

CALEYI



NORTHERN BEACHES GROUP austplants.com.au/northern-beaches

January/February 2024

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APS Northern Beaches Group acknowledges the Traditional Owners of the land on which our activities take place. We pay our respects to Elders past, present and emerging, and recognise the continuing connection to lands, waters and communities.

APS Northern Beaches Meeting Thursday February 1, 2024 at Stony Range Regional Botanic Garden, Dee Why.

7.15 pm Lesser plant family Sapindaceae – Conny
7.30 pm Presentation: Julie Leal will give an entertaining and informative talk on native bees and exotic honeybees.

Julie Leal from **Beaches Bee** loves bees. About 7 years ago, she decided to take her passion to another level and became a beekeeper. With her mentor, she established the **Northern Beaches Bee Association** and now started **Beaches Bees**, selling beautiful honey, teaching beekeeping to students and running workshops locally. She is involved with the **When Bee** group whose role is to educate on the importance of bees and providing habitat.

Supper - Georgine & Jane

APS Northern Beaches visit Sydney Royal Botanic Garden Wednesday February 14, 2024.

Paul Nicholson will concentrate on "Australian Rainforests and rainforest plants" Full details page 2.

Please email stories, photos (as attachments please) etc for CaleyI to march@ozemail.com.au

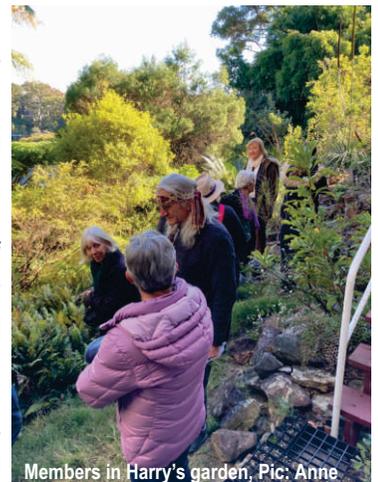
APS NORTHERN BEACHES GROUP 2023 REPORT

Conny Harris

2023 proved to be an active year again, even though the heatwave at its end stopped the much loved and enjoyed Christmas gathering.

Covid is now again also continuing to lurk around every corner so we will continue to have absences because of it. Anyway the average number of participants at outings was 12.3, which I believe is excellent and the flower festival at Stony Range was an extraordinary success. For APS NSW every branch has to fill in statistics and advise of two highlights. As I only participated in very few Anne kindly made that decision: the garden visit at Harry Loots and the bushwalk at the end of Ralston Ave.

Harry Loots garden in Cremorne was visited in June by 14 people. Harry's garden overlooks Middle Harbour and Primrose Park and already from the street shows its character by the presence of several tall *Xanthorrhoeas*. Many of the plants in the garden are indigenous, but some are also simply beautiful native plants. Another important aspect of this garden is the provision of habitat for native fauna, for which Harry's garden even featured on television I believe. I missed this visit and have to thank Lorna, the writer of this report, and all other report writers, photographers and Jane, our newsletter editor, for such good insightful reviews.



The bushwalk at the end of Ralston Avenue matched the picture book walks everyone hopes to experience. A perfect sunny late winter day, with all buds opening and a great variety of all early flowers on display. The colour palette included purple, white, cream, yellow, pink with *Boronia ledifolia*, *Phebalium squamulosum*, *Kunzea capitata*, *Conospermum longifolium* and *Hibbertia cistiflora*

and more from others. 19 people attended, including my granddaughter and the length was just perfect to see the wonderful flower display as well as getting a good idea about the landscape, which drops off into continuous bushland valleys towards Garigal National Park and St Ives. Different vegetation communities were displayed at the eastern and western aspects

of the path, but that may reflect more than just the direction. The walk was followed by lunch at the local hotel allowing for plant discussions and plant ID to be resolved whilst restoring our energy.

