

Fronds

Friends of the Australian National Botanic Gardens
Number 106 April 2024





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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Graham Gail

Current Council members. Sitting left to right: Christianna Cobbold, Marg Nicholls, Alan Henderson.
 Standing left to right: Linda Beveridge, Beth Tyerman, Rod King, Masumi Roberson, Neville Page. Inset: Kerry Moir.

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Friends of the ANBG is a member of the AAFBG

Front cover: The endangered Omeo Storks-bill (*Pelargonium* sp. *Striatellum* (G.W.Carr 10345)) is restricted to only four locations in NSW. It lives within a narrow habitat just above the high-water level of lakes. In 2023, staff at the ANBG undertook a suite of conservation activities for this species. See article page 6. Photo: by M. Fagg at ANBG, courtesy of APIL.

Getting to know the peas of the Southern Tablelands

A intriguing native peas display is breaking new ground for the Southern Tablelands Ecosystem Park (STEP). I joined Bill Handke at the entrance to STEP on a sunny Thursday morning in February for a tour of the Parade of Peas (PoP).

The display is a fine example of STEP's mission, which is to become a demonstration regional botanic garden, education and conservation centre for Southern Tablelands species.

STEP is easy to find in the wider campus of the National Arboretum Canberra. Take the road to the bottom of the main carpark and you will see the STEP sign.

Diversity of pea forms

Bill Handke is a gardening enthusiast, and one of the 20 or so volunteers who come regularly on a Thursday morning to work in STEP. He is rapidly becoming an expert in the peas of the Southern Tablelands. Bill is a hands-on entertaining guide to the unexpected variety of local pea species, their plant forms and horticulture. Peas can be ground covers, creepers or climbers, shrubs of all shapes and sizes, and even small trees. The leaves are diverse, and the flowers can be yellow, orange, red, pink, mauve purple or combinations of all those colours. Around Australia, there are 1,500 peas, almost twice as many as there are eucalypts and more than the wattles. Peas are generally poorly known, although there are 47 pea species in the ACT alone.

Bill says: "Although STEP has various local pea species scattered throughout, the development of the new entrance at STEP provided the opportunity to give a dedicated area to these striking plants. There are 29 species in the Parade at the moment, and the seeds of a further 24 species will be propagated in due course."



Bill Handke STEP 2024

Parade of Peas at the entrance to STEP (step.asn.au) at the National Arboretum Canberra.

Peas can be tricky to identify

Plant identification is a general interest for Bill – but it poses a real challenge in the case of peas. While in springtime many of the showy pea species have brightly coloured flowers which are highly visible throughout the region's bushland, they can be easily overlooked when not in flower.

A common tag for local peas is 'egg and bacon' plants because of the yellow and brown colour combination of the flowers of many of the showy species. Although perhaps most familiar of all is the purple climber, *Hardenbergia violacea*.

Peas fall into three broad groups, with the groupings determined by the position of the 10 stamens of the plant. Leaves can be hairy or bald; stems can be hairy or bald; leaves can be alternate or opposite, in whorls or trifoliate (three leaves coming from the same spot). And there is variety in the calyx and the bracteoles. So much to learn.

Peas are of further interest due to a most intriguing and complex system of pollination. Native peas have three parts to their flowers: the 'standard petals' which are the two prominent

petals at the back of the flower; 'wings' which are the two petals in the front that cover the 'keel' (that looks like the keel of a boat), in which the stamen and stigma are located.

When an insect lands on the top of the wings to collect the nectar in the centre of the flower (ie at the base of the standard petals) the wings of the flower push apart, the keel spreads apart and the stamen lifts up so that pollen is transferred to or from the insect.

Peas come in a variety of forms

- trees (eg *Jacksonia scoparia*)
- tall shrubs (eg *Goodia lotifolia*, *Pultenaea daphnoides*)
- mid-sized shrubs (eg *Pultenaea retusa*, *Bossiaea grayi*)
- low shrubs (eg *Pultenaea procumbens*)
- groundcovers (eg *Pultenaea pedunculata*, *Pultenaea microphylla*)
- climbers (eg *Hardenbergia violacea*)
- creepers (eg *Glycine tabacina*)
- twiners (eg *Glycine clandestina*)

Peas of the Southern Tablelands (cont.)

Tips for growing local peas

Bill's experience shows that peas generally prefer not to have wet feet. So, a well-drained soil is a requirement for most pea species.

They generally prefer semi-shade because many are woodland species. But some do like it sunny all day. In the wild they can grow on very rocky and dry sites.

Propagation can be difficult, and Bill and his STEPers are trialling different techniques. He is happy to share his experiences with visitors.

Seed and plant sources for cultivation

STEP is very grateful for the support from ANBG for providing seed, including several rare and endangered species. In the future STEP hopes to extend the collaboration to sharing information about soil composition, treatment and drainage needs.

Bill says that STEP has also been fortunate that the Southern Tablelands Australian Plant Society, based in Goulburn, has provided pea plants and seedlings of some of the hard-to-get species. But most of the peas in STEP have come as plants from Cool Country Natives in Pialligo where the propagation team are highly skilled and produce good plant stock.



Bill Handke STEP 2024



Bill Handke STEP 2024



Andy Russell STEP 2023

Top: The Notched Bush Pea (*Pultenaea retusa*) is an erect shrub with wedge-shaped leaves and yellow to orange and red to purple flowers from August to November.
Above left: Austral Trefoil (*Lotus australis*) is a small spreading herb, 30–50 cms in height, which flowers in spring.
Above right: The Smooth Darling Pea (*Swainsonia galegifolia*) is a long-flowering perennial, up to one metre in height, bearing pink to red flowers with white centres. A worthy garden plant.



Bill Handke STEP 2024

Plants have also been sourced from the Canberra Native Nursery at Carwoola and the propagation group of the Australian Native Plants Society Canberra.

STEP's hope for Parade of Peas is to provide the 'wow' factor for visitors as they enter the garden. My visit confirmed that it does that well – and it will only get better as the Parade of Peas is extended and matures.

Elsewhere in STEP, there is a variety of well-established peas. The She-oak Nook has the spectacular *Jacksonia scoparia* (Winged Broom-pea or Native Dogwood) and *Hovea linearis* (Common Hovea), while the Central Garden – the spine that runs down the middle of STEP – has lots of peas that prefer to be in semi-shade. Bill encourages us all to come and see!

Cathy Robertson
FronDs Team

The Murrumbidgee Bossiaea (*Bossiaea grayi*). This rare and endangered species is sited in the STEP entrance, Section F and is one of the highlights in STEP. There are some superb specimens in the large pots near the ANBG Visitor Centre. The ANBG will be donating more endangered peas for a future STEP section dedicated to rare and endangered Southern Tableland plants.

Searching for seed

On 12–13 December 2023 I did my first trip as a 'Seedy Volunteer' for the National Seed Bank at the Australian National Botanical Gardens (ANBG), and it was a doozy.

The role of the Seedy Volunteers is to go out into the bush and collect seeds for the Bank. I'm told that it used to be fairly straightforward as they started the collection and were collecting fairly common plants, but now most of what is needed is rare and endangered, so finding them has gotten a lot harder.

This overnight trip had three professionals from the ANBG Seed Bank, Plant Records and Horticulture teams, plus me and one other volunteer, a university student.

Our main target species was *Almaleea capitata*, a pea that was last seen in the ACT over five years ago in a boggy valley high in the mountains above the Orroral Valley in Namadgi National Park.

