



September–October 2018



Sarah Sharp speaking at the FOG Special General Meeting. Photo: Paul Archer.

Sarah Sharp now an Honorary Life Member of FOG

At a Special General Meeting on Saturday 18 August, Sarah Sharp was awarded Honorary Life Membership of FOG, in accordance with Rule 12 in the Friends of Grasslands' Rules. More than 30 members were present to endorse the award; and those of us not present that day also say: "Congratulations Sarah! Very well-deserved!"

Sarah has made extraordinary contributions over the last 28 years – to FOG and to the rescue of grassy ecosystems and to biodiversity and conservation more broadly. In 1994, the year FOG was formed, Sarah was the Grassland Project Officer, ACT Parks and Conservation Service – Wildlife Research Unit. Thanks to Sarah and her colleagues, substantial initial recovery work had begun in 1992, the start of a four-year ACT Grassland Recovery Program. The resulting ACT Grassland Recovery Plan, later released as the Government's first Action Plan, included a recommendation to establish a Friends of Grasslands Group ... and here we still are! A summary of some of Sarah's prodigious achievements and continuing work for grassy landscapes in ACT and NSW is in the box at left. Sarah stepped off the FOG Committee at the end of 2017, but she still contributes to FOG in many ways, including managing membership and sales.

Among Sarah's works for grasslands

- first comprehensive grassland surveys in the ACT;
- since 1991, many publications as author or coauthor – e.g. numerous conservation strategies and recovery plans including the ACT Government Action Plans nos. 27 and 28; the books *Grassland Flora* and *Woodland Flora*; a chapter in *Land of Sweeping Plains*; management plans for many areas under ACT jurisdiction including Googong Foreshores; the 'Grassy Ecosystems Management Kit: a guide to developing conservation management plans'; etc., etc.;
- The *ACT Vegetation Monitoring Manual* and 'Vegwatch', explaining assessment and monitoring methods that community groups and landholders can (and do) use;
- co-organiser of two conferences/seminars: 'Management of relict lowland grasslands' in 1993 (and its proceedings); and 'Grass half full or grass half empty? Valuing native grassy landscapes' in 2014;
- President, or in various committee roles during 9 years on the FOG committee, and still working on behalf of biodiversity via other local committees;
- practical on-ground landcare (voluntary), and practical on-ground surveys and data analysis (as a private consultant).

Spring bursting with activities involving FOG people

Spring starts (**5 September**) with a book launch by artist Carolyn Young and FOG member Dr Sue McIntyre. Then FOG is part of the environmental-care display at Jamison shopping centre, Macquarie, Canberra (**7–9 September**). FOG people will be among the (hoped for) 2000 people 'standing against extinction' on the Lawns of Parliament House, Canberra, 8.30–10.00 on Monday **10 September**.

On the weekend **21–24** (Friday–Monday) **September**, FOG's Narrandera adventure led by Rainer Rehwinkel includes a chance to sight the Plains-wanderer (*Pedionomus torquatus*; critically endangered). If you're not in the Riverina that Friday **21 September**, you may like to help translocate a rare plant, the Aromatic Peppergrass, *Lepidium hyssopifolium*, at Mcleods Creek nature reserve, Gundaroo. The following Saturday, **29 September**, we'll meet at 2 pm at a FOG members' property just north of ACT border to wander through their regenerating grassland. And the next day, Sunday **30 September**, two FOG workparties will tackle tasks at Stirling Park and Yarramundi Grassland. After at least 8 more activities through October and November, including a 2-day grassland forum, FOG will go on a **Big Hole Grassland adventure** on the first weekend of **December, 1–2**. Andrew Zelnik's photos below are from an April recce of the trip. *Details of all these activities are on pages 2,3,4 in this newsletter.*



Left: Part of the hole itself.

Right: The diverse native grassland FOG will visit, north of the Big Hole.

Welcome to our new members!

Lauren Schenk, ACT

Ryl Parker, ACT

Tristan Armstrong & family, ACT

FOG-related activities September, October, November–December 2018

Wednesday 5 September, Launch of a new grassland book

National Library of Australia conference room, 5.15 for 5.30 pm

Dr Carolyn Young presents the results of her National Library of Australia Creative Arts Fellowship research on endangered small Australian mammals of grassy woodlands. At 6.30 pm the book *Grassland in Transition* by artist Dr Carolyn Young and woodland ecologist Dr Sue McIntyre will be launched by Genevieve Jacobs and Simon Corbell. The book features fine-art photographs illustrating transformations in plant diversity and form after agricultural practices. It brings together photographs and their underpinning ecological theory. To attend, you must book by phone to 02 6262 1111 or at <https://www.nla.gov.au/event/re-imagining-australian-mammals>.

Jamison Centre environmental-care display, 7–9 September

Helpers to 'person' the display and talk about FOG will be welcome. Contact margaret.ning@fog.org.au to find out more.

'Stand against Extinction', 10 September, Parliament House

Contact Geoff Robertson (see page 5) to find out more about this planned gathering, 8.30–10 am Monday 10 September.

Translocate rare Aromatic Peppercress, Friday 21 September

Help is needed at Mcleods Creek nature reserve, Gundaroo, to translocate *Lepidium hyssopifolium*. Meet at 10 am at the reserve, about 3 km along Marked Tree Rd. Tools and morning tea provided; bring your own lunch and gloves. RSVP (essential): libby.lindsay@environment.nsw.gov.au, 02 6229 7046.

FOG weekend 21–24 September at & around Narrandera NSW. Exploration of grassy landscapes with Rainer Rehwinkel.

A rich program of visits to grassland, wetlands and bird haunts in the Narrandera region, starting on the Friday (21st), and ending on Monday 24th with a visit to an aquarium and fish hatchery. The full description is on pp. 3,4.

Saturday 29 September: FOG visit to a property, nr Sutton NSW

Meet at 2 pm at 99 Read Rd, which is the second right-hand turn off Mulligans Flat Rd after you cross the ACT/NSW border heading north towards Sutton and Gundaroo. This visit is an easy walk in a level paddock; around 1 km total distance. Interesting grassland vegetation is reappearing on this FOG members' property which is recovering from former grazing. In a reccy in May, Margaret Ning spotted 54 species in the paddock. *What else may we spot in spring?*

Revisit 'Ballyhooly', near Bungendore NSW, Sunday 14 October

'Ballyhooly' is a 1000 acre property of FOG members, with a number of bushwalks mapped on it. Meet at 10 am at the property and leave whenever you need to. This is Yellow Box–Red Gum grassy woodland with much fauna. Register with margaret.ning@fog.org.au for a map and further details. Take your own lunch, and dress for the weather and possible snakes. Walking conditions are moderate to easy. FOG last visited in March 2017.

FOG work at Hall Cemetery woodland, 9.00–11.00 am

On Saturday 6 October and on Saturday 3 November, your help is needed and welcome at Hall Cemetery (a short way along Wallaroo Road, which is a turning off the Barton Highway not far before the NSW border). The task is to tackle emerging weeds, especially plantain, and selected patches of exotic grass. The work will be a combination of spot application of herbicide and physical removal or trimming.

Morning tea is provided. Please dress for the weather and gardening, with sturdy footwear.

