dock, is the most common local introduced relative. Its leaves are curled on the edges, and it is a bigger and more robust plant that grows quite erect, to about a metre tall, and is found in wet areas.

I have provided a drawing of Wiry Dock, at about one quarter of natural size. This species would not be used for a colourful garden display. But it is an important member of our remnant lowland grassland communities, and its unkempt demeanour is more than welcome there.

FOG groups and projects

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

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

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

Committee & correspondence The Committee organises, coordinates and monitors FOG activities. Members are John Fitz Gerald (Pres.), Sarah Sharp (Vice Pres.) Kris Nash (Sec.), Stephen Horn (Treas.), Kim Pullen, Naarilla Hirsch, Tony Lawson, Isobel Crawford, Margaret Ning, John Buckley and Evelyn Chia. Andy Russell is public officer. Inquiries/correspondence: committee@fog.org.au. Postal address: FOG, PO Box 987, Civic Square, ACT 2608.

Communication produces *News of Friends of Grasslands* and *FOG e-Bulletin*. Inquiries: isobel.crawford@fog.org.au (newsletter), and tony.lawson@fog.org.au (e-Bulletin).

Cultivation and Conservation encourages growing of local grasses and wild flowers to learn about their horticulture and ecology, and produces *Cultivation Corner*. Inquiries: janet2.russell@fog.org.au.

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

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

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

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

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

Media spokesperson Sarah Sharp (0402 576 412). FOG is a regular contributor on Radio Landcare, Tues 9-10am on (2XX, Canberra 98.3FM).

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

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

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

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

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

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