

# *Fron*ds

*Friends of the Australian National Botanic Gardens*  
*Number 110 August 2025*





# Friends of the Australian National Botanic Gardens

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## **Fronds is published three times a year. We welcome your articles and photographs.**

The deadline for articles is mid-February for the April issue, mid-June for the August issue and mid-October for the December issue.

Email material to the *Fronds* Committee at the above email address or place in the Friends letterbox, located inside the Gardens Visitor Centre, between 9.30 am and 4.30 pm, Monday to Sunday. Editorial messages: telephone 02 6250 9548. Previous issues of *Fronds* may be found on the Friends website under the Newsletter tab.

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Friends of the ANBG is a member of the AAFBG

## Acknowledgment of Country

We acknowledge the traditional custodians of the land throughout Australia and their continuing connection to country and culture, and pay our respects to Elders past and present.

Front cover: Water Dragon by Micheal Tanton.

Back cover: Eastern Water Dragon, Rock Garden, by James Gara.

# Macrophytes of montane streams

By Jane Roberts

Out walking in Namadgi National Park, you pass a stream and suddenly notice – there are plants in there!

These are macrophytes, a term which by convention refers to vascular plants adapted to growing in, under or on, water of rivers or wetlands. Submerged macrophytes (leaves under water) and floating-leaf macrophytes (leaves floating on water) are the focus for this introduction to macrophytes of montane streams near Canberra; but you will also see emergent macrophytes (grow erect through water).

You are not alone if you think you know little about macrophytes. As a group, macrophytes of streams and rivers are poorly known in Australia (but not overseas) and are routinely overlooked in conventional vegetation surveys.

A stream is a mix of habitats, so macrophyte presence and abundance is shaped by stream characteristics – its size, flow regime, substrate and water chemistry. If conditions are not suitable for macrophytes, then only mosses or liverworts may be present.

Streams of broad grassland valleys at moderate altitudes are moderately wide, roughly 1 metre deep, on gentle slopes, on slightly peaty or organic substrates. Mid-stream, they have beds of submerged macrophytes, sometimes so dense they occupy most of the channel: such abundance is unusual (except in polluted enriched streams). These mid-stream beds are also relatively species rich, with up to seven species present, in contiguous patches or intertwined: *Isolepis fluitans*, *Montia australasica*, *Myriophyllum variifolium*, *Ranunculus amphitrichus* and *Hydrocotyle rivularis* are all native: *Ranunculus trichophyllus* is introduced.

All are perennial, reliant on vegetative regeneration (fragments, stoloniferous or rhizomatous expansion) rather than sexual reproduction (seeds).

Vigorous flow means macrophytes trail downstream, bobbing at the water surface, their flowering tips held just above water. Pollination is aerial. Some of these mid-stream species occur in other aquatic habits, like soaks and wetlands, where they take on a compact quasi-terrestrial form and flowering is more prolific.

Variable Milfoil *Myriophyllum variifolium* (Haloragaceae) is both widespread and abundant in these streams. It is one of three in-stream milfoils of the Southern Tablelands, the others being *M. alpinum* (slightly higher altitudes) and *M. verrucosum* (slightly lower altitudes). Its submerged leaves are very finely dissected, reddish in winter, and look feathery.

Occasionally they are loaded with pinkish gelatinous-looking blobs, likely *Rivularia* sp., a type of Cyanobacteria. Only male flowers have petals; the colour of female flowers is due to their styles.



Naas Creek showing the richness and abundance of submerged and floating-leaf macrophytes in streams through broad, open, grassy valleys. All photos by Jane Roberts.

The extreme flows of March 2021 had a destructive effect in the Cotter system, scouring out milfoil beds: recovery is proving slow.



Variable Milfoil *Myriophyllum variifolium*.- Female flowers and entire emergent leaves (left). Gelatinous pinkish blobs specific to submerged leaves (right).

# Macrophytes of montane streams (cont.)

A mid-stream habitat has stronger flows and turbulence. Such conditions are not suitable for all macrophytes, so instead some establish along stream margins where flow is quieter, substrate finer, and overhanging tussocks offer some protection.

These marginal macrophytes are a mix of forms (submerged, floating-leaf, emergent), and mostly have inconspicuous flowers. The most common species are *Ranunculus inundatus*, *Lilaeopsis polyantha*, *Isoetes muelleri*, *Potamogeton ochreatus* and *Potamogeton cheesemanii*.

Quillwort *Isoetes muelleri* (Isoetaceae) is a short inconspicuous tufted plant, with fibrous roots; it is rough to the touch, typically part buried in sediment. Quillworts are one of three orders in the class Lycopodiopsida, the others being clubmosses and spike mosses. *Isoetes muelleri* is the only *Isoetes* species in Southern Tablelands, and is the most widespread species in Australia.



Left: Submerged trailing stems and leaves of Floating Club Sedge *Isolepis fluitans* are like apple-green tresses under the water.  
Right: Small spikelets of Floating Club Sedge held above water surface and above floating leaves of *Hydrocotyle rivularis*.

Like many native submerged macrophytes, it is little-known and under-recorded. Scattered individuals can be found – by luck or diligent searching – on sandy margins of small perennial forested streams, or along rivers such as the Murrumbidgee and Shoalhaven. But sometimes Quillworts are abundant, and form

short meadows. The meadow patches currently along the Cotter River are remnants that survived the extreme flows of March 2021. The timescale for *Isoetes muelleri* to return to its pre-flood extent – if ever – is a matter for conjecture, as so little is known about growing conditions, growth rate, dispersal and establishment.



Left: A clump of *Isoetes muelleri* which had been partly buried, with burial depth indicated by white tissue. Lower Cotter, March 2022.  
Centre and right: Contrasting forms of White Purslane *Montia australasica* (Portulacaceae). In mid-stream and fast flows, plants are submerged, vegetative with etiolated leaves (centre), whereas in shallows or when stranded on drying ground, plants have shorter erect leaves and white flowers, often forming a starry carpet (right).

*Lilaeopsis Lilaeopsis polyantha* (Apiaceae), a short inconspicuous emergent macrophyte of shallow stream margins, has leaves that are erect, cylindrical and hollow, with obvious transverse septa. Similar morphology in *Eleocharis sphacelata*, a much taller wetland species, has been interpreted as minimal investment strategy, whereby relatively few resources are allocated to structure, and culms are partly supported by surrounding water. It is not known if this adaptation to the aquatic habitat applies to *Lilaeopsis*.

You may also notice other plants beside streams, usually on saturated ground although sometimes in shallow water. These are amphibious species, not usually recognised as macrophytes. Some of the more common species have attractive showy flowers. The pretty pink-flowered *Gratiola peruviana* is ubiquitous: it is native, but most of the bluey-purple flowered plants are not.

In forested catchments, streams are narrow, shallower but sometimes with deep pools, deeply shaded, and home

to lichens, mosses and liverworts. Just one macrophyte species is found here, Water Starwort *Callitriche stagnalis* (Plantaginaceae) a delicate floating-leaf species with a rosette of small floating leaves. It grows out from the margins forming extensive mats. Water Starwort is introduced, a prolific seeder, and very widely distributed through shady and open sites in cool-temperate south-eastern Australia.

### About the author

After a PhD in botany and several years as a research scientist with CSIRO, Jane Roberts worked as an ecological consultant for over 25 years, advising on various aspects of water management especially environmental flows, and on condition and monitoring of vegetation of rivers, floodplains and wetlands. Since retirement, it has been her mission to raise awareness and appreciation of wetland and river plants in the Southern Tablelands, which she does by talks, workshops, moderating, guides, consultancies and personal projects.



Water Starwort *Callitriche stagnalis* is introduced and very widely distributed in cool-temperate south-eastern Australia. Lees Creek, March 2022.



Left: Small River Buttercup *Ranunculus amphitrichus*.