Most important: REGISTER with john.fitzgerald@fog.org.au at least two days before the workparty, so there is enough tea and equipment for everyone.



'Reference grassy woodland (Bookham Cemetery)'
by Carolyn Young.

FOG work on National Lands: Stirling Park & Yarramundi

**Sunday 30 September,
Sunday 28 October**

Two weeding workparties are planned for Sunday 30 Sept, and **one** on Sunday 28 October, all starting at 9 am.

Your help is needed and always welcome.

Tools are provided. You need to wear suitable protective clothing (including hat) and footwear appropriate for the work and the weather, and bring your own drinking water.

Workparty convenors **provide morning tea**, making these into pleasant social occasions.

Please **register by two days before the date** of the workparty at the relevant email address below, so there are enough tools and tea for everyone, and to find out where to meet if you are not sure, 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.

Stirling Park woodland, Yarralumla ACT
Sunday 30 September, 9 am. Please register with jamie.pittock@fog.org.au for details of meeting place etc., nearer the time, and to ensure there is enough morning tea for all.

Yarramundi Grassland, 245 Lady Denman Drive, ACT, Sunday 30 September, 9 am. Please register with jamie.pittock@fog.org.au to find out the work intended, and ensure there is enough morning tea for all.

Stirling Park woodland, Yarralumla ACT
Sunday 28 October, 9 am. Please register with jamie.pittock@fog.org.au for details of meeting place etc., nearer the time, and to ensure there is enough morning tea for all.

FOG-related activities continued – September, October, November–December

Grassland forum

presented by FOG and ACT Government

A grassland forum is being organised for

Wednesday 24 October and Thursday 25 October.

This is the forum that originally was planned for earlier this year. Details are being finalised and will be released shortly.

Watch for them in a FOG ebulletin or other emails soon.

**‘Spring on the Victorian Volcanic Plain’
26–29 October weekend**

This tour, run by the Victorian Volcanic Plain (VVP) Biosphere Committee, will showcase some of the interesting and precious features of the VVP region. (The VVP Conservation Management Network is now a member of FOG.) This year’s tour will honour the history of Indigenous traditional owners, the Gunditjmarra, and appreciate the volcanic origins of the basalt plain. Visit <https://vvpspring2018.eventbrite.com.au> for details and to book. (Password is VVPB.) Alternatively, this link may work: <https://www.eventbrite.com.au/e/weekend-26-29-october-spring-on-the-victorian-volcanic-plain-tickets-36674356989>.

Revisit Nerriga property, 9–11 November

Members of FOG and Australian Native Plant Society visited Nerriga for a fascinating weekend in February 2018 to see Lauren and Norm Booth’s rare plant species. This revisit is in the hope of seeing those and other species in flower in this richly diverse woodland. For background reading, see *News of FOG* January–February and March–April 2018. Arrive on Friday 9 November or early Saturday 10 November. Leave on the Sunday. There is a comfortable camping area with facilities, and maybe a caravan or two. Bring all your own food etc. Register with margaret.ning@fog.org.au for a map and further details.

Annual Stirling Park Wildflower walk, 11 November

This is the annual walk through the usually glorious wildflowers of Stirling Park where FOG’s and Yarralumla Residents Association’s work has cleared the overgrown weeds during the past 9 years. Details in the next *News of FOG* (in October).

17–18 November weekend: Hunting the Monaro Golden Daisy across the Monaro, southern NSW

Another weekend adventure – it’s a hunt! FOG, led by Margaret Ning with a map, and guidance from David Eddy for some sites, will be searching for the threatened Monaro Golden Daisy (MGD), including a visit to the good MGD population on Old Cooma Common so that everyone knows what to look for. The group will stay in and around Cooma overnight. Want more details? See next *News of FOG*.

Looking further ahead: 30 November – 2 December, FOG visit to the Big Hole, Deua National Park

A FOG excursion on the weekend of 1–2 December will visit the grasslands near the Big Hole, southern NSW, in Deua National Park. Details, and more of Andrew’s photos, will be in the next *News of FOG*. Accommodation for that trip will be at the Deua Tin Huts or Berlang Camp ground. If you would like to know more before October, contact margaret.ning@fog.org.au.



**Flora, western vegetation, wetland birds,
the Plains-wanderer, and some fish:
a FOG and ANPS trip to Narrandera NSW,
Friday 21 – Monday 24 September**

by Rainer Rehwinkel

After you make your way to Narrandera via Gundagai on the Hume Highway and Wagga Wagga on the Sturt Highway, the field trip will start at Fivebough Swamp at Leeton on the Friday afternoon (21 September). Fivebough is large wetland, with access paths deep into the site. It has a breeding population of Brolgas and many other bird species are likely to be seen.

That evening will allow time to settle into accommodation, with a caravan park and a number of hotels and motels available. **Participants are responsible for their own bookings.**

Saturday (22 September) will start with a visit to Milthorpes Travelling Stock Reserve (TSR), a large site with river frontage, an extensive River Red Gum Forest, open Grey Box Woodland and Speargrass Grassland.

Then travelling south, we will visit Buckingbong State Forest, a large area of Grey Box–White Cypress-pine Woodland, with a break here for lunch. Then, it will be on to Yorkies Plain TSR, an extensive Speargrass Grassland with patches of Weeping Boree Woodland and River Red Gum Forest.

Returning to Narrandera, there will be an opportunity to visit Narrandera Wetlands, which is an artificial wetland adjacent to the Murrumbidgee River.

On Saturday night, there will be **a very special trip to spotlight for the critically endangered Plains-wanderer**, led by David Parker, NSW Office of Environment & Heritage Threatened Species Officer. This will be at a site about 30 minutes’ drive from the town, near the village of Morundah where we can eat at the pub, while David hopefully locates the birds (*Pedionomus torquatus*), and then we may have an opportunity to see them close-up.

For photos and a bit of information about this threatened bird, see <https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10588>

As numbers may be limited for this part of the trip, you are advised to ensure that you let the registration officer (Margaret Ning) know that you would like to be part of it. However, late-comers should still register in case others drop off the list.

Sunday’s destinations are a woodland and grassland at southern end of Lake Coolah (Bimble Box Woodland and Speargrass Grassland adjacent to the lake, which is currently dry), and then stopping at various locations along Kamarah Road including at Mejum State Forest, to see Grey Box–White Cypress-pine Woodland, Yellow Box Woodland and Bimble Box Woodland Lignum Swamp. We’ll break here for lunch.

The day will end at Rocky Waterholes Reserve on Bundigery Creek, where if you walk alongside the river, you may see Koalas in the River Red Gums above the path. Here you’ll see riparian vegetation, rocky hillsides, River Red Gum Forest and Grey Box Woodland.

... continues on next page

FOG-related activities continued – October, November–December!

FOG trip to Narrandera, 21–24 September, continued

Although it has been very dry, recent small rainfalls may have been enough to encourage some native flora to make a show. On recent reconnaissance trips to the sites, I've observed very little growth of exotic annuals, so at least the sites won't be dominated by these. All sites are likely to yield some interesting birdlife, if nothing else!

On Monday, we have arranged a visit to the John Lake Centre (DPI Fisheries) for a guided tour to see the aquaria and hatcheries. This has a nominal cost. After the stop at the fisheries centre, you can make your way home. A number of other sites could be visited on the way, including Poison Waterholes Creek, Bullenbung TSR, and sites at Wagga Wagga and Gundagai.

