



Australian Plants Society Northern Beaches
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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.

CALENDAR

Thursday March 3, 2022 APS Northern Beaches meeting at Stony Range Regional Botanic Garden.

7.15 pm Lesser Plant family Laminaceae - Penny Hunstead

7.30 pm presentation Bill Dobson 'Native Orchids of the Northern Beaches'.

Saturday March 12, 2022 - APS NSW Quarterly hosted by **Menai Group** at **Illawong** . **Chris Gambian** from the **Nature Conservation Council** on '*how we can influence the conservation of native plants*'...Details p.7.

Wednesday March 30, 2022 - APS Northern Beaches visit **Royal Botanic Gardens Sydney**.

If you have any photographs, articles, links or suggestions for Caley please feel free to send to me Jane March march@ozemail.com.au 0407 220 380.

VISIT TO AUSTRALIAN MUSEUM PALAEOLOGY DEPARTMENT 16 FEBRUARY

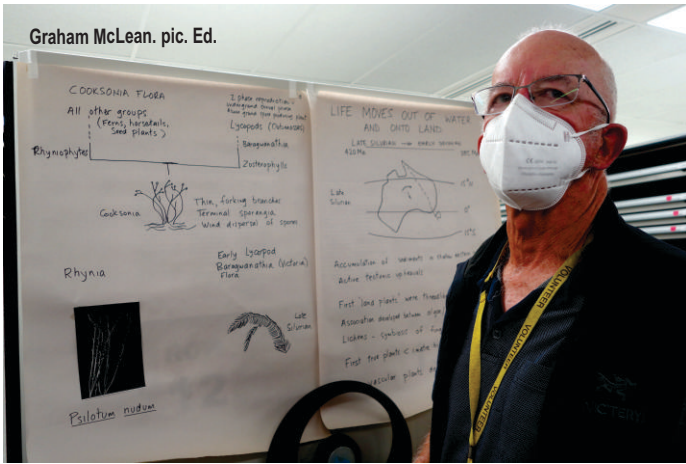
Russell Beardmore

Anne arranged the visit through her friend Graham McLean, a very experienced volunteer in the Department. Graham met the group (13) and first conducted us through the Museum's security checks. Once all signed in,



he took us through the doors into the magical world of fossils, all 165,000 of them - mind boggling! Along a central corridor, flanked by rows of large compactus units that house the specimens, Graham had arranged illustrated sheets of butchers' paper to support his talk. Much of his presentation was based on the book by Mary White, "The Greening of Gondwana".





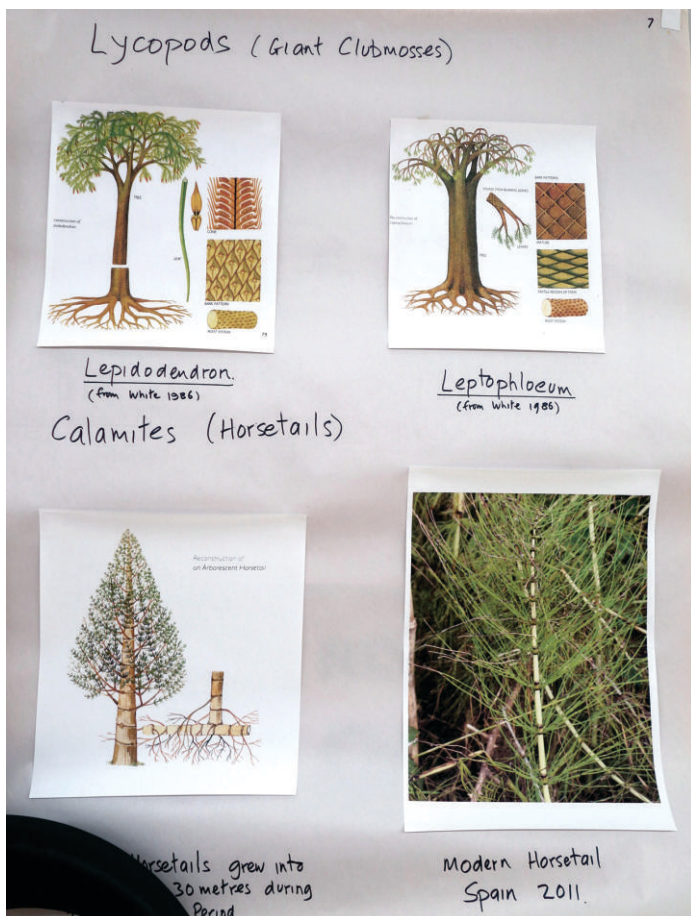
layers of fine silt and formed today's coal deposits. The first flowering plants appeared about 145ma, a blink of an eye on geological time scales.

