



News of Friends of Grasslands

Supporting native grassy ecosystems

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September & October 2021

Events ...

Thurs 9 Sept, 6.30-8pm
online forum

Sustainable water management in south-east Australia - any links to grasslands? with Professor Jamie Pittock. Register with geoff.robertson@fog.org.au.

Fri-Sat 10-11 Sept,
FOG visit to Charles Sturt University, Wagga Wagga. Inquiries: margaret.ning@fog.org.au

Sat 16 Oct, all day
Visits to FOG's Canberra grassy on-ground projects. Register with andrew.zelnik@fog.org.au

Sun 17 Oct, 10am-noon
Bioblitz with young rangers, with EPSDD. Inquiries: maree.gilbert@fog.org.au

The latest updates are found on our website at [Calendar](#)

Visit our website - <http://fog.org.au/>



Welcome new members!

Helen Cross - ACT
Michael Robinson &
Giselle Roux - VIC

From the President ...

August 2021

At the time of writing the ACT has gone into another COVID lockdown, and our exploration of our grasslands, grassy woodlands and other natural areas is limited to our one hour per day exercise allowance.

Building on our experience of lockdown in 2020, there is a lot we can do for our local environment in just an hour a day. For instance, tools like Nature Mapper mean that we can record flora and fauna species that we see on our outings. Those who have access can use the ACT Government's Field Maps app to map weed infestation for dispatching in the coming growing season. When appropriate (noting that the ACT Government has suspended volunteer work in parks during the lockdown) key weeds can be hand pulled, forked out or cut and daubed. I take an old bread bag with me and collect rubbish. Now is a good time to collect those broken glass scatters in your favourite piece of bush for disposal.

Hopefully our lockdown can ease soon. I'm particularly keen to support a new FOG initiative coordinated by Sarah Sharp. My ANU colleague Professor Phil Gibbons has lent FOG three groups of five third-year ecology students to prepare condition reports for fifteen grassland remnants in the ACT. The selected remnants are listed in the ACT Government's conservation plan for our favourite ecosystem and are those not currently included in the conservation reserve system. If we can get into the field, FOG volunteers will assist the students to identify species. The students will report on the condition of the sites to FOG and the ACT Government on October 22nd. Hopefully this information will inform conservation interventions.

Stay safe and I hope to see you in the Grasslands in spring. *Jamie*



Lawson grassland mural at Hackett Shops
photo by R. Rehwinkel

Advocacy Report

Naarilla Hirsch

June 2021

In the Preliminary Documentation for the City Hill development project (referral 2019/8449), there was information that Golden Sun Moth (GSM) offsets for this project and the light rail project have been combined, and that approaches to delivery of the offset would be coordinated. While regretting the loss of GSM habitat, FOG supported this coordinated approach. We also asked that, given the offsets are to be delivered via the NSW BioBanking scheme, that information about the GSM offset credits are included on the ACT Government's Offsets Register in such a way that we can understand how the credits are ensuring no net loss of GSM across the landscape.

Public comment was invited on a proposal is to downgrade *Leucochrysum albicans* subsp. *tricolor* (Hoary Sunray) from endangered to vulnerable on the national threatened species list. While in some years FOG has observed good displays of the daisy along roadsides in the local area, our impression is that these flowerings may be on the decline and elsewhere the presence of wild populations is not much in evidence. FOG put the view that, while there may be an argument for downgrading the status of ACT and NSW populations, the poor status of populations elsewhere is an argument to retain the species as endangered to enhance its overall genetic variability.

FOG responded to the EPBC referral for a Woodbury Ridge Estate development in Sutton by strongly supporting the proposed mandatory measures and controls to be included in the estate by-laws but expressed concern about how these will be maintained and enforced over time.

July 2021

In its comments on the Preliminary Documentation for the Poplars development in Jerrabomberra (referral 2020/8801), FOG asked for clarification around formal inclusion of a small remnant of Box Gum Woodland and its population of Hoary Sunray in the Poplars North BioBanking Site. With regard to impacts on the Golden Sun Moth, FOG expressed concern about piecemeal consideration of the impacts of successive development proposals on the moth given the reference to possible rezoning in the future outside the current area proposed for development. FOG also raised other issues such as the location of bushfire management zones and appropriate tree species being used in the landscape masterplan.

The Environmental Impact Statement for the redevelopment of the Canberra Brickworks was out for comment. FOG expressed disappointment that our repeated request to consider all impacts on the Golden Sun Moth (GSM) south of the lake, including those in the area of the Canberra Brickworks, be considered together and a strategic approach to the species conservation be taken. Proposed offsets for impacts on the GSM population (albeit in a Chilean needlegrass area) were the purchase of GSM credits from the NSW BioBanking scheme at a site along Old Cooma Road, near Googong. We repeated our request that such offsets be reported on the ACT Offset Register.

FOG responded to an EPBC referral about a residential subdivision on Beatty Hill Royalla with several issues. One was that we are aware than another development (a quarry) is proposed in a nearby area, so the two developments should be considered together rather than in a piecemeal fashion to fully assess their cumulative impact. The proposal conserves 72% of the Box-Gum Woodland on the site in a Biodiversity Stewardship Site, with 3% being a loss to be offset. The remaining 25% will be retained and protected within the proposed residential lots. FOG questioned how effective the latter would be in retaining biodiversity values in the long term. Royalla Landcare has also made a submission that provides more details about potential impacts on biodiversity values on existing Royalla blocks.

The Commonwealth has released the *Threatened Species Action Plan 2021 – 2026: consultation paper* for comment. This is a general paper with questions about the eight action areas and selecting priority species and places. FOG answered many of these questions in from the perspective of conservation of our grassy ecosystems and the species that rely on these ecosystems. The issues we raised will be familiar to FOG members and included: mandatory cat containment in urban areas near reserves; connectivity issues; taking a landscape approach; the risk of offsets or purchase of biodiversity credits being seen by developers as a way to buy off their obligations; and the critical state of our grassy ecosystems and species such as the Grassland Earless Dragon.

August 2021

There was an EPBC referral for development of a wind farm in the Adjungbilly (NSW) area. Noting that the Lake Burrinjuck area is one of the few strongholds of the vulnerable Yass daisy, FOG reiterated the concern we have raised in other referrals – that all impacts to threatened species such as the Yass daisy need to be avoided, and that the benefits of such renewable energy activities should not be at the expense of our biodiversity.

FOG expressed significant concerns with the EPBC referral for development of a solar farm at Wallaroo, NSW, relating both to the assumptions that are made in the referral and to what is omitted from consideration. Firstly, there is need for an appropriate and adequate assessment for the presence of Natural Temperate Grassland on the site. Consideration of Striped Legless Lizard (*Delma impar*) was restricted to rocky habitat, but FOG believes that this was too limited. The Scoping Report states that the Golden Sun Moth (*Synemon plana*) has a high potential to occur on site, but despite this the species was not considered any further in the referral documents. These documents also do not discuss the possible occurrence in the project area of other significant fauna for which there are suitable habitat and nearby records, including the NSW endangered Key's Matchstick Grasshopper (*Keyacris scurra*), the ACT vulnerable Perunga Grasshopper (*Perunga ochracea*) and the rare and locally endemic Canberra Raspy Cricket (*Cooraboorama canberrae*). As well, the proposal will have impacts on woodland birds such as the Little Eagle and the Superb Parrot.

The full text of these submissions appears on our website.

Concern over airport road - Naarilla

Back in 2009 the Commonwealth approved construction of a northern road around Canberra Airport provided certain conditions were met. In May 2020 the Commonwealth approved a variation to the alignment for this road. This change to approval conditions was not put out for public comment because it was argued that the impact would be no more than the original impact approved in the 2009 referral.