If you have not already signed on for this extraordinary trip, contact margaret.ning@fog.org.au to register and be sent the detailed itinerary/timetable.



EOIs wanted. Be paid (maybe) to conserve native grasslands on Monaro!

The Biodiversity Conservation Trust (BCT) is calling for expressions of interest (EOI) from landholders who would like to earn annual management payments for conserving grasslands on their property in the Snowy Monaro LGA. Suitable sites must contain 10 ha or more of native grasslands in reasonable condition. See <https://www.bct.nsw.gov.au/news-stories/do-you-have-native-grasslands-your-property-monaro>.

EOIs must be submitted by **5 pm, Friday 7 September**. Complete the autofill EOI form online, save it and email to info@bct.nsw.gov.au or call 1300 992 688.

A bunch of other things coming up

Monaro Runes – paintings of Monaro dieback

1–17 September, Cooma Raglan Gallery and Cultural Centre

An exhibition of paintings and drawings by Sharon Field and co-artists, about the Monaro Ribbon Gums *Eucalyptus viminalis* and dieback.

21st Australasian Weeds Conference, 9–12 Sept, Sydney

Register via <http://www.21awc.org.au>.

Native Seed workshop, Bookham NSW, 25 September

A workshop with Stephen Bruce from Greening Australia to discuss **native plant id techniques, native seed collection, cleaning and storage techniques**. It will be at Bookham Memorial Hall for theory, Bookham Cemetery for plant id (approx. 10 kms from the hall), at **9 am to 3 pm**. Cost: \$10 to assist with catering costs, payable on the day. Bring: Computer. RSVP: kangiara@gmail.com, by **18 September**.

National Landcare Conference, 10–12 October, Brisbane

Details are at <http://www.nationallandcareconference.org.au>.

People's choice voting is easy; start at that web address. Ginninderra Catchment Group and Lenore Hodgkinson (Ken Hodgkinson is on our FOG committee) are two of the nominees for national awards.

Biodiversity and Climate Change Roadshow, 31 October

'How can we conserve species from the impacts of climate change?'. A day of tailored training at Queanbeyan NSW. For info: <https://www.eventbrite.com.au/e/biodiversity-climate-change-roadshow-queanbeyan-tickets-47943605615> or phone 02 9850 6298.

12th Australasian Plant Conservation Conference, APCC12, 11–15 November, CSIRO Canberra ACT.

'Moving house – a new age for plant translocation and restoration'. Earlybird rego ends on **Friday 31 August**. Find out more about APCC12, and register, at <http://anpc.asn.au/conferences/2018>.

Weed control undertaken by NCA and FOG at Stirling Park woodland and Yarramundi Grassland in June

Screen shots of ACT Government weed control maps for financial year 2017–18 showing the extensive weed spraying undertaken by the NCA and FOG (mainly via contractors like EnviroAg, and volunteers) at Stirling Park (right) & Yarramundi Reach (left). An impressive effort.

Black = African Lovegrass.

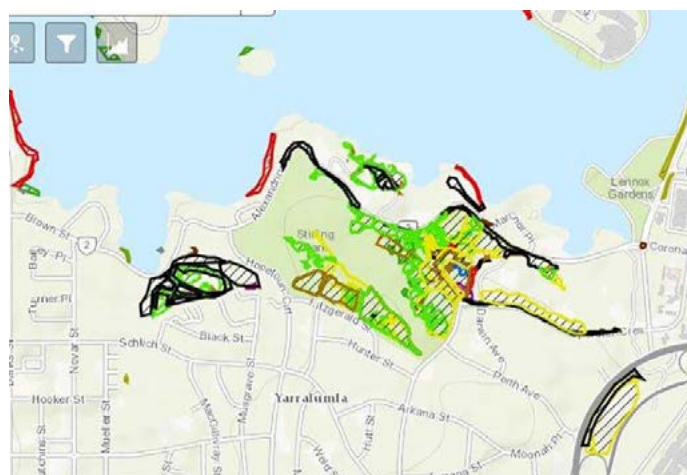
Green = Chilean Needlegrass.

Red = Blackberry.

Yellow = St John's Wort.

Brown = Serrated Tussock.

Notes and screenshots sent by Jamie Pittock, 23 June 2018.



Stand Against Extinction (of Grassland Species)

Monday 10 September, 8.30 – 10 am

This event is being held on the lawns of Parliament House. It is being organised by *Places You Love* and supported by the Conservation Council. FOG members, please join me to show your support for grasslands and associated species. I am trying to find out more. If interested, please let me know (geoffrobertson@iprimus.com.au).

President's report by Geoff Robertson

Margaret and I were travelling when the last newsletter was published. On our two-month trip we saw some of the most amazing country. Fortunately we were able to meet a number of Aboriginal people and to become better acquainted with their deep and rich culture. Much of the land we travelled through is Aboriginal Land returning to traditional management. My impression, likely biased, is that it is much healthier as a result of that management. Meanwhile FOG was ably managed by the committee, with advances being made on many fronts.

Coming up is our **Grassland Forum and Field Trip on 24 and 25 October** which will greatly update our understanding of and strategies around grasslands (details to come; see page 3).

Our annual report circulated to politicians continues to be received well. Further to my last report, we received letters from John Barilaro thanking FOG for the report. He stated, "I appreciate the efforts that groups such as Friends of Grasslands contribute to our local community and the broader region. In particular I commend Friends of Grasslands cooperation with the Snowy Mountains Regional Council to manage the Old Cooma Common Grassland Reserve and the 7800 hours of volunteer time contributed in 2017." A similar letter was received from Minister Upton, NSW Minister for Conservation.

We received a letter from Andrew Barr offering us a special grant of \$1000 to assist in our submission on North Mitchell Grassland. I met with Suzanne Orr on how we follow up on the offer of the grant. Finally, I had a very productive meeting with Elizabeth Lee, the Liberal Party spokesman on the ACT environment.

At our winter talk on 18 August, two fantastic presentations were made by Darren Le Roux on Restoring Box–Gum Grassy Woodland on Barrer Hill and by Brett Howland on his team's Grassland Restoration, demonstrating the excellent science underpinning, and innovative practice applying to, the management and restoration of our ACT grasslands and grassy woodlands. Some present were surprised by some of the innovative elements being adopted – something to think about. It is great to observe the cutting edge approach in the ACT.

At that meeting, FOG awarded Honorary Life Membership to Sarah Sharp. A pre-circulated statement described her extraordinary contribution, passion, leadership and sound science in support of grassy ecosystems and FOG in particular. Janet Russell, Ken Hodgkinson and Paul Archer who prepared the statement, after thorough research and interviewing many people, said their work was an eye opener on Sarah's contribution. Thanks Janet, Ken and Paul for your work. And to Sarah – 'Well deserved!'. The meeting also congratulated Margaret Ning on her OAM for her contributions to grasslands and herpetology.

Finally, consider joining me on **10 September on Parliament House Lawns for the 'Stand Against Extinction' event** (above).