Centre: A patch of *Lilaeopsis Lilaeopsis polyantha* showing the erect tapering leaf with transverse septa.

Right: Australian Brooklime *Gratiola peruviana*, named for its natural distribution of South America and Australia.

# Reptiles at the Gardens

By Geoff Robertson

We are fortunate in Canberra to be surrounded by native vegetation which also provides habitat for many diverse and fascinating native flora and fauna species. The ANBG is a wonderful place to see many spectacular flowering and other plants, and also has a great diversity of bird life, attracting many visitors to the Gardens. ANBG is also home to many reptile and frog species (collectively known as herpetofauna), insects, and numerous other life forms, all of which may be found on NatureMapr.

Reptiles are very dear to me. A little research of the ANBG map appearing on NatureMapr records reveals two snake, three dragon and six skink species. Reptile species, particularly in the wild, are fascinating both to watch and observe their amazing behaviours.

The ANBG is doing a wonderful job, providing a welcoming habitat for Brown Snakes and educating the public about them: this is a safe place for these snakes and human observers. I could tell you some fascinating stories about Brown Snakes, but another time maybe. Equally fascinating is to discover that Blackish Blind snakes

## Reptiles at ANBG

**Snakes** – Eastern Brown Snake, Blackish Blind Snake.

**Dragons** – Water Dragon, Bearded Dragon, Jacky Lizard.

**Geokos, legless lizards, goannas, turtles** – nil.

**Large skinks** – Eastern Blue-tongue Skink, Cunningham's Skink.

**Medium size skinks** – Copper Tailed Skink, Boulenger's Skink, Eastern Three-toed Skink.

**Small skinks** – Delicate Skink.



Irene Lorbergs



Karin Neufeld

Top: Gippsland Water Dragon.  
Above: Eastern Bearded Dragon.

are observed there. These are below-ground dwelling non-venomous snakes, which look somewhat like earth worms, but closer attention reveals scales and a fork tongue. Occasionally they appear above ground and might be found when gardening.

The Water Dragon, the Gippsland sub-species, has a major colony in the Garden and finds plenty to eat, while the short-and-chunky Bearded Dragon and long, thin Jacky Lizards are also

present. 'Beardies' are usually found on the ground but sometimes climb trees and shrubs, while 'Jackies' prefer basking on rocks. I once watched with some horror and then fascination, as an adult Jacky I was watching was suddenly grabbed by a Brown Snake which slowly devoured and digested it, with the last part to be seen being the tip of the tail. The Brown Snake was almost golden in colour: like many reptiles they may vary much in colour.



John Bundocke

Another delightful creature is the Eastern Blue-tongue with black-brown-orange-cream bands which are sometimes triangular.

After a recent skin shedding, their shiny colours are amazing. Fat and chunky Cunningham's Skinks are usually seen in largish family groups basking on top of rocky outcrops.

The Copper Tailed Skink is a medium sized skink with spectacular stripes. As my good friend John Wombey points out, stripes go down the body and bands across. Boulenger's Skink (*Morethia boulengeri*) is quite distinctive, usually with the long white side stripe, above which is often a thicker black stripe.



Karin Neufeld

The Eastern Three-toed Skink is distinguished by its small limbs, three-toes, and bright orange underside. While common, they are only seen when disturbing the soil.

Delicate Skinks, frequently plentiful when present, are often seen wriggling away. While not recorded, Garden Skinks (*Lampropholis guichenoti*), closely related to Delicate Skinks (*Lampropholis delicata*), are also likely to be present. In photographs, they are often difficult to tell apart. In this region, Guichenoti's Skink (as I would prefer to call it) has nice blue flecks through its back, whereas the Delicate Skink is brown.



Karin Neufeld

Images of all reptile species recorded at the ANBG may be found on NatureMapr. However, the images shown are not solely from ANBG but come from all over Canberra and the Southern Tablelands. They reveal just how varied in appearance some of these species are.

Top: Eastern Brown Snake.  
Centre: Eastern Brown Snake.  
Below: Copper Tailed Skink.

# Reptiles at the Gardens (cont.)



Deb Howard



James Gara

Left: Gippsland Water Dragon. Right: Eastern Water Dragon, Rock Garden.  
Below: Reflection, Gippsland Water Dragon.

Many other species are likely to be present, although many reptiles prefer other vegetation communities such as savannah woodland and grassland. The reader may see numerous geckos, legless lizards, goannas, turtles, other skinks and dragons at the annual Snakes Alive Exhibition, organised by the ACT Herpetological Association (ACTHA) at the ANBG – the next one is from 12 to 18 January 2026. Children especially love it.

All reptile species are seriously declining, and learning about them is a first step to their conservation. Fortunately, NatureMapr, which readers may readily access and contribute to, is a wonderful educational and conservation resource.



Narelle Aldridge

The web is also a readily accessible resource on reptiles. Joining the ACTHA is another possibility. One conservation measure I would like to see is the translocation of small reptiles to home gardens, although this would need well-regulated captive breeding programs, careful management and a change to legislation.

Keep an eye out for our amazing reptiles and capture them on your cameras. Good Herping.

## About the author

Geoff Robertson is a long-term volunteer, speaker and advocate for nature, and former co-owner of Garuwanga. He has learned from and contributed to many regional nature organisations. He is a self-taught ecologist and a professional economic and social statistician. His mentors include many land managers, natural scientists and First Nations people.

The Fronds team would like to thank the Photographic Group for the beautiful images used in this article.

## Check out reptiles at ANBG on NatureMapr

In your web browser (eg Safari), TYPE **naturemapr.org**

Top line: CLICK ON 'Australia by region', then SELECT Canberra and Southern Tablelands (top left hand corner).

Next line; SELECT line 'NatureMapr' and CLICK 'Maps'.

This creates a dropdown. In the dropdown, SELECT 'Other Spaces'.

SELECT 'ANBG'.

In line starting 'Maps', SELECT 'field guide'.

In Categories SELECT 'Reptiles and Frogs'.

Suggest you then in turn SELECT 'Snakes', 'Skinks', 'Dragons' etc.

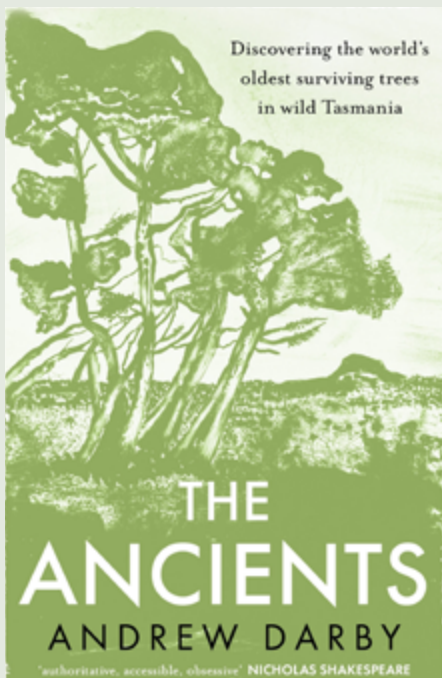
To check out Black Mountain Reserve

In dropdown, SELECT 'Reserves'.

SELECT 'Black Mountain'.

Enjoy and learn!

