



# News of Friends of Grasslands

Supporting native grassy ecosystems

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July–August 2019



FOG secretary, Paul, driving 'Victa the Vinca slayer' over Periwinkle, ready for spraying as it regenerates in spring. Photo by Jamie Pittock, at Stirling Park – Gurubung Dhaura workparty, 26 May.

## Workshop-in-the-Field

### Franklin Grassland, a future Conservation and Recreation Reserve, Tuesday 16 July 2019

This workshop, 9.30–12, aims to discuss a Concept Plan to develop Franklin Grassland Reserve as a conservation and recreation reserve. It will consist of a walk around the key areas of the site accompanied by short addresses from Peter Hazell (Mulloon Institute), Donna Hazell (NSW Biodiversity Trust), Clare McInnes (Offset Unit, EPSDD), Suzanne Orr MLA, Karissa Preuss (Ginninderra Catchment Group) and Geoff Robertson (Friends of Grasslands). To inquire about the workshop, to **register your interest**, to obtain details of the meeting place and to receive further information, please contact [geoffrobertson@iprimus.com.au](mailto:geoffrobertson@iprimus.com.au) or phone (02) 6241 4065 **by c.o.b. Friday 5 July**. The workshop is organised by Friends of Grasslands and Ginninderra Catchment Group, working with the Offset Unit, Environment Planning and Sustainable Development Directorate (EPSDD), and the Office of Suzanne Orr MLA.

## Changed roles at the NCA

Congratulations to Peter Beutel of the National Capital Authority, who has been promoted to Director, Estate Management. Peter has been FOG's key collaborator on our National Lands work over the last 9 years, as a driving force for improved management at Stirling Park – Gurubung Dhaura and Yarramundi Reach, via conservation and fire management plans, weed control, and other major reforms.

We shall continue to collaborate with Peter while also working with Michelle Jeffrey as acting Manager, Open Space, and Chantelle Martins as acting Officer, Lake and Dam.

Jamie Pittock

## Welcome to our new members!

Clare & Andrew Kavunenko, NSW; Keith Thompson, NSW;

Mark Robb, NSW; Tim De Mestre, NSW;

Karen Warburton & Michael Chapman, NSW;

Meredith Cosgrove, ACT; Vera Kurz, ACT; Michael Peedom, ACT

## FOG will visit grassy woodland in Griffith ACT, Sunday 21 July, 2 pm start

A reminder that FOG is visiting the stimulating re-grasslanding by Griffith Woodland Volunteer Group and FOG members (see pp. 7–8 of the May–June newsletter) at Griffith ACT on Sunday 21 July. Meet at 2 pm on-site, parking at Carstenz St, Griffith, or on La Perouse St near the Brockman St intersection. The site is a hilltop, rocky in places but not steep. It is only a small area, and our ramble may take less than 1 hour – or more. Afterwards we are invited to tea and scones around the fire-pit in Libby's nearby garden! To **register** (so we know how many scones, mugs ...), email [ann.milligan@fog.org.au](mailto:ann.milligan@fog.org.au).

## Invitation to revisit Rick Farley Reserve near Mungo National Park Mon–Fri, 8–12 July 2019

Mick Kelly and Geoff Simpson, of Mothers Ancestral Guardians Indigenous Corporation (MAGIC), are again inviting FOG members and other friends to visit Rick Farley Reserve, near Mungo National Park, on 8–12 July during NSW school holidays. The group will **travel to Balranald on Sunday 7 July**. All ages are welcome. "The opportunity to download, detox and connect with Country is endless at Rick Farley Reserve," says Geoff Simpson.

As with our visit in 2018, the program will include: \* A cool cultural burn or burns (weather permitting); \* Malleefowl ceremony; \* A visit to the large artefact site in the amphitheatre; \* Planting trees into spinifex; \* Visiting Malleefowl mounds and learning about Malleefowl ecology; \* Recording trees, birds, tracks and reptiles, using the Reserve's App.

For a report of our fantastic first visit and each of these activities, see *News of Friends of Grasslands*, May–June 2018, page 11 (<http://www.fog.org.au/Newsletters/2018-05newsletter.pdf>).

**Register with:** Margaret ([margaret.ning@fog.org.au](mailto:margaret.ning@fog.org.au), or phones 0427 788 304 or (02) 6241 4065) who will give you all the details of location, equipment (that you should take, and that which is provided), cost, etc. The site is around 850 km west of Canberra.

## More FOG activities – August: see page 3

1. The annual mid-winter afternoon of talks and tea this year is on **Saturday 31 August**. See page 3 for more information. **It's in a new venue this year, at the ANBG.**
2. Also, Rainer Rehwinkel and colleagues are planning to lead a visit to several Travelling Stock Reserves near Bungendore, on **23 or 24 August**. An outline is on page 3.

## FOG matters

### FOG Advocacy by Naarilla Hirsch

#### May

1. FOG provided comments on the SolarShare draft landscape plan, with our main recommendation being to make use of local species only, and to get advice from local groups such as Greening Australia as to what local species are hardy and would meet SolarShare's requirements.

2. In relation to the inquiry into Draft Variation 360 – Molonglo River Reserve: changes to public land reserve overlay boundaries and minor zone adjustment, FOG commented that this is an opportune time to incorporate the Coombs "tip" – currently subject to a development moratorium – into the River Reserve area, since this both mitigates against the requirement to manage an Outer-Asset Protection Zone within the Molonglo River Reserve adjacent to the Coombs Peninsula, and is an opportunity to provide a high quality low impact recreation hub outside the Reserve.

3. The Yass City Council asked for public comment on its Parkwood Planning Proposal. FOG raised concerns about conservation management (and restoration), grassy ecosystem fauna (Rosenberg's Monitor and Pink-tailed Worm-lizard), Natural Temperate Grassland preservation, hollow-bearing paddock trees, broader issues of biodiversity conservation, Aboriginal values in the landscape, and the lengthy urban/environment border.

4. A substantial piece of work this month was FOG's submission on the Draft ACT Native Woodland Conservation Strategy and Action Plans April 2019. This covered both broad issues and detailed comments on specific parts of the document. A summary of the broad issues FOG raised follows:

- i. Expand the scope: Given that this is a ten year strategy, there should be a greater focus or vision of what might be achieved ten years from now, encouraging a wider range of thinking and being ambitious and aspirational in its approach.
- ii. Stakeholders: Acknowledge that many people and organisations are undertaking conservation actions and/or influencing conservation outcomes, and that much that is happening is not under the auspices or control of the ACT Government.
- iii. Woodland decline: There needs to be greater recognition that, while Yellow Box-Blakely's Red Gum Grassy Woodland is declared threatened, other woodland communities are in at least the same state of decline, especially Snow Gum Woodland, and all require a high level of preservation.
- iv. Off-reserve woodlands: There needs to be full recognition and acknowledgement that much of the remaining woodland is outside the reserve system and is on unleased or leased Territory land or on Commonwealth-managed land, so that the requirement for collaboration is critical.
- v. Rural landholders: Following on from the previous point, there is a critical need to work with lessees in a positive manner to encourage stewardship and support rural lessees who want to retain and conserve areas of woodland.
- vi. CNP management plan and site operational plans: It is essential that the Canberra Nature Park management plan be completed and that associated site-specific operational plans be developed. It is also essential that operational plans are available for all unleased sites.

### 2019 ACT workparties at Stirling Park and Yarramundi

Your help is needed and always welcome.

