



News of Friends of Grasslands

Supporting native grassy ecosystems

ISSN 1832-6315

November & December 2023

Activities

Work Parties

Sat 11 Nov 9-12:30pm Gurubung
Dhaura

Sat 9 Dec 9-12:30pm Gurubung
Dhaura

Register: [Jamie Pittock](#)

Budjan Galindji (Franklin
Reserve)

Wed 1 & 22 Nov 9-11:30am

Wed 6 Dec - 9-11:30am

Register: [Margaret Ning](#)

Hall Cemetery

Sat 18 Nov 9-11am

Register: [John Fitz Gerald](#)

Scottsdale Monitoring

Register: [Linda Spinaze](#)

Thurs 9 Nov 2023 (to be
confirmed)

For details of the following
activities see Page 4:

Armidale visit

Sutton, Goorooyarroo Lane

Return visit to the Tinderries

Shoalhaven River property

visits (Wyanbene area)

Tasmanian Grasslands activity

New members

Welcome to:

Steph Brooker (ACT)

Sarah Buxton (ACT)

From the President ...

Three key FOG decisions

It takes skill and commitment from members and our excellent Committee to support the breadth of activities undertaken by FOG. At the September 2023 Committee meeting, three significant decisions were taken.

1. First Nations and care for grassy country

In the last newsletter, members were invited to comment on our proposed FOG acknowledgment of First Nations Peoples. I thank the many members who did provide feedback, all of which was most positive. I also thank the three Indigenous elders who provided welcome advice to improve our acknowledgement.

The Committee has now adopted our statement. FOG acknowledges and celebrates First Nations Peoples, the Traditional Custodians of the grassy ecosystems that we strive to conserve. We seek to commit to collaborating with Traditional Custodians to manage grassy ecosystems to support traditional and ongoing social, economic, cultural and spiritual values. The full statement is available on the FOG website at: <https://www.fog.org.au/FirstNations20230929.htm>.

2. Conserving the grassy ecosystems of the SE Highlands Bioregion

We discussed the dire state of the grassy ecosystems of the SE Highlands Bioregion in NSW. We now have new governments in NSW and at the Federal level. The Commonwealth Government has adopted the Convention on Biological Diversity's Global Biodiversity Framework that has a target of conserving 30% of representation areas of ecosystems by 2030, and restoring a further 30% of their area. The Federal Minister has also committed to preventing species extinctions. Significant action is required if these important targets are to be achieved in the SE Highlands Bioregion. The Committee resolved to step up FOG's work, funded by the generous donations received from members earlier this year. We will (a) prepare a prospectus to better communicate the need and opportunity to conserve these grassy ecosystems, (b) hold a workshop in 2024 with government and non-government organisations to identify lessons learnt from past programs and opportunities to do more, and (c) support Associate Professor John Morgan at LaTrobe University in his proposed research to quantify the conservation status of grassy ecosystem remnants in SE NSW. The engagement of FOG members in these activities would be welcome: more news in later newsletters.

3. FOG Safety Management System

FOG undertakes a wide range of activities every month. Looking in the mirror, I can see that I'm not getting any younger. Like all organisations, we need to do our best to hold events safely. FOG has a Safety Management System developed to enhance the safety of work parties on national lands. After consultation with activity leaders, it has now been revised to include all FOG work parties from 2024.

The Safety Management System is available to all members. A key enhancement is that a person with a valid first aid certificate will be required at each work party.

Our current list of FOG volunteers indicates that we have a limited number of people qualified in key areas, especially first aid, but also including ChemCertIII and asbestos awareness. If you have qualifications in these areas and are willing to aid events, then please advise me. FOG also has funds to pay training fees for any members who are willing to gain these qualifications. Again, contact me if you can help.

See you in our grasslands!

Jamie Pittock, President, 0407 265 131

Advocacy report

Sarah Sharp

September, October 2023

Submissions

Amending the Kosciuszko National Park Wild Horse Heritage Management Plan 10/9/23

FOG supports culling wild horses, with particular reference to threatened and vulnerable ecosystems. FOG is concerned that populations of wild horses will always require culling. A long term strategy to maintain low or no populations would be the most optimal solution. We would like to hear of plans to change legislation and undertake public education that aims to lead to the removal of feral animals including horses in the park and in other sensitive areas of NSW.

Inquiry into fostering and promoting the significance of Australia's National Capital, 4/9/23

Joint submission with Conservation Council. Three recommendations provided for inquiry consideration:

- Commit to conserving the biodiversity and Indigenous cultural heritage of the bush capital.
- National lands in central Canberra need to be reserved as nature reserves.
- Promotion of the 'bush capital' should include the bush.

The latter includes an option to collaborate with the ACT Government to establish, conserve and promote a National Botanical Precinct along the western end of Lake Burley Griffin, from the Australian National Botanic Gardens to Gurubung Dhaura, and pursue designation as a National Park City.

Public Consultation for DA-202341900 at Block 11, Section 1, Denman Prospect, 19/10/23

Due to some inaccuracies and ambiguity in the previous call for comment on this DA, a further consultation opportunity was provided. FOG's concerns lie with the potential/likely impact on the critically endangered Box-Gum woodland adjacent to the development in Block 12. Recommendations were included to reduce that impact.

Other matters

There is to be an inquiry into the Territory Plan and other associated documents, with opportunities to contribute to this on 6-7 December.

All submissions are available at [Advocacy \(fog.org.au\)](https://fog.org.au/Advocacy)

STOP PRESS

The ACT Conservation Council has called for **urgent action to save the Canberra Grassland Earless Dragon**. [Click here for more information](https://conservationcouncil.org.au/blog/2023/10/26/join-the-urgent-last-stand-for-the-canberra-grassland-earless-dragon/) or copy this address into your browser:
<https://conservationcouncil.org.au/blog/2023/10/26/join-the-urgent-last-stand-for-the-canberra-grassland-earless-dragon/>

Three 'Moderate' Weeds close up

John Fitz Gerald

My three species once again thrive in many disturbed areas. Two are rated at moderate priority in Downey's 2022 *Advisory List of Naturalised Alien Plants in the ACT*; the third is high priority. All were collected in the Belconnen district of NW Canberra, a bit of a concern since some nice remnants of NTG lie not far away.

I'll start with the high priority weed *Hedera helix*, English Ivy. This is rarely found in open grasslands, but most certainly has a major presence in grassy woodlands and forests. It is native to N Africa, Europe and W Asia. It is ranked a significant environmental weed in Victoria, ACT, NSW and Tasmania. ALA shows over four thousand records ringing the SE edges of our nation. The fruit is a globose drupe with a tough purple skin and is readily spread by birds and omnivorous creatures like foxes. Fruit commonly have two to five seeds.