However, FOG believes that, as well as direct impacts due to the road corridor, the road will fragment the Grassland Earless Dragon (GED) population in the area and push the GED towards extinction on the airport grounds. As we did not believe that these indirect impacts have been assessed fully, in September 2020 we wrote to the Commonwealth and to the ACT Government (who will be responsible for long term management of the road). Since then we have been advised by Canberra Airport Group of an additional requirement for the approval – signage along the road warning of possible GED crossings. However, we have not yet received responses to our letters so have written again expressing our concerns and asking for information about why these have been dismissed and how the long term survival of the GED in the area will be ensured.

Slender Speargrass *Austrostipa scabra* and streetwise native grasses

Michael Bedingfield

We know a lot about the toughness and invasive capacity of African Lovegrass *Eragrostis curvula* (ALG). It is well established in the Canberra region and can even be found growing in cracks in the concrete paving in footpaths and roads in the suburbs. However, there are some local native grasses that are tough as well and they can be found colonizing our footpaths and roads too. I have found stretches of road in my suburb of Conder with four species of native grasses determinedly trying to live a life on the edge. These are Red Grass *Bothriochloa macra*, Windmill Grass *Chloris truncata*, Weeping Lovegrass *Eragrostis parviflora*, and Slender Speargrass *Austrostipa scabra*. I was surprised to find the Weeping Lovegrass growing in such a harsh location since it prefers a damp situation. But it can be found growing among rocks by the Murrumbidgee River and I suppose the recent wet summer made the concrete roadside attractive too.

As well as the ALG other exotic grasses can be found in the same situation. These are Couch Grass *Cynodon dactylon*, Summer Grass *Digitaria sanguinalis*, Stinkgrass *Eragrostis cilianensis*, Feathertop Rhodes Grass *Chloris virgata*, and Goose Grass *Eleusine tristachya*. Feathertop Rhodes Grass grows fairly erect and is a clearly visible roadside specialist that can be seen while driving in many places around Canberra. In this essay we will focus on Slender Speargrass, which has other common names including Corkscrew Grass and Rough Speargrass. The scientific name is *Austrostipa scabra* with the species name deriving from its scabrid leaves which are rough to the touch. It is very common and abundant in grasslands as well as on farmland and in the open spaces around Canberra sometimes creating dense stands.

It is perennial, grows very erect, is typically about half a metre tall and has seed-heads that are feathery in appearance.

The name Speargrass is descriptive and derives from the shape of the seed with awn, which resembles a spear. When dry the sharp "spear" takes on a sickle shape and this is a key way of recognising the species. This is shown in the attached drawing. The dry awn is twisted and screw-like at the base. When it's made wet by rain it straightens out and rotates, forcing the seed into the soft damp soil. Hence we have the common name of Corkscrew Grass. It is widespread and occurs in all Australian states though more abundantly in the southeast of the continent.

While we may appreciate Corkscrew as a native, sheep farmers are not fond of it. This is because the seeds can burrow into the fleece, skin and eyes of their sheep causing pain and stress for the animals and contaminating their wool. Also it has only low to medium forage value. But it does have the advantage of growing on poor quality soils and is drought and frost tolerant. It also provides food for seed eating birds such as finches and parrots and grazing native mammals don't seem to be bothered by the seeds.

In recent years there has been more interest in the urban environment as a habitat for wildlife and studies have been done of the species composition of this biologically diverse arena. The "Wikipedia" page in the references goes into some detail about this, and even tells us about the effect it can have on the evolution or genetic adaptation of some species.



In my suburb Eastern Grey Kangaroos are a familiar sight in winter, coming down from the nearby hills. Some of them stay in sheltered parks and gardens during the day, becoming semi-permanent residents. Common Brush-tailed Possums also have well-established suburban homes. A multitude of bird-life is drawn in by the abundance of native and exotic trees, as well as the many fruit and nut trees which are a great source of food. Of course there are many insects that find the habitat suitable. I have a small population of Double-spotted Cicadas *Galanga laberculata* completing their lifecycle in my yard, and the Nectar Scarab Beetle *Phyllotocus navicularis* emerges each summer in hundreds from my lawn. Native plants such as Tufted Bluebell *Wahlenbergia capillaris* and New Holland Daisy *Vittadinia* species have colonised our parks and roadside reserves, and with them many native grasses. Lots of local native species of fauna and flora thrive in the urban environment and Canberra Nature Map provides plenty of information about them.

The drawing of Slender Speargrass was one of the first grasses I did way back in 1995 when FOG was very new. I've also provided a photo of Windmill Grass growing in situ. I am impressed by the pioneering talents of the four native grasses mentioned here. They would be a good choice for any native revegetation project.

References: https://www.greeningaustralia.org.au/wp-content/uploads/2017/11/FACT-SHEET_Austrostipa-scabra.pdf

<https://keys.lucidcentral.org/keys/v3/AusGrass/key/AusGrass/Media/Html/AUSTROSTI/AUSSCA.HTML>

https://en.wikipedia.org/wiki/Urban_wildlife



Is It All Relative? A Close up

John Fitz Gerald

In this contribution, I continue with plants doing well in our damp conditions. I'm interested this time in comparing relatives and have taken a few plants from three genera and imaged their seeds.

Firstly to genus *Isotoma* from Australia and New Zealand. On the left of my first image is the chunky, dark and patterned seed from *Isotoma axillaris*, Rock Isotome. This plant grows in the eastern half of NSW but is uncommon in the Southern Tablelands region and absent from the ACT. It is best known here as an attractive erect garden plant with two cultivars. I have noticed in the past few years that Blue Banded Bees regularly buzz the bright blue flowers of this species in my home garden. On the right of my first image are the tiny, smooth and rounded brown seeds of *Isotoma fluviatilis*, Swamp Isotome. These low-growing plants from southern NSW, Victoria and Tasmania belong to subsp. *australis*. Seeds of these two relatives are clearly unlike. The two parts of this image have different magnifications, with a scale bar marking 0.2mm in both parts. Next, to genus *Lythrum* where the seeds I've imaged are very alike, even though the plants that produced them are not. On the left of this image is *L. salicaria*, a striking pink-purple flowered perennial plant of water edges which grows erectly one metre tall, sometimes more, with thin woody stems. Botanical sources describe this plant as native to several parts of the world including Europe, Asia and Australia. Notably in USA and Canada it is rated invasive in wet places to which it has been introduced. On the right of the image is *L. hyssopifolia*, again a plant of wet edges but much smaller with softer stems, an annual with inconspicuous pale flowers. Seeds of these species are quite similar in surface colour and texture, but the *L. salicaria* are a little longer and more conical in shape. Both parts of this image have the same scale.

Finally to genus *Plantago* where seeds of three low herbaceous species show partial similarity. At the far left of the image I show *P. varia*, in the centre *P. major*, on the right *P. lanceolata*. *P. varia* is native to many grassy places in SE Australia and Tasmania and recognised by distinct teeth on leaf margins and elongate flower spikes. *P. major*, Broad-leaved Plantain, is introduced from Europe and parts of Asia and prefers damp sites. Its leaf is much broader but the spike is elongate like the native. *P. lanceolata*, Ribwort Plantain, is introduced from Europe and Asia and has narrow leaves with smooth margins and flower spike much shorter than its relatives. Ribwort Plantain has become a serious weed in many of our bush and grassland sites, particularly after disturbance, and unfortunately there is little written about the best control methods.



Seeds from genus *Lythrum*, left *L. salicaria*, right *L. hyssopifolia*



Seeds from genus *Plantago*, left *P. varia*, centre *P. major*, right *P. lanceolata*



Seeds from genus *Isotoma*, left *I. axillaris*, right *I. fluviatilis*

This species is widely introduced and ranked as weedy in many parts of the world. All three species produce abundant seeds, though it does seem that the high fertility of the introduced species gives them an advantage. Seeds of all three species show a distinct scar or hilum marking an early attachment in the plant ovary. The *P. major* seeds are smaller, rougher and more angular. Seeds of the other two species are similar but *P. lanceolata* is distinctly shiny in parts. All three parts of this image have the same scale.