Tools are provided. You need to wear gardening clothes (including hat) and solid footwear appropriate for the work and the weather, and bring your own drinking water. The workparty convenor **provides morning tea**, making these into pleasant social occasions.

Please **register by two days before** the workparty so there are enough tools and tea for everyone, and so you can be told if the weather forecast has led to a cancellation. Workparties are cancelled if there is lightning; or there is heavy rain; or the forecast is for 35°C or more; or there is a total fire ban.

When you register, you'll be sent more details about the workparty, such as tasks, targets, and where to meet for Stirling Park in Yarralumla. Yarramundi Grassland is at 245 Lady Denman Drive, ACT 2611.

#### Stirling Park – Gurubung Dhaura, 9 – 12.30

**Register:** [Jamie.Pittock@fog.org.au](mailto:Jamie.Pittock@fog.org.au), ph. 0407 265 131.

**Sat 29 June:** Park near the Alexandrina Drive/Mariner Place (west) intersection. Meet on the rise just west of Haines Creek. We shall focus on: mowing *Vinca* Blue Periwinkle, weeding and collecting rubbish.

#### Future workparties

**Sunday 25 August:** Stirling Park – Gurubung Dhaura.

**Sun 29 September:** Stirling Park – Gurubung Dhaura.

#### Yarramundi Grassland, 9–12.30

**Sun 29 September:** workparty here also.

- vii. Traditional custodians and land management: The strategy should acknowledge that the traditional custodians of this country have the primary role (inclusion and autonomy) when making decisions about conservation of areas, including in utilising traditional management practices.
- viii. Threats and management: This area of the document needs some restructuring and renaming of sections to both highlight the most significant threats and acknowledge that disturbance is a necessary part of ecological diversity, function and resilience and should be identified as such.
- ix. Linkage of issues: the document needs to better link the impacts and management of identified issues; for example, invasive plants and climate change.
- x. Summary statistics and indicators: It is essential to identify what it is that is trying to be achieved (i.e. a benchmark) against which to measure change in condition.

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### FOG Advocacy continued

- xi. Enhancing woodland condition: Overall there should be more emphasis on enhancing condition to increase resilience and functionality (and identifying what would be considered good condition) over all land tenures, not just in reserves and other ACT Government open space.
- xii. National Recovery Plan for White Box–Yellow Box–Blakely's Red Gum Grassy Woodland and Derived Native Grassland (2011): There is no reference to this document, and how ACT conservation actions relate to this plan.

5. FOG also made comments on the ACT's updated *Strategic Bushfire Management Plan* (SBMP) and the *Regional Fire Management Plan* (RFMP). One comment was the need for research to include the impacts of cultural burning and ecological burning practices as fire management tools, as well as their role in managing and enhancing our biodiversity assets. FOG strongly supported some of the new initiatives in this strategy, such as the inclusion of the "Aboriginal Fire Management Zone" in the plans. We reiterated our view that all inner asset zones should be within the development footprint when they adjoin areas of conservation value. FOG also encouraged a more flexible approach to burning of natural grassland sites, ensuring frequency is based on best available knowledge, and recognising that important research is currently underway that may guide future utilisation of burns in natural grasslands.

6. Another document out for consultation this month was the Draft ACT Cat Plan 2019–2029. FOG's comments included resourcing to ensure compliance, the need to extend cat containment across the whole of the ACT as soon as possible (and rejection of the proposed grandfathering option), and agreement that feral cats should be listed as a threatening process within the ACT (as they are already nationally). With cat containment, if a staggered approach is decided on, then all new suburbs and those established suburbs bordering nature reserves and open space with native vegetation should be the first priority.

7. In regard to a proposed redevelopment of City Hill, ACT, impacting on a low density Golden Sun Moth population breeding in an exotic ground cover area (EPBC referral), FOG in principle opposes the impact but also made a suggestion that, for an offset, consideration be given to either restoration work on the NCA grasslands at Yarramundi Reach, or alternatively removal of the pine plantation at Stirling Park west to provide a link from Stirling Park through to the ACT parklands containing Golden Sun Moth in Yarralumla.

### June

The NSW Threatened Species Scientific Committee put out a Preliminary Determination to list Key's Matchstick Grasshopper *Keyacris scurra* for public comment. FOG drew attention to a record of the species at Mulligan's Flat in the ACT, and supported listing of the grasshopper. One hope is that the listing will lead to further investigation and on-ground work that may lead to a greater understanding of this species and initiate activity to protect its habitat and recovery.

The full text of FOG submissions appears on our website.



### More FOG activities, from page 1

#### Mid-winter talks and tea, & perhaps lunch also

**Saturday 31 August, 12.30–4.30**

This year's talks and tea afternoon is in a new venue: the **BANKS BUILDING** at the **Australian National Botanic Gardens**, as an experiment. We have booked from 12.30 til 4.30, for a packed afternoon with three speakers: **Juliey Beckman**, on *Antechinus* in grasslands, and **Sue McIntyre** and **Bill Willis** speaking about establishing grassland species from seed: Sue, choice of species in relation to climate change; Bill, his seed production business. Be sure to register with [ann.milligan@fog.org.au](mailto:ann.milligan@fog.org.au), for updates as details become clearer.

#### Visit TSRs near Bungendore, 23 or 24 August

Rainer Rehwinkel, Lesley Peden & Liz O'Donnell are working with Molonglo Conservation Group to deliver a NSW Government-funded Saving our Species project. The project focuses on six Travelling Stock Reserves near Bungendore NSW: Doughboy, Brooks Hill, Sweeneys, Reedy Creek, Smiths Gap and Gidleigh. The sites contain Natural Temperate Grassland, Tablelands Snow Gum Grassy Woodland and Box–Gum Woodland and are home to a suite of threatened woodland birds.

Molonglo Conservation Group invites FOG members to visit these TSRs with them on an all-day trip, Friday 23 or Saturday 24 August. The sites are relatively near each other, and the day will include a lunch/toilet stop at Bungendore. Details are still being decided. If you are **interested**, email [ann.milligan@fog.org.au](mailto:ann.milligan@fog.org.au), so you can be sent full details as the planning reaches final stages.

#### Looking ahead ... details nearer the time

**Sat 21 September: evening walk to spot wildlife** at Stirling Park – Gurubung Dhaura.

**21–23 September: a 3- or 4-day FOG trip** to TSRs in Narrandera area, and The Rock NR near Wagga, led by Rainer Rehwinkel.



Margaret, Alice, Will and Alison clearing ivy on 5 May. They were among 13 volunteers working at the eastern end of Stirling Park – Gurubung Dhaura, hand-removing Ivy and Purple Top infestations, cutting & daubing extensive Privet regrowth, and spraying Blue Periwinkle. Photo: Jamie Pittock.





## Articles

### Close-up on two water-loving grasses by John Fitz Gerald

For this issue, let us look at grasses growing in the 'fresh' water of Kippax Creek in Umbagog District Park, Latham, in the suburban west of the ACT.

I will start with the impressive *Phragmites australis*, Common Reed. This plant, growing to 2 m tall and more, probably seems quite different to the knee-high plants that we most commonly recognise as grasses. *Phragmites*, though, has all the parts, particularly the sheath at the base of each leaf, to distinguish it as grass.

*Phragmites australis* grows actively and throws green flowers in summer (photo 1). The flowers mature into fluffy heads and the leaves take on wintery colours in mid-year (photo 2). I imaged two spikelets under a microscope, and the long hairs along the rachis and in tufts on each callus are easily seen (photo 3). After much searching I was able to find some seed (photo 4) – apparently it is common for the seed to be sparse and unviable. Most reproduction is vegetative via rhizomes and stolons.