Since splitting from Gondwana, Australia's flora has evolved in line with changes in world climate patterns, sea level variation and so on. At the peak of the last ice age, around 12,000 years ago, sea levels were around 120 meters lower than they are today. In wet times, the continent has been covered in vast areas of rain forest only to revert to tracts of desert and dry forests with the flora adapting to survive.



The story of the evolution of Australia's unique flora is complex, to say the least, with multiple influences from the time of Earth's formation about 4.6 billion years ago. These include changes in climate, with great variation in sea levels and the effects of continental drift resulting from the phenomenon of plate tectonics. This continental drift has been occurring since early in the life of the planet, with land masses coming together and drifting apart many times. The land mass we now know as Gondwana was formed "only" about 160m years ago, when the supercontinent of Pangea split into Laurasia and Gondwana, the latter including Australia, Africa, India and South America. Gondwana itself split apart bit by bit with Australia parting ways with Antarctica about 40m years ago. Since then, Australia's flora has been evolving with no "outside" influences.

The first life on earth was primitive bacteria, developing perhaps 3.8 billion years ago. Algae followed, but the first land plants did not appear until about 400m years ago. These were simple plants with asexual reproduction. Large tree-like plants took hold in the Carboniferous period, from about 360 to 290 ma. These plants were gradually buried under



The story of the evolution of our flora can be "read" from the fossil record. Graham showed us many fossils tracing the evolution of flora from early Lycopods and Glossopterids, Conifers, Ferns -and the Dicrodium flora from around 250ma and many of the flowering plants from around 140ma. It is hard to comprehend that these fossils formed while Gondwana was still a part of the supercontinent Pangea and long before Australia became an isolated continent dominated by flowering plants. Some of the plant families that we recognise today started to appear before the Gondwana breakup - Proteaceae, Casuarinaceae, Myrtaceae, Mimosaceae and over the past 40m years or so have developed into our familiar Australian flora. It is some story!!

At the end of Graham's wonderful presentation, I think we all felt a case of information overload. I know my head was spinning! We cleared our heads over lunch in the lovely Museum restaurant.

All in all, a fantastic outing - thank you Anne.



Russell Wait in his Eremophila garden. Rachael Fowler

‘TIME IS THEIR SECRET WEAPON’: THE HIDDEN GREY ARMY QUIETLY ADVANCING SPECIES DISCOVERY IN AUSTRALIA

theconversation.com February 8, 2022 Rachel Fowler, The University of Melbourne.

Each year, many new species of Australian plants, animals and fungi are discovered and described. It's detailed, time-consuming work, and much of it could not be done without the contribution of older Australians.

I'm an evolutionary botanist and I use DNA sequencing to better understand relationships between plant species – a field known as phylogenetics. My job involves collecting plant specimens in the furthest corners of Australia.

Time and again I'm helped by older, generally retired Australians with a passion for the plants I'm working on. In their own time and with their own resources, they take it upon themselves to explore and document a particular geographic area or group of plants.

Many have a professional scientific background, although not necessarily in the field they now contribute to. For these dedicated men and women, passion is their driver and time their secret weapon.

Without these older Australians, my research wouldn't be where it is today. So let me introduce you to a few of them.