For plant and flower images, please go to resources like Canberra Nature Map which has 20-30 photos of nearly all species.

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. The scale bars near the right side of each image represent: Pic 1 = 0.2, and Pics 2 and 3 = 0.5 millimetres, respectively.

Links: <https://plantnet.rbg Syd.nsw.gov.au/search/simple.htm>
<https://canberra.naturemapr.org>

CABI - Invasive Species Compendium <https://www.cabi.org/isc> Centre for Agriculture and Bioscience International, UK
<http://creativecommons.org.au/learn/licences/>

OPINION PIECE

Post-fire regeneration: a remarkable phenomenon or natural occurrence?



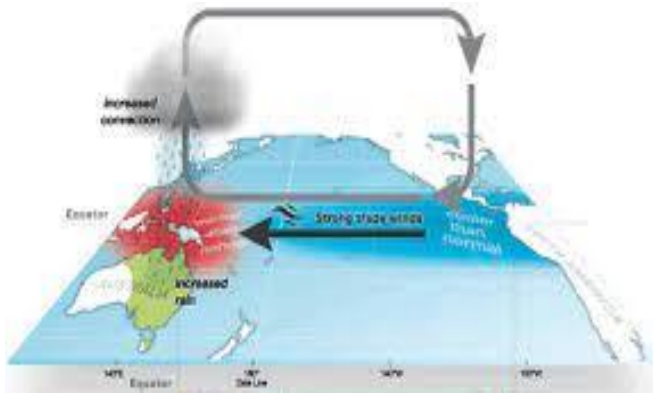
Part 1: Effects of Climate Variables

Words and pictures by Roger Farrow

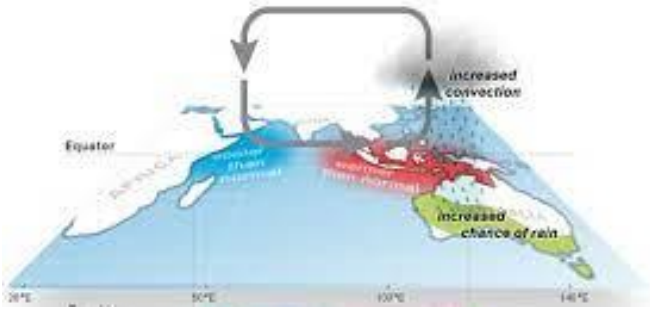
The impact of the recent bushfires on the vegetation has been invariably described in the media in terms of superlatives. First, the 'destruction' of the plant landscapes by the fires and the potential extinction of plant species, and second by their 'remarkable' recovery. The severity of these fires has also been seized upon as a consequence of global warming. These statements need to be put into context.

First: Australia's flora is dominated by flammable plants including sclerophyllous trees (notably eucalypts) and shrubs plus perennial grasses. Flammable biomes (distinct biological communities) in Australia go back to the start of the Palaeogene 50 million years ago era when the climate became markedly drier (Crisp et al 2011). This is confirmed by the presence of charcoal in soil core samples throughout this period. This suggests that the Australia flora has evolved to recover from fire, however severe, by a variety of mechanisms described later. In contrast, the flora of the arid zones of other continents is often dominated by fire resistant succulents and cacti. It is now conceded that fire has shaped the evolution of the earth's plants right back to the Devonian Era (He & Lamont 2018).

Second: our current climate fluctuates between wet and dry periods that are now known to be driven by changes in ocean temperature in both the Pacific (the El Nino-Southern Oscillation) and Indian Oceans (the Indian Ocean Dipole) and as well as by the position of the southern ocean westerlies (Southern Ocean Annular Mode). When these changes coincide in both negative and positive phases, they produce warmer surrounding ocean temperatures that feed moisture into eastern and northern Australia leading to an increase in precipitation, as witnessed in 2020-2021. The opposite happens when ocean temperatures are lower and dry conditions ensue (2019), although it should be noted that drought-impacted areas rarely extend over the whole continent. It is not known how long plants have adapted to this changing environment in Australia, but it could also be for an extended period, long before human occupation of this continent.



El Niño Southern Oscillation: negative phase = La Niña

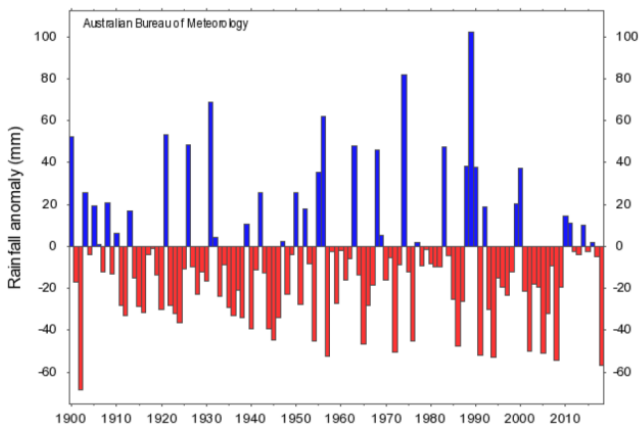


Indian Ocean Dipole: negative phase



Southern Annular Mode: positive phase

However, climate variability is generally skewed towards the opposite phases resulting in extended dry periods that are often, but not always, broken by flooding rain that generally last only 1-2 years.

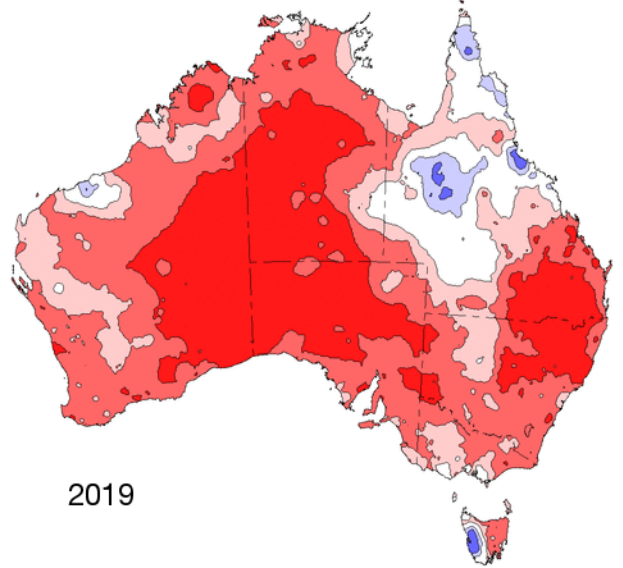


Rainfall anomaly 1900-2020 for all of Australia

This graph shows the sudden intense drought of 2019, the millennial drought and the end of the federation drought, as well as the big wet of 1973-1974.

Spatial distribution of rainfall anomaly 2019.

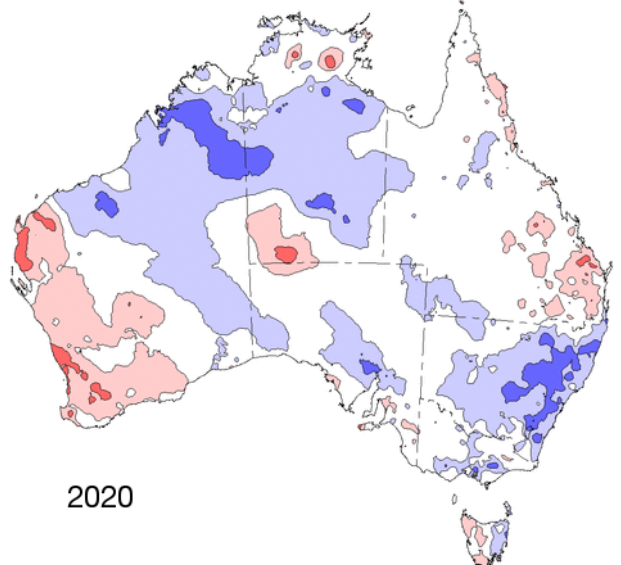
Dark red = extreme deficit



2019

Spatial distribution of rainfall anomaly 2020.