Many years ago, I visited the huge marshes of eastern England and was excited to find that the Common Reed, better known there as Norfolk Reed and widely used in thatching, is *Phragmites australis* and I wondered how it came to establish there. In fact, the plant is native to temperate areas on many continents. In the USA, local forms are being invaded and overtaken by naturalised forms from elsewhere, which are therefore considered a biodiversity risk. Another risk is that populations become so widespread and dense that open water is reduced. However, *Phragmites australis* in many places is a wetland stabiliser and important shelter and possibly food for bird groups such as Reed Warblers.

Why *australis*? The holotype accepted by botanists is a specimen collected in 1799 at Port Jackson, with the name indicating its collection from a southern location on the globe – 'southern' in Latin being *australis*. (Note that Australia was only officially accepted as a place name around 1824.)



1. *Phragmites australis*, Common Reed, lush and green summer growth.



2. *Phragmites australis*, fluffy inflorescences and browning leaves going into winter.



4. *Phragmites australis*, two seeds. Scale bar: 0.2 mm.



3. *Phragmites australis* spikelets, conspicuous long hairs. Scale bar: 1 mm.

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### Close-up on two water-loving grasses, continued



5. Water Couch, a mat of growth.



6. Water Couch, digitate inflorescences.



7. Lemma (left) with palea hidden underneath, and seed (right) of Water Couch. Scale bar: 0.5 mm.

All images: John Fitz Gerald.

[john.fitzgerald@fog.org.au](mailto:john.fitzgerald@fog.org.au)

Grass two is a more ‘regular’ grass: *Paspalum distichum* or **Water Couch**. It forms mats and low creeping tufts (photo 5). Inflorescences are digitate, commonly with two racemes (photo 6) of spikelets. Each spikelet has only one floret having, when mature, a hard and shiny lemma and palea which, if fertilised, will contain a smaller brown seed (photo 7).

Just as I found with my first plant, this species revealed surprises when I searched out some background for this article. I, like many of us I suspect, gather most grass information from *Grasses of New South Wales* and from *Grasses of the NSW Tablelands*. These NSW sources consider *Paspalum distichum* to be native, so I was derailed to open the plant census for the ACT (4.0) (<https://www.anbg.gov.au/cpbr/ACT-census-2017/index.html>) to see *P. distichum* listed as ‘Exotic / Introduced into Australia’. More searching online in Floras of Victoria, South Australia and Western Australia brings a similar result: its status in these states is introduced, naturalised or alien, though Queensland evens the score a bit by rating it ‘Native’.

I thank Dave Albrecht from the Australian National Herbarium who helpfully provided more background and confirmed this disparity is current. He also points out that, in NSW, *P. distichum* “is important because it provides nutritious feed for a range of wetland birds and is a major component of an endangered ecological community in NSW” – ‘Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions’ (see that webpage at <https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10929>). Dave also provided another important reference on plant status around Australia that I may pass on to any reader who contacts me.

I hope that FOG newsletter readers are intrigued by these images and text. I’m reminded, most of the times when I assemble a new article, that the plant world is rarely simple!

Micrographs were taken at the National Seed Bank of the Australian National Botanic Gardens. They can be reproduced freely if attributed and linked to the Creative Commons licence CC BY, <http://creativecommons.org.au/learn/licences/>.

#### Sources of information include:

*Grasses of the NSW Tablelands*, by H. Rose, J. Kidson, C. Rose & C. Edwards. NSW DPI, 2013.

*Grasses of New South Wales, 4th edition*, by S.W.L. Jacobs, R.D.B. Whalley & D.J.B. Wheeler. University of New England, 2008.



#### Describing vegetation by its growth form

Rainer Rehwinkel has pointed out an article by Oliver *et al.* on growth forms. It is a very useful classification that helps in understanding and describing vegetation. The table that appears with the article classifies vegetation as either tree, shrubs, grass & grass-like, forb, fern and other. It gives a description of each category and the sub-categories and their description. We think this will be most useful to FOG members.

Oliver I. *et al.* 2019. ‘Expert allocation of primary growth form to the New South Wales flora underpins the biodiversity assessment method.’ *Australasian Journal of Environmental Management*. <https://www.tandfonline.com/doi/full/10.1080/14486563.2019.1595186>

Geoff Robertson





## Smoky Buzzer, *Myopsalta waterhousei*, a grassland cicada

Michael Bedingfield

When a male Smoky Buzzer cicada is seeking company, he will perch on a grass stem to make his love song, hoping it will attract a female to him. The song is a metallic buzzing sound which is made by vibrating a membrane in the abdomen where there is a resonating chamber to amplify the sound. The song lasts less than two seconds and is repeated over and over, with a variation in the amplitude throughout the song. The sound can be heard on the web page at reference (1).

It is a small cicada with the larger and more visible forewings being only 14 to 19 mm long. The one here in my photograph had a total length including wings of 20 mm. When I submitted my photos of this cicada to the Canberra Nature Map website it was identified by Lindsay Popple who is a renowned expert on Australian cicadas and has his own website dedicated to them.

The Smoky Buzzer's habitat is described as open grassland but also includes other open grassy areas. Seeing its habitat, I asked him if it fed on native grasses. He replied that he had observed the adults feeding on both native and exotic grasses, and he believed that the young nymphs fed on the roots of both native and exotic grasses. Cicadas are sap-sucking insects with a sharp proboscis that they insert into their preferred food plant. Without much effort they absorb the plants' juices, in this case that of grasses, and excrete the unwanted liquids.

The scientific name for the Smoky Buzzer is *Myopsalta waterhousei*. The species occurs in south-eastern Australia and is distributed from southern Queensland through New South Wales and Victoria to eastern South Australia. The strongest population is in the area covered by a broad arc roughly following the mountain ranges of those states.

The genus *Myopsalta*, see reference (2), includes a number of other grassy ecosystem cicadas. There are the New England Grass Buzzer *M. wollomombii*, Dark Smoky Buzzer *M. lactea* and Coolah Grass Buzzer *M. coolahensis* all of which inhabit grasslands but are not local to the Canberra region. There are other species that like different types of grassy ecosystems. One is the Black Mountain Tinkler *M. parvula* which is known only from that ACT location and from near Omeo in Victoria. It inhabits grassy woodlands on hillsides with a moderate slope. All the members of this genus are of a similar smallish size, and while cicadas are renowned for making a lot of noise, the species of this genus are not loud at all.

The lifecycle of cicadas follows the seasons but in an irregular way. Nymphs have front legs that are adapted for digging. They may spend several years underground, and for some Australian species it may be 6–7 years. They feed on roots and grow slowly by a succession of moults. They emerge when they are large enough and have the right conditions for a successful adult life. After emerging in the warmer months the insects feed on the preferred host plants, mate and lay eggs before the season closes.



The immature nymphs of the Smoky Buzzer spend their underground time feeding on the roots of grasses. The timing of the emergence of adults is difficult to estimate – populations are quite ephemeral – and can be anytime from September to March. But given their chosen food plant one could safely guess that the presence of fresh juicy grass would be essential. This logically follows rain that softens the ground allowing waiting insects to dig their way out of their underground chambers.