We started hiking early in the morning on the Granite Tors trail, but soon branched off for a steep bush bash for most of the way. After several hours of scrambling around, over and between enormous granite rocks, pushing through thick and scrubby post-fire vegetation, and trying to keep on the right bearing, we made it over a high saddle to the spot.

Beginner's luck held, and I spotted a tiny yellow pea flower! The experts confirmed that it was the right one, and everyone started looking for more. We ended up finding over 20 tiny plants within about a 25 metre radius, but none anywhere else in the valley. Only two of them had flowers. With such a small population we didn't get to collect any seed, cuttings or plants, but it was very significant to have found a population at all after the 2019 fires.

Our leader decided that we had enough time to try another bog he



Provided



Provided



Provided

Top: Searching for *Almaleea capitata* in the high valley. Above: Tamera Beath and Mya Anlezark identifying plants in the Orroral camp ground (left) and *Viola cayleyana* (right).

had spotted on Google Earth about 1.5 km further on, so we set off again on a compass bearing through the scrub. We found the bog, but no more *Almaleea*.

We then had to forge our way to the original trail, another few hours of scrambling. It was 6:30 pm before we made it back to our cars to head down to the Orroral Camp Ground for the night after 10 hours of very hard but rewarding slog.

After dinner, a refreshing night splash in the river and a good night's sleep in our camp, we went on to look for another species last seen approximately 10 years ago near the camp ground, a native violet, *Viola cayleyana*.

We found much more of this one, though once again not much in flower. The timing wasn't quite right to collect seed, but the Plant Records rep was able to dig out a few specimens to take back and propagate. Another success.

Our last target was another pea, *Miberlia pungens*, last seen near the foot of the Mt Tennant hiking trail. We found just two plants, neither of them in flower. The population was once again too small to collect anything, but at least we had found a couple of plants.

This was a great introduction to the life of the seedy volunteer, but I hope not all the trips I sign up for are quite this strenuous!

A new Seedy Volunteer

The Rare Bloom Project

A partnership approach to conserving Australian wildflowers

During the summer of 2019–20, Australia experienced an unprecedented series of bushfires, causing extensive damage to the natural environment. The fires burned almost 10 million hectares of land, including peatlands, rainforests and alpine habitats, with many of the most adversely impacted areas having never experienced fires of such intensity.

In response to this event, **WWF-Australia** and **Botanica by Air Wick** partnered to create The Rare Bloom Project™. This three-year initiative, in collaboration with the Australian Seed Bank Partnership, aimed to complete a comprehensive national program to support the conservation of 120 Australian wildflowers.

At its core, The Rare Bloom Project™ sought to undertake a nationwide program of seed collection, germination trials, propagation, reintroductions, and long-term seed banking.

The Australian Seed Bank Partnership

The ASBP is a collaboration of seed banks and flora-focused organisations delivering strategic conservation actions for Australia's native plants. The ASBP contributes to the protection of Australia's native plant diversity through sustainable seed and germplasm collecting, banking and use, research and knowledge sharing. With seed banking partners in every state and territory, the partnership is a key driver of plant conservation effort across the country.



Gavin Phillips

Staff from the Australian PlantBank collecting seed from the Pink Flannel Flower (*Actinotus forsythii*) in the Blue Mountains for the Rare Bloom Project.

To realise these objectives, the project relied on the collaborative network and expertise of the Partnership, leveraging partnerships with eight ASBP partners spanning seven states and territories.

Our alliance facilitated data collection and conservation activities on a national scale, ensuring the project's reach and impact extended across diverse ecosystems and geographical regions.

In the project's initial stages, teams of researchers, conservationists and volunteers were mobilised to conduct reconnaissance missions to assess the impact of the fires on seed availability and species recovery. These assessments provided critical insights into post-fire vegetation dynamics, guiding targeted seed collection efforts and conservation priorities.

Seed collections were then made to ensure the genetic diversity of native species was secured in long-term seed banks, while germination trials of collected material provided valuable insights into propagation techniques.

Plants were also grown on and planted in living collections at botanic gardens, and for translocations in protected areas. These provide important insurance populations should the wild plants be impacted by future environmental threats.

Despite encountering challenges such as adverse weather conditions, germplasm availability issues, and disruptions caused by Covid-19, we exceeded initial expectations.

Woolworths funded conservation actions for the Pink Flannel Flower (*Actinotus forsythii*) (left) and Bussell's Spider Orchid (*Caladenia busselliana*) (right).



ASBP



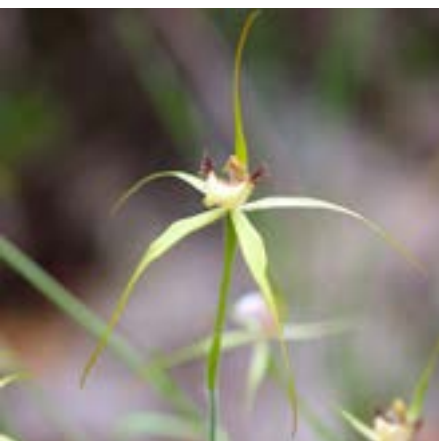
Gavin Phillips

Seed from the Pink Flannel Flower (*Actinotus forsythii*) in the palm of its collector. This plant is a bushfire ephemeral, meaning it blooms after fire. After the bushfires of 2019–20, there was a mass emergence of this species in the Blue Mountains.

The project surpassed all targets, securing germplasm collections for 153 species, conducting germination trials for 66 species, surveying 14 species, and propagating 11 species for conservation.

In total, the project provided conservation support for an impressive 183 species, making a substantial contribution to ex situ plant conservation in Australia.

Supplementary funding was raised for the project through a Sydney pop-up boutique titled 'The Rare Bloom Florist'.



Belinda Davis

The pop-up raised \$2,500 through the sale of species-themed art, which then funded a Student Research Scholarship aiming to advance our understanding of seed aging.

Additionally, Woolworths generously provided funding that allowed for targeted conservation actions for three threatened species, including the endangered Corunna Daisy (*Brachyscome muelleri*), Bussell's Spider Orchid (*Caladenia busselliana*), and Omeo Storksbill (*Pelargonium* sp. Striatellum (G.W.Carr 10345)), enriching the projects conservation impact and reaching broader conservation goals.

In a significant stride towards inclusivity and comprehensive biodiversity conservation, the Rare Bloom Project ventured into the heart of the Northern Territory to incorporate the unique flora of Uluru-Kata Tjuta National Park. This endeavour, led by the National Seed Bank (NSB), not only marked a pivotal moment for the project but also laid the foundation for meaningful collaboration with Anangu Traditional Owners.

Together Anangu and the NSB secured seed from 25 plant species ensuring that the conservation efforts were undertaken in a manner that respected and acknowledged the rich cultural heritage of the land.

The collaboration not only facilitated seed collection but also became a platform for two-way learning, fostering relationships that extend beyond the project's scope.

This collaborative approach has laid the groundwork for additional plant conservation projects and knowledge exchange initiatives.

The project also served as a platform for public awareness and education. Through communication activities, including educational videos, social media engagement and planting days, the project fostered a better understanding of the critical role of ex situ conservation in responding to environmental threats.

The success of the project underscores the importance of collaboration, adaptability, and public engagement in safeguarding Australia's diverse native flora.

The Rare Bloom Project™ came to an end in late 2023, however its legacy endures as a model for collaborative conservation efforts.

Beyond its outcomes, this project underscores the resilience and adaptability required in the face of environmental challenges. As we reflect at the project's end, this work stands as a testament to the power of partnership, the importance of proactive conservation, and the collective responsibility we bear in safeguarding the rich tapestry of Australia's native plant heritage for generations to come.