Dark blue = extreme rainfall



2020

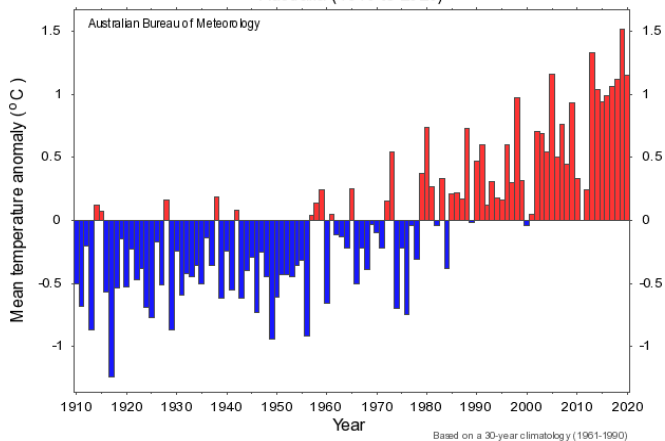
This map shows the area of heavy rainfall that fell over the fire-affected areas of south-east NSW during 2020.

Confirmation that cycles of drought and wet go back at least 1000-years comes from tree ring data from 1000-year-old cypress pine, *Callitris sp*, in WA.

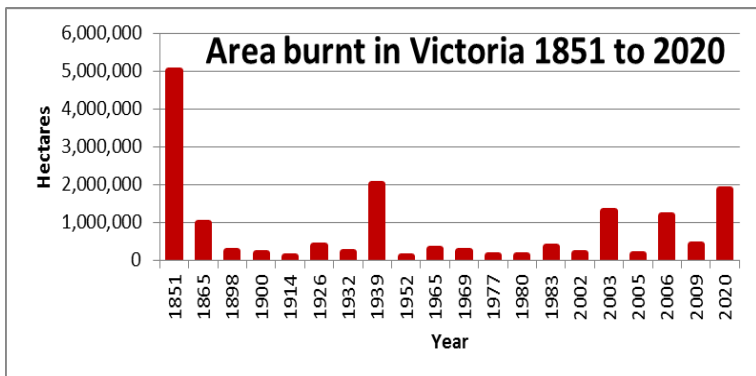


Third: post-industrial warming amounts to about 1.7C and, in my opinion, has only played a minor role in these recent events, namely by increasing the moisture carrying capacity of the atmosphere in a wet period and marginally impacting on the desiccation phase during the preceding dry period.

Mean temperature anomaly 1910-2020



The severity and extent of the recent fires appear no worse than the great conflagration of 1939-1940, although more of Victoria was burnt on that occasion. It is certain that such major fires occurred well into the past as charcoal layers in soil cores testify.



Fourth: The intensity of the recent fires was, primarily due to the dryness of the vegetation. By December 2019, understory shrubs across large areas of forest, woodland, and heathland of south-eastern Australia were observed to be completely desiccated or dead. Eucalypt foliage was similarly affected, especially in local Southern Tablelands Dry Sclerophyll Forest. Lightning strikes during December 2019 initiated the fires in remote and inaccessible areas at several locations and these spread rapidly through forests and heathlands before effectively running out of fuel by the end of January. No amount of controlled burns could have reduced this rapidly accumulating dry fuel load. Substantial rains fell in late February and continued during 2021 as a negative phase of the Indian Ocean Dipole intensified.

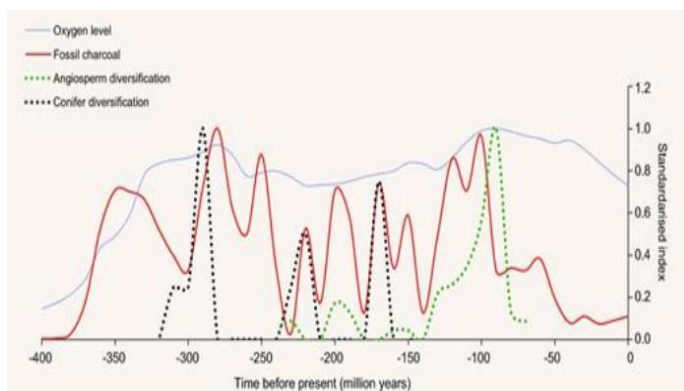


Drought-induced death of scribbly gums (*E. rossii*) at Smith's Nature Reserve, Mulloon. May 2020

Fire and the Rise of the Angiosperms

Mega fires have been a feature of the Australian landscape since records began and the geological records confirms that they predate the arrival of humans and go back to the very start of plant life on earth.

Fire is now recognised as the major driving force behind the sudden rise of the angiosperms forests in the Cretaceous era about 100mya when broad-leaved forests replaced the gymnosperm and cycad forests (He & Lamont 2018).



After the major Cretaceous/Cenozoic boundary extinction event, Australia's climate became markedly drier, and was associated with the development of a flammable sclerophyllous vegetation and grassland.

The adaptations of flammable vegetation to regenerate and recover after mega fire events is discussed in Part 2 of this investigation.

Reference: He T, BB Lamont. 2018. Baptism by fire: the pivotal role of ancient conflagrations in evolution of the Earth's flora. *National Science Review* 5:237-254

Bass Garden Weeding - a grassy grant project

Sue Ross

Bass Gardens park is approximately four hectares of natural temperate grassy woodland (NTG) situated in Griffith, Canberra, in the heritage area of Blandfordia 5 (Griffith and Forrest). In contrast to the NTG, apart from some Southern Blue Gum (*Eucalyptus bicostata*) the trees are exotic and planted in distinctive patterns. Some key features of the NTG include a diverse range of more than 44 native plant species including grasses and forbs identified through the help of FOG members and the use of Canberra Nature Map (CNM). More native flora, particularly grasses, are yet to be properly identified. The park also has a Conservation Zone (CZ) of about 2 hectares, established in 2016, roughly at its centre.

The Friends of Bass Gardens (FOBG) volunteer group was established in March 1998 with the goal of conserving and improving the park to complement the minimal input of government resources, i.e. contract spraying in the CZ, mowing and some removal and replacement of dead or badly damaged trees. In the early years only woody weeds were dealt with by FOBG but recently attention has moved to herbaceous weeds, particularly African Lovegrass (*Eragrostis curvula*) and Chilean Needlegrass (*Nassella neesiana*). Other weeds less significant but still of concern because of numbers include Panic Veldtgrass (*Ehrharta erecta*), Capeweed (*Arctotheca calendula*) and Ribwort (*Plantago lanceolata*).

Despite best efforts, effective treatment of the number of significant invasive weeds was beyond the capacity of the FOBG, leaving little time for other weeds which were spreading. In 2020, with the Griffith Narrabundah Community Association Inc (GNCA) as the relevant grant recipient, FOBG was very grateful to be awarded a FOG grant of \$1500 for contract weed spraying, specifically outside the CZ (see p7 Nov-Dec 2020 Newsletter). The purpose of engaging a contractor was to achieve greater weed control and ensure relevant weeds, not native plants, were effectively sprayed in a shorter time than was possible by volunteers. The goal was to reduce the future seed bank, allow FOBG to manage better the number and density of weeds in future years, reduce weed spread back into the Conservation Zone, and free up volunteer time for other tasks. A further goal is to assess an extension to the Conservation Zone boundary at an appropriate time, and to consider other approaches outside the CZ such as frequency of mowing.

