

CALEYI



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

November 2022

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

Saturday October 29. Set-up 9-12 am
Sunday October 30. 2022 Spring Festival.
9 am - 3 pm

Thursday November 3, 2022 APS Northern Beaches meeting at Stony Range Regional Botanic Garden, Dee Why.
7.15 pm Lesser plant family Haloragaceae - Eleanor
7.30 pm Presentation - Sean Granger, Coordinator Invasive Species at Northern Beaches Council.
WEEDS - new definitions and regulations.
Supper - Estelle & Penny.

Saturday November 19, 2022 APS Northern Beaches 10 am visit Pamela Dawes garden in Allambie Heights. Details by email later.

APS NSW Annual Gathering, Southern Highlands, NSW. 12 - 13 November 2022. see p. 6.

Many thanks to Russell Beardmore and Conny Harris for their great contributions to this edition.

Jane March march@ozemail.com.au 0407 220 380.



The Herbarium facility's functional and sustainable design is inspired by the Waratah New South Wales' floral emblem. Pic:ARCHITECTUS_FDC

VISIT TO NATIONAL HERBARIUM OF NSW, 12 OCTOBER 2022

Russell Beardmore

At our June meeting, Trevor Wilson was our guest speaker. As we were chatting over coffee after his talk, he made an informal invitation to visit the new Herbarium at Mt Annan. The visit on 12 October followed from this invitation.

After a little confusion as to the meeting point, ten members were met at the Herbarium by Trevor Wilson and Hannah McPherson, Collections Manager and a good friend of our APS group. We spent some time outside, marvelling at the impressive structure before us - six huge vaults made from rammed earth blocks, all under the protection of a massive curved metal roof. It was almost worth the visit just to see this wonderful building. Hannah ushered us through the big solid timber front door - everything about this place is on a grand scale - and explained that she would take us through the facility following the carefully designed workflow.



Checking the newly planted bed at the entry. Ed. Essentially, the function of the Herbarium is to receive specimens collected in the field, mount them and place them in one of the vaults for many years of safe storage.



Hannah explains sequences. Pics. Ed.



Animated discussion over archival materials.

We finished the tour in one of the vault entry areas, where we caught up again with Trevor Wilson who was preparing a detailed botanical description of a specimen.



The workflow starts with a receiving bay and from there the specimens are placed in drying chambers - the samples must be dry for storage - then to freezers to ensure that any wildlife is destroyed. One of the key design criteria for the entire facility was the prevention of bugs, especially the herbarium beetle, getting into the stored collection. In the old Sydney Botanic Gardens facility, bugs were steadily munching the specimens, despite the introduction of many different control measures. Small samples are taken from the specimens for a different freezing/drying process to minimise destruction of DNA. These samples go for DNA analysis in the on-site laboratories.

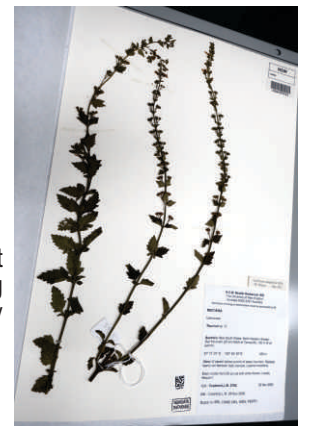
After freezing, the specimens are considered bug-free and safe to introduce into the "clean" zones - essentially the specimen mounting rooms where teams of volunteers - there are over forty on the rosters - carry out the painstaking work of mounting, labelling and cataloguing. We spoke to some of the volunteers, all of whom were passionate about their



work. As one said to me, "I love it". There are also rooms in the "clean" zone where specimens can be packed for sending to botanists anywhere in the world.



There we also met the celebrated Dr Barbara Briggs, long retired as a senior botanist with the Royal Botanic Gardens. She showed us a specimen collected in 1806, possibly earlier, that had been collected by George Caley, one of the great collectors in the early 19th century.



Trevor took us inside the adjacent vault where he had some interesting specimens to show us - all totally fascinating!