Desmond Bradley
A/g National Coordinator of
the Australian Seed Bank
Partnership

Friendly Chatter

Botanic Art Group

The Botanic Art Group is preparing for its 17th Annual Exhibition at the Visitor Centre from Saturday 6 April until 5 May. The theme this year was chosen by popular vote to be Bush 'Fragrance' to celebrate the aromas of native flora. Members commented on the number and quantity of bush flower essences, many of which are suggested to improve mental health and wellbeing. Bottlebrush, *Banksia*, *Boronia*, flannel flowers and lemon myrtle are some of the well-known flower essences although there are many others.

Jindii Spa at the Gardens uses locally sourced botanical ingredients. Commercial products using *Eucalyptus* oil are well known in medicinal and cleaning products and Australian sandalwood is highly valued by the international perfume industry. Since the 1840s millions of trees were exported, decimating sandalwood populations in southwest Australia. Sandalwood is now being grown again commercially in Western Australia.

Many people notice that familiar fragrances evoke powerful memories on a personal level and so it seemed appropriate to celebrate some of the many aromas of native flora in this exhibition.

The exhibition this year features works on paper using watercolours, acrylics, coloured pencils, pen and ink, mixed media and etchings. This year, to recognise not only those formally exhibiting artworks but also the wider group of members, we have asked all members to take part in a display of small square artworks (10 x 10 cms) to show the range of interest in native flora.

We thank our sponsors who have contributed prizes to be raffled to raise money for the Friends. This year's sponsors are Buvelot Framers, 45 90 Framing, Fine Art Framing, Jindii Spa, Cool Country Natives nursery, and the



Cornelia Buchen-Osmond



Vivien Pinder

Gossypium sturtianum by Cornelia Buchen-Osmond (L) and Native flowers by Vivien Pinder (R).

Botanical Bookshop. Please buy a ticket in the raffle as funds go directly to the Friends.

All Friends are invited to a preview and sale of artworks on Friday 5 April from 2:00 pm to 4.30 pm before the exhibition opens to the public.

The Botanic Art Group is open to all members of Friends who would like to come along to one of the monthly meetings and draw specimens selected by the horticultural team at ANBG – no experience necessary. We now have over 130 members.

Kate Ramsey

Growing Friends

On 2 March, Growing Friends had their March plant sale to the public, held at the Gardens, with more plants on offer compared with the sale held in September 2023. The Growing Friends' sales always offer plenty of opportunities to add another native plant to your garden, deck or balcony.



Photographer

Plants destined for the Growing Friends March sale to the public

With Canberra's weather swinging between very hot days in their high 30s to days of deluge, the plants for sale responded kindly and seemingly grew as we watched.

The group is now looking at trying new varieties in its cutting sessions, to offer the public an even wider variety at its next plant sale in six months time.

New members to the Growing Friends are always welcome, as they come festooned with new ideas and collaborate together to bring new interests on plant varieties to the group.

Growing Friends have commenced discussions with the Friends' organisation and with the Gardens' Nursery experts and management, regarding options for upgrading its current propagation facilities. The existing facilities have served the group well for many years but are now starting to show their age. In particular, Growing Friends would like to expand the ability to propagate from cuttings, upgrade seed raising capabilities, and incorporate facilities to support grafting.

The group would also like to improve working conditions for its volunteers. This is a long-term project, but will result in a much improved environment in which to grow plants and provide a more pleasant and functional facilities for volunteers to work in.

Sadly, John Connolly, a long time member of Growing Friends, recently passed away. (See page 14.) John was a friend and mentor to many in Growing Friends who undertook a number of roles in the group and will be greatly missed.

For more information about the plants we sell and about the group and membership, please email growingfriends@friendsanbg.org.au

Donna Growcock

Plant Science Group

The first Plant Science Group talk for 2024 was held on Monday 12 February. Dr Gemma Hoyle (Seed Scientist, National Seed Bank, ANBG) and Bek Hyland (Senior Nursery Horticulturalist, ANBG) presented work being undertaken at the ANBG on the Survive and Thrive Project. The ANBG is a partner in this multi-year project aimed at securing ex situ conservation collections of threatened subalpine plant species as an insurance against extinction and to supplement existing efforts to protect remaining populations in the wild.

Gemma discussed seed collection and banking of 12 target species and presented some of the results from germination experiments. Bek discussed propagation from cutting and seeds and cultivation of these target species.

It is planned to continue our talks on the second Monday in each month except in March and June when these will be held on the third Monday due to Canberra Public Holidays falling on the second Monday.

If you wish to receive information about the talks and other activities of the group, please email plantscience@friendsanbg.org.au

Lesley Harland

Photographic Group

The Photographic Group entered 2024 with a new Committee, a successful 2023 exhibition, a record membership level and renewed enthusiasm.

The Committee now comprises: Convenor, Phil Green; Secretary, Susan Pettersson; Membership Secretary, Paul Bainton; Publicity Officer, Graham Gall; and General Members, Steve Playford, Simone Slater and Kevin Gale. They have hit the ground running, with the program of guest speakers well-developed and the working groups established to look after the 2025 Calendar production and the 2024 *Illuminate* Exhibition.

The 10th Annual *Illuminate* Photographic Exhibition was held in the Visitor Centre Gallery in December. Twenty exhibitors entered 45 framed prints. Two competitions were held and won by Irene Lorbergs and Ben Harvey. Sales of framed and unframed prints were brisk.

Many other items created by members either sold out or sold well, including cards, calendars, bags, bookmarks, fridge magnets and jewellery.

A record number of raffle tickets was sold with prizes donated by Graham Gall, Jim Gould, the Botanical Bookshop and Pollen Cafe. The prizes were well received by the happy winners. As a result, after payments to members and expenses, the Group was able to donate \$1,285 to Friends.

Late in 2023 the Photographic Group was invited by Gardens' management to submit images for their new banners to fly at the main entrance to the Gardens. The selected images are shown below. Congratulations to photographers Steve Playford, Ben Harvey and Simone Slater for having their images chosen.

Meetings are held on the last Friday of the month in the ANBG Theatre commencing at 10.00 am. If there is no outing in the Gardens, the meeting has a guest speaker followed by members presenting their recent work in a popular 'Show and Tell'. New members are always welcome.

Phil Green



The new banners in situ outside the front gate of the Gardens. Images (left to right) by Steve Playford, Ben Harvey and Simone Slater.

Friendly Chatter (cont.)

Nature Journaling

Nature Journaling meets on the first Monday of each month. We meet at the Visitor Centre at 10.00 am. All Friends are welcome, but it's best to let Lesley know you are coming.

If you would like to join us, please contact lespage26@gmail.com

Lesley Page



Chris Foster

Volunteer Guides

Training new guides

New Volunteer Guides at the ANBG are expected to have a keen interest in Australian native plants and in sharing their love for the Gardens with visitors, but they don't need to have any knowledge of botany – although many do.

New guides go through an intensive training program which is on right now. The program includes a number of classroom sessions, including basic botany and the relationship between Australian flora and fire. There are a number of familiarisation walks in different parts of the Gardens and training walks on particular topics such as plant evolution and the significant Australian plant families Myrtaceae and Proteaceae. They are taken on visits to the nursery and the library; and learn about the important conservation work done by the ANBG.

As well as building their botanical knowledge, new guides learn about

communicating with groups of visitors from a wide range of backgrounds, abilities and interests and of all ages. They learn to find their way around the Gardens; and develop practical skills in driving the Flora Explorer bus and using two-way radios so they can communicate with Rangers if necessary.