My image shows one fruit on its stem, one whitish seed from an opened fruit where I partially tore the skin around the seed, and two seeds with skin removed. The seeds I recovered had irregular surfaces and were translucent and soft. I initially hoped this meant immature or diseased seeds but reading suggests that ruminant character is normal. Therefore, the throng of happy Currawongs eating from the plants where I collected fruit were most likely spreading active seeds in their droppings, leading to new carpets and climbing stems of this aggressive plant.



English Ivy, drupe and seeds, scale 1mm

Second on my list is *Pyracantha* sp. or Firethorn. I'd had my red-fruited subject confirmed as *P. fortuneana* via Canberra Nature Map, and that has about 200 records from ALA. However, the name varies around the country

and is also known as *P. crenoserrata*. The group of *Pyracanthas* has about two thousand records on ALA, again ringing the SE edges of our nation. Their origins are nearly all in China. It is an environmental weed in NSW, ACT and Victoria. The genus is part of the plant family *Rosaceae*. This puts the plant in the grouping which includes domestic apples and pears so its fruits are known as pomes that have an inner core which is separated from the outer flesh and which encloses the seeds. The *P. fortuneana* seeds in my image were hard and shiny, and each pome contained 4-5 of them when I carefully cut the crisp flesh open. Again, birds and omnivores spread the pomes. The resulting invader is mostly found in our grassy woodlands where the seeds have been carried from gardens and naturalised, usually under trees where birds perch. However, the plants occasionally pop up in grasslands away from fences so possibly these have been carried by foxes, etc.



Pyracantha fortuneana, seeds, scale 1mm

Finally to an invader that we probably don't notice much as we walk in the outdoors. *Poa annua* is a small grass, native to Europe, that is widely established in temperate Australia, as in many parts of the world. The concentration of over seven thousand Australian records is in the SE and SW corners and Tasmania. It has environmental-weed status in Victoria and NSW. My image shows a young *P. annua* spikelet at the right still showing fresh-growth colours and hairiness of florets. In the image centre are single florets with dried lemmas and paleas, and to the left are three separated smooth brown seeds.

The circumstance that led me to choose this weed was a short walk on a dewy morning through a suburban area of mixed grasses managed by mowing. When I returned to my car with damp boots, hundreds of tiny florets were sticking to the soles and leather. I gingerly climbed into the car and went home where the boots were quarantined until I could dry them and brush all seeds into the bin. It showed me how readily these priority-weed seeds can be

spread by machines, equipment, walkers, wheels into areas where they would definitely be a threat. On this occasion the dew was heavy enough to hold the seeds so many could be captured, but I could have been going on a longer walk with boots drying off and leaving a trail of seeds.



Poa annua spikelet, florets and seeds, scale 1mm

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.

*Information above was gathered from websites, principally Atlas of Living Australia - www.ala.gov.au
Plantnet - plantnet.rbgsyd.nsw.gov.au/search/simple.htm
Weeds Australia - weeds.org.au
weeds.dpi.nsw.gov.au*

Activities from Page 1

Sat 4 Nov, 1.30pm, **Sutton, Goorooyarroo Lane**. Wander over a 40 acre block that has been variously grazed in the past, but not for the last eight years or so. The shady canopy and understorey will make for a pleasant afternoon walk. Register: margaret.ning@fog.org.au

Sat 18 Nov 9am, **FOG's return visit to the Tinderries**. Not much was flowering when we visited in May, but this time we shall get a much better idea of what is there. The views are amazing, the walking is reasonably easy most of the time, and it is a beautiful, peaceful place to be. (Sun 19 Nov is our back up day if the weather lets us down on 18 Nov.). Register: margaret.ning@fog.org.au

Sat-Sun 2-3 Dec **Shoalhaven River property visits (Wyanbene area)**. Camping weekend on two members' properties, within proximity of each other, but with different vegetation communities; one a heathy grassland sandstone community and the other is open woodland and riparian forest, and both feature the Shoalhaven River. We shall start on Friday afternoon, stay two nights and finish around lunch time on Sunday. There is some accommodation available, and lovely areas for camping as well. (You can arrive on Saturday if that suits better.) Register: margaret.ning@fog.org.au

Late January 2024 **FOG Tasmanian Grasslands activity**. Broadly we plan to travel either the week beginning Mon 22 or Mon 29 Jan. (approx. week away from home). A proposed five day program of property visits and discussions with ecologists and landowners. This planning is being done in cooperation with Pierre Defourny of Tasmanian Land Conservancy (TLC). If you wish to fly, transportation from Hobart to the Midlands and back, and for the duration of the visit program, can be organised through TLC. (FOG member). If you are interested in joining us, email us with your preferred dates and we shall do our best to plan around them to accommodate everyone. Contact: margaret.ning@fog.org.au

How to separate vegetative material of Slender Speargrass and Serrated Tussock

Isobel Crawford

Summary

The characters which most readily and reliably separate vegetative material of these two species are leaf-blade diameter and the length of leaf-blade hairs. Slender Speargrass blades are to 1 mm diameter, twice that of Serrated Tussock blades. Slender Speargrass blade hairs are usually 0.2–0.3 mm long and readily visible with a 10-x lens in good light. Those of Serrated Tussock are < 0.1 mm long and therefore not as readily visible with a 10-x lens in good light, although they are usually more palpable (Figure 1; Table 1).

If a good quality, older ligule is available, its colour, texture, and the presence/absence of hairs on the upper margin are also reliable characters: Slender Speargrass has a less robust membranous ligule with a fringe of hairs on the upper margin, and Serrated Tussock has a more robust opaque-whitish, papery ligule (Wheeler, Jacobs and Whalley 2002) without fringing hairs (Figure 1; Table 1). Less reliable characters are habit, blade length and colour, ligule length and shape, and the presence/absence of hairs at the sheath/blade junction (auricular hairs) (Figure 1; Table 1).

The complete paper is available on the FoG website [here](#)