Once outside again, Hannah talked more about the symbolism of the building itself, explaining that it represents a Waratah flower with the arching roof the flower protecting the vaults, the seeds. She also explained that the architects placed great importance on positioning the building so as to give recognition to the fact that the site had once been an important meeting place for a number of local aboriginal clans.

We concluded the visit with an enjoyable lunch at the nearby Flower Power Café.

NB. Hannah has confirmed this valuable information :-

The head of the ID counter who we spoke to was Peter Jobson.



Peter had offered to provide ID on submitted photographs. The Botanical Info Service can be contacted on: botanical.is@botanicgardens.nsw.gov.au

DROSERACEAE

Report for the Lesser plant families at the October meeting by Conny Harris.

Only 4 genera belong to the *Droseraceae* family and in Australia we have only one Genus: *Drosera*, which includes 54 species. Of those 42 species are in WA.



In North America: Venus fly trap (genus: *Dionaea*). (Pic: RBG)

Drosera is carnivorous. The sticky liquid on leaves holds insects and the leaf rolls up to dissolve and digest them. Flowers are white and for *D. spatulata* occasionally pinkish.

Our local Northern Beaches species are:



D. binata –forked sundew, to 80cm tall. (Pic: Georgine Jakobi)



D. peltata, which has initially a rosette of leaves at the base, but it may be withered or absent and stalked semicircular leaves along the stem. (Pic: rbg.vic.gov.au)



D. peltata is divided in ssp. *peltata* (height 5-17cm) and ssp. *auriculata* (height 20-30cm) (Pic:Pinterest.com)



D. pygmaea – with a tiny rosette of basal leaves (10-12mm) and being up to 3cm tall. (Pic:utas.esu.au)



D. spatulata – common sundew with a basal rosette 30mm wide. (Pic: Ken Harris)

Additional species in the Sydney region are: *D. burmanii* and *D. glanduligera*.



Shutterstock.

LET’S SHOW A BIT OF LOVE FOR THE LILLIPILLY.
This humble plant forms the world’s largest genus of trees – and should be an Australian icon

The Conversation September 30, 2022. Darren Crayn, and Stuart Worboys, Australian Tropical Herbarium, James Cook University.

You’re probably familiar with the sight of a lillipilly bush. This hardy Australian staple – a glossy evergreen bearing powder-puff flowers and clusters of bright berries – features in many a garden hedge.

But you may not know this humble native has spread across the globe in waves of emigration, adaptation and evolution. Almost 1,200 species of lillipilly are now found in rainforests across the tropics and subtropics of Africa, Asia and the Pacific.

Our research helped reconstruct the evolutionary history of lillipillies in unprecedented detail. We show how lillipillies evolved in Australia and now form the largest genus of trees in the world.

Lillipillies are one of Australia’s great gifts to the natural world. But the story of these homegrown heroes may be taking a grim turn.



Show off: the lillipilly is a glossy evergreen bearing clusters of bright berries. Shutterstock

A plant on the move

Lillipillies began their international adventures about 17 million years ago. At that time, the Australian continent (which together with New Guinea is known as the Sahul Shelf) was colliding with Southeast Asia (known as the Sunda Shelf) following its breakup with Antarctica. This breakup was the final dramatic act of the fragmentation of Gondwana.

The collision provided opportunity for biotic exchange between the northern and southern hemispheres. Many plants and animals moved south to the Sahul Shelf and prospered in the new lands. Lillipillies are one of the few lineages that moved in the other direction.

Along with our songbirds, lillipillies stand as a rare example of an Australian group that set out from these shores and achieved major evolutionary success abroad.



Lillipillies are a magnet for pollinators. Shutterstock

Lillipillies light up our lives when they flower and fruit. Their showy white, cream or red flowers are followed by succulent red or purple berries. They’re a magnet for pollinators, helping fill our gardens with the songs of insects and birds.

The riberry, *Syzygium luehmannii*, is one of the most commonly grown and stunning garden species. It produces heavy crops of delicious fruit rich in antioxidants and prized by chefs.

Many species in the genus are used as food and medicine by Indigenous people, and potent antibacterials have been identified in the leaves of some species. Cloves, a favourite spice of home bakers, are the dried flower buds of an Indonesian lillipilly – the aptly named *Syzygium aromaticum*.