A contractor was engaged in October 2020 and the first spraying was done in that month with a follow-up in February 2021. Some isolated Parramatta Grass (*Sporobolus africanus*) was also treated. The contractor has mapped his work and loaded it into the Collector app. On the evidence of the contractor's mapping and of on-site inspection, the purpose of the grant seems to have been very well met. The grant application had significant input from ACT Government City Services Division and was strongly supported by Michael Mulvaney (ACT Government Environment Division). Because FOBG is not an incorporated organisation, GNCA's support as 'the applicant' has been crucial; GNCA continues to be very supportive of, and interested in, our work in various ways and is much appreciated. The contract work has already enabled FOBG to concentrate on other weeds such as the *Ehrharta erecta*, some *Plantago lanceolata* and to deal with *Eragrostis curvula* as it emerged after the spraying. Removing weeds under trees and mulching are now the main activities of the working-bees.

What next? Possible projects where FOG, City Services and an ecologist's advice would really be appreciated by FOBG include:

- Collecting and sowing seeds from existing plants on site such as Vittadinia species, Clammy Goosefoot (*Dysphania pumilio*), Climbing Saltbush (*Einadia nutans*), Redleg Grass (*Bothriochloa macra*) and Weeping Grass (*Microlaena stipoides*).
- Continuing weed removal by volunteers.



FOG visit to Bass Gardens Park with members of FOBG, City Services and neighbours 28th May 2021 - Photo Andrew Zelnik.

- Introducing grassland species that were once present in the general area such as Yam Daisy (*Microseris lanceolata*), Button Wrinklewort (*Rutidosis leptorhynchoides*), Emu Foot (*Cullen tenax*) and Lemon Beauty Heads (*Calocephalus citreus*), with reference to Michael Mulvaney's observation that the overall diversity of the site could be increased in this way. FOG has recommended Hoary Sunray (*Leucochrysum albicans*) as a 'good spreader'.
- Quadrant surveys which may help in designing future management plans.
- Possibly engaging an experienced and qualified person to assist with a management plan for the area outside the CZ.
- Possibly further extending the area of the Conservation Zone within the next few years, if weed management can be improved from the 2020 base line.

FOG visit to Six-Mile

10 July 2021

Rainer Rehwinkel

I had the pleasure of leading the Friends of Grasslands midwinter field trip to this wonderful site today. Formerly thought to be a travelling stock reserve, more recently, I've been informed by the South East Local Land Services that this is not formally recognised as a TSR, so it appears it's only a Vacant Crown Land Reserve. Six Mile is on Hoskinstown Road, Bungendore. Twenty-seven people attended.

I've been coming to this site for about 25 years, initially as part of my former work with the NSW Government, but also quite frequently for birding. As a patch of open woodland, indeed part of a large remnant, it's always been really good for declining woodland birds. However, birds were not the object of today's visit.

This reserve is justly famous for its incredible floristic diversity. Perched on a low stony ridge, the site falls on both sides. To the west, there's a sheltered valley with a trickling drainage-line adjacent to its boundary with the road reserve. To the east, the fall is more gentle, sloping to the east to a broad valley-flat. Beyond the eastern boundary, there's cleared exotic-dominated pastureland that slopes up to more woodland and forest on the hill opposite.

Because of the variety of landforms concentrated into its relatively small area, there is a corresponding variety of ecosystems. Capping the low ridge is dry forest dominated by ancient Scribbly Gums (*Eucalyptus rossii*), Brittle Gums (*E. mannifera*) and Broad-leaved Peppermints (*E. dives*), with a mid-layer of Leafy Bitter-pea (*Daviesia mimosoides*) and various cassinias (*Cassinia* spp.). The ground-layer here has an incredible diversity, with creeping Native Sarsparillas (*Hardenbergia violacea*), patches of Red-anthered Wallaby-grass (*Rytidosperma pallidum*), and many forbs, most notably, numerous Copper-wire Daisies (*Podolepis jaceoides*). The western valley, with its deeper soils, has towering Yellow Boxes (*E. melliodora*) and wide, spreading Apple Boxes (*E. bridgesiana*) over a grassy ground-layer. Here we found numerous spent umbels of Blue Devils (*Eryngium ovinum*), each bearing a bounty of seeds. This Box-Gum grassy woodland exemplifies a Critically Endangered Ecological Community (CEEC) as listed under the Commonwealth's threatened species legislation.

The eastern fall has a narrow band of box trees that then give way to a broader band of Snow Gum Grassy Woodland immediately below. This community has groves of Snow Gums (*E. pauciflora*) over a ground-layer of Weeping Grass (*Microlaena stipoides*), Kangaroo Grass (*Themeda triandra*) and Snow Grass



E. mannifera at Six-Mile



(*Poa sieberiana*). It exemplifies an Endangered Ecological Community (EEC), also listed under NSW's threatened species legislation.

In the cold valley flat, there's quite a large area of Natural Temperate Grassland (another CEEC), here dominated by dense Kangaroo Grass, and with silvery-grey patches of Lemon Beautyheads (*Calocephalus citreus*), their remnant cylindrical heads, too, carrying copious seeds. A little further upslope, I found a patch of Sticky Everlastings (*Xerochrysum viscosum*), their spent flowerheads providing just about the only colour for the afternoon.

The turnout for the afternoon's trip was surprisingly large, given the cold, overcast weather. Attended by FOG stalwarts, along with many faces new to me, the trip was designed to give participants a primer on identifying plants by their features during their dormancy. The Six-Mile site proved to be particularly good for this purpose, because of its diversity of ecosystems, each with its broad panoply of components.

To aid in this endeavour, Kris Nash, a member of both FOG and the ANPS's Wednesday Walkers, provided her list of flora collected by that group. I extracted my extensive species lists from site surveys dating back to about 1997 held in the Grassy Ecosystems Database in NSW's BioNet.

Even with those voluminous lists, and especially considering the season, participants came up with many species not previously recorded, including a small patch of rosettes of Greenhood orchids (*Pterostylis* sp.).

Unfortunately, as a piece of land that no-one seems to be managing, our otherwise idyllic walk was marred by seeing patches of weeds, including Chilean Needlegrass (*Nassella neesiana*), Serrated Tussock (*Nassella trichotoma*), St John's

Wort (*Hypericum perforatum*), English Hawthorn (*Crataegus monogyna*) and Sweet Briar (*Rosa rubiginoides*). Small piles of garden waste discarded rubbish and animal carcasses testify to some humans' lack of regard for our natural heritage. I liken such a phenomenon to vandals entering the Louvre and painting a moustache on the face of the Mona Lisa. The one thing that sets environmental vandalism apart from desecration of priceless artworks is that it does not seem to raise eyebrows as the latter would. This is despite the fact that environmental damage destroys irreplaceable treasures that have taken millions of years to compose! Thanks must go to Margaret Ning for her drive, enthusiasm and organisational skills, for putting the trip together and to Kris for supplying the ANPS list. Finally, I wish to thank the participants who braved the cold and threatening showers to attend.



FOG members at Six-Mile

Recent FoG Events

FOG's Canberra on-ground projects

Geoffrey Robertson

On Sat 12 June FOG held its visit to four sites associated with its Canberra on-ground projects, commencing before lunch with Hall Cemetery and *Budjan Galindji* (Franklin Grasslands), and after lunch *Gurubang Dhaura* (Stirling Park and Yarramundi Grasslands). At each site, we spent one and a quarter hours. Before the event, participants were sent directions and notes on each of the sites. Traditionally, FOG has visited Canberra grasslands during winter - the days are usually cold but it is a good time to familiarise oneself with grasslands without the distraction of plants in flower. Twenty three people participated, sixteen at each of the first and fourth sites and seventeen at the second and third.