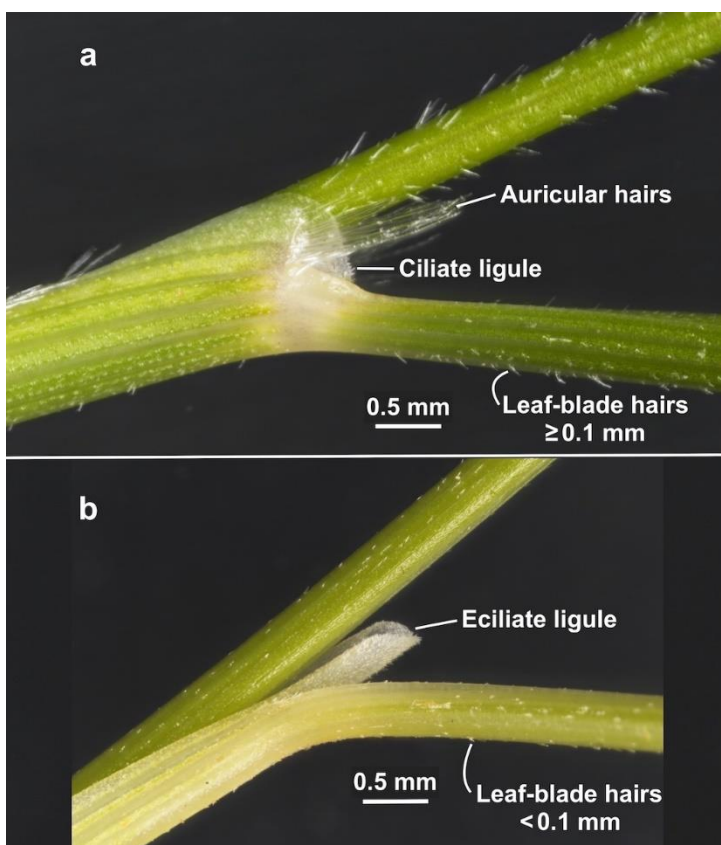


Figure 1 a Slender Speargrass *Austrostipa scabra* spp. *scabra* (IC 10575);
b Serrated Tussock *Nassella trichotoma*.

Table 1. A comparison of some vegetative characters of Slender Speargrass and Serrated Tussock

character	Slender Speargrass		Serrated Tussock
	spp. <i>falcata</i>	spp. <i>scabra</i>	
Habit (older plants)	erect		weeping
Leaf-blade length (cm)	commonly < 15 (VF) ²	commonly > 15-30 (VF)	15-45 (AG2) ¹ to 30(-50) (VF)
Leaf-blade colour	green		yellowish (lime) green
<u>Leaf-blade diameter</u>	to 1 mm (VF)		to 0.5 (VF)
<u>Leaf-blade hair length (mm)</u>	(0.1-)0.2-0.3(-0.6) (n=45)	(0.1-)0.2-0.3(-0.5) (n=52)	< 0.1 (n=57)
<u>Ligule colour/texture</u>	membranous, less robust		opaque-whitish, papery, more robust
Ligule length (mm)	0.3-0.6 (AG2) 0.3-0.6 (WJW)	0.6-1 (AG2) (0.3-)0.6-1(-1.5) (WJW)	0.5-2.5 (AG2, WJW)
	0.5-1.5 (VF)		0.5-1 (VF)
<u>Ligule margin</u>	ciliate		eciliate
Ligule shape	bilobed		single lobed
Auricular hairs to 2 mm	+	occasionally +	-

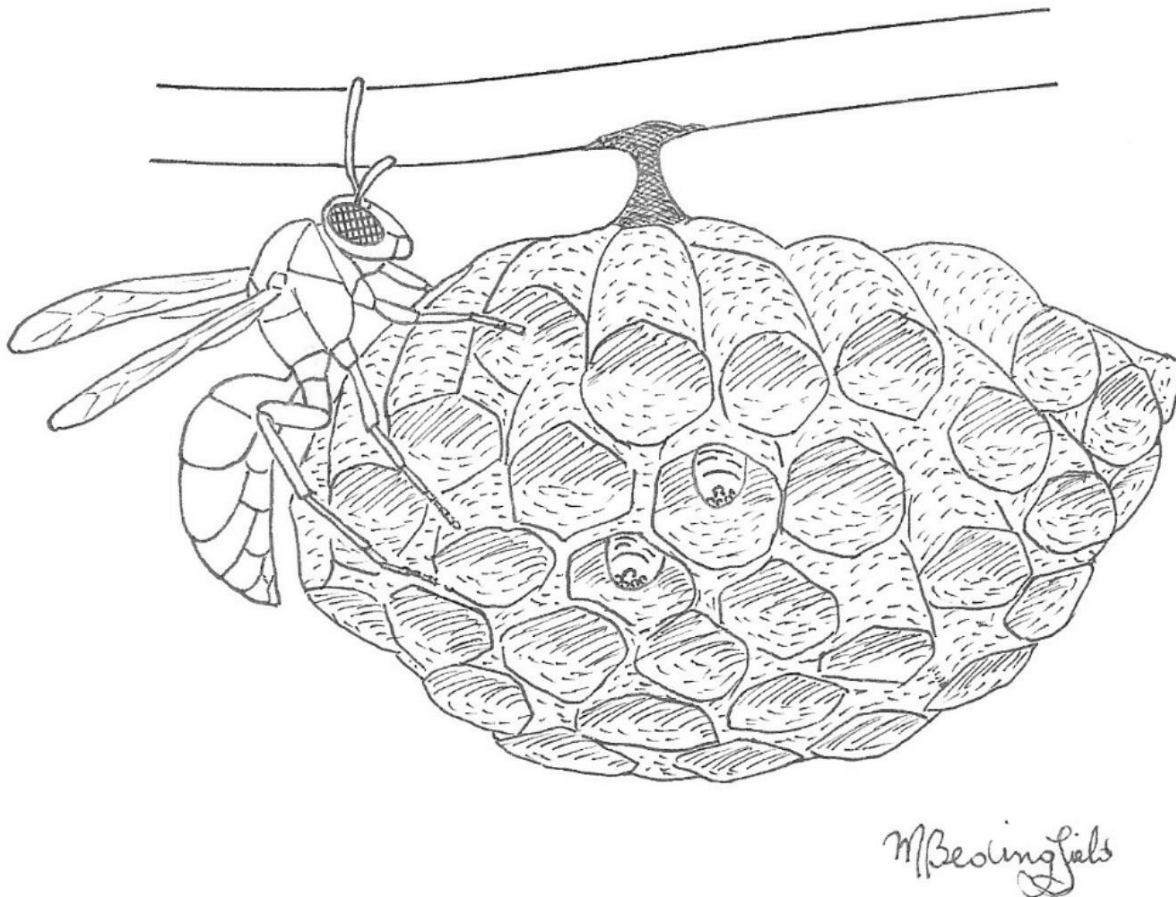
Underlined characters are the most reliable:

¹ AG2 [AusGrass2](#); ² VF [VicFlora](#); ³ WJW Wheeler, Jacobs and Whalley (2002)

Common Paper Wasp, a social wasp and an example of haplodiploidy

Michael Bedingfield

Most wasps that are native to Australia are solitary wasps, with the females working alone to raise the young. Common Paper Wasps, however, are very communal and every year females create a small family colony to raise the next generation with their offspring. They are a medium-sized wasp with a body length of up to 20 mm, a narrow 'waist' and banded colouring in shades of red-brown with some yellow markings and a yellow face. The scientific name is *Polistes humilis*. The Atlas of Living Australia lists three subspecies. The subspecies that is most common, that occurs locally and is recorded on Canberra Nature Map is *Polistes (Polistella) humilis*.