# Botanical Bookshop book reviews



## **The Ancients: Discovering the world's oldest surviving trees in wild Tasmania. 2025**

**By Andrew Darby**

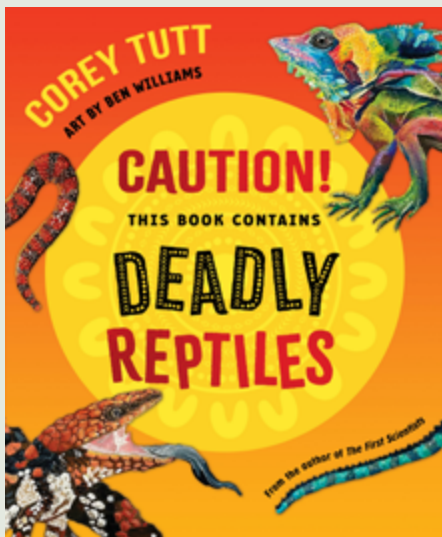
**Illustrations by Kaye Green**

**Colour photographs. Paperback, 288 pages, \$35**

In wild Tasmania there are trees that are thousands of years old, some whose ancestors lived with the dinosaurs, and some have been growing for ten millennia or more. Clearly this helps explain the title of the book, The Ancients!

This beautifully written, well researched book takes us on a botanical journey of discovery in the wilds of Tasmania to learn more about these magnificent specimens which include the King's Lomatia, the Huon Pine, the Myrtle Beech, and Australia's only native winter deciduous tree, the golden Fagus.

Prize winning nature writer Andrew Darby combines his enthusiasm and concern for these trees, with stories of the people who discovered the ancients, as well as fascinating facts about the plants and their relationship with native wildlife, local people and historical connections. He explains the increasing threats faced by these trees, especially that of fire and climate change, and offers different perspectives of survival and hope. The selection of photographs in the centre of the book provides a rather neat little visual summary.



## **CAUTION! This Book Contains DEADLY REPTILES. 2025**

**By Corey Tutt**

**Art by Ben Williams**

**Hardback, 137 pages, \$33**

Saltwater crocodiles don't always live in salt water, and the Northern Death Adder isn't even an adder.

An Australian reptile book done different, featuring 68 reptiles, each with their unique facts and their name in a First Nation's language. Corey has collaborated with Elders and Traditional Owners across 20 different First Nations to bring us the history and meanings behind their traditional names and connection to Country. While Corey has all the info, the artwork by Ben provides vibrant and close-up pictures of these animals, bringing their descriptions to life.

"What makes it DEADLY?" It might not be what you would expect.

An incredibly engaging introduction to First Nation languages and native Australian reptile species for all ages.

# Friends Briefs

## Friends 2025 AGM

The 37th Annual General Meeting of the Friends of the ANBG will be held on Thursday 16 October at 3.00 pm in the Gardens Theatre followed by light refreshments in the Dickson Room.

On the agenda will be the elections for Secretary and Treasurer, and four ordinary members of Council. If a current member of Council nominates for and is elected to another vacant position, there will be an additional vacancy for an Ordinary Member.

The agenda will also include reports from Dr Rebecca Prizl, Branch Head Science and ANBG, Department of Energy, the Environment, Climate Change and Water, Linda Beveridge, President of the Friends and Rod King, the Treasurer.

Nearer to the date, a notice will be issued on the Friends website and in the e-bulletin with the AGM documents and information about how to nominate for the vacant positions.

If you have any questions, please send them to [secretary@friendsanbg.org.au](mailto:secretary@friendsanbg.org.au)



Stephen Hunter

On 12 June *Asplenium nidum* by Jenny Mun was presented by Linda Beveridge (right), President, to Craig Cosgrove, Acting Director of ANBG, for the ANBG's art collection, in the company of Wendy Antoniak (left), from the Botanic Art Group, and the artist, Jenny Mun (2nd from left).

This painting was selected from the Botanic Art Group's *Rainforest* exhibition by representatives of the Friends Council and the ANBG. Jenny's painting also won the Horticulturists Prize.

The common name for this plant is Birdsnest Fern, and the Rainforest Gully is a great place to see them in the Gardens.



## Don't leaf it too late: The student photo competition closes 29 August

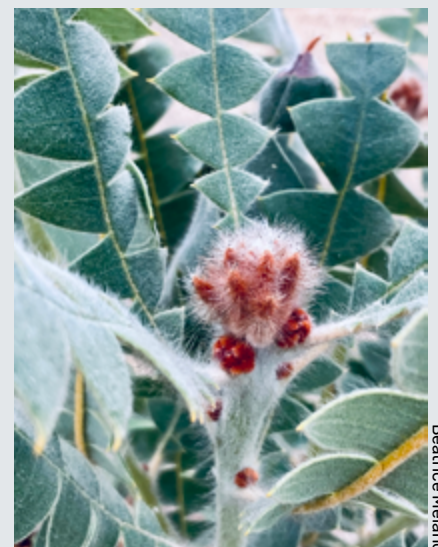
Winter days are crisp and still in the Gardens. The crowds have thinned, the air is bracing (but the cafe is still warmly welcoming). What a perfect time for budding photographers to capture an image for the student photo competition.

The Friends 25th annual Photographic Competition for Students is open to students attending Australian primary or secondary schools or colleges. It provides a fun and educational opportunity for students to discover the value and beauty of the ANBG, and use their photographic skills to share that beauty with other visitors.

All entries must be digital photos taken in the Gardens between 30 August 2024 and 28 August 2025, featuring an element such as plants, wildlife or landscape.

Cash prizes are awarded across five categories for individual students and their schools, and winning entries are displayed in the Gardens. The First Prize winners also receive a native plant for their school or college garden.

The competition closes at 5.00 pm AEST on Friday 29 August 2025. Full competition details are at [friendsanbg.org.au/activities\\_schoolsphotocomp](http://friendsanbg.org.au/activities_schoolsphotocomp)



Beatrice Melano

## New Friends website to be rolled out soon

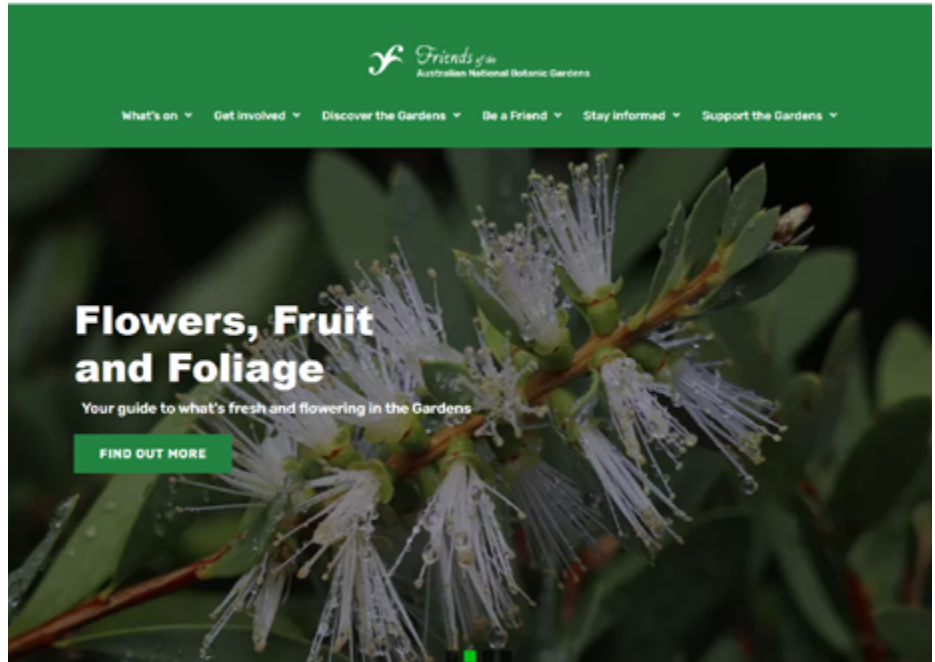
Hopefully by the time you read this, we will have moved to a new Friends website. It will have the same address [friendsanbg.org.au](http://friendsanbg.org.au) but will have a new, fresh site design.

The change is driven by the end of support for the current software (Drupal 7) and a need to update the site to work well with mobile devices. We are migrating the site to WordPress, a widely used system that will give us new features and ease of use.