At each site, we were welcomed by the project coordinators: John Fitz Gerald at Hall Cemetery,

Margaret Ning and Geoff Robertson at *Budjan Galindji*, Jamie Pittock at *Gurubang Dhaura* and John and Jamie at Yarramundi. Each of the coordinators explained the pre-



John Fitz Gerald at Hall Cemetery – A.Zelnick

European settlement landscape, the emergence of the site with the development of Canberra, how FOG became involved, FOG's objectives, plans and experience with each site and its partnership with each landowner: Hall Cemetery Trust (Hall Cemetery), ACT Government and ACT Parkcare (*Budjan Galindji* and *Gurubang Dhaura*) and the National Capital Authority (NCA) (Yarramundi).

At Hall, John took the group to the centre of the cemetery, where he conjured up various images of its history, and explained FOG's early involvement in weeding out regenerating eucalypts to protect the Tarengo Leek Orchid (*Prasophyllum petilum*) - the lone population in the ACT, and occurring in maybe four sites in NSW. He also described some of the many rare plants that may be seen in the warmer months, and the presence of the endangered Key's Matchstick Grasshopper (*Keyacris scurra*). We then scrambled to part of the surrounding woodland on the north side of the cemetery where John explained the weed species that were present and what strategies had been attempted to reduce each species, including the use of Slasher, a natural herbicide. We wandered around various patches of *microlaena*, and its gradual extension throughout the woodland area, along with other indigenous grasses and forbs. John's intimate knowledge of the ecology of each weed species and what weed method works or doesn't was very enlightening.

At *Budjan Galindji*, the cars were parked on the nature strip on Flemington Road and the group entered the exceedingly cold grassland. Geoff talked about the site's history, plans to make the reserve a recreation area putting the conservation of grasslands (and other biodiversity) first, the formation of the Parkcare Group, and the involvement of the ACT government which will landscape the site to make it visitor-friendly, and manage the reserve as an offset site. Geoff encouraged the group to observe the landscape (the distant mountains, what would have been extensive grasslands

looking south, the fringing woodlands, and the various wet areas and drainage lines) as first nation people would have observed it for millennia. We stood alongside a large area which was until early last year a blackberry and *phalaris* site, now emerging with many native grasses and forbs. This is also a site where the group has planted and watered wallaby grass grown by Parkcare member Vanessa. The Parkcare group is repeating this approach in selected areas of the reserve. We then walked, observing many features of the site: the former large farm dam now emerging as a permanent wetland with many plants, and an attractive site for birds including Latham's snipe; populations of Canberra peppercress; areas of high quality grasslands and areas of re-emerging *phalaris* following a burn earlier in the year; areas of grasslands emerging after weeding; and the positive impacts of slashing. The time allowed prevented us from visiting the woodland, the area being developed as a seed orchard, and the ephemeral wetland - each worth a return visit.

At *Gurubang Dhaura* we assembled at the gate at the corner of Hopetoun Crescent and Fitzgerald Street. There, Jamie explained FOG's vision for the extensive box gum woodlands on the southern side of Lake Burley Griffin originally set aside some years ago for a Prime Minister's residence and foreign embassies. FOG aims to have these woodlands preserved in perpetuity. From the gate we made our way to the former pine forest which was recently cleared and is now being restored to a grassy woodland by NCA, Greening Australia (GA) and FOG. GA and FOG had organised the plantings at the site, supplementing the regenerating vegetation and removing weeds. From there we made our way to the top of the ridge and doing a loop walk visited areas where FOG had been weeding and planting. Along the way Jamie and others familiar with the site explained how the areas that we had been passing through had been dominated by woody weeds. A major achievement, undertaken by the NCA and encouraged by FOG, was the



Geoff Robertson at Budjan Galindji – A.Zelnick



Jamie Pittock at Gurubang Dhaura – A.Zelnick

removal of a large area of blue gums and cedar wattles - native trees but not indigenous - which detracted from the natural vegetation of the ridge. Following the removal of the trees, the area has quickly regenerated to its original vegetation. There was some discussion about possible thinning of regenerating eucalypts to allow the bigger trees more room and to keep the woodland open in structure. The ongoing stewardship by the Ngunawal of cultural sites was highlighted, and along the walk we observed two “ring trees” and a “scar tree”.

At Yarramundi Grasslands we parked in the ACT ATSI Cultural Centre carpark, off Lady Denman Drive. From there we made our way to the south-east corner of the buildings. John provided a historical context: the area was once all grassland, but now has patches of planted eucalypts. The large area of grassland had been traditionally mown, but the practice was stopped some years ago when a striped legless lizard was discovered. The practice of mowing had allowed the western area to become dominated by Chilean needle grass, *Paspalum* and other weeds. With John we visited several smaller sites on the western side of the centre. Each was an experimental plot, a partnership between FOG volunteers and Greening Australia, to replace weeds with indigenous grasses and forbs. Each site had its own story and takeaway lessons. However, a common lesson was that, while in most sites weeds had remained, overall the vegetation was now dominated by kangaroo grass.

The most exciting patch was the “scrape and sow”, which had been funded by an ACT Environment Grant. Five centimetres of topsoil had been removed and the site treated with herbicide, then seeded with a mix of grasses and forbs, which slowly established. The site was weeded but not watered, despite being established in a drought.

Some mowing was practised as a protection from fires and in another area, as an experiment, the blades had



John Fitz Gerald at Yarramundi Grasslands – A.Zelnick

been set as high as possible. John considered mowing was a possible management tool and pointed out many subtle impacts of the mowing, some highly desirable. Before we finished the visit we walked to the second scrape site, in many subtle ways different from the first. If anyone wants a copy of the handouts please contact geoff.robertson@fog.org.au.

Online forum on ACT grassy offsets

The subject of FOG’s online forum on 17 June was ACT offsets and its full title *Using offset funding to recover ecosystems and species habitat with special reference to Budjan Galindji* (Franklin Grasslands)*. The presenter, Dr Ingrid Stirnemann, heads the Conservation Planning team within the ACT offsets unit, in the Environment Planning and Sustainable Development Directorate. She is currently finalising the offset plan for *Budjan Galindji*. Twelve people participated in the forum.

She began by reminding us that environmental offsets compensate for adverse impacts on matters of national environmental significance (MNES), as identified under the Australian Government *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). MNES include threatened plant and animal species, threatened ecological communities, migratory species protected under international agreements, world heritage properties and national heritage places. At *Budjan Galindji*, the offset work will focus on the Striped Legless Lizard, Golden Sun Moth, Pink-Tailed Worm Lizard, Superb Parrot, Swift Parrot, Box Gum Woodland and Natural Temperate Grassland. It will take into account other conservation values such as woodland birds, the Perunga Grasshopper and the Canberra Raspy Cricket, as well as Indigenous and Historic Heritage values.

Managing an offset site can include: creating a Nature Reserve (when it is gazetted), writing offset management plans, monitoring site condition, ensuring connectivity for fauna and flora, working with stakeholders (e.g. holding workshops), developing a Fire Hazard Management Strategy and Grazing plans, and developing restoration and research plans. Key stakeholders in this case include the Dhawura Ngunawal Caring for Country Committee, FOG and Parkcare, Waterwatch, Transport Canberra and City Services (TCCS) and Icon water which are responsible for certain infrastructure at the site. Ingrid hopes that stakeholders will collaborate in research projects that contribute towards the conservation of the critically endangered grassland species at *Budjan Galindji*.

The map shows the vegetation at *Budjan Galindji*, with the green shaded areas broadly showing grassland and brown the remnant woodland. Within the grasslands the map shows two areas of natural temperate grasslands of good and better quality, and native and exotic pasture.