The annual life cycle of *Polistes humilis* begins in spring with nest building. The wasp may start a new nest but will also reuse one from the previous year. The material for the nest is grey wood fibre which is chewed and mixed with saliva to make a coarse papery structure with hexagonal cells. For illustration I have provided a drawing of a nest with a wasp and two small larvae present, and a coloured photo. These wasps feed on caterpillars and spiders, using their sting to paralyse their prey. They also feed on nectar. The founders of a new nest are female queens that have been inseminated in the previous season and have over-wintered. Eggs are laid in the cells of the nest and hatch into tiny grub-like larvae. They are fed with chewed-up prey, each larva growing within the safety of the cell. When the larva is mature enough the cell is sealed with a white cap and the larva pupates within the cell, later emerging as an adult.



There are generally several queens to a nest and they are usually closely related. The number of queens present in a nest increases with the size of the colony so a larger nest increases the genetic variety within that nest and therefore its ability to adapt. In late spring and early summer the first new adults emerge and these are all females. They help with the nest-building and the feeding of the young and provide food for the resident queens. There is no physical difference between the female queens and workers. There is normally

a dominance hierarchy in place with the female queens keeping their daughters in a subordinate role as workers. The colony grows in this way for a while with all the members being female.

In late summer and early autumn males are produced as well as the adult females that are to be the future queens. Seeking to mate, the males disperse from the nest so there is no inbreeding. After the breeding period the weather is cooling and the colony declines. Most of the adult wasps die during winter. The new queens become inactive and take shelter to wait out the winter period.

But how is it that these insects can have offspring that are male or female at different times? *Polistes humilis* is a haplodiploid species in which females develop from fertilised eggs and males develop from unfertilised eggs. Like most animals, the females have two sets of chromosomes, one from each parent, and are therefore diploid. Males have a single set of chromosomes from the mother only and are haploid. After mating the females store the sperm in an organ called the spermatheca, and can control its release. If sperm is released as the egg passes down the oviduct the egg is fertilised and a female offspring results. If no sperm is released a male is the result. So males do not have a father, but they have a grandfather. It is also possible for a queen to produce male offspring without mating. All wasps, bees, sawflies and ants are from the order Hymenoptera and are haplodiploid.

Internationally, *Polistes humilis* is called the Australian Paper Wasp. The Atlas of Living Australia shows it distributed across mainland Australia mostly in the southeast, and as rare in the drier inland. It has been introduced to New Zealand. The species occurs in a variety of habitats including grassy woodlands and has adapted to urban environments. Since the wasps feed on caterpillars and nectar they play a role in biological pest control and act as pollinators. They are a valuable part of the ecosystem. They are territorial, and while they are not aggressive away from the nest, if their nest is threatened the females are liable to attack and sting the intruder.

A local species that is very similar to *Polistes humilis* in appearance, but more reddish in colour, is the much less common Red Paper Wasp, *Polistes (Gyrostoma) erythrinus*. An issue for native paper wasps is that they compete for food with introduced species. These are the Asian Paper Wasp *Polistes chinensis* and the highly invasive European Wasp, *Vespula germanica*. This is a situation that needs to be monitored to see if the native species declines over time.

The world of insects is truly fascinating. For social wasps, haplodiploidy ensures that the queens and female workers are all closely related. This promotes altruistic behaviour within the colony. Whether they are building the nest, collecting food, looking after the young larvae or protecting the nest, they all work together. This has contributed to the great success of the species we have presented here.

Main references:

<https://www.ozanimals.com/Insect/Common-Paper-Wasp/Polistes/humilis.html>

[www.inaturalist.org/taxa/181077-Polistes-](http://www.inaturalist.org/taxa/181077-Polistes-humilis)

[humilishttps://www.researchgate.net/publication/248902394 Mating system and genetic structure in the paper wasp Polistes humilis](https://www.researchgate.net/publication/248902394_Mating_system_and_genetic_structure_in_the_paper_wasp_Polistes_humilis)

Focus on conserving biodiversity in FOG's four winter talks

Ann Milligan

You, as a reader of *News of FOG*, are surely familiar with the photo of glorious native grassland on the front of FOG's book *Grassland Flora*? That cover photo shows Top Hut Travelling-Stock Reserve (TSR) in 1997, as FOG's president Jamie Pittock told us while introducing Andrew Zelnik's presentation – one of four we heard during FOG's summer-like 'winter talks' afternoon on 26 August at Mugga Mugga Environmental Education Centre.

Andrew touched on the work FOG is doing at Top Hut TSR (halfway between Adaminaby and Cooma, NSW), and showed a few of his gorgeous photos of its high biodiversity and its rare and threatened grassland flora

and fauna. What an example of a high-quality native grassland! No wonder Rainer Rehwinkel declared it has “extremely high conservation value”.



A work-party at Top Hut TSR showing some of the TSR's biodiversity. Photos: Jiyan Akyol (left) and Andrew Zelnik (right).

We heard that FOG is leasing the TSR from South East Local Land Services for years 2020–2025, aiming to conserve its biodiversity. Margaret Ning coordinates management of the lease, and she and Andrew work with people from FOG and the local area, including NSW government staff, to weed and otherwise protect the TSR's habitat values. Jamie Pittock announced that money from the 2023 End of Financial Year call for donations is helping support the project.

Conservation efforts

- Ongoing monitoring of sites (ACT Government)
- Captive breeding facilities
 - Tidbinbilla, Melbourne Zoo and UC
 - Successfully breeding of individuals
- Current Research
 - Study reintroductions into previously occupied areas
 - Optimise monitoring efforts (via smart burrows)
 - Aim: Maintain captive breeding and reintroduce individuals at additional sites



Biodiversity work in the ACT was the focus of the three talks by Professor Bernd Gruber, Sarah Sharp and Hugh Coppell. Bernd's team at the University of Canberra is intensively studying *Tymanocryptis lineata* (Canberra Grassland Earless Dragon) which now occurs only around Canberra airport and in the Jerrabomberra grasslands.

This very detailed talk updated FOG's knowledge of this tiny lizard (about the size of an adult thumb), and outlined new features of the studies, such as 'smart' burrows for easier monitoring of the dragons in the field, and testing whether fences (or no fences) are better when introducing captive-bred dragons to open grasslands.


The talks by Sarah Sharp and Hugh Coppell outlined work where FOG is interacting with government for conserving biodiversity in the ACT. Sarah's initiative, working with the Conservation Council, is lobbying the ACT Government to identify and manage 'areas of conservation significance', such as patches of native

grassland and woody native grassland, that occur across ACT. Under this initiative, land managers would be guided to treat these vegetation types in the same way across all land tenures. Local land tenures include horse paddocks, urban and rural leases, nature reserves, urban open space, road easements, travelling-stock reserves, and Commonwealth land (e.g. airport, defence and research facilities).

Identified outcomes

Integration of Canberra's unique biodiverse landscape into planning, management through stewardship across all tenures:

1. Enhance condition, resilience and habitat value of conservation areas
2. Reduction of threats to rare and threatened species
3. Implementation of actions to address key threatening processes:
 - Clearance of mature native trees
 - Fragmentation
4. Inclusion of other assets including cultural areas, other scientific assets
5. Collaborative participation of ACT and Commonwealth government departments, landholders and community



Objectives for a biodiversity network to protect 'areas of conservation significance'. Image: Sarah Sharp.