Bevan Buirchell, Ron Dadd and Russell Wait



Bevan Buirchell sorting Eremophila specimens. Pic: Bevan Buirchell

From opposite sides of the country – Bevan and Ron in Western Australia and Russell in Victoria – these three collectors discover, sample and grow extensive collections of emu bush (Eremophila).

More than 200 species of emu bush have been described, and many are rare, threatened or endangered. Emu bush is a culturally important plant for many Indigenous Australians, and recent research has revealed the genus contains many new chemical compounds of interest for medicinal use.

Each year, the trio spends weeks four-wheel driving in arid and remote parts of Australia where emu bush is thought to be found. When the men come across something interesting, they record scientific details and collect a cutting for propagation in their own or each other's gardens.

Between them, Bevan, Ron and Russell have collections of almost every described species of emu bush, and new species awaiting formal description. So far, Bevan has described 16 new species or subspecies.

In this way, their gardens are like living museums of species diversity. They're a great resource for the inclusion of species in phylogenetic research.



Ron Dadd helps advance knowledge of emu bush. Pic: Bevan Buirchell

Don Franklin

In the tablelands of Far North Queensland, retired ecologist Don Franklin spends his time expanding his knowledge of eucalypts.

A colleague put me in touch with Don when I was planning fieldwork to collect eucalypt species for my latest research project. Don was happy to help, assisting me with planning my collection route to ensure I sampled not just every species possible, but all the interesting variants he knows from different regions.

This on the ground experience is invaluable for my work, and impossible to gain from published literature alone.

Don is writing a comprehensive field study for eucalypt species spanning about 80,000 square kilometres. Over the past five years he's travelled every road in the area, marking species distributions, morphological variants and regions of hybrid zones.

Don was my guide and assistant for a few weeks of field work, and my understanding of this group of plants benefited immeasurably.



Don Franklin is a eucalypt expert. Robyn Wilson

Margaret Brookes

Margaret is a retired horticulturalist. For the past decade she's volunteered at the National Herbarium of Victoria and the University of Melbourne Herbarium, where she helps curate the collections.

Over this period, Margaret's work has included mounting thousands of new specimens submitted by researchers like me, and processing the backlog of old collections. Margaret has also transcribed historical field notes for plant collectors in decades and even centuries past.

Margaret's work makes these plant collections accessible to researchers and the general public all over the world.

Continual advances in genetic sequencing technology mean we can increasingly access DNA from older and older dried specimens. In this way, the work done by Margaret and other herbarium volunteers becomes even more essential in discovering and classifying new species.



Margaret Brookes has mounted thousands of new specimens. Pic: Joanne Birch

Combining forces with senior-citizen scientists

As an early career researcher I am bound by two to three year funding contracts. In that short time, samples must be collected and genetically sequenced, then analysed and the results interpreted.

And to come up with plausible hypotheses to understand species' relationships, my expertise must be broad. I've got to be good in the lab, proficient at analysis and across the latest literature.

To produce high-quality work in such tight time frames, I rely on the hidden "grey army" of older people such as those described above.

And while I can only speak from personal experience, I daresay many fields of natural science also benefit from a dedicated older generation quietly contributing to the body of scientific knowledge.

We must recognise the invaluable contributions made by older volunteer researchers. And if we're to have any chance of better understanding the estimated 70% of Australia's biodiversity unknown to science, their continued involvement is imperative.

For those interested in volunteering or citizen science projects, try contacting your nearest herbaria. You could also check out the Atlas of Living Australia's DigiVol volunteer portal or the Australian Citizen Science Association.



Cortinarius kula Mark Brundrett

THE ANCIENT, INTIMATE RELATIONSHIP BETWEEN TREES AND FUNGI, FROM FAIRY TOADSTOOLS TO TECHNICOLOUR MUSHROOMS (edited)

theconversation.com February 1, 2022 Gregory Moore, The University of Melbourne, Mark Brundrett, The University of Western Australia.

Environmental scientists see flora, fauna and phenomena the rest of us rarely do. In this series, we've invited them to share their unique photos from the field. You may be familiar with the red toadstool with white spots, which are often the homes of fairies in children's stories. These toadstools are also a small part of grander magical story: they are striking examples of mycorrhizas.