FOG Advocacy by Naarilla Hirsch

August

1. The NSW National Parks & Wildlife Service asked for comments on horse riding in wilderness – proposed amendments to plans of management. FOG's response was to oppose horse riding in any designated national park. To maintain the environmental values of these areas, impacts from human and exotic animal activities should always be minimised, not expanded. Particular issues raised were the shortness of the trial to assess the impact of horse riding in some wilderness areas, and concerns about compliance in the long term.

2. The Senate is undertaking an inquiry into Australia's faunal extinction crisis. FOG provided a detailed submission to this. Particular issues raised included lack of information about fauna populations, the impact of climate change on species, examples of where the protections in place are not adequate and loss of habitat is continuing to occur, and lack of protection for some high quality habitat areas such as those that occur in Travelling Stock Reserves.

3. Results of an EPBC referral

In 2014 the Commonwealth asked for comments, under the EPBC Act, on a development at the old CSIRO headquarters in Campbell (EPBC referral 2014/7372). Adjacent to the buildings is 3 ha of Natural Temperate Grassland (NTG) inhabited by the Golden Sun Moth (GSM). FOG opposed the application because of its destruction of NTG and other threatened species on the site and the likely impact on the adjacent site with its NTG and threatened species. The submission also included a number of issues that should be considered in the unfortunate case of the development going ahead.

FOG raised similar concerns in a submission in 2016 to the NCA when a Development Control Plan was released for the site. In its response to the NCA concerning the proposed demolition of the old CSIRO buildings, FOG again reiterated these concerns and also drew attention to lack of clarity regarding removal of old potentially hollow-bearing trees during this process.

The Commonwealth has recently made a decision about this referral. The development has been approved but there are a number of conditions attached, including:

- A limit to the amount of NTG and GSM habitat that can be cleared;
- A management plan to ensure no loss of quality to the remainder of the site;
- A buffer zone between the development and the NTG area, fencing between the two areas, and signage about the conservation values of the site;
- Offsets which are retiring similar ecosystem credits under the *NSW Threatened Species Conservation Act 1995*, plus \$100,000 for GSM research in the ACT.

This result is fairly typical of what we see occurring. The next issue is whether or not these conditions are met and there is no deterioration in the quality of the site due to the development over time.

The full text of FOG submissions appears on our website.



Black Field Cricket, *Teleogryllus commodus*, one of Nature's musicians

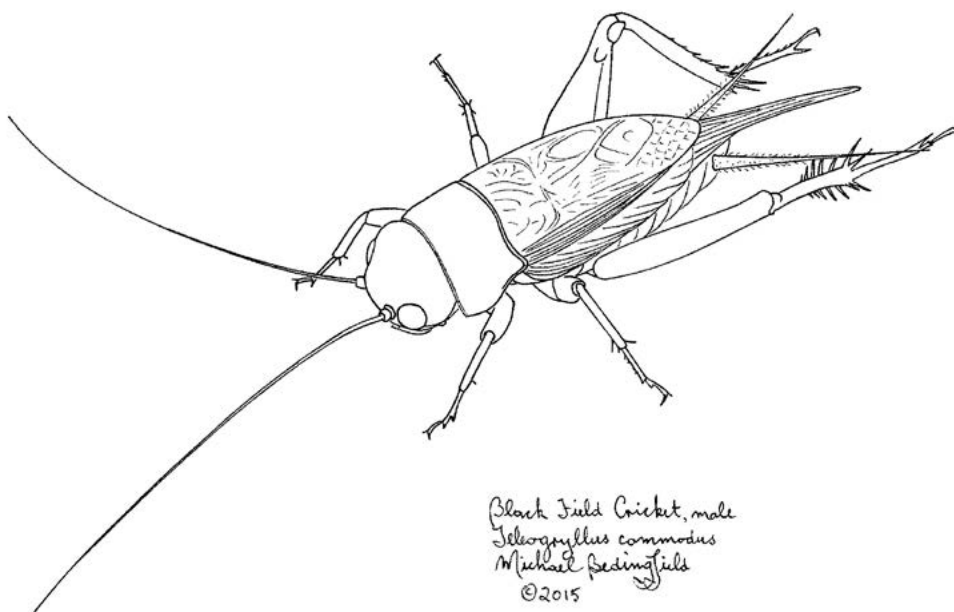
Michael Bedingfield

The sound of many crickets chirping is very familiar to us, especially at night or after rain in summer and early autumn. The males make the sound in the hope of attracting a female. To make their music the males rub their two upper or forewings together to make a chirp-like song. The wings are moved back and forth in a repetitive scissors-like motion. The method is called stridulation and the noise can be quite loud when one of the insects is close by. One forewing has a row of tiny pegs along a particular vein. This is rubbed against a scraper on the hind edge of the other forewing to create a vibration. A short video of a field cricket doing this can be viewed at the first reference (a). The sound is amplified by the design of the wings to produce acoustic radiation. Females are strongly influenced by the tone and strength of the calls. Male crickets are quite territorial and their song is also meant to repel other males from the vicinity. They are sensitive to temperature and will only play their musical instruments when it is warm enough to do so.

The drawing I have provided is of a male Black Field Cricket, which is known by the scientific name of *Teleogryllus commodus*. Its colouring is black or dark brown and it has two tails. The female has a long ovipositor extending from the rear end of her body between the two tails. The two back legs are stronger than the others and give thrust when the insect hops. The wings enable flight but when in danger these crickets are more likely to hop away. The body size is up to about 3 cm. The front antennae are almost as long as the body, and there are 'ears' or sound receptors on the forelegs.

There is one generation per year and weather conditions will affect the growth and development of the animals. Eggs hatch within the soil from spring to mid-summer depending on temperatures and rainfall in the location. After hatching from eggs the young ones, called nymphs, grow by a series of moults, taking a few months to mature. They are similar in appearance to the adults but smaller and lack wings. The adults live for several months, with the females being able to lay up to 2000 eggs. This is done in autumn by inserting the long ovipositor 1–2 cm into the soil. The eggs survive the cold winter months underground.

If you approach the sound of one of these crickets chirping it will stop calling when you are close. This is quite understandable since they have many predators including a variety of birds and reptiles, possums, mice as well as other insects.



Crickets are not seen as often as they are heard and seeing one in the wild is unusual. But since Black Field Crickets live in urbanised areas it is common for them to enter houses and so they are a common sight in town. They are generally nocturnal and spend their days hiding in burrows or other sheltered places. One rainy evening I found one of them in my house. I captured it in a bottle, deciding to put it out later when the rain eased. Soon I found another one had entered and I captured it in the same bottle. Returning to the task later on I found there was only one cricket left and a few loose legs – one had eaten the other!

Black Field Crickets are native to Australia and are very common in our region. They are found in a variety of habitats including grasslands, grassy woodlands, forests, farms and urban areas. They occur all states of Australia, in the south-east and south-west, and have been introduced to New Zealand. They are omnivorous and while they feed mostly on plants they also eat the remains of insects. In some places they are regarded as an agricultural pest because of their fondness for some crops and pasture plants.

The chirping of a cricket is really a male's love song to serenade a female, and en masse they create a harmonious choir. It is one of those appealing sounds in nature, like that of a breeze through She-oak trees or water cascading over rocks, and it serenades us all.