Within the woodland the map shows native and exotic pasture. The darker brown shows the interface between the native grasslands and the woodlands. Broadly speaking, natural temperate grasslands comprise a diverse range of native grasses and forbs while native pastures are essentially dominated by a single species of native grass such as Tall Spear Grass. The insert map shows the location of the site within Gungahlin.

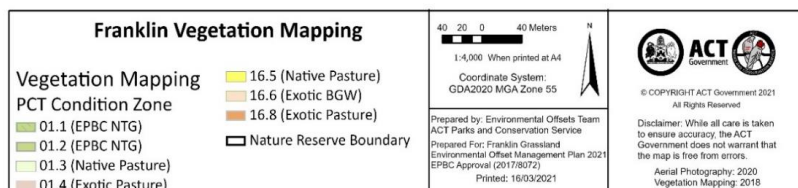
The rest of the presentation, not reported here, concerned research being undertaken on many of the threatened species which are the focus of offset management for the site. There were many questions following the presentation about the nature of offsets, their overall effectiveness, and the means by which one can measure their success or failure.

FOG has been impressed by the use of offsets in the ACT and by the ACT government staff committed to their successful implementation, and looks forward to collaborating with offset projects at *Budjan Galindji* and elsewhere.

Thank you, Ingrid, for your highly informative and interesting presentation - it should greatly assist FOG in its thinking and work.

*** Budjan Galindji,**

pronounced: boo-jarn garl-in-jee, literal translation: bird water, free translation: "Water bird" Grasslands. The name was recommended by Dhawura Ngunnawal Caring for Country Committee and Winnagaay Ngunnawal Language group.



Franklin Grasslands update

The brave members of Budjan Galindji (Franklin Grasslands) Landcare Group, organised by FOG, has continued through winter, although our work party on 7 July attendance was down to five, and our 4 August event has been rescheduled as it was too wet (and cold) to do anything useful.

Nevertheless on 4 August, Sarah Ayrton (Seed Savers), Ranger Stephen Bruce and Geoff Robertson met on site to discuss plans for the seed orchard at Budjan Galindji. Maree Gilbert (Ranger-in-Charge, Environmental Offsets Urban Reserves, EPSDD) circulated a plan for the orchard in June. It will comprise two raised and one ground-level garden beds. They listed the following



species as being purchased for Stage 1 of the project: *Sorghum leiocladum*, *Rydotospermum (carphoides & caespitosum)*, *Themeda triandra*, *Bulbine bulbosa*, *Chrysocephalum apiculatum*, *Convolvulus angustissimus*, *Desmodium varians*, *Dianella longifolia*, *Glycine tabacina*, *Leucochrysum albicans*, *Linum marginale*, *Rutidosis leptorrhynchoides*, *Zornia dactyloides*. The plants chosen for stage one are appropriate as Offset commitments to improve GSM habitat. "Most forbs selected are indicator species for NTG and have been proven to produce seed in production and germinate successfully in restoration works. Some of these species have been chosen based on the difficulty of collecting in the wild."

Photos show the new fence at the north east corner of Budjan Galindji (before the first garden bed was built) and the second photo shows Stephen and Sarah beside the first of the garden beds. Members of the Parkcare Group and Seed Savers will be involved in the seed orchard. This is great way to learn about key grassland plants. If you would like a copy of the plan, please contact Maree or Geoff. With all the rains, the

ephemeral wetland and the old dam look amazing, frogs are noisy and some bigger water birds are turning up - in July a pelican was a regular visitor.



Gurubang Dhaura

On 20th June, fifteen FOG volunteers gathered at Gurubang Dhaura (Stirling Park) to remove a broken internal fence. Nearly half a kilometre of fencing was removed, with the usable star pickets going to Greening Australia, wire and bent pickets to recycling, and the treated pine posts to the Lindsay Prior Arboretum for reuse. Tree guards were repaired from past planting efforts and four sacks of rubbish were removed.



Lawson nature ramble - Rainer Rehwinkel

24 July. We had a great turnout at today's Lawson Landcare's nature ramble around the suburb. The objective of the day was to enjoy (as much as we could on a day that threatened rain and wind) the natural delights of the suburb, and to make a note of some of the issues that we thought we could tackle over the next few months.

We are so very lucky here to have such fine examples of two critically endangered ecological communities, namely Box-Gum Grassy Woodland and Natural Temperate Grassland. However, there are many conservation and management challenges, even here.

We have our work cut out for us, but I do have faith that we also have some fine people with loads of enthusiasm to carry the day. Lawson Landcare was set up with assistance from FOG.

Jo Clay MLA joins 24 July Lawson ramble

Jo Clay who joined the ramble posted on her facebook page. "The suburb of Lawson is surrounded by critically endangered grasslands and Box-Gum Woodlands. These in turn are home to threatened species like the Golden Sun Moth, Striped Legless Lizard, Perunga Grasshopper and more. But only 1% of these grasslands are currently protected in NSW and the ACT.

Tim Hallow for Canberra and I joined Rainer Rehwinkel on a nature ramble and found so much amazing wildlife! But DHA wants to develop some of the most critical parts in Lawson North. Wouldn't it be great to preserve it for habitat and community use instead?" She urged readers to sign the Conservation Council petition and provided links to the Conservation Council and Rainer's facebook page. Photo (Rainer) shows a few FOG members.



Beginning to weed forum

Our forum in July (29th), was attended by 25 people, eager to hear from Margaret Ning and John Fitz Gerald on their weeding experiences. The session was organised to deal with the steep learning curve required of people beginning to weed a patch. As recognised by the speakers, there are so many things to learn, including plant identification; plant life cycles; coming up with a plan; what methods to use, if using equipment and herbicide, what training is required and how to avoid collateral damage; and avoiding weed successions (e.g. followup treatment, adding native seed or plants into bare ground). The pair went through each of these topics, talking of practical ways to approach each of the issues and referring to additional resources that may be accessed.

The pair mentioned that it is good to have a vision of what one is trying to achieve, which may be the basis of a weed strategy. They explained the many methods of weeding and the equipment to use. They spent some time talking about simple (non herbicide) methods, use of herbicides and their experience with a non-herbicide alternative - Slasher - and where this is effective or not effective. They also talked about using other land-management techniques and their weed impacts - such as burning, slashing (not to be confused with Slasher) and scraping and sowing.

Importantly they talked about the learning process, and how to maintain, review and adapt one's vision; starting slowly and planning (skills, resources, equipment); keeping paper and photo records and monitoring; the Bradley method of bush regeneration, a fine place to begin developing an integrated (with objectives) weed management plan suitable to the individual situation; how to seek grants and assistance; sharing experience with others, and being relaxed. They also listed many resources that are available and provided links to them. They finished off their presentations with two case studies: Franklin Grasslands and Hall Cemetery.

There were numerous questions, and following the session there was also an exchange of emails. The most common response was that so much was learnt from the session - information that is not readily available from other training. One concern that was raised was the Greens' announced policy of stopping the use of herbicides as a weed management tool. Thanks go to Margaret and John for explaining the complexity

involved, the principles to be applied and how this can be done in a very practical way. Also thanks to Rainer Rehwinkel who managed the many questions that were asked during the session. Attendees received a copy of the slides following the session.

On 8 August, Margaret and John held a follow-up grass identification session on the terrible trio, Chilean needle grass, African love grass and serrated tussock, with five participants from the forum.

Vera Kruz kindly provided the following feedback: "I recently attended the weed session held via Zoom, and the follow-up 'nasty grasses' walk with Margaret and John. Is it appropriate to express appreciation in the next FOG newsletter? If not, perhaps you could formally pass on my thanks. The sessions were most informative. Their knowledge, and generosity and patience in sharing this knowledge with the wider community, is invaluable. I have already put the 'lip test' for Chilean Needlegrass which Margaret introduced us to, to the test! Thank you so much for facilitating these kinds of events."