The new website retains all the current information and resources plus a range of new features to improve how people interact with the Friends online. You will see a different menu structure in the new site, with drop-down submenus to help you find your way:

- **What's on** – includes the full calendar of events, Thursday Talks and links to ANBG events.
- **Get involved** – includes information of Friends various special interest groups.
- **Discover the Gardens** – includes guided walks and tours.
- **Be a Friend** – includes information about the Friends and how to become a member.
- **Stay informed** – includes latest news, email bulletins, the *Fronds* newsletter, useful links and resources plus a 'Search by Category' page where visitors can search for their specific areas of interest.
- **Support the Gardens** – includes the donations page plus information on our projects and achievements. A donate button appears throughout the site in the footer.

We've tried to make the new website more visually appealing and easy to navigate. The website team will continue to look at ways to improve the site and will add new features in the future.



The new-look Friends of ANBG website homepage.

We hope you will like the design of the new site. You can explore it at [friendsanbg.org.au](http://friendsanbg.org.au)

We'll be very interested in any feedback. The Website Team email is [website@friendsanbg.org.au](mailto:website@friendsanbg.org.au)

**Beth Tyerman**

## New members Morning Tea and Walk

On Sunday 23 March the Friends welcomed a large group of new members at a Morning Tea and Walk, providing the opportunity to find out more about the Friends and to connect with the activities run by and for our members.



Stephen Hunter

The day began with short presentations from Council, special-interest groups and volunteer teams about Friends activities and how we support the Gardens. Over morning tea, members could then find out more about areas that particularly interested them. Afterwards, Volunteer Guides led special walks and provided a Flora Explorer tour so that the new members could learn more about the Gardens and how the Friends have helped with its development.

**Wanda Filsell**

Left: New Friends on a Flora Explorer tour of the Gardens after the new members morning tea and information session.

Right: Elizabeth Halfnights leads a tour of the Gardens for new Friends.



Stephen Hunter

# Friends Briefs (cont.)

## Student profile

### By Jay Nicholson Friends of ANBG Student Research Scholarship recipient

I grew up on a bush block in Geraldton, Western Australia, and was fascinated by the huge diversity of plants from a young age (when I wasn't busy playing badminton or soccer).

My early studies took me to the Pilbara region, where I investigated the night-time water use of arid tree species.

It gave me a taster of how amazing arid plants are, especially the array of strategies co-occurring plants have to deal with the same, very harsh conditions. You'd also be surprised at how active some species are at night!

I then worked as a botanist in Darwin and across the Top End where I helped restore mine sites. I even conducted a seed collecting trip with Tom North at the National Seed Bank (NSB) collecting a threatened Hibiscus species in Kakadu National Park. Funny how I'm now in Canberra collaborating with him once again.

After five years amongst the tall spear grass, I decided it was time for a PhD. My love for the desert and connections in Parks Australia drew me to Uluru-Kata Tjuta National Park.



Selfie with the Mala Rangers at Uluru-Kata Tjuta National Park after field work.



Jay Nicholson measuring night-time stomatal conductance on *Atalaya hemiglauca* along Weeli Wolli Creek in the Pilbara in 2017.

A severe heatwave and drought event in 2019 caused widespread mortality in a range of culturally important plant species. With Anangu – Pitjantjatjara and Yankunytjatjara people – the Traditional Owners, we are working together to understand where and why plants are dying.

We've already discovered some interesting patterns, and are collecting plant physiology and environmental data to explain our observations.

One really exciting component was setting up an array of microclimate loggers to test a hypothesis we generated with Anangu: one focused on how temperature, soil moisture and wind change along dune sequences, leading to specific patterns of plant death. You'll have to come to my Thursday Talk on 6 November to hear about those results, plus the progress of our glasshouse experiment using seeds from the NSB.

Anangu are very good teachers, and not only have we been learning together about plant ecology, but I have been learning Pitjantjatjara, the major language for Uluru and surrounds. I think I'm ninti pulkah (very knowledgable), but others might say I'm still nintiringanyi (becoming knowledgable).

With the Friends Student Research Scholarship, I have been able to immerse myself further into my PhD than I thought possible. To further increase my language skills, I attended a 3-day Pitjantjatjara course. I have also been able to explore other parts of central Australia to extend our observations beyond Uluru, providing critical validation for the local patterns we are observing.

I've got one more year left in my PhD, with sadly only one big field trip left. I have loved every minute of it so far, and look forward to sharing our exciting results.

## Gift membership

Have you considered giving that special friend or relative a membership to the Friends?

A gift membership is a thoughtful way to tell someone you appreciate them, and is a gift that goes on giving throughout the year.

Friends members receive the newsletter, *FronDS*, three times a year; can attend special Friends events and activities; join special interest groups like the Botanic Art or Photographic groups, or Growing Friends, Plant Science, Plant Recognition groups, or Nature Journaling. Enjoy a free cuppa in our air conditioned lounge.

Receive discounts at the bookshop and café, and three hours free parking when visiting the Gardens.

Gift memberships given now will not expire until end October 2026.

Stumped for a suitable Fathers Day gift? Why not give something much more meaningful than a pair of socks this year!

Visit [friendsanbg.org.au/membership](https://friendsanbg.org.au/membership) to find out more.

# Friendly Chatter

## Botanic Art Group

Our annual exhibition, with a theme of *Rainforest*, was held in April. Over 60 artists submitted framed works which were approved by the botanists team of experts. Many other members contributed to the Squares project where small squares were displayed to give visitors an opportunity to sample work undertaken in the Botanic Art Group meetings which are held three times a month in the Banksia Centre. As a result, a number of new members joined our group.

The workshop *Beginning Watercolour* by Mignon Atkinson was on 20 July and on 23 August we will be holding *An Introduction to Coloured Pencils* by Annette Dahler. We are very grateful to members who have volunteered their time to teach workshops and also to the staff at the Gardens for their ongoing support.

If you would like further information about meetings or workshops please email [botanicart@friendsanbg.org.au](mailto:botanicart@friendsanbg.org.au) for more information.

**Kate Ramsey**

## Botanic art books in Friends Lounge

Jane Lambert very generously donated her collection of botanic art books to the Friends of the ANBG, which are available to read in the Friends Lounge. They are a beautiful source of information about botanic art and botanic artists.

Members of our Botanic Art Group and other interested Friends greatly appreciate the pleasures and complexities of botanic art, and the opportunity to peruse attractive sources of information.

**Linda Beveridge**



Left to right: Imogen Sykes-Bridge, Melissa Sykes and Mike Johnson perusing the botanic art books very generously donated by Jane Lambert.

Graham Gail

## Growing Friends

The Growing Friends sale on Saturday 8 March was a great success. People queued patiently in the sunshine and at 9.00 am, when the sale opened, they quickly sought out their selections. Most plants sold very quickly and, by the end of the sale, over 1400 plants had been taken home by happy customers. All the money raised will go to support various projects around the Gardens.

The Growing Friends Spring 2025 Native Plant Sale in October is an exclusive event for Friends, Gardens

staff and volunteers who will have exclusive access to hundreds of plants from a large variety of groundcovers to familiar or unusual large and small shrubs. A limited number of ferns will also be for sale.

All plants are propagated from cuttings or seeds sourced from within the Gardens, and a full list of plants will be available on the Friends website closer to the sale. For more details see page 21 in the 'What's On' section.

For more information about Growing Friends please email [growingfriends@friendsanbg.org.au](mailto:growingfriends@friendsanbg.org.au)

**Donna Growcock**



Plant buyers wait for the opening of the autumn plant sale by the Growing Friends.

Bron Houlden

# Friendly Chatter (cont.)

## Nature Journaling

Nature Journaling is in recess until September. The group usually meets on the first Monday of the month at 10.00 am at the Visitor Centre.