Many of the training activities are presented by ANBG staff, but existing guides also play an important role. For experienced guides this is an opportunity to share their knowledge about the ANBG and Australian flora, and for others it is an opportunity to gain new knowledge which they can then share with trainees.

At the end of the formal training program, existing guides will act as mentors to help the trainees develop their skills and knowledge further so they can pass their final assessment to become qualified guides.

Kerry Moir



Angela Braniff

Top: Small-leaved Plum Myrtle (*Ptilidostigma rhytispermum*) by Chris Foster
Above: By Angela Braniff



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

Botanical Bookshop book reviews



Our Bugs. 2023

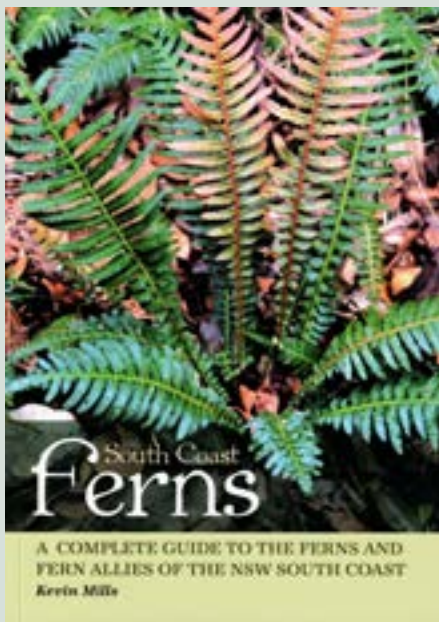
By Bronwyn Bancroft

Board book, colour drawings, 20 pages, \$18

This book by bestselling Bundjalung author-illustrator Bronwyn Bancroft introduces children to 20 interesting Australian bugs including the Leopard Slug, Christmas Beetle, Paper Wasp, Termite, Emperor Dragonfly, Redback Spider and Witchetty Grub.

Each bug is presented on its own page with a beautiful rhyming description and illustrated with intricate, detailed full colour drawings which are both eye catching and realistic! Here's just one of the intriguing bug descriptions from the book: "I can make the world's loudest insect sound. And it's true that I spend heaps of time in the ground." Any thoughts?

If you enjoy this book, the author has also written *Our Birds* which is also colourful, educational and introduces us to a good selection of commonly seen birds including the Splendid Fairy Wren, the Pee Wee, the Eastern Yellow Robin plus more. Wonderful!



South Coast Ferns – A complete guide to the ferns and fern allies of the NSW South Coast. 2023

By Kevin Mills

Softcover, 193 pages, colour photographs and maps, \$45

At last: a field guide to the local area ferns!

This book covers all 136 species of fern and fern ally known to occur on the NSW coast from Sydney to Batemans Bay. Beautifully presented, this field guide devotes a full page to each species with nice clear colour photographs for identification purposes, plus notes on distinguishing features, distribution and habitat, range (including a map), status and etymology. Author Kevin Mills also includes chapters on the south coast region climatic conditions and environment, and a comprehensive section titled 'The ferns as a plant group', which gives a detailed description of a fern, nomenclature, hybrids, ferns and their use by humans, plus some interesting historical information including some great old photographs of a fern display panel at Minnamurra Falls Reserve and a fern inspired bench seat at the Royal Botanic Gardens in Sydney.

We have been asked many, many times for a book to help identify the local ferns and here it is. The perfect reference for naturalists, bushwalkers, gardeners and horticulturalists for the South Coast and surrounds.

Friends Briefs

The Friends Public Fund has changed

The Australian Government has changed the rules relating to environmental funds, and that includes the Friends of the ANBG Public Fund.

The Register of Environmental Organisations has been abolished, and along with it the need for organisations such as the Friends to have a Public Fund as a separate section of their financial arrangements.

Tax-deductible Gift Recipient status now reverts to the Friends of the Australian National Botanic Gardens Inc. Donations in future will continue to be tax deductible, and donors will be issued with an official receipt which clearly shows that the donation is tax deductible.

A short history of the Friends of ANBG Public Fund

The Friends of the ANBG Public Fund was entered into the Register of Environmental Organisations on 1 December 2003. On 3 May 2004 a Management Committee, referred to at the time as Trustees, was established by Trust Deed.

On 4 May 2016 a House of Representatives Standing Committee recommended, among other things: "...that the Register of Environmental Organisations be abolished and that the administration process for endorsement as a Deductible Gift Recipient for environmental organisations be transferred wholly to the Australian Taxation Office."

Almost eight years later, on 1 January 2024, the Australian Government adopted the recommendation of the 2016 Committee and abolished the Register of Environmental Organisations and with it the Friends of ANBG Public Fund. So ends 20 years of history. But it doesn't really end there, as the tax deductibility for donations continues in the name of the Friends.

The idea of having a public fund was originally canvassed by Geoffrey and Sally White who thought that the Friends activities would be enhanced by having Deductible Gift Recipient status as an environmental



Professor Frank Fenner.

organisation. At the time, Sally was a Volunteer Guide at the Gardens. Friends President, David Coutts, took up the idea with strong support from Pauline Wicksteed and Beverley Fisher.

The initial Management Committee had to draw on individuals with a range of qualifications, including research, law and accountancy. Eventually a foundation board was established, comprising Neville Page (Chair), Pauline Wicksteed (Secretary), Beverley Fisher (Treasurer), Professor Frank Fenner and Geoffrey Hay.

Professor Frank Fenner, who passed away in 2010, is probably Australia's best known research scientist, having been responsible for research into a vaccine for smallpox and the myxoma virus, as an effective control of rabbits. Geoffrey Hay was a prominent

practising solicitor at law firm Mallesons, and prepared many of the legal documents required to set up and maintain the Public Fund.

I recall having a discussion with Frank Fenner when the time came for him to retire from the Management Committee. He said: "Now that I'm 90, I really have to cut back on my activities." Frank Fenner was replaced on the Committee by Robert Boden, who had been Director of the Gardens for 10 years from 1979–89.

Barbara Podger took over as Chair of the Management Committee in 2014, and continued in that role for eight years until 2021. Others who served on the Public Fund Management Committee over the years were: Sue Serjeantson, Alan Henderson, Helen Elliot, Jann Ollerenshaw, Louise Maher, Marg Nicholls, Marion Jones, Beth Heyde, David Headon, Adrienne Nicotra and Rod King.

The first two donations to the Public Fund were \$1,000 from Margaret and Garth Mansfield, and \$30,000 from the Mundango Charitable Trust, of which Sally White was Chair.

These early donations really got the Public Fund going, and went towards the first big Public Fund project which was the Rock Garden Shelter, now called the Friends Shelter. Total cost was \$38,359. The Friends allocated funds from its general account to make up the required balance.

After its establishment, the Public Fund became increasingly popular with Friends, many of whom donated generously year after year. Since its inception, donations to the Public Fund have totalled \$406,824. Overwhelmingly these donations have come from Friends. All donations received are reserved for Gardens related projects. We look forward to many years of environmentally friendly projects at the Gardens.