News Roundup

An amazing grassland blog - Sue Ross

This amazing grassland blog by Stephen Murphy (<https://www.recreatingthecountry.com.au/blog>) is highly recommended reading. He describes himself as "an author, an ecologist and a nurseryman" and "designer of natural landscapes for over 30 years" who "loves the bush, supports Landcare and is a volunteer helping to conserve local reserves". He continues to write about ecology, natural history and sustainable bio-rich landscape design. There is too much in this website to summarise here but it will interest those who are starting to learn about grasslands and those who are well down that path. Lots of 'how to', 'where are', photos and other information.

Chief Minister's grant

In June, Suzanne Orr MLA's office approached FOG about the possibility of receiving a third Chief Minister's grant. After consultation within FOG, it was decided to apply for \$1500 for weeding at Hall Cemetery. FOG provided Susanne Orr with a history of the site, its conservation values and FOG's more than ten year involvement. It pointed out how the previous grant in 2020 of \$1800 had greatly assisted us to roll back the weeds caused by the great rainfall of 2020, and how a further grant would enable FOG to make further progress with its endeavours at Hall Cemetery. On 14 July we received a letter saying that we had received the grant.

We of course wrote to both the Chief Minister and Orr's office thanking them. It is good that FOG has good relations with members of the ACT Legislative Assembly, who are familiar with our work and recognise its value.

Corangamite CMA Newsletter

The latest *Plains Facts newsletter* from the Corangamite CMA [here](#), turned up in our email box. It contained information about cultural burning, the grassy eucalypt woodlands stewardship program, the linear reserves project, and more. It is worth reading and the images say everything we need to say about the beautiful appeal of grasslands and grassy woodlands.

Creating grasslands from scratch

On July 7th, two FOG members were amongst the thirteen people who participated in the monthly Grassland Interest Group (Bellarine Landcare) in an online meeting. Candice Parker, Greening Australia, gave a presentation on her experience in establishing and maintaining grassland ecosystems and revegetation. She has managed multiple projects coordinating weed and pest control, mapping threatened species, creating community engagement, revegetating private properties and establishing seed production areas for significant grasslands species. She has also undertaken controlled ecological burns.

Her presentation went through the steps that are required to establish a grassland from scratch using the Paul Gibson-Roy "scrape and sew" method, focusing on

the Moolapio project, a partnership initiative between Greening Australia and Alcoa of Australia, at Point Henry, Geelong. There were many questions from the group about all aspects of the process from preparing the site, use of herbicides, preparing and managing the seed orchard, choice of species to be planted, sowing, the succession of various species that appear after the sowing (some species are slower to establish than others), the adoption of the site by grassland fauna and flora that was not sown, and follow up weeding and fire management.

John Fitz Gerald was given the opportunity to explain FOG's experience in the mini scrape and sows at Yarramundi Grasslands - members of the group showed great interest in this.

Lawson Grassland Mural - Rainer Rehwinkel

On 26 July I attended the launch of the Golden Sunmoth mural at Hackett Shops - see photo on the front page. The mural reminds us of the Lawson Grasslands. I'm part of the Lawson Campaign, to protect the endangered ecosystems at the Lawson defence land, and am proud to say, that I met the artist, [Faith Kerehona](#), before she started this project. Please sign the petition to Save Lawson's Grasslands [here](#).

National Landcare Award winners – Geoff Robertson

On 5 Aug, I was invited along with Rainer Rehwinkel (the ACT Individual Landcare Winner) to a special ACT Landcare night to watch the National Landcare Awards Zoomed in from Sydney. This event was both fun and serious. We gathered in the National Press Club ACT, while elsewhere people were confined to viewing via Zoom. The event was hosted by Costa Georgiadis online from Sydney.

The ACT won two national awards: Ms Gilbert, a Kalari Wiradjuri woman, won the the Young Landcare Leadership Award (she is very impressive) and The Red Hill Bush Regenerators won the Landcare Community Group Award (so well deserved). I was also impressed by the granting of awards to First Nation Peoples' groups, and by the heavy emphasis on soils and regenerative farming, with a strong focus on biodiversity and farming outcomes. For a fuller account of the awards see [press release](#).

Ramsar Wetland Convention is 50

On 12 July, Jamie Pittock wished a happy birthday to the Ramsar Convention on Wetlands - 50 years old this year! His article published on 12 July (pay to view) urges scientists to apply our research to make greater use of the Ramsar Convention.

In his introduction he points out "the urgent case for conservation of the biodiverse springs of the world is well made by Cantonati et al. (2020). Our colleagues do

the global community a great service with their compelling advocacy to better conserve these ecosystems in a changing world".

He states that "four objectives for spring protection were proposed. I write to invite our conservation science community to take a second look at the Ramsar Convention on Wetlands as a well-developed global platform for translating scientific knowledge into practice to advance conservation of springs and other wetland ecosystems. Here, I outline why the convention may be especially relevant for enhancing conservation of particular wetland ecosystems before addressing how it may advance Cantonati et al.'s (2020) proposed objectives."

Reference: Pittock J. *Use of the Ramsar Convention to protect springs and other wetlands. Conservation Biology. 2021.*

Vale Shirley Pipitone - Geoff Robertson

Shirley was a FOG member but is better remembered by many Canberrans for her active commitment to many native plant groups (often taking up an executive or committee position) with the aim of promoting, educating, researching and growing of native plants and their inclusion in landscaped gardens. The list is far too long to mention here, apart from mentioning that she made a major contribution to the creation of Southern



Tablelands Ecosystems Park in the early years of its establishment - she also came up with the name. More broadly she demonstrated a strong commitment to environmental, scientific, cultural, mental-health and political causes. In recognition of her many contributions she received the Chief Minister's Gold Medal Award in 2015. FOG recognises her important contributions and offers its condolences to her family.

Vale Andrew Cameron - Geoff Robertson

The Tasmanian Land Conservancy (TLC) posted on its website that it is mourning the loss of Andrew Cameron who died on 2nd August. The moving TLC tribute to Andrew may be found [here](#). Andrew was the driving force behind the [Midlands Conservation Fund](#) which focuses on Tasmania's Midland Grasslands. He was married to Margaret Ning's cousin Diana, and FOG was organising a field trip to Tasmania led by Andrew.

TLC has stated "to make a donation in memory of Andrew, please [visit our Donations in Tribute page](#) and type 'Andrew Cameron' in the Honouree Name. All gifts

will be directed to the Midlands Conservation Fund to support the conservation management of threatened lowland grasslands and grassy woodlands in the Tasmanian Midlands. We are also collecting tributes to and memories of Andrew - if you would like to contribute, please email news@tasland.org.au."

I would ask members to show their appreciation of Andrew and the work of the TLC. FOG has already made a donation.



Andrew and themeda grassland. Photo by Andy Townsend

Using salicylic acid to grow native grasses

Research undertaken by scientist Dr. Simone Pedrini at Curtin University and reported by Simone Pedrini, Jason C. Stevens and Kingsley W. Dixon in [PLOS ONE](#) has found that seed encrusted with salicylic acid improves plant establishment for three familiar grass genera: spear grass, weeping grass, and wallaby grass.

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Membership to [join or renew](#), inquiries: membership@fog.org.au

Events & work parties: [Calendar](#). To attend an event, register with event organiser.

Book sales: Order forms: [Grassland & Woodland Floras](#). Inquiries: booksales@fog.org.au.

Small grassy ecosystem grants: [Latest on grants](#). Inquiries: supportedprojects@fog.org.au

News of Friends of Grasslands: [Latest & past issues](#). To submit articles & news items newsletter@fog.org.au

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