If you would like to join us, please contact [lespage26@gmail.com](mailto:lespage26@gmail.com)

This issue's contribution from Nature Journaling is a poem by Lynlea Roger.

**Lesley Page**

"I use drawing as a way of switching the brain into creative mode and then I write.

In early November I came to the Gardens restless and wearied from the commentary enveloping the US election.

In the Gardens, oblivious in sun and wind, I came across a fecundity of flowering accompanied by massed insect swarming, pollination and procreating."

### Repose

While across the globe hot breath's words

pour from retribution's jug,

here an older story stands.

In stillness watch and wait  
and guarded be,

lest ears dulled and hardened eyes  
steal mercy from this place.

Brushed heads bow  
with fecundity's weight

gently wrought in fevered energies  
and sun-bright swarms and  
flight of scores

an older story testifies.

Behold a greater heft

Born by the earth

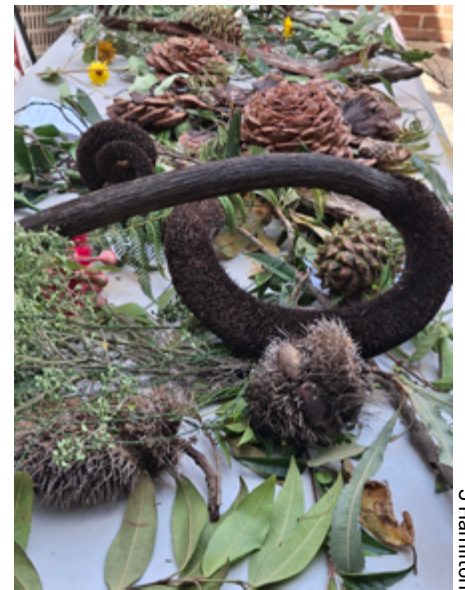
In windswept tranquillity

**Lynlea Rodger**



J Hamilton

Left: Flash Hou, dog tired after guiding Lindy Hou OAM on the low-vision tour.  
Right: The 'touchy feely' table of botanical samples.



J Hamilton

## Volunteer Guides

### Low-vision tour a first for the ANBG

Losing your eyesight shouldn't mean losing access to the Gardens. So when Vision Australia asked about a walk for people with low vision, a group of Volunteer Guides created a tour to give Visitors that non-visual experience.

First, some terms: 'low vision' can include people who are blind from birth, have become blind later in life or can see some items if they are held close or magnified. People with low vision are 'vision-impaired' not 'visually impaired'.

With valuable insights from the Canberra Blind Society's Lindy Hou OAM and Debra Quinnell, we developed a walk to suit participants using canes, guide dogs and carers.

We chose features such as raspy Sandpaper Fig and velvety Emu Bush; the cool of the mist and the smell of humus in the rainforest; the gush of the Friends' Cascades; the story of the Eastern Koel chick begging from its foster parents; the citrusy scent of crushed Lemon Myrtle leaves.

Our inaugural tour started with a very popular 'touchy feely' table of botanical specimens for the Canberra Blind Society group to touch and smell.

The guides who led the tour felt privileged to help our vision-impaired visitors reconnect with the Gardens.

This tour is now available as a booked walk for anyone who wants to experience the Gardens in a new way.

**Julie Hamilton and  
Glenys Agnew**

**"Thank you both so much for  
organising a really lovely visit.  
It was special and I hope we can  
do it again soon."**

**Julia  
Low-vision walk  
participant**

## Photographic Group

An annual highlight of the Photographic Group's activities is our photographic exhibition, this year titled *Illuminate 2025*.

The exhibition will run from 21 November to 14 December 2025 in the ANBG Visitor Centre. The prize categories for *Illuminate 2025* have been announced:

- **David Cox Flora and Fungi Award:** Native Flora and Fungi of the ANBG.
- **Fauna Award:** Native Fauna of the ANBG.

As well as framed photographs, cards, calendars, and other items will be on sale at the exhibition. The timing is ideal if you have a seasonal gift in mind.

The Photographic Group's program of well attended and informative monthly meetings continues. The April meeting featured a session in which members of the Photographic Group presented images for constructive discussion and critique led by two experienced and respected Group members.

At the May meeting Craig Crosgrove, the Acting Director of the Gardens kindly provided an overview of the eagerly anticipated conservatory project including the internal planting design.

Landscape photography was the focus of the June monthly meeting. Rodney Garnett, a longstanding member of the Photographic Group gave an in-depth exposition of this exacting genre.

The July meeting was devoted to helping Group members prepare for *Illuminate 2025*, especially in printing, framing and merchandising their work.

A stimulating program of further monthly presentations is on the horizon. Moths and butterflies, the role of photography in citizen science and nature tour photography are all subjects in prospect for the remainder



Narelle Aldridge



Emily Erwich

Top: Swamp Banksia, *Banksia robur*.  
Above: Sturt's Desert Pea, *Swainsona formosa*.

of 2025. Keep an eye on the Friends online calendar for details.

The Photographic Group always jumps at opportunities to help promote the Gardens and assist the Friends in lifting public knowledge of and engagement in ANBG.

Over recent months members of the group have been regularly submitting photographs to support the Gardens' social media presence and providing images to support articles in *Fronds* and the Friends website. The group has supplied carefully chosen photographs for inclusion in the Garden's official 2026 calendar.

The monthly Cameras and Café gatherings are proving popular. The Photographic Group conducts these on weekends to encourage broad participation. The cooler months often make for highly atmospheric photographic conditions.

The Review of the Group's membership database has been completed: 123 members have confirmed they wish to continue their membership. A special thanks to Paul Bainton for conducting this comprehensive review.

**Phil Green**

# Gardens Shorts

## Acting Director's update

This year has flown by, marked by a significant leadership transition following Peter Byron's departure. Stepping into the role, I've had the privilege of overseeing a period of continued growth and exciting developments across the Gardens. The new Director of the ANBG will commence in the role on 21 July; we are looking forward to welcoming them to the Gardens.

Visitation numbers have steadily increased, prompting essential landscaping upgrades to better accommodate the rising foot traffic. These improvements are helping us maintain a welcoming and accessible environment for all visitors adding to previous upgrades including the Friends Lawn precinct.

Our major infrastructure projects are progressing well. The Seed Bank is on track for a soft opening in July, and we're pleased to report that all contracts are aligning for



A new pebble-crete footpath improves accessibility, connecting the Gondwanan section to the Rock Garden and back to the main path.

the Conservatory's construction to recommence in July. We anticipate opening the Conservatory by mid-2026. With the Seed Bank relocating to its new facility, the Crosbie Morrison Building will once again be available for venue hire, expanding our capacity for community engagement.

Another major infrastructure project recently completed is the addition of the site generator outside the Crosbie Morrison building. This will provide backup power for the core precinct of the Gardens including the Seed Bank and its important collections, café, Jindii day spa, staff accommodation and venues. We have also replaced numerous end-of-life switchboards across the site, removed three power poles and associated wires feeding the Seed Bank and made many other minor upgrades to improve the visitor experience at the Gardens. I would like to thank the Friends for their patience and adaptability navigating so much work being undertaken at the site, especially recently.

In staffing, we are actively recruiting two part-time Education Officers. This initiative aims to reduce workforce casualisation and enhance our educational offerings. Regular on-site staff will enable us to deliver

consistent face-to-face programs for school groups, while also developing classroom resources and online content to reach schools unable to visit Canberra.

Thanks to the generous support of the Friends, new bubblers and drink bottle refill stations have been installed throughout the Gardens. These long-awaited additions are now serving the most frequented areas, improving visitor comfort and sustainability.

Accessibility continues to be a priority, with a new pebble-crete footpath now connecting the Gondwanan section to the Rock Garden and back to the main path. We have now paved the remaining sections in the Tasmanian garden, effectively closing the paving loop, replacing the remaining granite sections. These paths not only improve access but also encourage exploration of previously under-visited areas.