For me, our own brief presentations of a lesser family are still a most treasured part of our monthly evening sessions. Other presentations are also delightful, but my wish to learn about our local flora is getting fed with what we produce within our group and that is pretty satisfying! I also loved the 'Huntsman spiders' talk by Helen Smith and enjoyed/ admired others but that is like icing on the cake after our lesser family talk. So I do really like to thank those of you, who did a lesser family presentation and encourage all others to do one as well. It is only meant to be a 5 min presentation and someone else could be there for a back up if you wish.

Least and last a big thank you to all in the group, the more active the bigger my thanks, as it made my job very easy, as was needed with the horrid and ongoing Lizard Rock Development proposal.

GUIDED WALK SYDNEY BOTANIC GARDENS WEDNESDAY 14TH FEBRUARY 10 .30AM

Anne Gray



Paul Nicholson will lead a walk in the Royal Botanic Gardens on Wednesday 14th February at 10.30 am. The theme this year will be "Australian Rainforests and rainforest plants".

His talk will include information about Australian Rainforest seed conservancy, history of the Big Scrub and efforts to restore it via plants in the Australian Garden and we will also be shown heritage plantings in the garden.

The Big Scrub was once the largest expanse of subtropical rainforest in Australia. It covered 75,000ha in the hinterland of Byron Bay until cleared by European settlers. Today only 1% of the rainforest remains.

He also plans to talk about the Sunda-Sahul Exchange. This is the exchange of flora between these two Pleistocene era continents when the sea level was 150m lower than it is today.

Sahul was made up of the land masses of Australia, Tasmania and New Guinea and the land bridges that connected them.

Sunda consisted of many of the present day islands of Indonesia which were joined to the South East Asian mainland.

Paul is a very entertaining and informative speaker. This is an event not to be missed. Anne Gray will email more details closer to the event.

Registration is required for this event. Attendance fee \$14 can be paid on the day. Anne Gray annepsgray@optushome.com.au

MEMBER PROFILE - LORNA SCOTT

Lorna Scott January 8, 2024.



Lorna in the Singapore orchid garden.

I grew up in North Balgowlah on the edge of the bushland around Manly Dam. As kids we always played in the bush, and my father took us for walks along tracks on the way to swimming in the reservoir. We often saw flannel flowers, waratah and blossoming boronias and croweas along the tracks.

There were summer bush fires and my family would assist the RFS in fighting them at the end of our street. I was aware that it was a fragile environment that could easily be destroyed.

I trained as a doctor and during my life as a GP I studied for a diploma in herbal medicine and knew the therapeutic uses of many plants, only a few of which were native species unfortunately.

I made a native garden in Balgowlah in the 1990s and became very interested and loved native plant species. Then I lived on Scotland Island which was the remnants of a spotted gum forest. Much of the island was overrun with lantana which I found very distressing, ugly and hard to keep at bay. I made a native garden there and enjoyed the birds and wildlife.

At present I live in North Narrabeen on a steep block with huge outcrops of sandstone boulders. I have gardened there for over 20 years with the help of some landscapers who built sandstone stairs, stone terracing and wooden decks on various levels to take in the views toward Narrabeen beach.



I have planted mainly native plants, but not solely and quite enjoy my little

front garden which is shaded by a frangipani and has some charming azaleas. Most of the block is loosely hedged by *Syzygium cascade* and I love the fluffy flowers, red berries which the birds and ringtail possums enjoy, and then the lovely red leaf new growth.