For comparison and interest I've included below a photo of a Silver Princess cicada, *Yoyetta celis*, which is also a small one and was caught by a large robber fly, *Asilinae* sp. (subfamily). This species feeds on Tea Trees, *Leptospermum* spp., and occasionally on *Melaleuca* spp., where they occur in patches in open forest or woodland. The photo shows the precarious life that these small insects lead. Robber flies capture their prey in flight and use their own proboscis to feed on the body fluids of their prey. It is an ironic way for a sap-sucking cicada to meet its maker.



Given the deterioration of our native grassy ecosystems, the simple fact that the Smoky Buzzer is happy feeding from both native and exotic grasses bodes well for the future of the species. I hope you spot one sometime when tramping through your favourite grassy patch.

### References

- (1) <http://dr-pop.net/waterhousei-299.htm>
- (2) <http://dr-pop.net/myopsalta.htm>  
<https://canberra.naturemapr.org/Community/Sightings/Details/3389822>  
<https://australianmuseum.net.au/learn/animals/insects/cicadas-superfamily-cicadoidea>

Images © Michael Bedingfield



## Identification problem solved

Jenny Liney

I used to live on the outskirts of Moruya with a vacant block next door covered with trees and garden plants. One day in January 2013, I noticed this peculiar insect on the outside of a window (photos); it looked as if it should have been a wasp, but the strange connection between the thorax and the abdomen was unlike anything I had ever seen, either in the flesh, so to speak, or in illustrations anywhere.

I took a couple of photos through the window and showed them to friends and acquaintances, but no one could offer any help with identification, or ‘yes, I saw one of those a while ago’. Even a retired professional entomologist could not suggest any information. She said that it looks as if it should be a wasp, but how could a wasp look like that?

The next suggestion was to send the photos to Kim Pullen, but even if I had done that, according to Michael Bedingfield, it would not have been a great help either at that time. The event took place before the Atlas of Living Australia was well established, and long before the Canberra Nature Map was constructed.

This conundrum has stayed in the back of my mind ever since, so imagine my surprise when I saw Michael Bedingfield’s image\* in the FOG newsletter of May–June. “That’s my unknown bug!!” I called out – even though there was nobody else in the house at the time to share my astonishment.

The lesson here is never to forget the strange things one has seen – chickens always come home to roost.

\* *Isodontia* sp. Grass-carrying Wasp.



Images: Jenny Liney.



### NSW 1:25,000 topographic maps on-line

**Did you know?** You can download NSW 1:25,000 topographic maps *free gratis* from a NSW government website?

<https://maps.six.nsw.gov.au/etopo.html>

Limit of 5 maps a day, each about 10 megabytes, some bigger.

The maps are pdf files, so you can zoom in or out, copy bits you want, save them, email them and print them. Very handy for planning an outing. And much cheaper than purchasing paper maps, which are now around \$17 a copy.

Richard Bomford

## Citizen Science – BowerBird website closing down

Michael Bedingfield

In May of this year we saw the announcement by entomologist Ken Walker that the nature website “BowerBird” will be closing down. It had been deteriorating in its capacity and was in need of a good software upgrade. However, the expense of the work involved was beyond the means of its sponsor, Museums Victoria, and there was no choice. Eventually BowerBird will disappear off the Internet. The website’s data has been transferred to iNaturalist, an international data mapping website based in the USA. Internet software requires constant

maintenance to keep it up to date with changing technology. So this type of citizen science can be quite expensive. After about ten years at the helm Ken will step back from doing citizen science and work on other projects, particularly some taxonomy revisions. The website provided a focus on nature which brought many interesting observations and discoveries as well as beautiful photography. It was a leader in this field and it is a sad event for nature enthusiasts and photographers, especially those from Victoria.





## Progress in the Yarramundi Grassland Revegetation project by John Fitz Gerald

Tuesday 30 April, the day for sowing the scrapes at Yarramundi Grassland, was perfect, and nine volunteers took to the job enthusiastically under direction from Nicki Taws of Greening Australia. Greening Australia has been central to several scrape projects in the region and, while Yarramundi is the smallest, it was important to have their professional input. Seeds of native species were purchased from Greening Australia: 800 g of grasses, five species, plus 200 g of forbs, eight species.

Previous updates (*News of FOG* January–February p. 5, and March–April p. 11) have emphasised two aspects of the Yarramundi demonstration.

- First, that because these scrapes are shallow and small, weed growth and reinvasion were expected to be challenging. Even after applying herbicide earlier in 2019, a nuisance level of clovers was still present on the sowing day, and a few exotic grasses have also come up since.
- Second, the much better news is that a pleasing crop of native species had resprouted and germinated: particularly, Australian Bindweed *Convolvulus erubescens*.

Our challenge was to preserve a good fraction of these ‘new’ natives through the sowing process. Therefore, we first scuffed the soil surface using a variety of rakes and tilling tools (*photo top right*), working around the most-native-rich spots. All seeds were carefully mixed, then combined with a few buckets of coarse sand (*photo 2nd right*). The mix was broadcast as evenly as possible across both scrapes and tamped down with rakhos and by boots being walked up and down. A little woody debris was added to the eastern scrape, attempting to reduce seed movement down its shallow slope. Sarah Sharp set up six monitoring points in each scrape to be used to measure progress of revegetation. At the end of the work the group enjoyed a pleasant morning tea and some networking.

Thanks to everyone for their efforts and Nicki and Greening Australia for their support. It was very nice that two of our number, Mardie and Laura, volunteered from ACT NRM and really threw themselves into the labour. EPSDD (Environment, Planning & Sustainable Development Directorate) also sent along one of their communication team to record parts of our activity and this will become part of a future piece documenting this year’s ACT Environment Grants. EPSDD also hosted a picture story on their Facebook page.



Winter frosts are now regular and we are grateful for some rain since the sowing. The sand has been redistributed slightly by the rains, and presumably seed has moved too. The woody debris was a good idea. A lesson learnt from the sowing preparation is to aim for a final light rake of the scuffed surface to create shallow marks (just 1 cm or less) along surface contours. Sand plus seed sown onto this will migrate stably into these lines with later wind and rain.



*Middle above:* Sarah filling the seed buckets.

*Just above:* Sarah broadcasting and Barbara tamping.

*Top left:* Seed of Kangaroo Grass and other species after broadcasting and before tamping.

*Bottom left:* the team ready for morning tea after the work. They are standing in one of the scraped places they have just sown.

*Bottom right:* Margaret broadcasting. Photo: Ali Gillett, EPSDD.

*Images top right, bottom left, by John Fitz Gerald. Others by Margaret Ning.*





## My introduction to *Cenchrus longisetus*, Feathertop Grass, and similar grasses

by Janet Russell



NSW Flora Online web site describes the *Cenchrus* inflorescence as a terminal spike-like panicle or raceme of 'burs' enclosing the spikelets. This article looks at the former category, as I have not yet seen any of the burr grass plants.

### *Cenchrus longisetus*

I passed by this plant over a year ago while driving and after a quick look I remember thinking that someone had been planting garden plants on the grass verge: its whiteness was striking. The plant was on a roadside grass verge on the way from Ainslie shops (ACT) to home and I was in a hurry. About a year later in early January this year, I passed by the same spot again and realised that the plant was a grass and that I should investigate it.

I photographed it and identified it as *Cenchrus longisetus*, Feathertop Grass. I uploaded it to Canberra Nature Map (photos top left & at right) and the identification was confirmed as a high-risk species (it is a declared noxious weed in NSW) that should be removed. Government officers inspected the site and removed the grass. It had been found to have spread further along the street. Two months later I noticed more of the grass and it had spread to the other side of the road. All these plants seemed to have been removed since.