Neville Page

List of Public Fund projects,

For some projects, additional funding came from the Friends general account

Rock Garden Shelter, later called the Friends Shelter	\$38,359
Ken Crawford Memorial Plaque	\$ 1,500
Website detailing Lichen data	\$14,820
Environmental Monitoring Stations	\$49,000
Signage Eucalyptus Discovery walk	\$ 2,233
Update and reprint of Eucalyptus Trail Brochure	\$ 443
Termite Mound for Red Centre Garden	\$10,800
Seed Bank Freezer	\$ 7,425
Seed Counter	\$14,440
Aboriginal Plant Use Trail	\$11,259
Rainforest Species Collection	\$ 5,000
Banksia Garden Interpretive Signage	\$ 14,911
Lichen Digitisation Project	\$10,000
Treehouse	\$40,000
Equipment for Seedbank Volunteers	\$ 9,680
X-ray assessment of legacy collections of National Seed Bank	\$15,200
Ex situ Conservation of <i>Macadamia janseni</i>	\$ 3,000
Seed Bank Exhibition	\$ 8,826
Video - ANBG Conservation Activities	\$ 9,090
East Core Precinct Revegetation	\$30,000
International Speaker at Australian Seed Science Conference	\$ 6,878
Scholarship Program including Don Beer Memorial Scholarships	



Recent photo of the Friends Shelter.

24th Photographic Competition for Students

The competition is open to students attending Australian schools or colleges, and provides an excellent opportunity for students to become aware of the value and beauty of the ANBG and, by exercising their photographic skills, to share that beauty with other visitors.



All entries must be digital photographs taken within the ANBG between 30 August 2023 and 30 August 2024, and feature some aspect of the Gardens, such as plants, wildlife or scenery.

Closing date is **Friday 30 August 2024**.

For further information please see the Friends website at friendsanbg.org.au/activities_schoolsphotocomp

Linda Beveridge

Friends Briefs (cont.)

Vale John Connolly

On 17 February, the Friends lost one of its most familiar, well-liked and respected members, and the Gardens lost one of its great supporters, when John Connolly passed away after a short illness.

John was born on 19 June 1938 and he and his wife, Maureen, joined the Friends in January 2005, after moving from Sydney.

After joining the Friends, it didn't take long for John to become involved in its activities. He was elected to Council at the February 2007 AGM and again at the February 2009 AGM. He was elected as Secretary of the Friends at the February 2011 AGM and held that position until he 'retired' from Council in October 2014.

After retiring from Council, John wasted no time in finding new ways to volunteer in the Gardens. This led him to joining Growing Friends only a month later. He quickly got involved in whatever had to be done in the group. Meanwhile, Maureen was very active as a Volunteer Guide in the Gardens, in training new guides and in various major projects. All this hard work and dedication was recognised at the Friends' 2017 AGM when John and Maureen received Life Membership of the Friends for 'their excellent and continuing contributions over many years'.

John was involved in many aspects of the life of Growing Friends and, until about October last year, it was rare not to see him at one of the group's weekly Tuesday morning working bees. For the last few years he has taken care of the group's watering roster, as well as cataloguing plants leading up to each biannual sale.

John also took pleasure in helping new Growing Friends to learn about the best way to propagate plants. He always had time to share



John Connolly in 2017 when he was awarded Life Membership of the Friends.

Barbara Podger

his knowledge of plants and plant propagation and mentored many new members as they built up their own knowledge and gained confidence.

In early 2023 he encouraged the group to become more involved in grafting and commenced research on what facilities would be required for this. This, in turn, led to a plan for improving all the group's propagation facilities. It is such a shame that John will not see his ideas in this area come to fruition.

It is hard to put into words how much John was liked and admired within the Friends and Growing Friends. In his funeral notice, his family described him as a friend and mentor to many, as well as being big in stature, spirit and generosity. All of his friends and acquaintances within the Friends, and the Gardens, would totally agree with this description. Many who have known him have also added that he was kind, helpful, hardworking, generous, knowledgeable and intelligent. One member echoed the thoughts of many by saying 'it has been a privilege to get to know him and work with him'.

Photo: *On the Edge*

My photo named *On the Edge* (right) is a composite of two photos I took in the ANBG, on the edge of the Rainforest Garden. In the background a black-and-white photo of a Superb Fairy-wren is superimposed over a close-up colour photo of a Red-browed Finch.

I chose black and white to better show the intricacy of the natural world and also a planet in danger of collapse. A ray of light crossing the picture indicates my hope to see a decrease in the destructive impacts of human behaviour.

There are two reasons, both equally important, for naming the photo *On the Edge*:

- the birds in the two photographs were both seen at the Gardens, literally on the edge of the rainforest.
- rainforests, temperate and tropical, are fragile ecosystems, on the edge – declining alarmingly – and I wanted to share my concern about threatened species. We tend to be more sensitive to the loss of fauna, overlooking the fact that more plant species than animal species are listed as threatened and that a direct connection exists between the two.

An interesting note about the Red-browed Finch and Superb Fairy-wren: the **Birdlife Australia** website mentions a similarity between these two birds, though from two different families. The simple song of the Red-browed Finch sometimes sounds superficially similar to the contact call of the Superb Fairy-wren.

Fanny Karouta-Manasse

Maurice Hermann



On the Edge, by Fanny Karouta-Manasse. From the ANBG Photographic Group Exhibition, Canberra, 23 November – 10 December 2023.

Butterfly walks

On a warm and sunny day in January, two groups of keen butterfly spotters set out to find butterflies in the Gardens. Almost straightaway we saw a dark coloured butterfly up high as it flitted in and out of the Pink Jasmine, but too quickly for us to say for sure which species. Was it a swallowtail?

In both morning and afternoon, as we walked on the incline beside the Eastern Mallee section, a cloud of Common Brown butterflies rose, some faded males but mostly larger brighter females. We paused near an *Acacia aneura* in this section, as it was being used as a colony tree for Stencilled Hairstreaks. The adults were busily flying around, rarely perching, while the pupae and larvae were being attended by friendly Meat Ants, and we saw a caterpillar moving carefully along the narrow foliage.

A white Cabbage Butterfly flew across the path as we walked along between the planted garden beds and the native bush, and we saw several more during our walks. Just before we turned into the Rainforest Gully, we saw a Common Brown perched on a low twig showing what great camouflage their underside markings are.

The green tones of the Macleay's Swallowtail caught our eye in different parts of the Rainforest Gully during the morning and afternoon walks, as well as the Orchard Swallowtail.

In the lawn area of the Rock Gardens we saw Common Grass Blues, Bronze Flat, Chequered Copper, Meadow Argus, and then an Imperial Hairstreak nectaring on the golden 'platform' of a Sticky Everlasting (*Xerochrysum viscosum*).

We also paused at the Kurrajong planted on the edge of the lawn, and examined the characteristic 'hole punch' made by Bronze Flat larva, which was evident on several leaves. Yellow Admirals were seen in this area during the afternoon walk, and near the café at the end of the morning walk.

During the afternoon walk saw an Australian Painted Lady flying across the Brittle Gum Lawn, then perched for a short while affording us a good look at her markings. In total, we saw 12 species of butterfly on the day.

Linda Beveridge and Suzi Bond

Imperial Hairstreak nectaring on a Sticky Everlasting (*Xerochrysum viscosum*). Damaged wing from 'life experience'.

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
- 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.



Gardens Shorts

Director's Report

Peter Byron Director of ANBG

Welcome back to the Gardens for 2024! We're looking forward to a big year with the completion of some major projects and ongoing record visitor numbers. 2023 was our biggest year ever recorded for visitation, with 544,457 visitors coming through the gates from January to December.

The year 2023 was also a blockbuster for the Gardens' Education team, with an incredible 22,304 students visiting throughout the year. This was a 40 per cent increase over the previous record set in 2019. These numbers demonstrate that the Gardens is valued by the community as a place of learning and excellence in plant and ecosystem science.