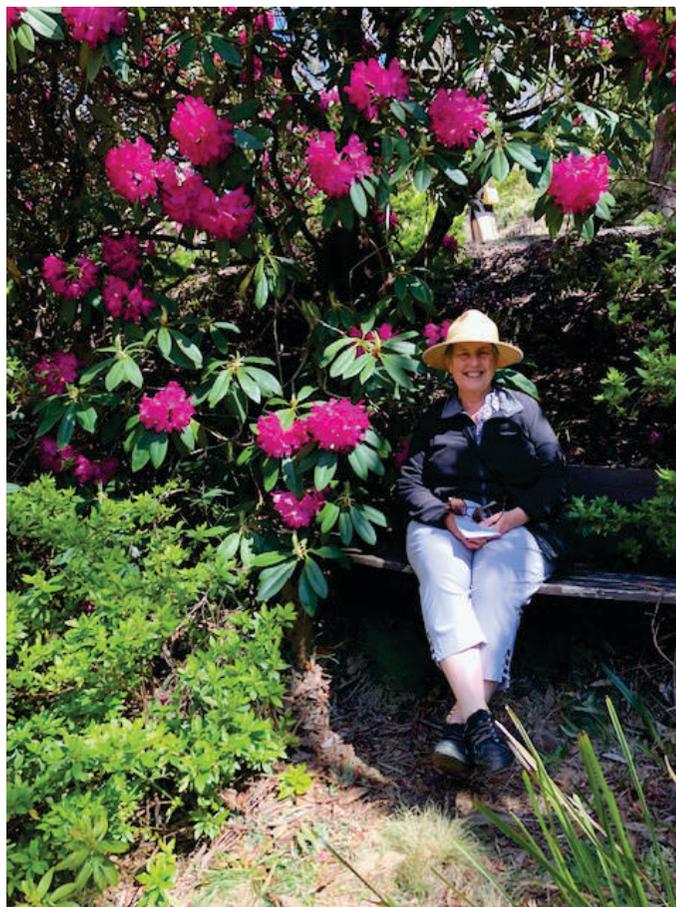
The top level of my block has a gigantic fig tree and *Angophora costata*. They are magnificent and in their shade I have planted many birds' nest ferns and native grasses which look very wonderful against the rocky backdrop.

From exploring the bush around Elanora Heights I realised that *Xanthorrhoea* would grow well and also *Philothea* and I have a number of both. My favourite plant is *Philothea myoporoides* because of its charming alteration from pink buds to white starry flowers. The soil is very sandy and well drained and I have had to enrich it a lot with compost and mulch.



Recently I have been planting native rock orchids and small banksias in a sunny terrace bed. I love the idea of garden design to make a lovely place to sit, feel the breeze, have a cup of tea and interact with plants and animals. I am not trying to re-create native bushland. I have never studied botany or horticulture but read many books on garden design.

My children were not very interested in gardening and were bored when I suggested nursery visits. But now as adults they love to come and sit in the beautiful quiet garden and feel relaxed. My grandchildren love to see the butterflies and lizards.



Lorna visiting Blackheath rhododendron garden.

JANE'S CORNER



Leader of the 2024 Hoya pruning squad. Common Crow butterfly caterpillar. JM.

PAUL NICHOLSON ONLINE VIDEOS

David Drage alerts us that Paul Nicholson issues information for the guides at RBG in Sydney and he includes links to short (2 - 4 mins) videos that he produces. They are usually of bush or forest in the Northern Beaches area which is his home ground.

Below are the links to two of these videos which you may like to view.

<https://youtu.be/gHPBO6iUHgI> North Head in October

<https://youtu.be/JBdbZZI584> Duffy's Forest and West Head part 2



First online photograph of *Wurmbea dilatata*, found on west coast of WA. Thomas Mesaglio,

THOUSANDS OF OUR NATIVE PLANTS HAVE NO PUBLIC PHOTOGRAPHS AVAILABLE. HERE'S WHY THAT MATTERS

The Conversation March 14, 2023 Thomas Mesaglio, PhD candidate, UNSW Sydney; Hervé Sauquet, Senior Research Scientist, RBG Sydney and Adj. Associate Professor, UNSW Sydney; Will Cornwell, Associate Professor in Ecology and Evolution, UNSW Sydney

For hundreds of years, botanists have collected plants to describe species and keep in herbaria across the world. But while physical plant specimens are irreplaceable, photographs of plants are also an invaluable resource for botanical research, conservation and education.