Mycorrhizas (pronounced my-cor-rye-zas) is the name for fungi associated with the root systems of many plants including trees, shrubs, groundcovers and grasses. These relationships are mutually symbiotic, which means both members benefit.

Fungi have a deeply ancient evolutionary origin, and colonised land with the first plants around 500 million years ago to form these partnerships. We humans often underestimate their importance to the ecosystems that have shaped life on earth.

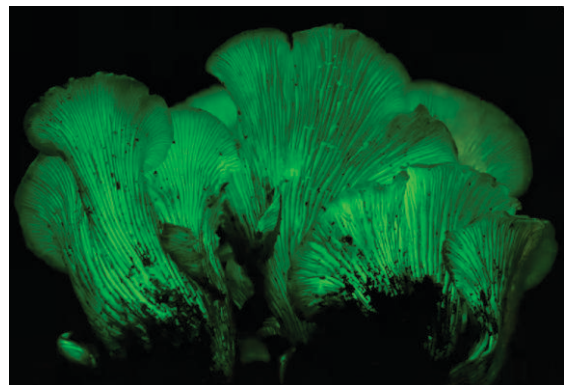
So let's take a closer look at how this relationship works and why it's so important for Australian ecosystems.

An intimate relationship

Fungi come in a beautiful diversity of shapes, sizes and colours. The following photos by my co-author Mark Brundrett are just a few examples of those growing in southwest Australia.

Mycorrhizas are not to be confused with fungi that decompose dead plant matter (saprophytes) or those that cause disease (pathogens).

Saprophytes are fungi that recycle nutrients, and these can also be large and impressive. They can create tree hollows, which provide shelter for nesting birds and other animals such as possums.



The bioluminescent ghost fungus growing on a tree stump. Mark Brundrett,

The primary role of mycorrhizas, on the other hand, is to provide resources such as phosphorus and nitrogen to flowering plants. They also effectively increase the absorptive surface area of the plant's root system, allowing plants to take up much-needed water and nutrients so they grow better and more quickly.

In return, the plants provide carbohydrates, a product of photosynthesis, which mycorrhizas require to grow.



The yellow navel fungus *Lichenomphalia chromacea* forms a protective crust on soils in association with lichen fungi and algae. Mark Brundrett,

There are five different types of mycorrhizas, and two of these are particularly important in Australian ecosystems. One type is called "ectomycorrhiza", where fungi wrap their hyphae (long, very fine hair-like structures that contact the soil) around the plant roots underground but don't penetrate the root cells.

The other, called "endomycorrhiza", is where fungi grow into the plant root, penetrating and branching within the root cells to form what look like little, microscopic trees. This is about as intimate a relationship between different types of organisms as you can get!

Mushrooms as big as dinner plates

We often become aware of the presence of mycorrhizas only when conditions for reproduction are right, and a mushroom or toadstool emerges from the ground. Such conditions may only occur every five to ten years. For some species, there may be centuries between reproductive events.

For many of us, our experience with mycorrhizal fungi begins in very early childhood when we first catch sight of those spotty red and white toadstools, called the fly agaric or *Amanita muscaria*. These fungi are often depicted in children's book illustrations, such as Little Red Riding Hood, Jack and the Beanstalk, and a number of Enid Blyton's tales. I recall conifers, such as pine trees, often growing nearby in the background of these pictures. This was no coincidence, *Amanita muscaria* forms mycorrhizal associations with many conifers.