We've joined the DCCEEW-funded Sporefinder program to monitor for Myrtle Rust. An air sampler has been installed in the Rock Garden, with samples sent for testing fortnightly alongside data on wind speed, humidity and temperature. This initiative strengthens our role in national biosecurity and plant health monitoring.



### Always welcomes Friends...

...with a 10% discount on purchases over \$10 (including gift vouchers) on presentation of their current membership card.

No discounts given on redemption of gift vouchers or sale table items.

For more information please visit the Botanical Bookshop Facebook page, Instagram or website

[botanicalbookshop.com.au](http://botanicalbookshop.com.au)

This report wouldn't be complete without mention of the Corpse Flower, *Amorphophallus titanum*, which flowered unexpectedly in February. We had nearly 1000 visitors on site, 100 media mentions and some extremely happy nursery staff. The event was a monumental effort by ANBG staff and some of our volunteers, we had a social media timelapse video viewed 2.7 million times, garnering 75,000 reactions and 2,900 comments; and were not only able to showcase the Corpse Flower but the ANBG and native species of corpse flowers we are growing at the Gardens.

Looking ahead, our team will be participating in two major conferences: the 2025 Australasian Seed Science Conference in Horsham and the BGANZ Congress here in Canberra. These events provide valuable platforms for our staff to share expertise and collaborate on scientific, educational, and policy challenges.

**Craig Cosgrove**

## The autumn plant out

In spring and autumn each year, the ANBG living collections teams come together to conduct our biannual plant-out. Thousands of plants are carefully propagated by the nursery team using seed, cuttings and other plant material collected from the wild. When the plants are large enough, they are moved from the nursery environment, where temperature and moisture are carefully controlled, to the Gardens for display and care by our horticultural staff. The plant records team manage the scientific records that underpin the collections and map the location of the plants once they're in the Gardens. Plant-out represents both the culmination of years of work, as well as one of the great collaborations that our living collection teams undertake.



ANBG



ANBG

Top: Horticulturist planting in the Gondwana garden. Above: Thousands of plants waiting to be planted out.

The ANBG support the conservation of species under threat by holding 'insurance' ex situ collections that can be accessed for propagation and translocation, genetic studies, other research and education purposes. About 60 per cent of the 4200 plants that were planted in the Gardens in autumn are rare and threatened.

To preserve the scientific value of the collections, plants are registered with a unique accession number that is printed onto the plant tags and associated with a database record that details the plants' provenance, collecting data, propagation history, clonal information and herbarium material.

So how do staff decide where the plants should go once they're ready for planting in the gardens? The living collections teams work together to select the appropriate garden beds with consideration of the growing environments needed, micro-climates, section themes, and spatial separation of different genetic material in order to spread the risk for valuable collections. Preparation is already underway for allocating plants to garden beds for spring.

**Joe Erskine and  
Tamera Watson**

# Gardens Shorts (cont.)

## Removing Bunya pinecones for safety: Arborist skills in action

Bunya Pines (*Araucaria bidwillii*) are majestic trees native to Queensland, Australia, known for their towering height and large, spiky cones. While beautiful, these cones can present significant safety risks in public spaces, especially in botanic gardens. Due to their heavy weight and sharp, spiky design, fallen cones can cause injury or damage to people and property. This is where skilled arborists come into play, ensuring the safe removal of these potentially hazardous cones.

Arborists in botanic gardens are specially trained to handle such tasks with precision and care. Removing the cones from a Bunya Pine requires not only an understanding of tree care but also advanced skills in climbing and working with specialised equipment.

Some of the trees in the ANBG have grown to over 20 meters tall, making the task of reaching the cones at the top especially challenging. Arborists often use ropes, harnesses and ladders to safely navigate the tree, ensuring both their safety and the protection of Gardens visitors.



Bunya pinecones can weigh up to 10 kilograms and are covered in thick, sharp spikes.

ANBG

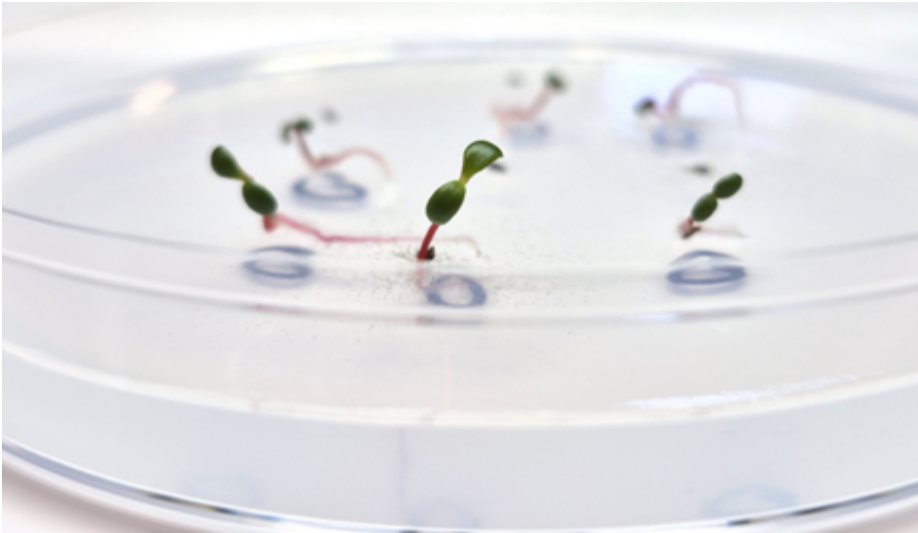
Bunya Pine cones can weigh up to 10 kilograms and are covered in thick, sharp spikes. Unlike the cones of many other conifer species, which are often smaller and lighter, Bunya Pine cones require careful handling. Dropping one from a significant height could cause serious injuries. Therefore, arborists take extra precautions when climbing to carefully remove the cones.

What makes Bunya Pines particularly challenging compared to other trees is their sharp leaves that cover the branches and upper trunk making them extremely unpleasant to climb; and the difficulty of seeing the cones from both the ground and when in the tree, making communication between climber and ground crew particularly important when finding all the cones in a tree.

Despite these challenges, skilled arborists ensure the safety and beauty of the Gardens, contributing to a safe and enjoyable experience for all visitors.

**Dan Marges**  
Horticulturist and Arborist





ANBG 2025

*Taxandria conspicua* (Myrtaceae) germination test.

## National Seed Bank retesting program: Are collections maintaining viability in storage?

Seed banks are an invaluable resource for the ex situ conservation of plant species. While in long-term storage at -20°C, seeds face two key threats: loss of viability over time and lack of knowledge regarding germination requirements.

Most species currently stored in seed banks around the world have little to no 'real time' longevity data and/or reliable germination protocols. The ANBG has begun to address these gaps for collections currently stored in the National Seed Bank (NSB).

Our 're-testing program' – a first for Australia – aims to uncover reliable germination protocols for each species stored, and periodically re-test each collection to understand on-going viability in storage. With the help of our volunteers, collections with initial germination tests conducted 10, 20, 30+ years ago are being re-tested under the same test conditions. By comparing test results, we can then determine if seeds have maintained or lost viability while in storage.

Our re-testing program also gives us the opportunity to identify species that may require investigation of novel seed pre-treatments to improve germination and alleviate seed dormancy.

For the past five years, the NSB has been implementing this program of decadal re-testing and have re-tested 94 collections (77 species) to date, with a further 44 collections currently in testing. Results suggest that 59 per cent of re-tested collections have retained their initial viability while in storage (ie there was no significant difference between initial and present-day germination), whilst 40 per cent of collections have decreased in viability (the degree to which still needs to be analysed).

'Real-time' longevity data like this allows us to identify species that may be short-lived in seed bank storage and therefore need to be collected (and tested) more frequently to ensure we have viable seeds in storage for many decades to come.