Photographs of plants capture information that can be lost from dead, dried plants, such as flower colour. They also provide ecological context and form the cornerstone of many field guides and education resources.



Photographs are valuable for providing extra information, such as habitat and other species growing nearby. Peter Crowcroft

All plant species known to science have samples preserved in at least one herbarium. Under the scientific rules for naming species, a species is not recognised unless there is at least one specimen officially stored in a collection somewhere in the world.

Unfortunately, and perhaps surprisingly, many plants have never been photographed in the field. Just 53% of the 125,000 known plant species in the Americas have field photographs in major online databases.

Given almost 40% of the world's plant species are threatened with extinction, there's a strong impetus to photograph as many of these as possible before they disappear forever. Without photographs of these species in the field, many could go extinct without us even realising.

How does Australia compare?

We were interested in how the Australian flora stacks up, so in our research, published today, we surveyed 33 major online databases. Most

of these were resources created and maintained by professional botanists, such as New South Wales' state herbarium portal PlantNET, but we also included some citizen science platforms such as iNaturalist.

Out of roughly 21,000 native Australian vascular plant species, a surprisingly large 3,715 (or 18%) did not have a single field photograph we could track down across our surveyed databases.

While most species across the southeastern states are well-photographed, Western Australia is the great frontier for unphotographed plants: 52% of all unphotographed species can be found in WA. The most incomplete plant family was *Poaceae*, the grasses, with 343 unphotographed species.

We identified three major "hotspots" for unphotographed Australian plants:

- northern Australia, from the Kimberley to Arnhem Land
- Queensland's Wet Tropics World Heritage Area
- Stirling Range and Fitzgerald River National Park in southwestern WA.

All three regions are characterised by remote environments that are often difficult to access.



Western Australia's Stirling Range, one of the major hotspots in Australia for unphotographed plant species. Thomas Mesaglio

Just as some animals receive less research and conservation attention than others because they aren't as charismatic, there is also a similar charisma deficit for some types of plants. Many groups of Australian shrubs or trees with spectacular floral displays have comprehensive, or even complete, photographic records. For example, all 176 of Australia's *Banksia* species have been photographed.



The charismatic and well-photographed *Banksia robur* from NSW and Queensland. Greg Tasney

Conversely, small herbs, plants with tiny or dull flowers, or groups such as grasses or sedges tend to miss out on being photographed – some of them for a very long time indeed. *Schoenus lanatus*, for example, is a

small sedge that grows across a vast stretch of coastal WA, from Perth all the way to the South Australian border. It was described in 1805 yet, more than two centuries later, it is still unphotographed in the field!

Although botanists and taxonomists take many photographs of plants, citizen scientists also have a crucial role to play in the documentation of our native flora, with organisations such as Desert Discovery at the forefront. During last year's expedition to Yeo Lake Nature Reserve at the remote western edge of the Great Victoria Desert, the Desert Discovery team photographed hundreds of native plants, including five species on our unphotographed list.

One example is the daisy bush *Olearia eremaea*, which is only found in WA's arid interior. First described in 1990 and illustrated with black-and-white line drawings, it was not until more than 30 years later that this species was first photographed, at Yeo Lake, a remote nature reserve roughly 200km northeast of Laverton.



The first identified field photographs of *Olearia eremaea*, taken during the Desert Discovery expedition to Yeo Lake, Western Australia in 2022. Thomas Mesaglio

Of course, some of the species on our unphotographed list have in fact been photographed, but the images are not available in any of the 33 major databases we surveyed. These photographs may be slides in someone's desk drawer or hard drive somewhere, appear in possibly out-of-print field guides and books, be behind paywalls in the scientific literature, or are not currently identified due to a lack of other comparison photos. This lack of discoverability is a problem, because these photos are very unlikely to be found by someone in the field trying to identify the species.