References

- (a) <https://www.youtube.com/watch?v=CQFEY9RIRJA>
<https://australianmuseum.net.au/black-field-cricket>
<https://collections.museumvictoria.com.au/species/8571>
https://en.wikipedia.org/wiki/Teleogryllus_commodus
[https://en.wikipedia.org/wiki/Cricket_\(insect\)](https://en.wikipedia.org/wiki/Cricket_(insect))

http://www.pmanz.nz/uploads/5/3/1/0/53106237/black_cricket_pmanz_pest_fact_sheet_1_.pdf

http://www.herbiguide.com.au/Descriptions/hg_Black_Field_Cricket.htm

Encyclopedia of Insects and Arachnids. By Maurice & Robert Burton, 1984. Finsbury Books.



Historic aerial photographs for the ACT available on ACTMapi

By Sarah Sharp

You can check out historical photo images of sites of interest using the Aerial Imagery button at **ACTMapi** (<http://www.actmapi.act.gov.au>).

Individual aerial photographs are presented in ACTmapi almost annually from 1951 to 1989. There are also composite coverages of photos taken in 1955, 2004, 2009, 2012 and 2014 onwards.

See vegetation, and changes through time

This is a great way to see how sites have changed over the years. You may wish to download images of areas to compare them over time. Often you can differentiate between native and exotic groundcover by the colour, and of course you can see details about tree cover, evidence of ploughing or past landuses.

How to do it

There are two ways of looking at a location:

1. There are aerial mosaics of ACT using air photography to create one composite image. These are available for 1955 and for 2004, 2009, 2012, 2014–2018.

The layers are listed on the left hand side, so you can choose which years to look at. Make sure only one year is ticked, so there is no overlap of images.

You can zoom in at any scale. All years except 1955 are in colour. If you turn on the Cadastre for Imagery and Road Labels you will be able to get a better sense of location. There's an incredible amount of change since 1955 – check it out!

Two images of Yarramundi Grasslands are presented here for your interest: 1955 (top) and 2018 (below).



2. Alternatively, to get more detail and more coverage you can look at individual air photos.

To get started, click this button:



Then enter the location and year or decade that you are interested in. Then 'View Photograph'. To save an image or screen shot, go to Advanced Tools and click 'Export'. Each image you save is automatically named 'Export', so you will need to 'Save As' each one with a new name, as a jpg or other format as you wish.



Burn at Charles Sturt University Canberra – St Mark's grassland

Kym Witney-Soanes, Mark Evans & Hazel Francis

On 28 April 2018 the ACT Rural Fire Service assisted Charles Sturt University staff with a hazard reduction and ecological burn at the Natural Temperate Grassland ('St Marks Grassland') at their Canberra campus in Barton. The photos by Hazel Francis show the green shoots springing up on 5 July (if you zoom in!).

There is a video of the burn on YouTube, at <https://www.youtube.com/watch?v=XWL-F9Txe0&feature=youtu.be>, called 'Capturing Fire – Ecological burn at the Charles Sturt University Canberra Campus'. (Hazel is Centre Manager at the Australian Centre for Christianity and Culture, Barton.)



Close-up: Seeing some spores – *Cheilanthes distans* by John Fitz Gerald



‘Close-up’ pokes into different parts of the plant kingdom and in this contribution I look at one spore-producing vascular plant, the fern *Cheilanthes distans*.

The genus *Cheilanthes* comprises a group of ferns known from many parts of the globe. Their common names often include ‘lip fern’ since leaf margins characteristically curl to protect their spore-bearing structures.

Cheilanthes distans has common names Shaggy Rock Fern or Bristly Cloak Fern, where ‘cloaking’ again indicates edge curling. *Atlas of Living Australia* shows this species grows in dry and steep rocky places of woodlands which are mainly in SE Australia, though the plant has even been collected from arid Central Australia. The species is found around the ACT, including open rocky places that now are treeless, but may not have been originally.

This fern is bipinnate with fronds to 20 cm long (photo above, no. 1). Hairiness is a distinctive character, on both upper and lower sides of pinnae, and on rachis. The photo at top right above (no. 2) shows simple hairs poking out from curled edges of the upper leaf surfaces (note that backlighting here somewhat exaggerates this feature).

If a hand lens or microscope is handy, these will help to examine structures producing the fern’s spores. Look on the underside of a leaf, and a fertile frond will show a continuous line of small spherical bodies in its curled edge. These are sporangia containing the *C. distans* spores. In photo no. 3 (2nd down, at right), the hundreds of tiny sporangia appear either light or dark.

The photo immediately right (no. 4) is at much higher magnification, and shows the detail of the light sporangia having released spores, the dark ones still containing them. In the bottom right of the frame is an inset (at quite similar magnification) showing free spores roughly 50 microns (µm) in diameter, nearly spherical and quite dark. Interestingly each sporangium has an annulus, a ridged structure running around one side, that shrinks on drying, eventually rupturing the thin wall of the sporangium and releasing spores.

This links back to my ‘Close-up’ from the previous newsletter, on grass awns, and is a second example of hygroscopic behaviour in the plant kingdom. The annulus on *C. distans* sporangia that have shed spores is an attractive golden brown, and this gives older



leaves a distinctive browned edge. To complete description of this fourth photo, the green background is the leaf, and the leaf bristles and walls of empty sporangia are both colourless.

Images 3 & 4 were captured 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/>).

The scale bar on the image of the full leaf (no. 3) represents a length of 1 mm. The scale bar (representing 0.2 mm) at the left-side of photo no. 4 refers to the top and left part of that image. The scale bar in the inset represents 0.05 mm.



A matter of provenance. 'Nature notes from the Murrumbidgee'

– a Facebook post on 15 August 2018 by Rainer Rehwinkel

https://www.facebook.com/permalink.php?story_fbid=1112998632199924&id=100004693938376&_tn_=K-R

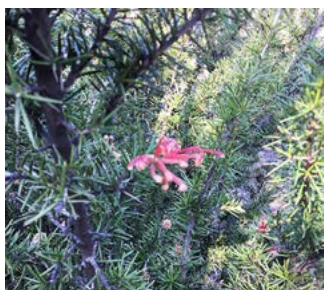
Today (14 August 2018), I joined other Friends of Grasslands – Margaret Ning OAM, Michael Bedingfield and Dave Mallinson – on an inspection of some potentially 'feral' grevilleas in the gorge of the river near the suburb of Bonython. Michael had recorded this population in Canberra's NatureMap app, but was uncertain of the identity of the plants. Apparently, there had been a planting of Juniper Grevilleas (*Grevillea juniperina*), and possibly the grevillea cultivar 'Canberra Gem', at the site many years before. Since then, some years ago, the site had been subject to rabbit control and a new much larger population has emerged – and it appears, from our inspection, that plants with probably multiple hybrid parentage are present.

The issue

A major issue here is that large groves of grevilleas are encroaching on, and threatening the integrity of, a significant plant community growing on some



Small-leaved Beard-heath.



A flower typical of *Grevillea juniperina* but perhaps showing a little too much pink and not the scarlet shade of the 'true' species, hence possibly a hybrid.



A plant resembling Rosemary Grevillea, though the leaves didn't quite gel for me, being shorter than normally seen in that species, and thus possibly a hybrid.