The grass is native to Africa and was previously named *Pennisetum villosum*. It has a pale green to white soft cylindrical inflorescence to 12 cm long. It is a perennial tussock-forming grass and grows 15–70 cm tall. The fine stems can bend slightly making it look shorter than it is. It is rhizomatous and also reproduces by seed and it poses a risk to our native grasslands: it is often found in lawns, roadsides and disturbed sites.

All *Pennisetum* species have been reclassified as *Cenchrus*, as DNA studies found that *Cenchrus* and *Pennisetum* were not distinguishable from each other, either morphologically or on the basis of DNA.

### Other *Cenchrus* species

There are two *Cenchrus* species that many people would be familiar with. One is *Cenchrus clandestinus*, Kikuyu Grass, which is naturalised in large parts of eastern and southern Australia. The other is *Cenchrus purpurascens*, Swamp Foxtail Grass (photo centre above), once known as *Pennisetum alopecuroides*, which has been cultivated as a garden plant. It is regarded as native to the eastern states but can become a problem in damp conditions.

*Cenchrus setaceus*, African Fountain Grass, has been found in Canberra and reported on Canberra Nature Map and was initially mistaken for *Cenchrus purpurascens*, Swamp Foxtail Grass. It can be very difficult to tell them apart.



Top left & above: *Cenchrus longisetus*, by Janet Russell. Top centre: *C. purpurascens*, by Michael Bedingfield, at Lake Burley Griffin, on Canberra Nature Map. Top right: *Cenchrus setaceus* example at Charnwood during a search for it; by Ann Milligan.

*Cenchrus setaceus* (top right) is a declared weed under New South Wales, Queensland and Western Australian legislation. It is not difficult to see there may be problems ahead for the horticultural trade in distinguishing one from the other, with these two species being so similar. It is worth noting that *Cenchrus setaceus* also goes by the common name Crimson Fountain Grass.

Needless to say, I am much more alert to different species of plants I find locally especially as, to our disappointment, we live in such a weedy area.

Fact sheets about *Cenchrus longisetus* and other *Cenchrus* species can be found at <https://keyserver.lucidcentral.org/weeds/data/media/Html/index.htm#C>.





## Re-introducing fire into long unburnt grassy ecosystems

by John Morgan

Department of Ecology Environment and Evolution, La Trobe University, Bundoora 3086, Victoria

Many grasslands and grassy woodlands are now rarely burnt in southern Australia, although it is likely that patch burning once played an important role in the structure and function of these ecosystems. Fire exclusion has led to tree recruitment, woody plant encroachment and loss of diversity.

Land managers are increasingly being requested to re-introduce fire to long unburned landscapes to promote diversity, but **what changes occur when fire is re-introduced to ecosystems when it has been long absent?** Are trees resilient to fire (or does it depend on their size)? Do species appear that haven't been seen for a while, presumably re-appearing from dormant soil stored seed? Do some species disappear, having initially profited from the absence of fire?

In this project, partly funded in 2017 by a small FOG Supported Projects grant (\$500), I have been testing ideas about re-introduction of fire to landscapes where much benefit might be derived from such activities.

Grassy ecosystems in western Victoria are much restricted (due to agriculture and, increasingly, timber plantations) and need sympathetic management to maintain their natural values. Re-introducing frequent fire to long unburnt grasslands is seen as a desirable management activity – it should serve to open up opportunities for seed regeneration and species coexistence. However, there are almost no examples where this has been tested, at least in good quality vegetation.

### Our methods

In this study, we have first quantified the groundcover condition of Red Gum grassy woodlands near Balmoral, western Victoria (e.g. Figure 1). They are ecosystems that have been unburned for many years. These beautiful grassy woodlands are dominated by Kangaroo Grass (*Themeda triandra*) but there are almost no inter-tussock spaces. Where spaces do exist, they are carpeted with bryophyte mats up to 50 mm thick. Hence, opportunities for recruitment by seed appear limited.

To understand what species might benefit from the re-introduction of burning, we have collected soil seedbank samples from 11 grassy woodlands that vary in their vegetation quality.

We exposed half the samples to smoke-water (to simulate 'fire' and determine if any species are promoted by such cues). The other half of the samples have been left untreated.



Figure 1. Grassy Red Gum woodland at Gatum, Victoria. This site has been long unburned but maintains daisy species such as Murnong (*Microseris walteri*).

### Findings

- We found that there are many native species in the soil seedbank, but not daisies. Daisies are generally thought to have short-lived seeds and hence, once lost from a system, they are difficult to recover.
- Smoke-water does not seem to cue germination; rather, warm dry stratification (by storing soils over summer) followed by autumn watering cues many species to emerge.
- We were excited to find that some native annuals – which have long been absent from the standing flora (such as Hairy Centrolepis *Centrolepis strigosa*, a small, grass-like tufted herb, and Hairy Annual Bluebell *Wahlenbergia gracilentia*) – are still present.
- An entire flora – the 'inch flora' – has probably disappeared from grassy woodlands in the absence of disturbances such as animal digging and fire. How long they can persist in the soil seedbank is unknown, but our work hints that there is some potential for long-term persistence belowground.

### Next steps

We will burn long unburnt grasslands in the coming summer to see if our initial results transfer to the field. Of course, other important questions will likely arise: will the abundance of currently sparse species be improved? How will exotic species respond to a change in disturbance regime? What about trees that have established in the inter-fire period? Understanding the capacity of grassy ecosystems to recover with simple interventions is crucial and may prove to be a cost-effective way to maintain diversity, although it is unlikely to bring back all species given the inability of some groups to form persistent soil seedbanks. Maintaining current disturbance (to the vegetation) is likely to be the best way to conserve native species diversity because it maintains ecological dynamics such as seed regeneration processes.





## Recent FOG activities

### FOG's visit to Morundah and Coleambally NSW, 10–12 May by Margaret Ning

It was a simple plan. Friday, travel to Narrandera, via high-conservation travelling stock reserves (TSRs); meet for happy hour at 5 pm. Saturday, travel to Coleambally to be shown around Conservation Blocks 10 and 11 managed by Coleambally Irrigation Co-operative Limited (CICL); Saturday evening, watch *Don Giovanni* opera at the Morundah Theatre. Sunday, return home, via The Rock Nature Reserve, south of Wagga Wagga.

Our first Friday stop was Pevensey TSR, just south of Stockinbingal. Unfortunately the site had just been grazed by hundreds of cattle, from one of two large herds we saw being droved in the area. We still managed to see myriad Chocolate Lily rosettes (*Dichopogon* sp.) that had escaped the cattle, and damaged fuzzweed (*Vittadinia* sp.) and everlasting daisy (*Xerochrysum* sp.), flowering Yellowish Bluebell (*Wahlenbergia luteola*) and mauve and yellow *Calotis* species, and on occasions we saw Climbing (or Nodding) Saltbush (*Einadia nutans*) patches. Other sightings included both blue flax lilies (*Dianella revoluta* and *D. longifolia*) and Wattle Mat Rush (*Lomandra filiformis* subsp. *coriacea*). An errant seedling Pepper Corn Tree (*Schinus molle*) was growing under a eucalyptus. We heard babblers. The canopy was White Cypress Pine (*Callitris glaucophylla*), Kurrajong (*Brachychiton populneus*), and White and Yellow Box (*Eucalyptus albens*; *E. melliodora*).