There is much to do. To achieve the objectives listed in the graphic above, the areas of conservation significance must first be identified. Then, suitable ecological management methods will need to be applied in combination with management for the various lands' other uses, while also meeting bushfire and other safety requirements. Sarah emphasised that the aim is to guide, not prescribe.

Finally we heard from Hugh Coppel, whose talk title was: 'What are we doing about weeds?' (below). Hugh outlined current strategies and methods, including new invasive species working-group committees; a 'Gardening Responsibly Initiative'; a new online 'tool' for prioritising weed treatments and several other online and phone-based tools for reporting weeds found in the bush.

The Gardening Responsibly initiative, by the NSW Environmental Trust, lets us check if our new garden purchase is invasive or not. This reminds me of the brochure that native plant enthusiasts used to hand out at the Bush Friendly Garden at Floriade each year, and at Weed Swap days at ACT's green-waste tips. It was called 'Grow Me Instead', and showed invasive garden plants and native alternatives that would fill the same visual niche for a garden.

Warming the inner FOG person

The lovely weather was ideal for chatting outdoors during mid-afternoon tea (and coffee and juice), while sampling the array of delicious snacks provided by Margaret Ning and Matt Whitting. At the end of the four talks there was heart-warming teamwork by many members of the audience: washing-up and drying and restoring the rooms to their initial condition. Thank you all, and thank you to our four speakers, and particularly to you, Margaret, for arranging this informative and pleasant Saturday activity.

What are we doing about weeds?

Hugh Coppel

Following on from my presentation to the FOG winter gathering at Mugga Mugga on Saturday August 26th, I was encouraged to translate my presentation into a newsletter article (with relevant links). It can be easy, at times, to feel disheartened about the state of weeds in our wonderful grasslands. They present challenges for which there are few easy solutions, often requiring hours of labour. However, I have been fortunate enough to be included in the launching/previewing/discussion of a few tools that may come in handy for weeding activities in grasslands.

[ACT Invasive species dashboard](#)

I would be remiss to start this article without including the fabulous ACT invasive species dashboard, developed by Steve Taylor at Parks and Conservation. This website is an interactive dashboard, featuring a map containing the areas of weeds that have been treated. Treatment details, including chemicals used, date, and weed controlled, are featured within each shape. While this map shows what has been achieved by the ACT government and ParkCare volunteers this year, there is another version that allows you to upload via your phone areas of weeds that need to be controlled. Training for this application is available from the ParkCare team and you can register using the MyImpact app.

[List of naturalised alien plant species in the ACT](#)

This list has been developed by Paul Downey and features a risk assessment score for each of the 683 exotic species considered naturalised within the ACT. The score combines environmental, social and economic factors to determine the overall risk posed by a species. There are also two other versions of this list, the [Naturalised non-local native plant species list](#) and the [Alert list of alien plant species](#), the second of which assesses plants that are not yet naturalised in the ACT but may become naturalised in the next 10 years.

[Canberra Nature Map and the Sleeper Weeds initiative](#)

As I am sure many of you are aware, Canberra Nature Map is a fantastic resource for identifying and recording occurrences of plant and animal species. It is also a great place to record weed occurrences, with data from Canberra Nature Map now being included in the ACT government's invasive species response programs. One new project, coordinated by Rainer Rehwinkel through Canberra Nature Map, is the sleeper weeds initiative. These are species that are currently featured on the [Municipal Infrastructure Standard 25](#) (MIS25), which is a list of species to be used for amenity plantings around Canberra. So far, we have been successful in getting *Agapanthus praecox*, *Arbutus unedo*, and *Nandina domestica* removed from the MIS25 due to the strength of the data available and their risk profiles on Paul Downey's lists (see above). However, we need the community's help to get the data needed for the remaining 10 species to be removed from the MIS25, through reporting occurrences via Canberra Nature Map.

[Gardening Responsibly Initiative](#)

This initiative is a certification scheme for nurseries, whereby they agree not to sell plants with a known or possible high risk of invasiveness. The ACT government is a partner on this program, implying they will only purchase from nurseries with this certification. It is important to note that the main page only features plants which are documented as non-invasive, without allowing one to search for species which have been listed as invasive. However, this can be done through the [Gardening Responsibly research portal](#), which requires a free account. Through this portal you also have the ability to create reports on the invasiveness of individual plant species including cultivars. These are assessed by a team of reviewers before they are factored into the profiles of each species. The Gardening Responsibly team has asked for assistance with creating these invasiveness reports, and I would be happy to provide training on how to complete one if there is interest from the FOG community.

[3D weed models](#)

This was something I forgot to mention in my talk, but that I know people may find interesting. The NSW DPI has commissioned an artist to create virtual 3D models of some weed species. [African lovegrass](#), [Chilean needlegrass](#) and [Serrated tussock](#) are among the selected species. These models can be manipulated to examine fine details of these plants, allowing people to improve their identification skills.

[WeedScan](#)

This is an app that has been developed by the Centre for Invasive Species Solutions, allowing people to identify weeds using artificial intelligence. With WeedScan, you can use the camera on your phone to search for species, with the app displaying its confidence with the identification. Currently, the species that can be identified are mainly located in NSW. However, it can work in the ACT but with more limited confidence and accuracy.

Escarpment Heathy Woodland Escape, Nerriga

Margaret Ning

Saturday 23 September. We planned our Nerriga sojourn as an escape from Canberra's cool spring weather (i.e., to a warmer clime), but ironically it ended up being an escape from Canberra's abnormally warm weather. Nine of us assembled in Bungendore, led by Rainer Rehwinkel, and ably supported by Brigitta Wimmer, who is familiar with the Nerriga area following visits with the Australian Native Plants Society over the years. Using the UHF's, Rainer kept us informed of the vegetation highlights along the way, interestingly consisting of a range of *Pomaderris* species and of the changes he has seen in the area over the decades.

Our first stop was Touga Rd, which was easy to locate and turn into. The heathy vegetation was alive with colour and we just wandered around admiring and even marveling at everything. We found some monitoring spots with wire exclosures, and the plots were reasonably large, to the point that it wasn't easy to work out what was being protected. I saw a couple of plants of a *Genoplesium* species (one with last year's fruits on it), but who knows!