Large groves of grevilleas are encroaching on a rare grassland community (foreground).

rocky knolls. That community, possibly allied to, or even part of the grassland community that grows in steep rocky sites in our region (Community r8), is here augmented by a population of the Small-leaved Beard-Heath (*Leucopogon attenuatus*), which we saw today flowering beautifully. Also present were plants of Barbed-wire Grass (*Cymbopogon refractus*), a grass allied to the culinary Lemongrass and an indicator species of Community r8.

Close inspection of the grevilleas here revealed resemblances of some of them to commonly planted garden species including Rosemary Grevillea (*G. rosmarinifolia*) and Woolly Grevillea (*G. lanigera*) which also has wild populations nearby. Some were probably second generation plants of 'Canberra Gem', but in the absence of flowers this couldn't be verified.

We questioned, too, whether the original plantings of *G. juniperina*, which by the way has natural populations in the ACT including upriver from this site, were indeed of the local provenance plants. Margaret pointed out that this widespread species has, according to PlantNet, no fewer than nine subspecies. The species has long been in the nursery trade, and those original plantings here at the Murrumbidgee may very easily have been sourced from nursery plants from anywhere within the species' range.

Here then, we have a typical situation where a new population has emerged, with genes infused from nearby garden plantings of clearly non-locally indigenous species, and into plants that may also not have been of local provenance. We have a so-called 'hybrid swarm', showing the characteristic 'hybrid vigour' of such situations.

Should anything be done about this?

Various options were discussed, including – most importantly – what to do about this? Should the whole population be removed, including seedlings that will continue to emerge after these plants are killed? Should only plants threatening the rare plant community be removed? Should the plants that are clearly hybrids be removed and plants showing characteristics of the 'true' species be kept?

Should the plants be left to continue to thrive, creating a novel ecosystem that may be better suited to a changing environment, given its hybrid vigour and the thought that it may also provide habitat for fauna?

If the decision is made to take some of the control steps above, are the significant resources even available to undertake the task?

As can be seen on the Facebook post, the post generated a vigorous discussion, ranging between the extremes: 1. Remove all non-locally sourced plants; 2. Remove only the plants that are threatening the rare grassland community; and, somewhere in the middle, 3. Remove all plants that are clearly hybrids, but keep extensive areas of non-hybrid plants to continue to provide nectar resources for honeyeaters, because the site is in an important migration route for honeyeaters. No doubt the debate will continue, because this issue is not confined to this site; it is also found in various permutations elsewhere. For example, I have previously FB-posted about non-local and hybrid swarming wattles at another site down-river!

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ACT Grassy Woodlands 2018 forum

Naarilla Hirsch and Janet Russell

We attended this forum in company with a number of other FOG members. The forum is part of the lead-up to a revised ACT grassy woodlands strategy and action plan, and a wide range of stakeholders and interested parties attended.

The topics presented at the forum covered most aspects of our grassy woodlands and caring for them. We had talks on their conservation, various restoration projects, Aboriginal fire-management, and the impacts of overgrazing, invasive plants, and dieback. There were talks about associated fauna such as the Superb Parrot, Bettongs and butterflies, and their habitat requirements. Others were about data collections and tools for monitoring the health of these ecosystems.

The emotions expressed by the participants ranged through despondency – because after 12 years of conservation effort the workers have not been able to even maintain the *status quo* in one reserve – to frustration with the government implementation processes in another. These issues will continue to impact grassy woodlands, and the government representatives' responses to the issues when raised did not give us hope that the situation will change. There was, however, cautious optimism expressed where improvements have been made.

One talk that stood out was the one on climate change, in particular the implications of climate change for our restoration efforts as well as the ecosystems themselves. The differences between invasive plants and their impacts on native plant extinctions, together with habitat loss and feral animals and their impacts on native fauna extinctions, came up for discussion. The timeframes need to be considered in relation to our restoration efforts.

Another aspect that came up repeatedly, particularly in reference to the speakers' visions of the future, was that of engaging the community in protection and restoration of our grassy ecosystems – not just those already committed to this, such as the forum attendees, but also the community as a whole and the younger generation.

A debate also arose regarding foxes, which many would like to see completely eradicated. If this occurred in today's modified ecosystems there were concerns that it would lead to increases in rabbit and possum numbers which would result in severe impacts on the vegetation. The importance of a landscape approach to conserving these ecosystems was emphasised several times.

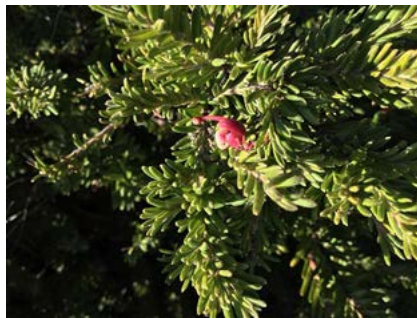
Some interesting ideas emerged from the final discussion, and we look forward to seeing how they are reflected in the revised strategy when it is released for comment early next year.



Continuing ... A matter of provenance. 'Nature notes from the Murrumbidgee' by Rainer Rehwinkel

The following concluding remarks were written a week after the above notes were posted, in response to much debate on FB, and on Canberra NatureMap.

It is still not clear what is to be done with these grevilleas. As one ACT Government staff member argues, the grevilleas appear to be an important nectar resource. However, the issue is that the population at Pine Island is most probably now much larger than the original local population of *G. juniperina* is likely to have been. Furthermore, the plants here are pretty much all along a continuum of hybridisation, from almost pure *G. juniperina*, to plants all-but-indistinguishable from *G. rosmarinifolia*. In addition, there are genes from *G. lanigera* present and, as the ACT staffer mentions, also from 'Canberra Gem' which is itself a hybrid of *G. juniperina* and *G. rosmarinifolia*. This will have implications for their progeny, should they recruit here.



Woolly Grevillea, *G. lanigera*

of the South Eastern Highlands (NTG SEH, see the link, below).

The added boon for local populations of honeyeaters and other small passerines that may be using this site needs to be carefully weighed up against the likely dis-benefits, especially the risk of the spread of genes from the hybrid swarm into more intact populations of both *G. juniperina* and *G. lanigera* that are, as I understand it, both upstream and downstream from this site.

Respected Canberra naturalist, Ian Fraser, in his comment to the original FB post, was unequivocal: to paraphrase him, "No argument, get rid of them all!".

Possibly the most important lesson here is that, when undertaking plantings in or near bush settings, extreme care must be taken in sourcing plants, and choosing the planting densities and the planting locations.

To see all the photos from the site, and the interesting comments generated by the original post, see my FB page (the link is at the top of this article, on the previous page).

Here's the link to the NTG SEH CEEC:

<http://www.environment.gov.au/cgi-bin/sprat/public/publicshowcommunity.pl?id=152>



Restoration trials in the ACT, as outlined to FOG on Saturday 18 August

The welcome rain fell strategically so as not to prevent people attending FOG's annual Winter Talks and Tea afternoon at a cosily warm Mugga Mugga Environment Education Centre in Symonston on Saturday 18 August. More than 30 people attended the activity, which included the Special General Meeting called to elect Sarah Sharp to Life Membership (see page 1), to listen to two excellent talks on ecological restoration in progress in ACT. And of course there was also time to chat, fuelled by tasty treats, for which we thank several contributors, as well as the tea FOG (via Margaret Ning) provided. Our two speakers were **Dr Darren Le Roux** (photo below right) and **Dr Brett Howland** (left, photo above right), both of whom work with ACT Government Parks & Conservation Service, after gaining PhDs at the ANU Fenner School. Thank you both very much for such interesting presentations. (The outlines here, prepared from the presented slides, have been checked by Brett and Darren.)