We have produced a searchable list of Australian native plants lacking photographs. We hope this work stimulates both professional and citizen scientists to track down these species and add photographs to public, discoverable repositories such as iNaturalist.

But be warned: these aren't easy treasure hunts. These species are a mix of very remote and often overlooked species – they are typically not famous or eye-catching. Finding them will take determination, botanical know-how, and a sturdy off-road vehicle.

But the pay-off would be well worth it – successful pictures would make their way into identification guides, allowing both citizen and professional scientists to identify, monitor and conserve these species into the future.

NATIVE RASPBERRIES, LIMES AND GERANIUMS: HOW DID THESE CURIOUS PLANTS END UP IN AUSTRALIA?

The Conversation: June 2, 2023 Gregory Moore, Senior Research Associate, School of Ecosystem and Forest Sciences, The University of Melbourne

While plants can't walk, they can certainly travel. Some species have travelled vast distances over millennia, moving by different and varied modes. Some found new habitats when the continent they were riding on slowly crashed into another. Others went on perilous ocean going



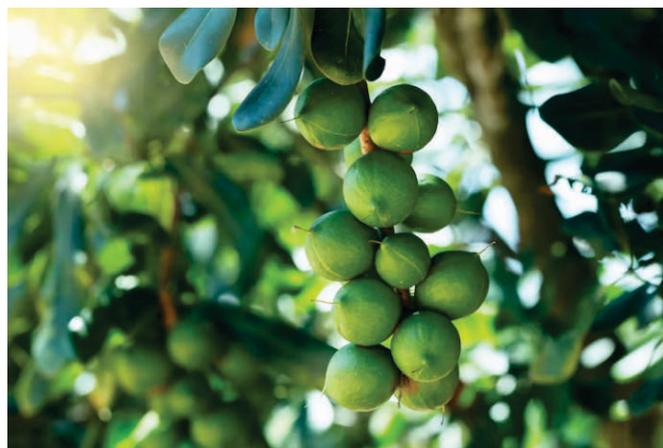
journeys – think of coconuts washing up on new island shores. Others still have been carried as seeds by birds or other animals – including us.

Many have now become local, endemic to their region of Australia. Some may surprise you.

Native nuts – how macadamia trees began.

Early in the age of jet aeroplanes, flying to America meant a stop-over in Hawaii to refuel. Here, many Australians tasted macadamia nuts for the first time and probably assumed they were a local delicacy. Imagine their surprise at discovering the truth. Hawaii's macadamia industry began when a few nuts were sent from Australia in the 1880s.

Of course, this was not news to Australia's First Nations people, many of whom had enjoyed macadamia nuts for millennia.



Macadamia nuts first gained notice in Hawaii – but they're Australian as can be. Shutterstock

There are four species of Macadamia, of which two are the most important nut producers, namely *Macadamia integrifolia* and *M. tetraphylla*. All species belong to the Proteaceae family, meaning they are related to banksias, grevilleas and proteas.

This family connection reveals the genus has a long evolutionary history, dating back about 100 million years. Macadamias travelled with the continent of Australia as it split off from Antarctica and South America.

In their natural habitat across northern New South Wales and southern Queensland, these subtropical trees can reach heights of 25 metres. But even though they are now widely farmed, they're actually threatened in the wild – and may be further threatened by climate change.

Oranges, lemons – and native citrus?

Many of us are fond of tart and tasty citrus – oranges from southern China, lemons probably from northern India. All the world's citrus trees stem from an ancestor species which grew in the foothills of the Himalayas, according to DNA evidence. Over time, these trees spread out and new species split off. Eventually, about 8–10 million years ago, they arrived in Australia.

The most well known is the finger lime, *C. australasica*, with tiny globes spilling out of the fruit like citrus caviar. But there are others, like the Australian lime, *Citrus australis* and the desert lime *C. glauca*. Like many citrus, they can be prickly customers with long painful spines. While most are shrubs and small trees, the Australian lime can reach heights of 20 metres.