Next was Old Junee TSR, a few kilometres west of Junee. We saw Curly Windmill Grass (*Enteropogon acicularis*), which was present at Pevensey but heavily grazed. Another recognisable grass was Red-leg Grass (*Bothriochloa macra*), but others, including tall *Stipa*, were difficult to ID after heavy grazing. Signs that we had travelled west included *Sida* sp., *Maireana* sp. (or spp.) and other chenopods. Other forbs included a robust fuzzweed, Slender Dock (*Rumex brownii*) and Yellow Burr Daisy (*Calotis lappulacea*). Lurking nasties, which would be obvious in spring, included St Johns Wort (*Hypericum perforatum*), Patersons Curse (*Echium plantagineum*), Onion Grass (*Romulea rosea*), Capeweed (*Arctotheca calendula*) and Horehound (*Marrubium vulgare*).



Old Junee TSR, Junee – Shirley, Mike, Margaret and Robin.



At Ganmain TSR, we were welcomed by a (small) mass of white daisies, a pink-flowering daisy, and another with wedge-shaped leaves. The understorey contained much shrubbery, including an unknown *Acacia*, *Dodonea* and *Cassinia*. Forbs and grasses included one of those lilies (possibly garland lily/*Calostemma purpurea*) that come up in profusion out west following a lot of rain, as well as Winter Apple (*Eremophila debilis*), Berry Saltbush (*Einadia hastata*), Blue Flax Lily (*D. longifolia*), Curly Windmill Grass, and there was a *Cheilanthes* species that was emerging everywhere following recent rain events. Unfortunately the exotics included a lot of Bridal Creeper (*Asparagus asparagoides*), cactus (likely prickly pear, *Opuntia* sp.), African Boxthorn (*Lycium ferocissimum*), and a carpet of *Oxalis*. We saw around 20 Choughs feeding at the site.

The Saturday trip to Coleambally included sightings of a Sea Eagle, Apostle Birds, Corellas, Cockatiels and Weeping Myall or Boree trees (*Acacia pendula*), which appeared to be everybody's favourite. On Kidman Way, just north of Coleambally, we viewed the impressive sight of Australia's largest solar farm; take a look! (this is a shortened url) <https://is.gd/fGldpe>

At Coleambally we met our hosts for the day, Mark Robb & Keith Thompson (CICL), and were joined by Eric Whiting from the Murrumbidgee Field Naturalists Club and author of *Wildflowers of the Narrandera and Cocoparra Ranges*. By now, we had become 20 people in an eight-vehicle convoy as we drove to our destination south-west of town.

Assembled at a large signage display in the park, Mark and Keith explained the CICL operation and its conservation work. CICL had emerged as a co-operative company owned by irrigators. Water licensing and management is the main pre-occupation of CICL and its 30 full- and part-time staff. Prior to CICL's establishment it had been a government agency. Government reserve land (1500 ha), not sold to irrigators for cropping or pasturing, largely lower fertile sandy areas, became Conservation Trust Blocks and were passed to CICL. In total, CICL manages 457,000 ha. Mark and Keith manage the Trust Blocks, amongst their other duties. CICL recognises environmental management, including managing water for conservation, as a core value. CICL and many irrigators are proud of their management of threatened species, such as the Superb Parrot, Southern Bell Frog and more recently

...continues on next page



### FOG visit to Morundah and Coleambally, continued

the Australasian Bittern. Initially, CICL conservation work had been well funded through the NSW Government, but funding is much scarcer now. Mark also discussed CICL's core business and the irrigation industry in general. Lots of water technology improvements continue apace; rice is being overtaken by cotton; there are new plantings of almonds in the area.

Trust Block 11 contains a lot of White Cypress Pine recruitment following 2010–11 floods. We were told CICL is under pressure to manage its red kangaroo population, and we heard its superb parrots. Biomass management has included crash grazing, but not on the sand hill areas. Mark and Keith explained their revegetation approach, using direct seeding and later planting: they favour plug plantings that include acacia and hop bush, all of which are very successful. They showed us impressive 'before' and 'after' monitoring photos. Other than cypress pine and some Yellow Box, the shrubby vegetation around us included Old Man Saltbush (*Atriplex nummularia*), Climbing Saltbush, Small-Leaf Bluebush (*Maireana microphylla*), Ruby Saltbush (*Enchylaena tomentosa*), Tumbleweed or Roly Poly (*Salsola australis*), Spiny Saltbush (*Rhagodia spinescens*) and a flowering Deane's Wattle (*Acacia deanei*).

Again we encountered widespread rock fern (*Cheilanthes* sp.) and many leaves of garland lily. Also, numerous patches of liverworts and mosses and occasional sizeable patches of germinating Blue Storksbill (*Erodium crinitum*). Curly windmill grass was also evident. While we could also see many Patersons Curse rosettes, it was good to hear that at least one of the bio-controls is at work there as Mark told us the tide of 'pattro' is receding. Other interesting exotics were Purple-flowered Devil's Claw (*Proboscidea louisiana*) and Catheads (*Tribulus terrestris*). As we drove around Block 11 in convoy, Mark used a UHF radio to point out a hectare of Rosewood (*Alectryon oleifolius*) in the distance, a Rosewood with an understorey of suckers, a group of Black Box (*Eucalyptus largiflorens*), Weeping Myall with interesting mistletoe, Buloke (*Allocasuarina leuhmannii*) and Sandalwood (*Santalum spicatum*) trees.

Block 10 was a Weeping Myall woodland, and we saw many different generations of it. We also saw mistletoe on Grey Wattle/Mulga (*Acacia brachybotrya*), red-flowered Black Box, a chenopod understorey, and many patches of newly germinated Blue Storksbill. Some past use of Block 10 has included half being cropped (oats or wheat) and then lightly cultivated, with half not being cultivated. The difference can be seen in the subsequent regeneration. Fire management has also been used against Barley Grass and Wild Oats on the block. Block 10 is close to the western edge of the Coleambally Irrigation area, and Mark encouraged us to walk to the rear of the block to see some Lignum (*Duma florulenta*) and an irrigation drain. It was one of Coleambally's main drains and was a natural creek (Spillers Creek) in the past. It was the southern boundary for Block 10.

After a splendid lunch at Coleambally Brolga Hotel, and the evening outing to the excellent Co-Opera and Morundah Opera production of Mozart's *Don Giovanni*, the visit to The Rock on Sunday morning for ten of us, was an enjoyable finale to the weekend! We started with morning tea, courtesy of The Rock's CWA craft shop and then moved on to The Rock Nature Reserve. I remember in the past, when FOG visited the reserve at least a decade ago, we came upon pools of recent rain and a wonderful spring growth of ephemeral forbs, including orchids and daisies. I don't think we covered more than a hundred metres of the track on that occasion. This time, the recent rain had created a green fuzz of vegetation in the low-lying areas.

We went off track onto a scrubby surface and hunted amongst the Common Fringe Myrtle (*Calytrix tetragona*) and Nodding Blue Lily (*Stypandra glauca*), hoping to find something interesting. Finally, among the rock fern, and tiny Chocolate Lily, *Caladenia* and Greenhood orchid leaves, we were rewarded with a succession of around 20 huge Greenhood flowers,



1. One of Coleambally's main irrigation drains, Block 10.



2,3. Death scene in *Don Giovanni* at the Paradise Palladium (Morundah hall), and Mike, Robin, Ron & Gail who were among our group of 17 in the audience.