This year we are expanding our education offerings following the November launch of the Plant Science Learning Hub (PSLH). The PSLH is an online educational product aimed at upper primary school students that supports educators to teach Australian plant science in classrooms right across Australia. It's a big project that has involved collaboration between scientists, educators and horticulturists at the Gardens, and I encourage you to explore and share it. You can find this project in the Education section of the Gardens' website or at learn.anbg.gov.au. (See the article in the December 2023 issue of *Fronde*.)

Our major focus for 2024 will be the completion and opening of the Ian Potter National Conservatory. The tropical plant collection is looking amazing and ready for being planted inside the Conservatory when construction is completed mid this year. The tropical plants will feature

many species never before cultivated from Kakadu National Park and Christmas Island, including numerous threatened species. I am very proud of the expertise of our Nursery staff that has made this such an amazing world class collection of Australian tropical plants.

Introducing new Executives



ANBG

Dr Rebecca Pirzl Branch Head for Science and ANBG, Parks Australia

Dr Rebecca Pirzl was appointed to the role of Branch Head, Science and ANBG in October 2023. Rebecca joined us from CSIRO and brings a wealth of experience in ecology, biodiversity and sustainability science, climate adaptation and Indigenous partnerships, specialising in systems-based approaches to nature conservation.

In her previous role she led an interdisciplinary sustainability science research group and was closely involved in devising ways to operationalise nature-positive concepts, as well as developing virtual laboratories and open data platforms, including significant collaborations with Australian herbaria to deliver eFlora for Australia. Her role with Parks Australia includes overseeing the ANBG and strategic science planning for marine and terrestrial Commonwealth protected areas.

Mr Ricky Archer Director of National Parks



ANBG

Following an extensive recruitment process Mr Ricky Archer was appointed as the new Director of National Parks in November 2023. Mr Archer, a Djungan man from North Queensland, has worked as a ranger, in conservation leadership positions, in the joint management of parks and managing relationships between First Nations peoples, the conservation sector and community. Most recently, Mr Archer held the position of CEO of the North Australian Indigenous Land and Sea Management Alliance. He also has qualifications in Conservation, Land Management and Social Science plus experience on a range of Commonwealth committees, including the Indigenous Advisory Committee and the National Landcare Advisory Committee. This appointment marks the first time the position of Director of National Parks has been held by a First Nations person.

New front entry banners

Three beautiful new banners have been installed outside the Gardens' Front Gate. These replace the previous banners, which had been in place for several years and had become cracked and faded. The new images were generously provided by members of the Friends Photographic Group. Thanks to the Photographic Group for your assistance with this project – the new banners look fantastic, and do a great job welcoming visitors. (See page 9.)

Launching the Plant Science Learning Hub

On 29 November the Gardens hosted the Minister for the Environment and Water, the Hon Tanya Plibersek, to launch our Plant Science Learning Hub.

Minister Plibersek was joined on the day by member for Canberra, Alicia Payne MP. The Minister spoke with local students and tried out some hands-on plant science activities with them, designing their own seeds and testing seed dispersal mechanisms.

Designed by Gardens scientists, horticulturists and educators, the Plant Science Learning Hub supports educators to confidently teach Australian plant science to upper primary students anywhere in Australia. We're excited for teachers to begin using the program with their students this year. For more information visit learn.anbg.gov.au

New Bushfire Boundary Suppression System

The Gardens' bushfire preparedness has been boosted by the completion of a new infrastructure project, the Boundary Bushfire Suppression System.

The Hon Tanya Plibersek MP, Minister for the Environment and Water, launched the project in November 2023. The Boundary Bushfire Suppression System extends the Gardens' firefighting system along our northern boundary to protect the Nursery, and to the south of the site to protect the Visitor Centre, Herbarium, Library, Botany and Administration buildings.

The new Boundary Bushfire Suppression System was funded by Parks Australia, and will significantly mitigate the risk of bushfire impacting the Gardens.



James Savill

New lighting around Pollen and Friends Lawn.

Lighting around cafe deck and Friends Lawn

The Friends Lawn and Pollen cafe deck have recently had an uplift with the installation of new lighting for evening events. Lights have been installed along the gardens around the edge of the deck, the concrete terraces, and under the Sydney Blue Gums (*Eucalyptus saligna*) that overlook the lawn.

The new lighting is intended to create ambience during evening events, and to increase safety by highlighting the deck surrounds.



ANBG

Left: Senior horticulturist Bek re-potting *Almaleea capitata* plants grown in tissue culture. Right: *Almaleea capitata* flower.

Conservation progress for *Almaleea capitata*, Slender Parrot Pea

The Gardens Nursery team are celebrating recent success in conservation of the threatened Slender Parrot Pea, *Almaleea capitata*, a target species in the Survive and Thrive bushfire recovery program.

No seed could be collected in the wild, limiting possibilities for conservation storage and research. Instead, our Nursery has been developing a 'seed orchard' using plants grown from cuttings and other tissues, with 87 plants now growing happily.

After one unsuccessful flowering season the first fruit began to develop in November 2023, causing great excitement! An initial batch of 120 seeds were delivered to the National Seed Bank in January 2024, with hopefully many more seeds to come.

Building a collection of seeds in the National Seed Bank will enable germination testing and potential storage, providing insurance against extinction for this threatened species.



Bek Hyland

Gardens Shorts (cont.)

Conservatory update: final preparations

It's a busy time in the tropical greenhouses as our horticulturists prepare plants for transfer into the Ian Potter National Conservatory in coming months.

Preparing soil

Plants in our greenhouses are generally grown in potting mix. However, in the Conservatory they will be growing in special soils developed by SESL Australia to be suitable for plants from our northern and tropical regions. These contain specific soil types such as profiled ferrosols and kandosols. To prepare plants for the transition they are currently being transferred from regular potting mix into an 'intergrade' media containing both Conservatory soil and potting mix. Re-potting some of the larger plants is a considerable challenge and involves pulling apart pots, removing old media with hand saws, and plenty of elbow grease.

Building plant displays

The Conservatory will be a state-of-the-art facility to showcase research, conservation and tropical horticultural displays. Our team has trialed several innovative plant displays including living chandeliers, airborne ferns and hanging logs. Some ideas have worked better than others, and we're busily building on our successes. We'll be keeping the best as a surprise for the opening!

Orchid mounting

Many of our orchids are getting a refresh by re-mounting them onto new material, including cork and terracotta. Orchid mounting is delicate and requires skill and attention to detail. When choosing the appropriate mounting (or potting) technique we consider how each species grows in the wild and its natural habitat requirements. Our team has also



Phalaenopsis orchids.

developed new methods for attaching orchids to their mounts which are easier, more efficient, and better both visually and for the plants.

Planting logistics

Growing plants is one thing; moving them is another challenge altogether. We are currently planning the detailed logistics of getting plants out of the greenhouses and into the Conservatory in a way that is as safe as possible for both the plants and for us. For some larger plants this will require specialised equipment and creative techniques to prevent damage, and keep our tropical plants warm and sheltered in Canberra's cool climate.

Trucking trees

The Conservatory horticulture plan includes several large trees currently being grown in specialist nurseries in Queensland. These trees will need to be excavated from the ground and transported to Canberra on the back of a large truck. This will be a delicate operation to make sure the trees remain as healthy as possible, and we look forward to tracking their journey. Once they arrive at the Gardens it'll be all systems go! To install the trees a section of roof will need to be temporarily removed, allowing them to be hoisted in using a crane. This will all happen in one day, as these tropical trees could be damaged if left out overnight in chilly Canberra.