Native raspberries

In recent years, the native raspberry, *Rubus probus*, has achieved celebrity status as a prickly, quick growing bramble with a good fruit. But like its relative, the blackberry, *Rubus fruticosus*, you have to work hard to get fruit and rarely come away unscathed. That's why it was big news when a thornless specimen was found and propagated. This will make a big difference to the cultivation of our native raspberry.



Our native raspberry is becoming popular. Shutterstock

So how did Australia come to have raspberries? It seems likely their ancestors migrated from North America towards Europe and Asia between 10 and 15 million years ago and eventually made it to Oceania.

Exactly how the genus *Rubus* made it to Australia is unknown, but the most likely pathway is a few seeds stuck to the feathers of a migrating bird. It could have happened as recently as a few hundred thousand years ago.

Native geraniums? It's true

I associate geraniums with my maternal grandmother, who had the most magnificent red geraniums along her back fence. Family folklore had it they were cuttings from a prize winner at a major horticultural exhibition – and I believe it.

While we associate garden geraniums with Europe, they're actually African and only arrived in Europe in the 17th century. But while we all know these geraniums, Australia has its own species. That fact still amazes me after decades of studying plants.

But first, let's clear up the debate over names. In the 17th century, geraniums and closely-related pelargoniums were grouped together in a single genus. But early in the 18th century, Charles LeHeritier – the botanist who first described eucalypts – divided them and there has been confusion ever since.

The easiest way of telling them apart is that geraniums have five petals of the same size and shape but pelargoniums have two larger petals and three smaller ones.

Most of the Australian native plants commonly called geraniums are in fact pelargoniums. You may have stumbled across *Pelargonium australe*, the most common of our seven species, which is spread across much of southern Australia.



Native geranium? The *Pelargonium australe* is the native plant most commonly thought of as a geranium. Wikimedia, CC BY

Native orchids: from flying ducks to the Queen of Sheba

There's something about orchids. In the 19th century, so many Europeans went mad for their flowers that the name "orchidelirium" was coined.

We have some of the most iconic orchids as natives, such as the remarkable flying duck orchid and the stunning Queen of Sheba. Our 1800 species mostly grow in our tropical and subtropical areas.



Australia's flying duck orchid (*Caleana major*) is world-famous for its resemblance. Shutterstock

Some orchids can be traced back to the last years of Gondwana. But curiously, we also have tropical species which must have island hopped from Papua New Guinea and Indonesia more recently.

That's only the start of our surprising plants. We have native tamarinds, native rivermint, and a native rhododendron.

And did you know that cloves come from an Indonesian species of lilly pilly? This species is related to Australian lilly pillies, a genus which evolved as the final fragmentation of Gondwana occurred about 65 million years ago. They rapidly diversified and there are now over 1000 species.

Plants move slowly. But they move much more than you'd expect. Their success has enriched the biodiversity and novelty of our ecosystems in surprising ways. As for me, I love an Australian macadamia nut – and I'll always love those imported red geraniums.

ANPSA BIENNIAL CONFERENCE 'GARDENS FOR LIFE' VICTORIA

30 September - 4 October 2024



A CHANGE OF VENUE

ANPSA 2024 Biennial Conference Melbourne

We have changed our venue for the ANPSA 2024 Conference from the Melbourne Convention and Exhibition Centre (MCEC), Docklands, Melbourne CBD to The Round in Nunawading, Melbourne.

The Round is a Performing arts and cultural centre in Nunawading, 379 - 399 Whitehorse Rd, Nunawading Victoria 3131. Nunawading is a suburb of Melbourne, 18km east of the CBD.

Website: <https://www.theround.com.au/> Phone: (03) 9262 6555.