4. A Greenhood in flower, with thumbnail for scale.



### *FOG visit to Morundah and Coleambally, continued*

later identified as *Pterostylis* sp. B. by Eric Whiting. Bingo!! Sadly, the ever-present Onion Grass was also present, though not yet in huge numbers. As we left the tantalising views of the 'rock' that gave The Rock its name, and called it a day, I determined to return under the right flowering conditions, and have already embedded a spy who will ensure that happens.

***Our thanks to Mark & Keith for giving up their time to show and tell us the Trust Blocks story, and to Rainer Rehwinkel & Andrew Zelnik for information on which TSRs to visit.***

The rock itself, at The Rock, south of Wagga Wagga, NSW.  
*This photo, and numbers 1 and 4 on p. 12, are by Margaret Ning.  
Photos on p. 11, and numbers 2,3 on p.12, are by Lucinda Royston.*



## **FOG's Eastern Broadacre Winter Tour, Sunday 16 June**

*By Geoff Robertson with Maree Gilbert*

A goodly rugged crowd gathered near Campbell Park Offices, ACT, at 1.15 pm. There we were introduced to Maree Gilbert and her fellow ACT Parks and Conservation Service (PCS) ecologists and rangers Emma Carlson, Thea O'Loughlin and Miriam Fokker, who were our hosts, guides and drivers for the afternoon.

We walked to nearby West Majura grassland (120 ha), between Campbell Park and the Majura Freeway (*photo right*), which recently became part of the ACT Government's grassland estate managed by PCS. It is habitat for Golden Sun Moth (GSM), Grassland Earless Dragon (GED), Perunga Grasshopper (PG) and Striped Legless Lizards (SLL). To examine the impact of heavy grazing by roos, largish areas have been enclosed with temporary fences (e.g. fence with orange feet in photo). Weed issues include St John's Wort, Saffron Thistle and Chilean Needle Grass. African Lovegrass is kept to a manageable level. Boom spraying is being considered for very weedy areas. A range of other issues were discussed, including that the ACT Government is now employing more grassland experts. We learnt the new term 'pyroherbivory' for a familiar concept (explained in box at right), and were told that PCS is trialling its use to move kangaroos through the landscape.



**Pyroherbivory:** 'In studies of patch-burn grazing, where cattle or bison are given access to both burned and unburned patches of vegetation, they spend something like 70% of their time grazing recently burned areas (and they stay on those areas most of the growing season), even when those burns make up a small percentage of the overall pasture.'

<https://prairieecologist.com/tag/pyroherbivory/>

Next we drove to East Jerrabomberra grassland (120 ha), a site familiar to FOG members. It is home to GSM, GED, PG and SLL. We looked at a large enclosure to protect part of the site from overgrazing by roos. Then we drove to the adjoining property 'Bonshaw' (over 100 ha), newly acquired by PCS to be managed as a reserve for GED and Natural Temperate Grassland. It is home to Button Wrinklewort (BW), GSM, GED, PG and SLL. We visited some lovely diverse grassland patches, and discussed why some patches attracted roos and others didn't, and the values of pyroherbivory and cattle grazing. I was delighted by the quality of the grasslands we saw there.

The next site was Amtech, adjacent to part of Fyshwick. Maree told us the hill of Amtech has one of the highest floristic diversities of the Jerrabomberra Valley. Once flagged for 'development', its future is uncertain. Looking across a fence, we saw a somewhat woody-weedy site, but nevertheless a home to GSM, PG and SLL.

Our final stop was the small (less than 1 ha) delightful site at Tennant St, Fyshwick (*photo right*), with many BW plants.

Maree told us that PCS has coordinated a nil-tenure, landscape-scale African Lovegrass control program this autumn with the aim of protecting GED habitat from the increasing threat. Herbicide control has been





### Eastern broadacre winter tour, continued

undertaken in all known GED habitat on public and private land as well as along roads in the Jerrabomberra Valley including Canberra Avenue, Hindmarsh Drive and Monaro Highway. They hope this is just the start of a long-term attempt to reduce ALG in 'dragon' habitat and improve resilience of remnant grasslands. (In relation to dragons, some curiosity was aroused in our group on hearing of concepts such as the use of dogs to find them\*.)

Many themes about grassland management and restoration arose during the afternoon and, as with many of our FOG activities, it was a workshop-in-the-field where much information was exchanged and many issues discussed.

FOG has used such visits over the years to gain knowledge of our grasslands and related grassland species. This has greatly assisted our advocacy, education and on-ground work. I believe that through this mutual interaction of ACT Government professional staff and FOG members, a solid foundation has been built to sustain the tremendous effort that underpins the region's native grassland (more formally, Natural Temperate Grassland, NTG) restoration and recovery. Fortunately Sarah Sharp was present, and could provide a longer term perspective on the history of each site visited and highly valuable insights into their management.

Despite it being a cool June day, there was no breeze and so no one was concerned by the cold. In all twenty people attended the event.

**Thanks Maree, Emma, Thea, Miriam and Sarah for making this a fascinating and informative day.**



*Main photo:* At Bonshaw. Janet inspecting this higher quality area dominated by Tall Speargrass *Austrostipa bigeniculata*, with Short Wallaby Grass *Rytidosperma carphoides*, Red-leg Grass *Bothriochloa macra*, and Hairy Panic *Panicum effusum*.

*Inset:* An Australian Pipit which led the convoy for a short time.

*All photos above:* Andrew Zelnik.



Some of the grassland species at the sites, L-R: *Cymbonotus lawsonianus*; *Rytidosperma* sp.; *Eryngium ovinum*, old seed capsules.  
*Photos:* Andrew Russell.

#### Grassland Earless Dragons x four species; one may be extinct

GED, *Tympanocryptis pinguicolla*, comprises four species, according to a Royal Society paper at <https://doi.org/10.1098/rsos.190233>: 'Taxonomy and conservation of grassland earless dragons: new species and an assessment of the first possible extinction of a reptile on mainland Australia' by Melville J., Chaplin K., Hutchinson M., Sumner J., Gruber B., MacDonald A.J. & Sarre S.D. (2019). The authors explain more in *The Conversation*, in 'Why we're not giving up the search for mainland Australia's 'first extinct lizard'' <https://theconversation.com/why-were-not-giving-up-the-search-for-mainland-australias-first-extinct-lizard-117831>

#### Restoring grasslands and maintaining groundcover for healthy sustainable agriculture

In *The Land* recently: 'We bought a farm to have more family time. We're risking it all to join a natural farming revolution.'

<https://mobile.abc.net.au/news/2019-06-22/regenerative-natural-farming-revolution-in-our-paddocks/11219812?>

Also, in N. American prairies: 'Prairie recovery: Slowly, a prairie restoration movement is gaining momentum...'

<https://www.csmonitor.com/Environment/2019/0614/Habitat-meets-profit-as-ranchers-restore-native-prairies?>

And 'When is a drought man-made?', blog post, Resource Consulting Services, June 2019, shows that soils with groundcover vegetation capture rain during drought. <https://www.rcsaustralia.com.au/when-is-drought-man-made/>



## Volunteers contribute to restoration at Mcleods Creek NR, NSW

by Susannah Power

Mcleods Creek Nature Reserve, near Gundaroo NSW, supports the Box–Gum Woodland Endangered Ecological Community, and provides habitat for several vulnerable woodland birds including Brown Treecreeper (*Climacteris picumnus victoriae*), Diamond Firetail (*Stagonopleura guttata*), Superb Parrot (*Polytelis swainsonii*), and the endangered Golden Sun Moth (*Synemon plana*).