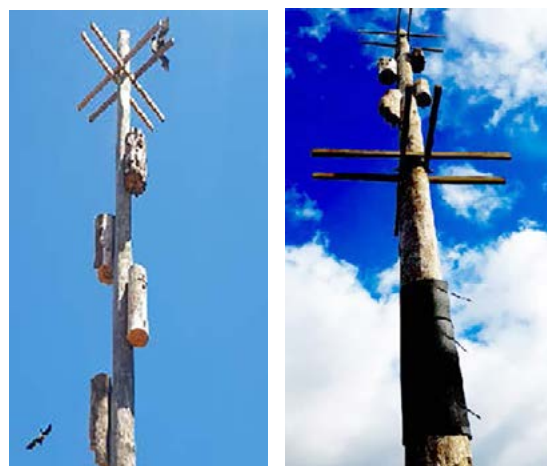


Photos: Paul Archer (above) & Darren Le Roux.

Barrer Hill: Restoring Box–Gum grassy woodlands for wildlife – Darren Le Roux

Humans dominate the Earth, night and day. In densely human areas, research finds there may be zero threatened species present, compared to 30–40 species in areas away from intense human activity. Box–Gum grassy woodlands that extended from Queensland to Victoria are now critically endangered fragments in the wheat–sheep belt, and the >400 species of fauna and flora that lived there before European settlement are now scarce. Part of the problem is that mature trees – keystone habitats in Box–Gum grassy woodland ecology – are being removed to make way for urban development and human safety.

The Barrer Hill restoration in the Lower Molonglo Valley aims to remedy the loss of mature tree-like structures by replacing them with dead tree trunks or wooden poles (photos right), anchored in concrete and provided with perches and nest boxes and wrappings to simulate bark. Also in this 50 ha restoration area between Wright and the pine plantations beyond the zoo are: planted and tended tubestock (50,000); installed woody debris (dead trunks from former street trees); 80,000 tonnes of 'scattered' large rocks; and >1 ha of Greening Australia's scrape-&-sow treatment, now growing native forbs and grasses. There are also art installations.



Darren's work is with the vertical structures, which he is monitoring to see if they can mimic some functions of mature trees, and so bridge the absence of habitat resources that occurs in the years between tree removal and their regrowth from tubestock. With remotely operated cameras and student help, Darren is finding that a range of fauna is responding almost immediately, visiting dead trees soon after they have been 're-erected' at Barrer Hill, perching on the crossbars atop utility poles, visiting the nest boxes, crawling (invertebrates and reptiles) or squeezing (bats) under the artificial bark ... and on the ground nearby there is a good cover of sown mixed species.

These are very inspiring observations, and possibly support others' ideas for ways humans can better co-exist with native species. For instance, art installations are designed to also be habitat (habitecture) in other parts of the world. How about replacing real trees by 3D-printed trees, artistic and functional, with hollows?

Grassland restoration program – Brett Howland, Maree Gilbert & Richard Milner

Grasslands evolved being grazed by large herbivores and burnt by lightning strikes, but that pattern changed around 30,000 years ago when humans turned up. Now, grassland biomass is more often removed by fire than by grazing, except in the ACT. Grassland management affects not only the grassland vegetation but also its unique fauna: Perunga Grasshopper, Pink-tailed Worm-lizard, Striped Legless Lizard and Grassland Earless Dragon depend on our grassland management.

Our tools for managing the Natural Temperate Grasslands (NTG) that remains in the ACT are: weed control; protection of land-use; and manipulation of biomass. The biomass and the height of the groundstorey vegetation in an area correlate well with the fauna found there. The ideal is heterogeneity, with a range of vegetation heights offering the variety of cover and openness needed for grassland fauna.

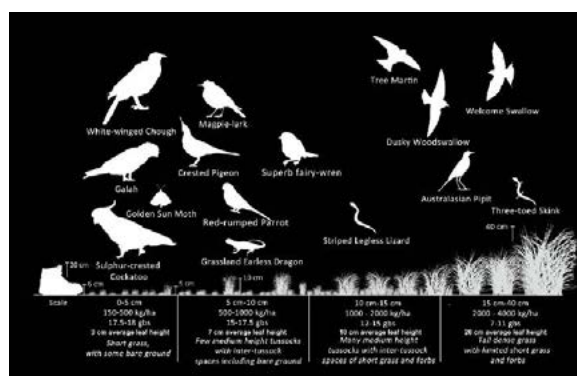


Image above, and photos overleaf: Brett Howland

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Restoration trials in the ACT, outlined on 18 August, continued

Grassland Earless Dragon (*photo right*) and Golden Sun Moth, along with a range of bird species, do well in short vegetation (0 – 10 cm) that is not particularly dense. Striped Legless Lizards do well in vegetation that is up to 15 cm tall in places, while a dominance of taller groundstorey plants (15–40 cm) favour only a few birds and skinks (*see diagram on previous page*).

How can we achieve that kind of heterogeneity in managed grasslands? Can fire do the trick?

Previous researchers have found autumn fires every 3 – 8 years benefited *Themeda* grasslands (Kangaroo grass): over several years such fire treatments changed vegetation from annual grasses to dominant C3 (winter-growing, wallaby and spear grasses) and C4 (summer-growing, Kangaroo Grass and Red Grass) grasses and native forbs. Conversely, heavy grazing, possibly with fertiliser, reversed the change.

Canberra's native grasslands tend to be dominated by C3 grasses: we wondered what the effects of fire would be in these grasses. Could it be detrimental?

We established an experiment to burn >200 ha across 7 grassland reserves in spring and autumn over 3 years. Both high and low quality habitat was burnt in this trial, at Dunlop, Crace, Gungaharra, Mulanggari, Kama, Jerrabomberra East and West, and Symonston. The burns were in spring or autumn 2016, 2017 and 2018 (*example burn plan, right*). To measure the outcomes we identified and counted the plants in five 1 m² quadrats (*see photo below*) per plot in 320 plots (20 m x 20 m, burnt or not burnt). We recorded plant diversity and abundance, vegetation structure (thatch, bare ground, biomass – can you lose a golf ball in it?), and birds and reptiles present. The 1702 quadrats took more than 550 hours work (Margaret Ning was in the team; *see photo below right*). We found 310 species (188 were native). One quadrat had 50 plant species in it! (the record is 89 species in Argentina!). The photo at right shows an example, post burn.

We monitored reptiles by turning over roofing tiles (*photo below*) placed in 156 locations – 17,680 tile turns – and found 14 species (1949 individuals in total, with 343 Striped Legless Lizards).



We have modelled the data to determine what has driven native and exotic species richness in these areas

since 2015, considering % of area burnt, season of burn, time since burn, vegetation community, initial plant species richness (native and not), soil, aspect, and change in % bare ground. The results suggest that native species richness is affected by season, % area burnt, time since burn, vegetation community, initial species richness, soil, aspect and reduction in bare ground. Exotic species richness is affected by % area burnt, initial species richness, aspect and reduction in bare ground. Numbers of C3 grasses declined slightly and C4 grasses increased slightly. Wild oats declined in the first year after a spring burn, but began to recover in the second year.