Upcoming milestones

- Completion of main structure including more steel, mechanical and electrical systems, insulation and framing for the glazing and glass blocks, and installation of the lift.
- Installing 173 double-glazed glass panels to roof areas and the northeast and northwest elevations, and 3,539 glass blocks to the southeast and southwest elevations.
- Transporting approximately 200 tonnes of specially formulated soils into the Conservatory beds.
- Commission building systems.
- Shipping and craning in large trees from Queensland and the ANBG greenhouses.
- Planting out smaller plants.
- Landscaping of surrounding gardens.
- Installation of interpretation materials.
- Training staff, guides and volunteers.

Seeking Conservatory volunteers

Expressions of interest are open for people who are interested in volunteering in the Conservatory. This is a front of house role where volunteers will have the opportunity to provide a meaningful experience to visitors and promote the appreciation of Australia's tropical flora. No botanic background is required as full training will be provided to equip you with the knowledge and skills you need for this role.

Volunteers will be required for a 7-day roster/3 shifts per day (except Christmas Day) to cover the Conservatory's opening hours of 10.00 am – 4.00 pm daily. It is expected that volunteers will commit to at least two shifts per month.

Please contact volunteer@anbg.gov.au to apply or ask for more information.

Sharing seed banking with Anangu Traditional Owners

By Millie Stevens, National Seed Bank

The ANBG was honoured to host some special visitors from Uluru-Kata Tjuta. Anangu Mala rangers Lena, Ursula and Joanna and Uluru-Kata Tjuta National Park (UKTNP) rangers Rita and Bek visited the ANBG (12–14 February) and Booderee Botanic Gardens (15–16 February) to learn more about seed banking and nursery techniques.

Background

In 2023, the National Seed Bank (NSB) had the opportunity to collect seeds in UKTNP as part of the Rare Blooms Project (see page 6). Through the consultation process with Parks staff and Anangu Traditional Owners it was clear that working with Anangu and providing opportunities for two-way learning would be an important part of this project. After a successful seed collecting trip to UKTNP in September 2023, where NSB staff and volunteers worked with Anangu to make 34 conservation seed collections of desert taxa, NSB staff were excited to host Anangu and share how we process, store and learn from those collections back in Canberra.

Sharing techniques

The purpose of this visit to Canberra was to share what happens to seeds when they are taken off country, and to share knowledge in seed banking and propagation techniques to support the reinvigoration of the on-park nursery at Mutitjulu, the Anangu community located within UKTNP.

Our visitors were shown around the Nursery and NSB, where they learned about techniques used for testing, preserving and germinating seeds. This included processing seeds, checking viability using a float and cut test, making smoke water



Visiting rangers in the nursery glasshouses with Lizzie and Kathryn.

for germinating seeds that are cued by fire (as many bush tucker and desert species are), sowing seeds and propagating from cuttings. The Mala Rangers helped to germinate seeds that were collected on the September trip to UKTNP including culturally important plants such as Bush Plum (Arnguli or *Santalum lanceolatum*), Bush Tomato (Wiriny-Wirinyapa or *Solanum cleistogamum*) and Bush Tobacco (Mingkulpa or *Nicotiana velutina*). Exchanging words between Pitjantjatjara and western science was another highlight of our work together.

Trip to the coast

After three days at ANBG the group travelled to Booderee National Park and Botanic Gardens, where they were shown around by Bherwerre Rangers from Wreck Bay Aboriginal Community and propagated Waratah (*Telopea speciosissima*) and Sarsaparilla (*Smilax glycyphylla*) from cuttings in the nursery. Including Booderee in the trip was a wonderful opportunity to continue knowledge sharing and grow relationships among Parks. The ANBG recognised similarities between the operations of the two jointly managed Parks (Booderee and Uluru-Kata Tjuta), and in the scale of their nursery work (not to mention the excitement of bringing desert folks to the sea).

Two-way learning

It was an honour to host Rita, Lena, Joanna, Ursula and Bek. Sharing seed banking processes with Natural Resource Managers is an important part of ensuring it is an effective conservation tool. Learning from and building relationships with Traditional Owners enables the NSB to respectfully include culturally significant plants and knowledge in our collection, strengthening our ability to conserve and learn about native flora. The NSB gained so much from seed collecting alongside Anangu, learning about their country and culture. It is our hope that sharing our knowledge and expertise in western plant conservation and horticulture techniques will be as valuable to Anangu.



Tom North showing Joanna and Lena how to make smoke water for treating seeds.

What's on at the Gardens

April to August 2024

Details are correct at the time of printing. Please check the Friends website friendsanbg.org.au or the ANBG website 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 and discover the spectacular colours of leaves, bark, flowers and seeds in the Gardens with a Volunteer Guide.

Themed Rostered Walks

11.00 am and 2.00 pm daily
Free*

Parliamentary Timber 6–12 May

Parliament House and Old Parliament House both feature some beautiful timbers from Australian trees. On this free guided walk, see living examples of these trees and hear some interesting snippets of information about them.

Botanists of the Trees 10–16 June

Botanists have named trees and also had trees named in their honour. Australian, British, French and German botanists have made outstanding contributions to Australian science. On this free guided walk see some of the trees and hear stories that encompass adventure, mystery, sex and even murder!

*Meet at the clock near the bridge. No booking required for individuals, but groups of more than six people should contact walks@friendsanbg.org.au a week in advance.

Threatened Species 12–18 August

On this guided walk we will visit some of the rarest plants in Australia, consider some of the threats to their existence and learn about some of the scientific work the Botanic Gardens are doing to conserve these plants.

Wattle We Call It? 2–8 September

Wattles are acacias, or are they? The first tree called a wattle in Australia is not an *Acacia* at all. The acacias of Africa are no longer acacias. Many of the wattles have leaves that are not leaves. On this free guided walk, hear about some of these paradoxes while visiting a variety of wattles in flower at this time of the year.

Self-guided walks

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

Bilby trail and craft activities Friday 29 March – Sunday 28 April

Learn about the bilby and its habitat on a children's self-guided trail from the rainforest to the eastern mallee. The easy loop finishes back at the Visitor Centre where kids can colour in and make their own bilby mask.

Gardens Through Time Heritage Trail

13 April – 31 May

Step back in time through the development of the ANBG on this self-guided image trail, part of the 2024 Canberra Region Heritage Festival. See how iconic locations have evolved and reflect on how the landscape connects us through time.

Magnificent MEGAfauna: family trail

1–31 July

Can you imagine a wombat the size of a car? What kind of creature is a 'demon duck of doom?' Visit the Gardens in July to meet the magnificent MEGAfauna that roamed Australia more than 20,000 years ago. Discover 'living plant fossils' and investigate the landscapes of Australia's past.

Flowers, Fruit and Foliage

All year
Free

The *Flowers, Fruit and Foliage* brochure is your self-guided tour to what's flowering in the Gardens. Armed with the guide, you can take a tour anytime the Gardens are open.

Knowledgeable and dedicated Friends Rosalind and Benjamin Walcott write and illustrate a new guide every two weeks, so it's always up-to-date.

The current version of *Flowers, Fruit and Foliage* is always available from the Friends' website friendsanbg.org.au

You can print your own hard copy or pick one up from the Visitor Centre. Alternatively, you can view the guide on a mobile device while walking in the Gardens.



Flora Explorer Bus Tours

Saturday, Sunday 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 or floragroups@anbg.gov.au

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.