The Round, a beautiful venue set in extensive parkland was a stand-out, it ticked all the boxes. It was built, a \$78 million project undertaken by the City of Whitehorse, over the last few years and opened in October 2023. It wasn't in existence when we were first selecting a venue. It has many versatile spaces eminently suitable for presentations, several airy light-filled spaces for our social gatherings in addition to outdoor spaces for relaxing with heaps of car-parking.

Transport

This venue is equidistant from two well-serviced metropolitan railway stations of Nunawading and Mitcham. Both a 15 minute walk to The Round. There is also an extensive network of buses into the area. It is a few kilometers south of exits from the M3 freeway.

Accommodation

There is a large choice of reasonably priced accommodation available to attendees.

From many AirBnBs to Hotel/Motels such as:

- Nunawading Motor Inn (3 Star, \$128-)
- Canterbury International Hotel (4 Star \$122)
- Beau Monde International (4 Star, \$104)
- Burvale Hotel (3 Star, \$111-)
- Quality Hotel Manor (4 star, \$116)
- Ringwood Lake Inn (4 star \$121),
- Sage Hotel Melbourne Ringwood (4.5 stars, \$152)
- The Sebel Melbourne Ringwood (5 star \$216)
- Best Western, Box Hill (\$119)
- City Edge Box Hill Apartments (\$204)
- and many more not listed

There is also a selection of Caravan Parks available. All these caravan parks have powered sites and onsite cabins:

- Crystal Brook Tourist Park is an easy 15 minute drive to The Round. The entry is surrounded by eucalypts and it has a heated outdoor swimming pool. There are several bush parks nearby. Fees weren't available but contact through <https://www.crystalbrooktp.com.au> Ph: 03 8877 1601. Address: 182 Heidelberg-Warrandyte Road, Doncaster East 3109.
- Lilydale Pine Hill Caravan Park is half an hour from The Round, easily accessed using the Maroondah Highway. They have quoted a rate of \$50 per night for a powered site and they can move caravans for storage off site at \$5 per night for people taking tours.

Visit: www.lilydalepinehill.com.au



The Round. To see more on the new venue <https://youtu.be/ZMyW380IU1k>

- Sundowner Caravan and Cabin Park, half an hour from The Round, either paying tolls on Eastlink or tackling several traffic lights. The park has space but 85% are permanent. Cost is \$34 per night, 7th night free. Visit www.sundownercp.com Email: sundowner@bigfoot.com.au Ph: 03 9546 9587. Address: 870 Princes Highway, Springvale 3171.

Please note that prices listed above are current and may have changed when booking. ASN Events is also looking into a package deal from a couple of nearby hotels. These will be released as soon as we have the details.

Important Dates

After recent meetings with ASN Events we have the following key dates:

- December, 2023 - ANPSA 2024 Biennial Conference Website,
- **Mid February 2024 - Early bird registration for the ANPSA 2024 Biennial Conference. The conference itself will cost \$650 or \$585 early bird registration for the 5 days including 3 days of lectures and 2 days of excursions.**
- Mid February 2024 - Early bird booking/s for pre and post Conference Tours. **Tour fees will be announced later. Pre conference tours 23-28 September. Post conference tours 5-10 October.**
- 1 July 2024 - closing of early bird registration for the ANPSA 2024 Biennial Conference. (Bookings will still be taken but at full regular price)
- 31 July 2024 - closing of bookings for pre and post tours.

Conference Tours

The Spring 2023 edition of Australian Plants is the 'ANPSA Conference 2024 Tour Edition'. The electronic pdf will be shared in our next Conference newsletter.

We look forward to seeing you there and invite you to register your interest through the website <https://apsvic.org.au/anpsa-biennial-conference-2024/>

Miriam Ford Convenor Nicky Zanen Co-Convenor

ANPSA 2024 Biennial Conference

Email: lilydalepinehill@bigpond.com

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TO REGISTER YOUR INTEREST

Contact Details

Email: anpsaconference@apsvic.org.au

<https://apsvic.org.au/anpsa-biennial-conference-2024>