About 75 species of lillipilly are native to all Australian states and territories except South Australia and Tasmania. The greatest concentration of species is in the Wet Tropics World Heritage Area of northeast Queensland. About 50 species are found there, half of which occur nowhere else on Earth.

And almost 1,200 species of lillipilly are now found in rainforests across the tropics and subtropics of Africa, Asia and the Pacific, including Australia. As is common in the tropics, species new to science are regularly discovered and named. For example, almost 30 new species of lillipilly have been named from New Guinea in the last two years – and many more are likely awaiting scientific discovery.



The powder-puff flowers of lillipillies light up our lives when they flower. Shutterstock

But how did lillipillies achieve such international success? Our research team decided to find out.

Peering into the past

The research, led by colleagues in Singapore, involved analysing the genomes of hundreds of living species of lillipillies. Similarities and differences in the structure of genomes can reveal how closely related the species are. Using that knowledge, we can build up a picture of their genealogy - the "family tree" that connects ancestral species and their descendants.

These techniques also allow us to estimate the amount of genetic change that has occurred along the branches of the genealogy. And, if we're lucky enough to have an accurately dated fossil of an ancestral species - as we do for lillipillies - we can calculate the rate of genetic change even more accurately. All this allowed us to peer deeply into the past and reveal the events that set the lillipillies on their global journey.

We already knew lillipillies evolved in Australia and emigrated into the rainforests of Africa, Asia and the Pacific. Our research showed this dispersion occurred in at least a dozen distinct waves.

Each emigrant lineage diversified rapidly and successfully in its new environment. This resulted in the nearly 1,200 lillipilly species found worldwide today - more than any other tree genus. In contrast, their relatives the eucalypts have largely remained only a local success story.

Asad twist?

Lillipillies may be one of Australia's most successful botanical exports, but their future, like that of many rainforest plants globally, is threatened by habitat degradation and climate change.

The Magenta Cherry (*Syzygium paniculatum*), for example, is endangered by coastal development in New South Wales. And the Brotherly Love Lillipilly (*Syzygium fratris*), found only on Queensland's highest mountain, is highly vulnerable to climate change.



Myrtle rust - seen here on lillipilly leaves - may be the most potent threat of all. Wikimedia

But a devastating disease - myrtle rust - may be the most potent threat of all. It's caused by an introduced fungal pathogen and kills new foliage, flowers and fruits of plants in the family Myrtaceae, to which lillipillies belong.

Myrtle rust arrived in Australia in 2010 and spread rapidly in the wind and via human activity. Already, it threatens some plant species with extinction. Lillipilly species have been damaged by this serious disease, though none are under immediate extinction threat yet.

Lillipillies are an Australian origin story. They're a major contributor to rainforest biodiversity and important to Indigenous cultures. And they've endeared themselves to generations of gardeners and cooks.

Given all this, lillipillies deserve to be recognised - and protected - as Aussie icons.

The Garden

Gardens are the mirrors of our soul
where, like Narcissus we create a role
in the reflected glory of our lair,
in ritual, retreat, and daily prayer;
where we have been, and where we plan to go;
and all the memories that we may grow,
to plant a hedge between us and the herd,
a cage and shelter from the strident word,
responding to some ancient law of life -
preferring plants to people for they're quiet.

Gardens are not the mill-ponds they may seem,
but turbulent constructions of our dreams;
of avarice and lust, obsessive greed,
unmitigated warfare on the weed,
a battleground from cottage gate to verge;
and, the sublimate some wild neurotic urge
we spray for sundry thrips, and murder ants,
and run around decapitating plants -
to rule the world up to the garden wall,
the garden is our sanctuary, our core.

Gardens are our monuments in time
where Tradescantia and ivy climb -
instead of letting nature have her rein
we try to push the limits of the game,
a home for cripple plants and other sports
that lurch and dribble, huddle for support;
double and spot, instead of tooth and claw,
lined up with drips as patients in a ward -
and when the last encumbered keeper dies,
the rampant weeds and other urchins thrive.