Next we drove to the furthest away point on our map, Kris's Knoll, which is a small peak adjacent to the road. That was an easy climb, especially when aided by the burnt stalks of the trees and shrubs, victims of the 2019-20 bushfires. Some of us climbed to the top of the knoll, where we were rewarded with *Actinotus helianthi*, and others explored the area around the base, which was ablaze with colour. The photographers in our party had a field day. For those two sites, the flowering orchids consisted of no more than a handful of a pink *Caladenia* and *Glossodia major* (syn. *Caladenia major*) at Touga Rd, and a *Thelymitra* species (of the spotted variety) at Kris's Knoll. The colours of the rainbow of the other flora species included: red (*Grevillea baueri*); orange (*Banksia ericifolia*, *Isopogon anethifolius*, and various peas); yellow (other peas, a *Hibbertia* species and various *Acacia* species); green (the sedges and a few grasses); and shades of blue, indigo and violet (*Dampiera stricta*, a *Hybanthus* species, *Scaevola ramosissima* and *Comesperma ericinum*). Rounding out the spectrum were the pink of *Kunzea parvifolia* and white of *Brachyloma daphnoides*, *Epacris microphylla*, *Pimelea linifolia*, *Grevillea patulifolia* and a *Philothea* species.



Other species we saw that had remnants of the previous year's fruit, and were yet to even think about flowering, were *Pomax umbellata* and *Haemodorum corymbosum*. In terms of new species for me, at Touga Rd we noted some strange fluffy looking plants that turned out to be *Stylidium lineare* with last year's flowerstalks (left). We also saw the delicate pink *Mirbelia rubiifolia* (below, image by Brigitta Wimmer), an off-white and pinkish *Commersonia* species, and the white *Woollsia pungens* and *Olex stricta*.



After lunch at Kris's Knoll, Rainer led us down towards Braidwood to a travelling stock reserve near the bridge over the Corang River, where there's a population of the threatened *Callitris oblongata*. Here, we heard Eastern Whipbirds calling and responding. We saw the snowy effect of the petite *Leucopogon fraseri* and the soft cushions of *Scleranthus biflorus*, which reminded us that we were in grassy country again.



A mystery at this site was a large-leaved epacrid that was only about 10cm high. We've identified this as *Styphelia adscendens* (see Brigitta Wimmer's photo, left).

While grasses were more abundant at this grassy woodland site, flowers were thin on the ground – without doubt the sandstone near the escarpment supported more splendidly floriferous vegetation.

Ten thousand sightings

From a post by Aaron Clausen in [Naturemapr Daily Summary 18 September 2023](#)

"A very sincere congratulations to Canberra Nature Map (CNM) administrator Michael Bedingfield for reaching a monumental milestone - ten thousand sightings! If it wasn't for all the assistance MichaelB has given me with refining and shaping the platform over many years, I think he would have likely hit this milestone much earlier! I am very glad to see that he's been able to report a few more sightings lately and quietly crept over the 10K barrier the other day while nobody was looking. Congratulations MB on hitting 10K sightings - CNM and NatureMapr wouldn't be what it is without your tireless efforts. What an incredible achievement and contribution to the knowledge of future generations that also coincides wonderfully with NatureMapr's 10 year anniversary".

Springtime at Yarramundi Reach

John Fitz Gerald

A field of Bulbine Lilies coming into flower at Yarramundi Grassland where FOG works with the NCA. The area had biomass removed by RFS ecological burn in late April and the lilies are making the most of their opportunity to set new seed.



Dragon at the airport

Matt Whitting

Previous newsletters have explained that on 23 September 2022 FOG wrote to the current federal Environment Minister Tanya Plibersek and requested that the approval for the Northern Road between Fairbairn Avenue and Majura Road in Pialligo be suspended based on new information, namely that the Canberra Grassland Earless Dragon is not widely distributed with tens of populations but genetically distinct with a severely restricted distribution and just three small populations.

We know the Minister has been considering the request. On 31 August 2023 at the Canberra Grassland Earless Dragon forum Geoff Robertson learned that Canberra Airport submitted an “options analysis” to the federal Environment Department in around early July. On 3 September, the Environment Minister wrote to FOG president Jamie Pittock and Conservation Council CEO Elle Lawless inviting a submission of any supporting information to be included for consideration before she makes her decision.



They responded on 12 September in a hard-hitting letter highlighting the importance of the site to the dragon, and problems with both the road and with approval granted for it back in May 2020, quoting information obtained by FOG under freedom of information.

Right now, a decision remains imminent. The latest media release from the Conservation Council can be found [here](#). Any submission before we hear from the minister may assist. FOG is concerned that this image of the dragon at Canberra Airport may be the last to be seen.

Monash Grasslands, a jewel in the suburbs

Zohara Lucas, Ecologist, Southern ACT Catchment Group

Tucked away in the Tuggeranong suburb of Monash lies a remnant Natural Temperate Grassland (NTG) that is very easy to pass by. Located between William Hudson Avenue and Isabella Pond it is surrounded by a border of *Phalaris*. However, if you dare to walk deeper into the site you will be rewarded.

The Park is dominated by Kangaroo Grass (*Themeda triandra*) with a wide variety of other native grasses including *Poa spp.*, Tall Speargrass (*Austrostipa bigeniculata*), Umbrella Grass (*Chloris truncata*) and Native Wheat Grass (*Anthrosachne scabra*); an impressive variety of forbs such as Blue Devils (*Eryngium ovinum*), Curved Riceflower (*Pimelea curviflora*), Creamy Candles (*Stackhousia monogyna*) and Scaly Buttons (*Leptorhynchus squamatus*); sub-shrubs including Urn Heath (*Melichrus urceolatus*) and Bush Pea (*Pultenaea procumbens*); with sedges and lilies including Bulbine Lily (*Bulbine bulbosa*) and big stands of Black-anthered Flax Lily (*Dianella revoluta*).

Friends of Monash Grasslands (FOMG), a local volunteer group, has regularly been visiting the site to care for the grassland and in turn to learn and pass on their knowledge of the importance of native grasslands to the local community.

Friends of Grasslands (FOG) awarded Southern ACT Catchment Group a grassy ecosystem grant of \$1500 in 2021 to assist with the creation and installation of permanent information signage to inform the community of the presence and importance of this remnant natural temperate grassland on their doorstep. FOG's grant covered just under 50% of the sign's costs. The need to inform the public about Monash Grasslands was great, as the majority of weeds have been introduced as dumped garden waste. FOMG continues to monitor the border of the intact grassland and treat areas of *Euphorbia* and *Vinca* to keep them out of the high-quality areas.

An endangered ecological community hiding in plain sight

Did you know you are standing next to a native grassland? Specifically, it is a Natural Temperate Grassland which is an endangered ecological community in the ACT and nationally.

What are native grasslands and why are they important?

Native grasslands are vegetation communities dominated by a range of native grasses and can contain a diversity of native orchids, lilies, daisies and a variety of rushes and sedges. They are home to many native plants and animals including invertebrates (such as bees, ants, flies, butterflies, moths, beetles, grasshoppers and spiders), reptiles (such as lizards and geckos), amphibians (frogs), mammals and birds. Many of these plants and animals are either listed as threatened or rare and uncommon in the ACT.