The fame of *Amanita muscaria* also arises from hallucinogenic properties, but it is most likely to have toxic effects if eaten. Also used as a natural insect killer. Mark Brundrett,

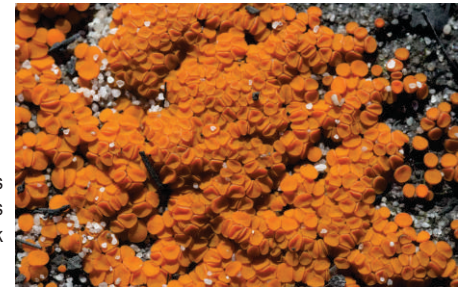
The mycorrhizal fungi associated with eucalypts can be less showy, with many being 75-100 millimetres across and a creamy, light tan in colour. They quite often pop up in home gardens, frequently in lawns, where they're very obvious and usually within 4 to 5 metres of a tree trunk.

Others are spectacular, including the bright purple, orange or green *Cortinarius* species. In fact, the beauty and diversity of our fungi now supports a new ecotourism industry in Australia, particularly in Tasmania.



Bright green mushroom *Cortinarius austroveneta* found in tall eucalypt forests. Mark Brundrett,

Some fungi are most impressive in the spring following bushfires, such as the abundant orange cup fungus that stabilises ash beds.



The orange cup fungus *Anthrocohya muelleri* is found briefly after fires. Mark Brundrett,

Indeed, most plants form mycorrhizal associations. Those that don't include plants from the common vegetable families brassicaceae (think broccoli, cauliflower, kale) and chenopodiaceae (spinach, beetroot, and quinoa). Neither do members of the proteaceae family, such as native banksias and grevilleas. These plants invest in very complex roots rather than fungal associations.



This is a species of *Ramaria*, a mycorrhizal genus comprising approximately 200 species of coral fungi. Mark Brundrett



Phlebopus marginatus is possibly Australia's largest terrestrial mushroom, with one found in Victoria weighing in at 29 kilograms. Mark Brundrett

Who's really in control?

Because we are so familiar with many of the plants in our environment, we are inclined to think it's them that control their relationship with mycorrhizal fungi. But it is possible mycorrhizal fungi exercise much more control. Or perhaps, the relationship is a perfect mutualistic symbiosis where partners share everything, including control, equally. We just don't know yet.

Members of the fungus kingdom work in synchrony with the plant kingdom to support all terrestrial life, including animals such as ourselves. We may not think about fungi very often, but we cannot survive without them. I sometimes wonder if the fate of the Earth's terrestrial ecosystems rests on mycorrhizal fungi. If so, perhaps we need to show them greater respect.

7 REASONS AUSTRALIA IS THE LUCKY COUNTRY WHEN IT COMES TO SNAKES

theconversation.com February 7, 2022 Christina N. Zdenek, The University of Queensland



Adugite (*Pseudonaja affinis*) Chris Hay

Australia has a global reputation as a land full of danger, where seemingly everything is out to kill you. Crocodiles lurk in estuaries, large spiders hide in bathrooms, and we share our suburbs with some of the world's most venomous snakes.

Snakes hold a particular fear and fascination for many people. The bite of an eastern brown snake can kill an adult in under an hour. And that's just one of more than 150 venomous snakes inhabiting the island continent across land and sea. Australian snakes are well and truly overrepresented out of the world's top 25 most venomous snakes.

Terrifying, right? Not quite. Australians are actually extremely lucky when it comes to snakes. Here are seven reasons why.

1) Our snakes bolt away from us

The best way to survive a snakebite is of course not to be bitten. Keeping your distance is the easiest way to avoid a bite.

But what if you're walking through the bush and don't see the snake? Luckily, most Australian snakes will rapidly slither away from us.

It could be much worse. Imagine if most of our snakes were like vipers or rattlesnakes, which hold their ground and can be easily trodden on. And imagine if our venomous snakes could sense our body heat, as pit vipers and rattlesnakes do with their heat-sensing pits. For Australians, simply staying still can keep you safe.

2) We have very few snakebite deaths

Compared to other countries with many snake species, Australia has orders of magnitude fewer snakebites and related deaths. South Africa has 476 snakebite deaths on average every year. By contrast, Australia has two or three.

3) If you do get bitten, you're very unlikely to lose a limb

Most snakebites in Australia are completely painless. This is in part due to the short fangs of our brown snakes (*Pseudonaja* spp.), who are responsible for most bites in Australia, but mainly because most Australian snakes have venom which works internally, rather than locally at the bite site. This means snakebites in Australia very rarely result in amputations.