Removing Woody Weeds from Black Mountain and/or within ANBG

Saturday 6 April, 8.30 am to 11.30 am

4 May, 1 June, 6 July and

3 August, 9.00 am to 12.00 pm

See the Friends of ANBG website for details about the meeting place for each weeding work party.

Please also book using the booking link so there is enough delicious morning tea.

For further information, email friendsofblackmountain@gmail.com or phone Linda on 0437 298 711.

Exhibitions

Visitor Centre Gallery

Open Daily 9.30 am – 4.30 pm

Free

6 April – 5 May

Bush Fragrance

The Friends' Botanic Art Group is proud to present their 17th annual exhibition. The artworks depict native flora illustrating this year's theme of *Bush Fragrance*. Many artists have worked on paper in watercolour, but others have chosen pen and ink, coloured pencil, etchings and collage. All artworks are checked by the botany department at ANBG.

All Friends are invited to a preview and sale of artworks on Friday 5 April from 2:00 pm to 4.30 pm before the exhibition opens to the public.

8 May – 2 June

Garden of Letters

An exhibition by the Canberra Calligraphy Society creating beautiful works that tell the story of the ANBG through calligraphy.

Culture on the Move – bush animal weaving workshops

Friday 18 and Saturday 19 April

10.00 am and 1.00 pm

Celia Rosser Room, Banksia

Centre

Suitable for 3+ years. Children

aged 3 - 7 years must be

accompanied by a participating

adult. Adults \$55 and Child \$30.

Book on ANBG website

Join Ronnie Jordan, a Kalkadoon Pitta Pitta woman, who will share her traditional ecological knowledge with you. Enjoy a hands-on experience where you and your child can each create a woven bush animal. The workshop inspires a connection to Aboriginal culture, and both children and adults will learn techniques of the age-old art of traditional weaving.

All materials supplied (wool and straw).

Culture on the Move – traditional weaving workshops

Saturday 20 April

10.00 am – 1.00 pm

Celia Rosser Room, Banksia

Centre

Suitable for 15+ years. \$150

Book on ANBG website

Join Ronnie Jordan, a Kalkadoon Pitta Pitta woman, who will share her traditional ecological knowledge with you. Ronnie is a qualified professional weaver and artist and has delivered weaving and art workshops. These workshops are a hands-on experience empowering participants with a sense of connection and the opportunity to learn to connect to the oldest living culture in the world.

All materials included (raffia and natural fibres).

Thursday Talks

April to August 2024

One hour talks are held at 12.30 pm every Thursday from February to November in the Gardens' Theatrette. 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 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 Thursday Talks are available from the ANBG library. Please direct queries to talks@friendsanbg.org.au

April

4 April

Andrew Skeoch
Deep listening to nature

Andrew, naturalist, recorder and author, will guide us into hearing the languages of nature, and hearing the environment in a new way.

11 April

Cormac Farrell
City living for pollinators

Join Cormac, an urban beekeeper and environmental scientist, on a journey covering food, urban gardens and the return of bees to Parliament House.

18 April

Emeritus Professor Dave Rowell
A whirlwind tour of Brachychiton: Kurrajongs, Flame Trees, Queensland Bottle Trees and their relatives

In this talk Dave, from ANU will describe the origins and diversity of *Brachychiton* group and focus on some of the particularly interesting and iconic species.

25 April

See details on the Friends of ANBG website.

May

2 May

Rachael Dawes, Carma Sweet, Sam Ning and Jo Wallner
Canberra's trees: the plans, the problems, and the progress

Rachael, Carma, Sam and Jo from ACT Government, will present the background, objectives and implementation of these documents and the progress made in keeping Canberra's monikers of the Bush and Garden City Capital.

9 May

Dr Gemma Hoyle
Can we bank the cloud forests? Conservation and ecology of threatened species endemic to tropical mountaintops in Far North Queensland

Gemma, from the National Seed Bank at ANBG, will describe synthesising current seed science knowledge, seed collection, storage behaviour and germination and will it enable ex situ conservation in Australia's cloud forest flora?



Dr Gemma Hoyle investigating the effects of light on cloud forest flora.



The Southern Tablelands Regional Botanic Garden, Forest 20 at the National Arboretum Canberra.

David Shorthouse

16 May

David Shorthouse
STEP by STEP: 15 years for Forest 20

David, a STEPer volunteer, will trace the story, with its ups and downs, of Forest 20 at the National Arboretum Canberra and outline the strategy for the next 10 years.

23 May

Dr Tobias Hayashi
The sexual chemistry of greenhood orchids

Tobias will talk about research from his PhD on pollination in greenhood (*Pterostylis*) orchids. Greenhood orchids attract their male fungus gnat pollinators by mimicking the sex pheromones of the female fungus gnats.

Provided

30 May

Graham Fifield

Can I get paid to plant trees?

Graham, from Greening Australia, will talk about the emerging opportunities for landholders and examples of how the carbon market can fund native vegetation restoration and conservation projects

June

6 June

Dr Roger Farrow

Four years on from the 2020 mega-fires. The course of recovery of the vegetation in Morton and Tallaganda National Parks

Four years on a complex pattern of succession is already apparent in two different plant communities, namely, heathland in Morton NP and forest in Tallaganda NP and will be illustrated in Roger's talk. Roger is an un-retired entomologist, formerly of CSIRO.

13 June

Christina Gee

Quolls on tour – detecting trait differences between reintroduced and dispersing eastern quoll populations

Christina, a Masters student at Fenner School of Environment and Society, will describe her exploration of how the 'quolls on tour' differ behaviourally and morphologically from those who still live in Mulligans Flat, and how we can use this knowledge to manage the metapopulations of eastern quolls and other species.



Provided



J Walsh

Professor Lindenmayer on a forest field trip.

20 June

Professor David Lindenmayer AO

The Forest Wars – debunking myths around native forest logging

David, from Fenner School of Environment and Society, will base his talk on his new book, *The Forest Wars*, and include a number of anecdotes from his experiences in dealing with Ministers and other officials over the past four decades.

David will be happy to sign copies of this new book after his talk.

27 June

Emeritus Professor Jim Hone

Birds of Namadgi National Park

Jim, from University of Canberra, will describe a surprising aspect of patterns of smaller birds and larger birds observed at seven sites over 16 years, along with links of birds and vertebrate pest control in Namadgi to recommend that monitoring of the birds in Namadgi be part of on-going park management.



Provided

Left: Christina Gee with an eastern quoll. Above: Emeritus Professor Jim Hone.



Provided

Dr Valerie Caron with dung beetles for the latest program.

July

4 July

Professor Steve Webb
Empty deserts: megafauna demography and extinction

Did mankind kill megafauna, or was it four great Ice Ages that caused Australia's megafauna extinction? In this talk Steve, Adjunct Professor of Australian Studies at Bond University, will outline the biogeography and general disposition of the megafauna and their predisposition leading to their extinction as he views it.

View Steve's book *Corridors to Extinction*.

Steve will lead a walk among the megafauna after the talk.

11 July

Dr Valerie Caron
Dung beetles

Valerie, from Health and Biosecurity, CSIRO, will talk about the wonderful world of dung beetles and the latest importation program.

18 July

See details on the Friends of ANBG website.

25 July

Dr Nicki Taws
Native grassland restoration

Nicki, Program Manager with Greening Australia, will present some of the grassland restoration work that has been undertaken in the ACT region over the past 10 years, sometimes with drastic measures that were required to give native plants the competitive edge.



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