Recommendations: For plants, our burns seem to give best results when high quality NTG has declined in quality, with thatching, little bare ground, and poor species richness initially. These burns were cool season in autumn and spring and a high proportion of the area was burnt.



For Grassland Earless Dragon, dependent on spider burrows to persist in harsh grassland, management needs to aim for a mix of short and medium grass tussock. GED populations decline in hard-grazed situations and where there is little grazing. For this species, fire may offer a way to open up and improve habitat quality.

Contact Geoff.Robertson@fog.org.au *if you would like copies of these pdf files (15–16 mb each).*



Rampaging *Rutidosia* – a FOG visit to Crace Nature Reserve and its Button Wrinklewort

by Ann Milligan and Sarah Sharp

In northern Canberra, if you drive towards Mitchell along the Gungahlin Drive Extension (GDE) freeway, or towards Watson along the Barton Highway after the GDE underpass, you can see an expanse of grassland, usually with a few cattle grazing and always some kangaroos, and sometimes a bunch of parked cars in the far distance near the pointy rocky hill ('Crace Hill'). The grassland is Crace Nature Reserve (named after the hill), and is entered via a locked gate at the corner of Bellenden St and Hoskins St, Mitchell, beside the track to the model aero-club (the reason for the parked cars). The reserve is open to visitors via a step-through in the gate.

On Friday 13 July, one of Canberra's beautiful winter days, four of us joined Sarah Sharp at the gate. This FOG activity had been postponed from the previous Friday when (if you remember) it had been raining with a bitterly cold strong wind. What a pity: there had been many more people available for that original date.

Our target site was about 1 km from the gate. The area is almost a forbland, with a high abundance of forb species including *Vittadinia muelleri* Narrow-leaved New Holland Daisy, the uncommon *Velleia paradoxa* Spurred Velleia, *Calocephalus citreus* Lemon Beauty Heads, *Cryptandra amara* Bitter Cryptandra, and *Lomandra filiformis* Matrush, with Kangaroo Grass and other grass species, and cryptogams and bare soil – a perfect mix and, of course, the 'rampaging' *Rutidosia* that gave Sarah this activity's title!

Sarah explained that she had been the original discoverer of this good patch of *Rutidosia leptorhynchoidea* Button Wrinklewort in 1998, while discussing conservation management after the area was first legislated as a reserve (it was originally established to protect remnant Natural Temperate Grassland and habitat for the vulnerable Striped Legless Lizard *Delma impar*).

The patch of Button Wrinklewort was found in an erosion scald, and the plants at that time had been grazed right down. To protect this threatened species, the population was fenced off (from cattle but not roos) and allowed to regenerate. Since then it has spread well outside the original fenced zone. The number of plants is estimated or counted periodically: 150 were counted when it was first discovered in 1998; 1000 and 4000 estimated in 1999 and 2000, 4946 counted in 2007 and up to 1000 estimated in 2016/17. We decided to count the number of plants for 2018, as they are very easy to distinguish at this time of the year.

The plants range from small bushes, up to 25 cm or so across, to seedlings (but completely recognisable) 1–2 cm across. Necessarily, our counts were not accurate, but our tally was well over 3000 plants – the population has not shrunk after all! That information will be provided back to the ACT Government for their records.

Sarah told us there has been some recent genomic work on this population of Button Wrinklewort to see if it will be suitable as a donor population to genetically rescue smaller populations. If its vigour is anything to go by, it will certainly be suitable!

Thank you, Sarah. What an interesting and different activity – nice to feel one is doing something useful and enjoyable on such a glorious winter's day.



Top-down: Bitter Cryptandra, *Cryptandra amara*. Photo: Andy Russell

Spurred Velleia, *Velleia paradoxa*. Photo: Andy Russell.

Concentrated counting, walking towards Crace Hill in the distance. Photo: Ann Milligan

Rutidosia leptorhynchoidea, Button Wrinklewort. Photo: Andy Russell



Two useful free resources: Snippet sent by Sarah Sharp

CSIRO Biodiversity Book – a free downloadable eBook about the science solutions to managing Australian biodiversity. See <https://www.csiro.au/en/Research/Environment/Biodiversity/Biodiversity-book>

Suzanne Prober & coauthors (2010): *The implications of climate change for biodiversity conservation and the National Reserve System: temperate grasslands and grassy woodlands.* From <https://publications.csiro.au/rpr/pub?list=SEA&pid=csiro:EP102259>

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

FOG’s and others’ dates, September onwards

- | | |
|--------------|---|
| 1–17 Sept | Monaro dieback – paintings exhibition at Cooma NSW |
| 5 Sept | Launch of <i>Grassland in Transition</i> (Young & McIntyre) |
| 7–9 Sept | Jamison display of environmental-care work |
| 9–12 Sept | Australasian Weeds Conference, Manly NSW |
| 21 Sept | Translocate rare Aromatic Peppercreess, Gundaroo NSW |
| 21–24 Sept | Narrandera NSW: Exploration of grassy landscapes |
| 25 Sept | Native seed workshop, Bookham NSW |
| 29 Sept | Visit to grassland on property near Sutton NSW |
| 30 Sept | Workparties: Stirling Park, Yarramundi ACT |
| 6 Oct | Workparty at Hall Cemetery woodland ACT |
| 10–12 Oct | National Landcare Conference, Brisbane Qld |
| 14 Oct | Visit to ‘Ballyhooly’ grassy woodland, nr Bungendore NSW |
| 26–29 Oct | Spring on the Victorian Volcanic Plain. Victoria |
| 28 Oct | Workparty at Stirling Park ACT |
| 31 Oct | Biodiversity and Climate Change, Queanbeyan NSW |
| 3 Nov | Workparty at Hall Cemetery woodland ACT |
| 9–11 Nov | Revisit to Nerriga NSW |
| 11 Nov | Annual wildflower walk, Stirling Park ACT |
| 11–15 Nov | 12th Australasian Plant Conservation Conference, Canberra |
| 17–18 Nov | Hunting the Monaro Golden Daisy, Cooma area, NSW |
| 30 Nov–2 Dec | Visit to grassland near the Big Hole, Deua NP, NSW |

In this issue (approximate titles)

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Welcome to our new members!
Spring bursting with activities involving FOG people
FOG-related activities September – December
Flora, western vegetation, wetland birds, ... *by Rainer Rehwinkel*
A bunch of other things coming up
EOIs wanted: Be paid (maybe) to conserve native grasslands...!
Weed control at Stirling Park & Yarramundi, *from Jamie Pittock*
President’s report, *by Geoff Robertson*
FOG Advocacy, *by Naarilla Hirsch*
Black Field Cricket *Teleogryllus commodus*, *by Michael Bedingfield*
Historic aerial photographs for the ACT, *by Sarah Sharp*
Burn at St Marks Grassland, *by Kim Witney-Soanes et al.*
Close-up: Seeing spores – *Cheilanthes distans*, *by John Fitz Gerald*
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by Rainer Rehwinkel
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