Animals that live in and visit grasslands are essential for the ecosystem to function. They help with pollination, seed and fungi spread, plant germination, infiltration and storage of water in the soil, and nutrient cycling. All of these help to maintain the condition of the soil. It is natural for these native grasslands to have no or very few native shrubs and trees. The plants and animals who live in grasslands need the large open spaces and abundant sunlight that grasslands provide.

Grasslands are filled with biodiversity!

Can you find Kangaroo Grass?

The dominant native grass at this site is Kangaroo Grass (*Themeda triandra*) – a tufted, perennial that can grow up to 1.5m tall, with a distinct seed head and green to grey leaves which turn orange during summer. Kangaroo grass seeds are edible, high in protein, and can be ground to make flour. Aboriginal families have cared for this land for generations and used seeds of kangaroo grass in an important and delicious food for humans and habitat for animals.



Photo by Andrew Zelnik

We acknowledge the Ngunnawal people as traditional custodians of the ACT and recognise any other people or families with connection to the lands of the ACT and region

Have you seen evidence of a Wolf spider?

Wolf spiders live in these grasslands and build circular burrows in the soil. You may see the burrows of these wolf spiders if you look close enough. The female Wolf spider will care for her young by carrying the spiderlings on her back until they are large enough to disperse. She can carry one hundred baby spiders on her back.



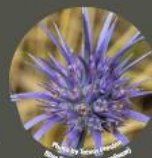
Listen out for an Australian Pipit

The Australian Pipit (*Anthus australis*) is a well camouflaged bird with a beautiful trilling song. In spring the female will make a circular grass nest on the ground in amongst the grass tussocks. Be careful where you step! You may see the Australian pipits perching on long grass stems or hear them singing their sweet song.



What is a Blue Devil?

The Blue Devil (*Eryngium yuccifolium*) is a native plant. Its leaves are green when young and turn blue as they age. If you look closely at the blue spiky heads, there are dozens of tiny flowers surrounded by spines (these spines are modified leaves, otherwise known as bracts). These bright blue flowers flower in the summer time. They are excellent food for pollinators including native bees and butterflies. Keep an eye open for them as you walk through the grassland.



What do you think a Hoary Sunray is?

The Hoary Sunray is an everlasting native daisy. Their flowers appear in late winter and stay flowering until early autumn. Feel the flowers, you may notice how dry they feel. This is an adaptation by the plant to grow in dry environments so they do not need to rely on water to keep their flowers open. Have a look if you can find some in the grasslands.



Lovely lizards live here!

Did you know the Eastern Bluetongue lizard (*Tiliqua scincoides scincoides*) is actually a huge skink? Blue tongues use rocks and fallen timber in the ecosystem for shelter and can be found in native grasslands. Unique to most reptiles, the female Eastern Bluetongue will give birth to live young and the juveniles will disperse immediately. To help Eastern Bluetongue lizards in your area, keep rocks on the ground and don't let dogs near them.



Grasslands need your love!

We need to protect Natural Temperate Grassland and other native grassland patches. Our local native grasslands are threatened by weeds, the impacts of urbanisation and development, introduced pest animals, inappropriate levels of grazing and fire, and climate change.

You can help look after Monash Grasslands by:

- **Joining Friends of Monash Grasslands** volunteer group to care for this site and protect this important habitat. For more information about volunteering, contact Southern ACT Catchment Group at www.sactcsg.org.au
- **Throwing garden waste** in your green bin. Do not dump garden waste here, garden waste can contain weeds that will invade this grassland. Advise Access Canberra of any rubbish dumped here.
- **Treating the grasslands** with respect and learning more about this important ecosystem with Friends of Grasslands www.fog.org.au and Canberra Nature Map www.canberra.naturemap.org



By illustrating the beauty of the plants and describing interesting facts about the animals that live in the grasslands we hope to win over the locals to care for and appreciate this NTG on their doorstep - and get a few more volunteers to help care for this important site.

FOMG meets on the first Saturday of each month. You are invited to join us! In the cooler months we meet in the mornings and in the warmer months we enjoy a working bee in the cool of the evening. The group is need of a convenor and if you or anyone you know has ever considered taking on such a role, now is a great time to get involved! The group is currently convened by SACTCG staff member, Zohara Lucas, but it's now time to pass the mantle on to a member of the community. If you are interested please get in touch with Zohara at ecologist@sactcg.org.au.

This was a team effort and our thanks go to FOG for the grant, all the volunteers with FOMG who have been loyal and reliable and a great joy to work with, to Margaret Ning, John Fitz Gerald and Andrew Zelnik from FOG who generously shared grassland knowledge and helped with editing and fact checking, to Alison Elvin who enthusiastically guided a grasslands walk, Correa Driscoll who wrote the first draft of the sign, Canberra Nature Map who provided wonderful photos for the sign and Screenmakers whose graphic design abilities turned an assortment of words and pictures into a professional sign. And also to the people who anonymously helped in the background, thank you for your help, we are really pleased with the sign and I hope you are too!

Next weeding party at Monash Grasslands
Saturday 4th November, 10:00 - 12:00
Meet on William Hudson Circuit, Monash
Everyone welcome!

Canberra Urban Biodiversity Surveys (CUBS)

Emmeline Norris

This is a new initiative that harnesses the potential of citizen science to answer questions about urban biodiversity in the city of Canberra. Being delivered by the ACT Government Office of Nature Conservation as part of the Connecting Nature Connecting People program, the surveys will evaluate the effectiveness of retaining and

improving habitat structure and ecological connectivity in supporting the conservation of native fauna within Canberra's urban landscape. CUBS engages the community through catchment groups, tertiary education institutions, existing fauna monitoring programs, and the Canberra Nature Map citizen science platform, along with its users. Together, and with support from the Office of Nature Conservation, these citizen scientists will survey seven species groups: insect pollinators, small woodland birds, small native fish, amphibians, small-medium terrestrial mammals, grassland reptiles, and riparian-aquatic mammals and reptiles.

Two taxa groups will be monitored in urban grasslands of Canberra: grassland reptiles and insect pollinators. The CUBS grassland reptile surveys commenced in September this year in collaboration with a second-year ecology class at the ANU. At 24 urban grassland sites throughout Canberra, ecologists established new grids of concrete roof tiles following the same method used by Environmental Offsets to monitor the Striped Legless Lizard. Six tile checks were completed over five weeks. Below are some interesting findings:

- Two Striped Legless Lizards at St Marks grassland
- Olive Legless Lizards at Monash grassland (4), Spain Place grassland (3), Want Place grassland (1), Croke Place grassland (1), Blue Devil grassland (1), St Marks grassland (1) and Lawson grassland (1)
- Eastern Three-Toed Skinks at Ainslie Volcanics grassland, St Marks grassland, Spain Place grassland, and Want Place grassland
- Juvenile Eastern Brown Snakes at Dunlop grassland, Lawson grassland, Monash grassland, St Marks grassland, and Want Place grassland

A map of the CUBS urban grassland monitoring sites is available [here](#). Sites not mentioned above include Mugga Mugga grassland near the Heritage Cottage, Jarramlee grassland, Yarramundi grassland, and Yarralumla grassland.