By contrast, across sub-Saharan Africa it is sadly common, with almost 2400 amputations reported in Africa's most populous country, Nigeria, every year. Unfortunately, the people most at risk of snakebite are the ones least able to afford the high treatment costs.

4) We have great access to excellent antivenom and other treatments

For snakebites, antivenom is the only specific treatment. If you're unlucky enough to be bitten by a highly venomous snake, getting the antivenom as quickly as possible is vital. Luckily, antivenoms work quickly, and ours are high quality.

Antivenom is often produced from purified horse antibodies. It's well known antivenom can cause anaphylaxis, which occurs around 10% of the time in Australia. These reactions can be quickly reversed by adrenaline administered in a hospital.

By contrast, some other countries have alarmingly ineffective antivenoms as well as triggering anaphylaxis 57% of the time. You can get antivenom at 750 hospitals across Australia. For more remote regions, snakebite victims benefit from proven pressure-immobilisation which should be applied before the Royal Flying Doctors come to the rescue.

5) We have the world's only snake venom detection kits

Using the wrong antivenom can lead to the treatment failing. So how do doctors know which antivenom to administer? It's not via snake identification by the victim because, more often than not, Australians get it wrong.

In 1979, Australia became the first country in the world to have a commercial snake venom detection kit to make antivenom choice more accurate. Even now, we're the only ones with this option.

Every other country has to rely on more dangerous options. Either the victim brings the snake to hospital for a professional ID, or doctors have to rely on the patient's symptoms and location where they were bitten to take an educated guess as to which antivenom will work.

As you'd expect, this can be a challenge. Why? Because there can be a great deal of overlap of symptoms caused by venom from unrelated species. Plus, picking the species responsible can take years of experience treating snakebite which many doctors do not have.

In Australia, there's another option if the kit is unavailable: polyvalent antivenom, effective against all our most dangerous snakes.

6) Snakebites are covered by Medicare

Antivenom can be prohibitively expensive, costing thousands of dollars per dose. Our nearest neighbour, Papua New Guinea, is a snakebite hotspot. But many people simply do not have the money to pay for the antivenom. In some areas, taipans kill more people than malaria due to the cost of treatment.

In Australia, treatment for a bite may cost around AUD\$6,000, but this cost is covered by Medicare. In my lab, we're working to make snakebite treatment more affordable by testing next-generation snakebite treatments.

7) Snake venom is actually saving lives

To top it all off, snake venom is saving lives. There are six therapeutic drugs on the global market derived from snake venoms, with another two in clinical trials.

Our many venomous snake species hold in their venom glands a mini drug library, a cornucopia for scientists to trawl through looking for promising new therapeutic drugs. In fact, a toxin from the venom of eastern brown snakes (*P. textilis*) is being tested as a drug used to reverse life-threatening bleeding complications.

Rather than fearing our venomous snakes, let's try seeing them as they are. They pose little risk to us. They flee from us. Their bites can usually be cured quickly. Their venom holds therapeutic promise. And they play a vital role in keeping down the numbers of introduced rats and mice.

So let's take a moment to appreciate Australia's wealth of beautiful snakes.

GOLD COAST BOTANIST DISCOVERS NEW RAINFOREST TREE SPECIES 'MINUTES FROM THE M1'

ABC Gold Coast February 9, 2022 Tom Forbes, Nicole Dyer and Kirsten Webster



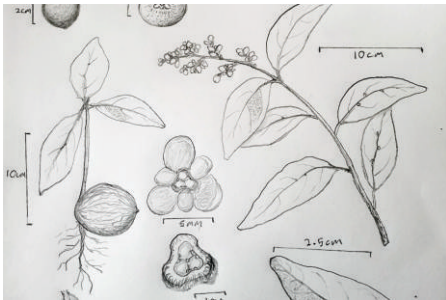
Lui Weber says the "corky" bark of the Wongawallan walnut caught his attention. (ABC Gold Coast: Tom Forbes)

When botanist Lui Weber visited his local physiotherapist for back treatment, he left with his head spinning after discovering a new rainforest tree species, the Wongawallan walnut (*Endiandra Wongawallanensis*), in his backyard.