These insights give us a true indication of how successfully we are conserving a species ex situ and increase our understanding of the priceless collections held at the NSB.

**Pip Alvarez, Freya Brown and Dr Gemma Hoyle**

## Friends Benefits

### As a Friend you are entitled to:

- Three issues of *Fronds* a year
- Three hour free parking pass

### Discounts at:

- Botanical Bookshop (most items)
- Pollen
- Jindii Eco Spa
- Cool Country Natives, Pialligo
- Australian Choice, Canberra Centre

### You also receive:

- Advance details of lectures
- Advance bookings for some events
- Discounts on some events
- ANBG library membership – borrow books, serials, videos and DVDs, and use computers and interactive CDs
- Special rates for functions at ANBG

### You can join:

- Botanic Art Group
- Growing Friends
- Photographic Group
- Plant Science Group
- Plant Recognition Group
- Nature Journaling Group
- Assist with ANBG research projects
- Become a guide

And you can relax with tea/coffee and interesting reading material in the Friends Lounge in the Ellis Rowan Building, open 9.30 am to 4.30 pm.



# What's on at the Gardens

## August to December 2025

Details are correct at the time of printing. Please check the Friends website [friendsanbg.org.au](http://friendsanbg.org.au) or the ANBG website [anbg.gov.au](http://anbg.gov.au) for changes and updates.

## Walks, Tours and Trails

### Guided Walks

**11.00 am and 2.00 pm daily**  
**Free\***

Enhance your visit to the Gardens by going on a free guided walk with a Volunteer Guide. Every guided walk is different as Guides share stories about the fascinating array of Australian plants on display.

### Self-guided walks

**Free**

Collect a map from the Visitor Centre to begin the trail.

### Flora Explorer Bus Tours

**Saturdays, Sundays and Public Holidays**

**11.30 am and 1.30 pm**  
**\$8 adult, \$5 child and concessions**

**Book on ANBG website**

Sit back, relax and be taken on a 45 minute highlight tour of the Gardens.

### Book a Private Tour

**Costs apply**

Tour the Gardens with your own tailored guided walk or Flora Explorer bus tour to suit your special interests, or purchase as a gift. Conditions apply. For more information contact [bookedwalks@friendsanbg.org.au](mailto:bookedwalks@friendsanbg.org.au) or [floragroups@anbg.gov.au](mailto:floragroups@anbg.gov.au)

\*Meet at the flag near the cafe bridge. No booking required for individuals, but groups of more than six people should contact [walks@friendsanbg.org.au](mailto:walks@friendsanbg.org.au) a week in advance.

## Themed Walks

**11.00 am – noon and**  
**2.00 – 3.00 pm**  
**Free\***

### The Art of Living Together 11–17 August

When plants and animals interact, both participants may benefit: one may benefit while the other is not affected, or one may benefit while the other is harmed. Join a free guided walk to see some interesting examples of plants that interact with each other and plants that interact with insects, birds and mammals, and decide who gets the better deal from each of these interactions.

### What is it about wattles? 1–7 September

We welcome wattles as spring approaches but are you aware how very many species there are and how widespread they are? Why their foliage differs so much? How those golden 'balls' are formed? Take a free guided walk to get some answers to these and other questions and see a wealth of wattles in flower at this time of year.

### Storytime in the Gardens

**First Friday of the month**  
**10.00 – 11.00 am**  
**\$5 per child, adults and infants**  
**under 12-months free**  
**Crosbie Morrison Lawn**  
**Book on ANBG website**

Join us on the first Friday of every month for family fun with stories about Australian plants and animals. Each themed session is packed with stories, songs and craft. Suitable for pre-schoolers.

## Exploring STEP at the Arboretum

**Saturday 13 September**  
**2.00 pm**

**Cost: \$5 (proceeds will be shared between the Friends of ANBG and STEP)**

**Event for Friends only**

**Bookings essential: See Friends of ANBG website**

The Southern Tablelands Ecosystems Park (STEP) is a regional botanic garden, education and conservation centre demonstrating southern tablelands species of eucalypt trees and understorey plants. It is located within the National Arboretum, Canberra.

Join experienced STEP volunteers on a one hour guided walk to admire this beautiful garden of local Southern Tablelands species. Wear comfortable shoes, and be prepared for some uneven ground.

## Wake Up with the Birds

**Saturday 20, Sunday 21**  
**September**

**Saturday 27, Sunday 28**  
**September**

**8.30 am (gates open at 8.15 am)**  
**Cost: Friends \$15; non-Friends \$20**

**Bookings essential: See Friends of ANBG website**

Observe amazing birdlife in the beautiful surrounds of the ANBG. In a small group, experience the Gardens early on a spring morning when the birds are nesting and at their most active. The walk of 1½ to 2 hours with expert bird guides includes plenty of time to stop and look.

Some binoculars will be provided, but bring your own if you have them. Wear comfortable footwear and warm clothes. (Please note: event not suitable for small children.)

## After Dark Walk in the Gardens

**Friday 26 September  
6.30 – 7.45 pm**

**Cost: \$20 Friends and their family, \$24 non-Friends  
Bookings essential: See Friends of ANBG website**

Fun for young and old, explore the Gardens as it gets dark, observe the birds as they go to bed, discover animals that come out at night. Visiting the Gardens by torch and moonlight gives such a different feeling and perspective to visiting during the day.

This special family friendly event is for everyone aged six and over. Enjoy a one hour walk with the ANBG's friendly Education Rangers who will take you into the Gardens and help you spot the night life.

## Woodcraft Guild annual sales and exhibition

**3–6 October  
Banksia Centre  
Costs apply  
See ANBG website**

## Bugs Alive

**3–8 October  
Crosbie Morrison Building  
Costs apply  
See ANBG website**

## Australian Native Plant Society Canberra Spring Plant Sale

**Saturday 18 October  
8.30 am  
Southern Carpark, ANBG  
See [nativeplantscbr.com.au](http://nativeplantscbr.com.au)**

## Growing Friends Spring 2025 Native Plant Sale

**Saturday 25 October  
9.00 – 11.30 am  
Growing Friends Area, off the Banksia Centre carpark**

Friends, staff and volunteers of the ANBG will have exclusive access to hundreds of plants from a large variety of groundcovers to familiar or unusual large and small shrubs.

All plants are propagated from cuttings or seeds sourced from within the Gardens.

Plants will cost \$6 a pot. All proceeds go to the Friends to support the Gardens. Sales by card only.

Detailed plant lists will be on the Friends website closer to the date.

## Sunset Cinema

**25 November – 26 January  
Eucalypt Lawn  
Costs apply**

Enjoy latest releases, children's and classic films in the beautiful garden surrounds. Bring a picnic or purchase your dinner and popcorn at the event.

To purchase tickets, see Sunset Cinema website [sunsetcinema.com.au/canberra](http://sunsetcinema.com.au/canberra)



## Exhibitions

**Visitor Centre Gallery  
Open Daily 9.30 am – 4.30 pm  
Free**

**30 July – 24 August  
Double exhibition**

### Soft Echo

Akie Haga's delicate glass works offer a personal meditation on memory, belonging, and the quiet beauty often found in overlooked plant forms. Rooted in close observation, they reflect an intimate and evolving connection to place.

### In the Company of Trees

Julie Bradley responds to spending time in the company of trees at Mt Wilson through her dynamic works on paper. To walk quietly among forests is at once reviving and challenging and Bradley's observations capture moments of awe and wonder.

**27 August – 21 September  
Miniatures**

AIM (Art in Miniature) is a friendship group of artists living in Canberra and its regions who enjoy working and exhibiting miniatures together. This exhibition takes inspiration directly from the beautiful ANBG. Its flora, fauna, herpetology, entomology, buildings, visitors and views have all inspired the group to create over 100 miniatures by 22 members.