Additionally, the CUBS insect pollinator surveys will commence this month and will run through to March. We are currently seeking volunteers to participate with these surveys, which are in collaboration with the Nature Mapr platform. Surveys will be conducted between mid-October 2023 and late-March 2024. Volunteers will be expected to survey their designated site/s monthly between these dates and upload sightings through the survey form on Canberra Nature Map. To conduct insect pollinator surveys, volunteers will spend approximately 30-45 minutes photographing pollinators on flowers within 50 metres of a central survey point. The photos are then uploaded to Canberra Nature Map using the survey form for identification by expert moderators. We are still seeking volunteers for the following grassland sites: Mulanggari Nature Reserve, Jerrabomberra East, Dunlop Grassland, Bonshaw Offset, Jarramlee Grassland, St Marks at Barton and Croke Place Grassland. If you are interested in participating, please register your interest [here](#) or email Emma Collins at woyapp@hotmail.com.

Throughout spring and summer of 2023/24, CUBS will engage consultants to undertake habitat assessments at all the monitoring sites. These will include assessments of herbage mass, ground cover, weeds, and floristic diversity. By collecting species occurrence records and habitat assessment data at dedicated monitoring plots of varying habitat condition, the program aims to establish a foundation for disentangling the environmental variables that influence species persistence in urban green spaces. This information will act as a means of validating spatial models developed through the ACT Urban Habitat and Connectivity Project and enhance the accuracy of future spatial models used to identify potential core and corridor habitat for the focal species groups in Canberra.

In the long-term, the program's findings will also inform the design and implementation of on-ground actions aimed at restoring suitable habitat, implementing Biodiversity Sensitive Urban Design, and promoting ecological connectivity in urban areas.

Finally, the CUBS project team would like to thank Sarah Sharp, Margaret Ning, John FitzGerald, Ken Hodgkinson and Zohara Lucas for being so generous with their time and helping to find suitable grassland sites for these monitoring activities. Your knowledge of Canberra's urban grasslands has been invaluable and we couldn't have done it without you!



Olive legless lizard at Monash Grasslands, Image Emmeline Norris



Brown snake at Want Place Grassland, Image Emmeline Norris

Bass Gardens Park interpretive signs

Sue Ross

Bass Gardens Park in Griffith now has two interpretive signs (one of which is pictured below) providing information about this remnant area of ancient natural temperate grassland, the 20th century history of those involved in establishing the park, and the planting of exotic trees in specific linear patterns.

The information is provided for those familiar with the park as well as those just passing by. This park is a known habitat for the Golden Sun Moth and supports a diverse range of native flora and fauna. A QR code on the sign links to Canberra Nature Map. The provision of these signs was funded by an ACT Adopt-A-Park Community Grant and sponsored by the Griffith Narrabundah Community Association. Content was provided by residents and local ecologists.

Welcome to Bass Gardens park

Remnant natural temperate grassland and exotic trees

Acknowledgement of Country

We acknowledge the Ngunnawal people as traditional custodians of the ACT and recognise any other people or families with connection to the lands of the ACT and region. We acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

For more information visit the Caring for Country webpage:
www.environment.act.gov.au/ACT-parks-conservation/healthy-country/caring-for-ngunnawal-country



Callocephalus fimbriatus
 Gang-gang Cockatoo
 Photo R McDowell



Natural temperate grassland

If you look out over the understorey you will have an impression of how the landscape has looked for centuries. This window to the past shows one of just a few remnant patches of what was an extensive area of natural temperate grassland. More than 99% of similar high quality natural grasslands have been cleared nationally. This area is thus critically endangered and of conservation importance. With over 70 native plant species it is a patch of relatively high diversity.

Wander in through the park and enjoy the diversity of flowers and thriving grassland insect life.

Can you see the green Conservation Area posts? These bound the area of the park's highest natural quality which is managed more closely than the rest of the park, with mowing constraints and greater effort to manage weeds. The area outside the Conservation Area is mown during spring and summer.

The grassland supports a variety of fauna including the endangered Golden Sun Moth, Gang-Gangs, Satin Bowerbirds, butterflies, bugs, spiders and visiting wallabies. Look out for the Chequered Copper, a small orange and brown butterfly, whose caterpillars can only eat native sorrel and only survive if attended by a small black native ant. These requirements are only found in high quality grassland.

The park is awash with yellow in a good spring and summer. Bulbine Lilies, Scrambled Eggs, Rush Lily and Common Everlasting daisies as well as the remarkable and spiky Blue Devil and the green Onion Orchid. In a wet autumn fungi abound. They are important for soil health and should not be disturbed. The grasses are mainly taller types including Knotted Speargrass, Corkscrew Grass, Redleg Grass and Slender Rat's Tail Grass. Smaller grasses include Weeping Grass and Hairy Panic.



Goodenia pinnatifida,
 Scrambled Eggs.
 Photo S Ross

Why is grassland here?

Natural temperate grassland occurs where few trees grow because of low temperatures, low rainfall and infertile or clay soils. In the ACT grasslands occupied the flat land of the valleys, below about 625 metres in altitude. This land was prime grazing country and then the best spot for building houses. Regionally, less than 5% of their original extent remains, and Bass Gardens is typical of the small and fragmented nature of remnants.

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News Roundup

West Majura Grasslands Reserve - temporary closure

Press release: ACT Government 4 October 2023 (edited)

West Majura Grasslands Reserve will be closed from 9 October 2023 for up to six months to allow contractors to conduct safety and remediation works. ACT Parks and Conservation Service, Executive Branch Manager Stephen Alegria said the closure is to ensure public safety while the area is searched for unexploded ordnance. "In the mid-20th century, Majura and Ainslie were used as live military firing ranges and as a result there are more than 1,500 anomalies in the grasslands that could be unexploded ordnance".

"If any unexploded ordnance are discovered, additional exclusion zones will be applied as necessary until the unexploded ordnance is removed and deemed safe by the Australian Defence Force. The ACT Government has engaged Milsearch Pty Ltd who are qualified and highly experienced to undertake the safety and remediation works at the reserve. As well as prioritising public safety, this work will allow ACT Parks and Conservation Service staff and contractors to safely conduct the maintenance and restoration work required to protect threatened grasslands, woodlands and native wildlife in the area. For your own safety, please do not enter the grasslands during the closure period".

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About the newsletter

News of Friends of Grasslands is published six times a year. It is sent by email (or posted on request) free to [members](#). The current issue and most prior issues are fully searchable. They are available [here](#) as text (no pictures or graphics) or in pdf format (1 to 4 MB files), including colour pictures and graphics. [Acrobat Reader](#) is required.

Fold here

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