"I was actually getting my physio from a guy who lives around here [Wongawallan]," he said. "In his backyard was a big tree with corky bark and it was very peculiar; the leaves were small, the bark was thick."

Mr Weber said the tree resembled the Crystal Creek walnut, which is an endangered species found in northern New South Wales. "It didn't seem the same as the Crystal Creek walnut, but it took years to find the actual flowers and fruit to find out that it was actually different," he said.

To get the species formally identified, the botanist had to describe the anatomy of the plant and what distinguished it from other species.



Botanists have to describe the anatomy of the newly discovered plant and how it differs from other species. (Supplied: Lui Weber)

"Then you have to formally publish it and name it in a taxonomic journal which is *Austrobaileya*, the Queensland Herbarium's journal," Mr Weber said.

Principal botanist at the Queensland Herbarium Paul Forster said the rainforests in south-east Queensland were relatively well explored, so the discovery was significant. "There's been a lot of effort over many years to discover all of the plants that occur there," he said. "The discovery of a new species in really close proximity to the Gold Coast, in the hinterland, after over 100 years of botanical exploration in that area is highly significant."

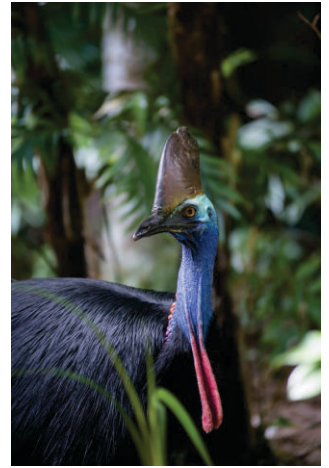
Mr Forster said between 10 and 20 new plant species were discovered in Queensland each year. "The majority of those are found in relatively remote and poorly explored parts of the state," he said. "Particularly on Cape York Peninsula, or the wet tropics in the north."

Dispersed by cassowaries

Cassowaries were thought to have dispersed the Wongawallan walnut seeds. (Supplied: Steven Nowakowski Panoscapes)

Mr Forster says the tree has a large fruit and there is a theory that its seeds were dispersed by now-extinct megafauna which disappeared in southern Queensland about 10,000 years ago.

Now cassowaries fill this role.



"There are number of species (walnut trees) that occur in both north Queensland and in southern Queensland," he said. "In north Queensland the fruit is consumed and moved around by cassowary and other species like giant white-tailed rats. "In southern Queensland nothing is moving them around and the species are very rare as a result."

Tree endangered

Gold Coast botanist David Jinks said the discovery of the endangered tree which can grow up to 27 metres in height was surprising and exciting.

"To find a tree species anywhere is significant, in this day and age, near a large population," he said. "To find it minutes from the M1 (Pacific Highway); no one would have expected that."

Mr Jinks knows the feeling of discovering a new tree species after he found the Springbrook leatherwood in the Gold Coast hinterland in 1993. The discovery never garnered much attention, because it coincided with the discovery of the 'iconic' Wollemi pine, west of Sydney, which attracted international attention.

The botanist is now helping to restore and rehabilitate a parcel of privately owned land at Mudgeeraba in the Gold Coast hinterland, which has a large stand of Wongawallan walnuts.

"It's part good bush and part cattle property," said David Jinks. "The owners [in the] long term are wanting to restore the property back to its natural state and they are lucky enough to have the world's largest population of that new tree on this property."



Botanists believe the large Wongawallan walnut seeds were dispersed by extinct megafauna. (Supplied: Lui Webber)

Mr Jinks estimates there are around 1,000 young and mature Wongawallan walnut trees in existence and they are all located on the Gold Coast.