Several drainage lines within the reserve are actively eroding, resulting in gullies that are several metres deep. Ongoing erosion is due to within-soil-profile water-flow so that the exposed sub-soils disperse readily and the resultant slurry is carried rapidly away downstream. Several side-arm gullies are also eroding due to undercutting, caving and slumping. This land degradation and soil loss is impacting on the values of the endangered Box–Gum woodland community.

In May 2019, NPWS rangers were helped by ten wonderful volunteers from the Friends of Grasslands, the Gundaroo community, and the Landcare network to stabilise four side-arm gullies. The work involved reshaping the gully heads, covering the exposed B-horizon with topsoil, straw, woodchip, jute netting, thatch and logs, and constructing sediment collection points using straw bales and logs. Over 4 days the team spread 7 tonnes of straw, 3 truckloads of woodchips, numerous trailer loads of thatch, and 2 truckloads of logs. They planted 200 robust groundcovers, and direct-seeded with shrub layer species. What an achievement!

This work complements activities implemented as part of the broader restoration program within the reserve, such as planting programs, weed control, and translocation of threatened forbs.

For instance, on 4 May 2019, another team of volunteers spent a couple of hours with us, upslope of one of the side-arm gullies, snipping off hundreds of the *Cassinia arcuata* seedling shrubs that continually emerge from the soil seedbank now that only roos graze the nature reserve. That team reinforced the effects of a similar exercise in May 2018 which had successfully cleared other areas of regenerating *Cassinia*. *Cassinia arcuata* is a native species that is local to the Southern Tablelands region. However, in highly disturbed areas it has the potential to colonise the site and outcompete recruiting native flora. A dominance of *Cassinia* at Mcleods Creek NR would undermine the conservation outcomes of the restoration program.

NSW National Parks and Wildlife Service (NPWS) would like to thank all the volunteers for their wonderful contribution. For further information please contact Susannah Power, NPWS Ranger on phone 0417 295 995.

*Middle photo:* The *Cassinia* team in the distance beyond a damp area full of *Cassinia* seedlings in the foreground. These seedlings were left so they could be cut and used in the gully stabilisation the following week.

*Right:* Ranger Libby in action snipping *Cassinia*. *Photos:* Ann Milligan.



One of the gullies after the stabilisation work.  
*Photo:* Susannah Power.



### Updated translocations policy, NSW plants & animals

NSW Office of Environment & Heritage (OEH) has recently updated its Translocation Operational Policy for plants and animals in NSW, including in relation to climate change or development. The Australian Network for Plant Conservation (ANPC) News, 31 May, recommends: 'download and read the OEH translocation operational policy before you begin planning. The OEH website also has information on licences, and how to apply'. Search at <https://www.environment.nsw.gov.au/>

### "Wild" grasses are in vogue as priceless native grasslands disappear

: an article on the need to conserve native grasslands in Victoria and that 'the future viability of many species may well depend on wide commercial interest, rather than small protected conservation sites'. <https://www.foreground.com.au/environment/wild-grasses-are-in-vogue-as-priceless-native-grasslands-disappear/> AND <https://www.theage.com.au/politics/victoria/from-grassland-to-wasteland-victoria-breaks-promise-to-create-environmental-reserve-20190512-p51mjd.html>





## Contacts for Friends of Grasslands Inc. groups and projects

**Website** [www.fog.org.au](http://www.fog.org.au)

**To contact FOG (general & media):** [info@fog.org.au](mailto:info@fog.org.au);  
phones 0403 221 117 / 02 6241 4065 (Geoff Robertson)

**Membership inquiries & payments:** [membership@fog.org.au](mailto:membership@fog.org.au)  
(application forms are at [www.fog.org.au](http://www.fog.org.au))

**To join in FOG activities/events:** [activities@fog.org.au](mailto:activities@fog.org.au)

**To join FOG working bees:**

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Stirling Park woodland, ACT: [jamie.pittock@fog.org.au](mailto:jamie.pittock@fog.org.au)

Old Cooma Common, NSW: [margaret.ning@fog.org.au](mailto:margaret.ning@fog.org.au)

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**FOG merchandise info (books, etc.):** [booksales@fog.org.au](mailto:booksales@fog.org.au)  
(order forms are at [www.fog.org.au](http://www.fog.org.au))

**Applying for FOG small grants:** [supportedprojects@fog.org.au](mailto:supportedprojects@fog.org.au)

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**To contribute to FOG advocacy:**  
[advocacy@fog.org.au](mailto:advocacy@fog.org.au)

**Website matters:** [webmanager@fog.org.au](mailto:webmanager@fog.org.au)

FOG’s comprehensive website gives: the calendar of FOG happenings; information about grasslands and grassy woodlands; proformas for applications & orders; all advocacy submissions; all newsletters (including the most recent).

### Dates to note, June –September

Sat 29 June	Workparty at Stirling Park woodland
7–12 July	Visit Rick Farley reserve, nr Balranald NSW
Tues 16 July	Workshop in Franklin grassland, ACT
Sun 21 July	Visit to Griffith (ACT) grassy woodland
23 or 24 Aug	Visit TSRs near Bungendore
Sun 25 Aug	Workparty at Stirling Park woodland
Sat 31 August	Mid-winter talks and tea, <b>ANBG</b>
Sat 21 Sept	Wildlife walk, evening, Stirling Park
21–23 Sept	TSRs Narrandera area, and The Rock
Sun 29 Sept	Workparties Stirling Park & Yarramundi

### ACT Threatened Species – Childrens’ Art Competition 2019

Young artists, 5–12 years old, choose from all Australian threatened plant and animal species to design an original work of art. Submit entries online **before 2 August**. Finalists’ artworks exhibited, ANBG. **Prizes.**

Queries to: Helen Church [helen@hsi.org.au](mailto:helen@hsi.org.au), ph.9973 1728 or Bren Weatherstone [greenhood@netspeed.com.au](mailto:greenhood@netspeed.com.au), m.0439 026 622.

### ‘Barka the forgotten river’: ‘til 21 July, Belconnen Arts Centre

A story of the Darling River by artists Badger Bates & Justine Miller.  
<https://www.belconnenartscentre.com.au/exhibitions/forgotten-river/>

### In this News of FOG ...

Welcome to new members!

Activities:– Visit to Rick Farley Reserve; Workshop in the field on Franklin Grassland; Visit to grassy woodland at Griffith ACT; Visit to TSRs late August; Mid-winter talks and tea; Workparties at Stirling Park and Yarramundi.

FOG Advocacy. Naarilla Hirsch

Articles:– Close-up on two grasses. *John Fitz Gerald*

– Smoky Buzzer, a grassland cicada. *Michael Bedingfield*

– Identification problem solved. *Jenny Liney*

– Bowerbird website closing down. *Michael Bedingfield*

– Yarramundi revegetation project. *John Fitz Gerald*

– My introduction to *Cenchrus longisetus*,... . *Janet Russell*

– Reintroducing fire to grassy ecosystems. *John Morgan*.

Recent FOG activities:– Visit to Morundah ... *Margaret Ning*

– Broadacre winter tour. *Geoff Robertson & Maree Gilbert*

– Volunteers at Mcleods Creek. *Susannah Power*

General interest:– Changed roles at the NCA; Describing vegetation by its growth form; NSW 1:25,000 topographic maps online; Grassland Earless Dragons x 4 species; Restoring grasslands and maintaining groundcover for healthy sustainable agriculture; Updated translocations policy, NSW plants & animals; ‘Wild’ grasses are in vogue as priceless native grasslands disappear; Art competition; Art exhibition.

Friends of Grasslands Inc.  
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