**24 September – 2 November  
Seedbank exhibition**

An exhibition telling the story of the ANBG seedbank.

**19 November – 14 December  
Illuminate 25**

The annual Friends Photographic Group exhibition will feature plant portraits, close-ups of flowers, birds and insects, and intimate landscapes within the Gardens and fauna from our local region.

# Thursday Talks

## August to November 2025

One hour talks are held at 12.30 pm every Thursday from February to November in the ANBG Theatre. We welcome donations by gold coins, notes or electronically. The Friends use the donations received to support Gardens programs and development and thank all those who have donated. It is a good idea to reserve a seat at the talks that you wish to attend; talks can book out very quickly. The booking link is on the [friendsanbg.org.au/calendar](https://www.friendsanbg.org.au/calendar) entry for the talk. Bookings can be made about 30 days in advance of the Wednesday night before the talk.

The Friends of the ANBG thank the speakers who volunteer their time and talents to further the knowledge of all attending events in the Gardens. Some summaries or PowerPoint presentations of talks are available from the ANBG library. Please direct queries to [talks@friendsanbg.org.au](mailto:talks@friendsanbg.org.au)

## August

### 7 August

#### Jed Pearson

##### **Beyond the bill: Platypus, science and waterway conservation**

Jed, Waterwatch Coordinator with Molonglo Conservation Group, will dive into the secret life of the Platypus, and how these monotreme marvels help us read the health of our freshwater ecosystems – and what we can do to protect them.

### 14 August

#### Dr Matt White and Anthony Hoffman

##### **Threatened ecological communities assessment**

Matt and Anthony will discuss the progress and impacts from listing of ecological communities under national environment law, including the Empodisma peatlands of south-western WA, the Karst springs of the Naracoorte Coastal Plain, and the Drooping Sheoak grassy woodland of the Eyre Peninsula.

### 21 August

#### Dr Michael Mulvaney

##### **Gang-gangs: What have we discovered and how does that help better protect them**

Michael, a former government ecologist, will update eight years of citizen science research and cover new discoveries since 2022 into Gang-gang nesting ecology and behaviour.

### 28 August

#### Emeritus Professor Patrick De Deckker

##### **Marine heat waves, the 'secret killer' in our oceans**

Patrick, from the ANU, will discuss alarming temperature increases near the surfaces of oceans that affect entire ecosystems; such as the vanishing kelp forests offshore Tasmania and the many organisms that thrive in among kelp. This change is not only in Australia, but world-wide.

## September

### 4 September

#### Dr Rod Griffin

##### **Uses of Acacia from perfumery to pulpwood ... and some things we don't yet know about their reproductive biology**

Acacias provide many economic benefits around the world, but little has been invested into research into the benefits of Australian species of *Acacia*, especially compared to eucalypts. Rod, from the University of Tasmania, will share current research into the pollination ecology of some temperate *Acacia* species.

### 11 September

#### Stephen Utick

##### **Camellia Flower God: The sacred camellias of Asia**

Stephen, a Visiting Curator of Theaceae at the Royal Botanic Gardens, Sydney, will embark on a journey across the sacred places of China and Japan to discover the ethnobotanical stories of the family Theaceae, genus *Camellia*.

### 18 September

#### Andy Whiteley

##### **Bioplastics**

Andy, from CSIRO, and the BioPlastics Innovation Hub aim to remove Australia's dependence on fossil fuel derived polymers in plastic packaging and replace them with fully compostable and sustainable alternatives.

### 25 September

#### Hannah Gerke

##### **Life on the edge: Personality and movement behaviour of urban brown snakes in Canberra**

Hannah, a PhD candidate at ANU, will talk about the hundreds of Eastern Brown Snakes translocated around the ACT each year. However, recent work has shown that moving reptiles long distances may have harmful impacts on Brown Snake behaviour and survival.



John Bromilow

White and his female mate, a recognisable Gang-gang pair that nest on Mt Majura.



Jenna Bytheway

A Bandicoot, who may have gourmet tastes.



Shelley Rowntree

*Chrysocephalum* sp.



Jay Nicholson

Plant death with Uluru in the background.

## October

### 2 October

**Annabel Ellis**

#### **Bandicoots and the great truffle heist**

Bandicoots have developed a taste for expensive French black truffles, costing farmers up to \$20k a year. Annabel, a PhD student at University of Sydney, uses marsupial friendly strategies to discourage their gourmet tastes.

### 9 October

**Bill Waterhouse**

#### **Wombat rescue at Major's Creek**

Bill and his wife rescue injured wombats, especially pouch pinkies, in facilities they developed at Major's Creek especially for growing and rewilding them.

### 16 October

**Don Beer Memorial Talk**

**Tasha James**

#### **Endemics on the Edge-Mt Imlay**

Tasha, a PhD student at University of Canberra and holder of a Don Beer Memorial scholarship, asks will *Hibbertia circinata*, *Boronia imlayensis*, and *Eucalyptus imlayensis* provide different insights into threatened species conservation on Mt Imlay and more broadly for threatened-species conservation?



Provided

### 23 October

**Shelley Rowntree**

#### **Chrysocephalum**

Shelley, a PhD candidate at University of New England and holder of a Friends ANBG scholarship, will discuss the species limits and the dominant processes affecting the breeding and conservation of the *Chrysocephalum* genus.

### 30 October

#### **Dr Gemma Hoyle and Tom North National Seed Bank 2.0: Evolution of seed collection, banking and research for world class conservation**

Tom and Gemma will provide a 'behind the scenes' look at why the upgrade to the National Seed Bank was necessary and how the new facility has been designed to ensure improved plant germplasm conservation and research.

## November

### 6 November

**Jay Nicholson**

#### **Why do some plants die while others survive? Exploring the impacts of extreme drought in the Red Centre**

Jay, a PhD student at ANU with a Friends ANBG scholarship, works with the Anangu, the Traditional Owners at Uluru-Kata Tjuta National Park, on understanding why certain culturally important species are dying, and what the future looks like for Australia's arid landscapes.

Left: *Boronia imlayensis* on Mt Imlay. Right: Getting the evidence in Antarctica.

### 13 November

**Josh Coates**

#### **Australian alpine pollinators in a changing world**

Josh, a PhD student at ANU, will present his research on pollination ecology in Kosciuszko National Park, including the effect of climate change on species such as the Bogong Moth which are so well adapted to the alpine climate.

### 20 November

**Robert Macklin**

#### **The man who planted Canberra: Charles Weston and his 3 million trees**

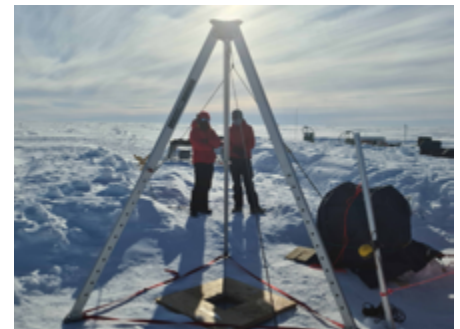
Robert's recent book explores Weston's life in the UK and his vital contribution to Canberra's dramatic foundation and its arboreal and botanic creation.

### 27 November

**Associate Professor Duanne White**

#### **Antarctic ice shelves?**

What lies beneath Antarctic ice shelves? Duanne, from University of Canberra, will show field studies of how warm ocean currents, past and present, are melting the weak underbelly of the ice sheet in the Denman Glacier region.



Provided

A blue-spotted lizard with a yellow throat patch is perched on a dark, textured tree branch. The lizard's body is covered in small, light blue spots, and its tail has darker, horizontal bands. The background is a soft, out-of-focus green, suggesting a natural, outdoor setting.

*Friends* of the  
**Australian National  
Botanic Gardens**

*Helping The Gardens Grow*