"There's twice as many panda on the planet as there are these trees, so they really are very, very threatened," he said. "They can be grown and planted in appropriate places to help survive the population."

The botanist said it was important to properly manage the existing populations of Wongawallan walnuts.

APS NSW GATHERINGS

Saturday 12 March – Quarterly gathering hosted by Menai Group at Illawong with special guest Chris Gambian from the Nature Conservation Council on how we can influence the conservation of native plants. APS member Lloyd Hedges will talk about Menai's involvement in the black Cockatoo and Five Island projects.



When: 1 pm

Where: Illawong Rural Fire Station

\$5 entry for members, \$10 non-members

Other activities may include propagation/smoke practices, bushwalks, garden visits and plant sales.

Chris Gambian has been a trade unionist, community organiser and campaigner for over 20 years. He currently serves as Chief Executive of the Nature Conservation Council of NSW, an organisation that represents over 170 conservation organisations in NSW as an effective and powerful voice for nature.

Chris was the Labor candidate in the Federal seat of Banks in the 2016 and 2019 elections.

Chris is passionate about ensuring that our democracy lives up to its promise that every person can have a strong voice in the halls of power. Whether fighting to protect nature and for action on climate change, or for good jobs, a fair distribution of income and wealth, or just standing up to a bully, Chris says government should be about people.

Most of all Chris believes that we all do better when we back each other in: standing in solidarity with each other, and to lend a hand wherever we possibly can.

A regular on radio & TV and in newspapers, Chris is passionate about taking positive ideas far and wide in the community.

Chris was born and raised in the southern suburbs of Sydney after his parents arrived in the St George district from India in 1975. He is married, and has two young daughters.

Saturday 21 May – APS NSW Quarterly gathering and AGM hosted by Parramatta and Hills Group at Cherrybrook, with Peter Olde on Grevilleas for pots and small gardens.

APS NSW - Central West Trip

When: 1-4 April, 2022 ,

Where: Burrendong, Wellington, Dubbo, Narromine, Parkes

APS NSW is establishing an interest group in which we share and acquire greater knowledge and skills in how to support regeneration, revegetation, restoration of NSW natural landscapes, leading to greater resilience.

This trip will provide those attending the opportunity to acquire a greater understanding of native plants and habitat resilience and what individuals and collective groups can do to assist.

We have arranged to visit seven properties in the Central West; at Forest Reef near Milthorpe, Dubbo, Narromine and Toongi. Six of the owners are actively involved in restoring the natural revegetation, partially or completely on their properties. The property owners are enthusiastic to show and discuss with us what they have achieved in restoring their properties.

There is no charge for this trip. However, the cost of food, travel and accommodation will be at your own expense. You are required to register if you plan to join us. This is so we can let the property owners know how many people they can expect.



The ANPSA 2022 Biennial Conference dates are Saturday 10 September to Friday 16 September 2022 at the Kiama Pavilion.

The theme is Australian flora, past present and future.

We will explore the flora of thousands of years ago to the present day and the world of the future!

We are hosting tours pre- and/or post-conference to beautiful places in NSW, like the South Coast, Blue Mountains, Lord Howe Island, Warrumbungles/Pilliga and Sydney.

Schedule of activities

We kick off the conference on the Saturday 10 September, with:

A complimentary tour of the Kiama region, which is part of the package for people attending the whole conference. This includes lunch at Shoalhaven Heads winery lunch with visits to Berry School nursery and Bombo Headland

A market fair - a combined farmers market and native plant sale - on the Sunday

A cocktail event to welcome people on the Sunday night

Conference sessions and excursions from Monday to Friday - conference days are Monday, Tuesday and Thursday, and excursions on Wednesday and Friday.

Focus on solutions - future proofing

We hope at the end of the week, you'll:

Be amazed at the beautiful Illawarra plants and environment

Renew old friendships and make new ones

Be inspired by new ideas, new partnerships and new learning

Experience practical hands-on tips and techniques to grow native plants

Together, we can make a difference to the world of today and the one we hand to our children and grandchildren.