Edwin Wilson New_Selected_Poems_2011

TWO INTERESTING PLANTS AT MT ANNAN

Eremophila muelleriana and *Rulingia hermanniifolia*. JM



POSTSCRIPT TO THE KIAMA CONFERENCE

Ralph Cartwright writes. If you did not get to join us at the wonderful conference in Kiama last month, you can still enjoy some of the presentations by watching them on our YouTube channel.

We have 6 published so far and hope to have most of the rest done over the next couple of weeks, so subscribe to the channel and get notified as new talks get published.

You don't need an account, just click the link below to see the playlist: Australian Flora Conference Presentations:

Including:

2022 AJ SWaby Address: What the future holds for Australian native plants

Environmental drivers of historic climate change

Eucalypts of the Illawarra

Eastern Banksia cultivars

[\(17\) Australian Flora Conference presentations - YouTube](#)

APS NSW GET TOGETHER IN THE SOUTHERN HIGHLANDS

**APS NSW November Annual Gathering, Southern Highlands, NSW
Saturday 12 November - Sunday 13 November 2022**

Venue: Exeter Village Hall, 10 Exeter Rd, Exeter NSW 2579



The Southern Highlands Group of APS NSW is hosting this year's weekend get-together at Exeter, Sutton Forest and Moss Vale on Saturday 12 and at Bowral on Sunday, 13 November.

The Southern Highlands Group has organised a variety of exciting activities for the weekend, including a plants sale on the Sunday.

This weekend offers a wonderful chance to see and enjoy a beautiful part of NSW and catch up with friends you may not have seen for a while. These weekends are extremely popular and it is essential that you register for the event.

Price of the get-together including morning tea, lunch and the get together sessions along with dinner and talk at Moss vale RSL on the Saturday night is \$90. If you only wish to attend the morning tea, lunch and get together sessions, the price is \$45. You can book and pay for both through the registration.

Guests are welcome to attend.

Program:

Please note that you will be given the addresses of the gardens we will be visiting when you arrive at the Exeter Hall.

Saturday, 12 November 2022

9.30am - Registration and morning tea provided by Exeter CWA

10am - Acknowledgement of Country welcome to participants. Bill Mullard and Heather Miles.

Speaker: Dan Clarke, APS NSW Conservation Officer and environmentalist - The Vegetation of the Wingecarribee Area.

Dan is a botanical consultant who operates DM Clarke Botanical Consulting Services which provides flora survey services, consultancy advice, and vegetation management and bushland regeneration services. Dan has worked as a botanist in the environmental consultancy industry since February 2011. He is currently the Conservation Officer for APS NSW. Dan has undertaken extensive vegetation surveys of the Wingecarribee area for the NSW National Parks and Wildlife Service. He is an experienced speaker and will inspire you with his investigations of the vegetation of the Wingecarribee area.

12 noon - lunch provided by Exeter CWA.

1.00 - 3.30pm - visit to two large but very different gardens. The group will be divided into two, with each half visiting the following gardens at different times.

Tanya Excel's 2.26ha property, at Moss Vale. A garden conversion.

Martin's rural property, at Sutton Forest. Extensive native and exotic plantings, large dam.

6.30pm for 7.00pm - Dinner, private room Moss Vale RSL Club, Cnr Hume Hwy &, Bessemer St, Mittagong NSW 2575. Cost \$45.

A talk by Jane Lemann, member APS NSW Southern Highland Group and co-ordinator of Mt Gibraltar bush care.

Sunday, 13 November 2022

9.30 - 11.30am - escorted walks at Mt. Gibraltar. Choice of easy or more difficult.

12 -1.00pm - Lunch, individual responsibility, with plenty of choice venues in Bowral.

1-3 pm: Kris Gow's and Sarah Cains' gardens in Bowral plus plant sale. Both are small gardens so staggered visits are required. The gardens are located on opposite sides of the same block so walking or driving between each is optional.

Registration

Get together registration – \$45.00

Includes weekend activities, morning tea and lunch on Saturday. (Saturday evening dinner not included.)

Get together registration plus dinner and talk on Saturday night – \$90.00

Includes Saturday morning tea, Saturday lunch, get together sessions and Saturday two-course dinner

To register go to <https://austplants.com.au/event-4877519/Registration>

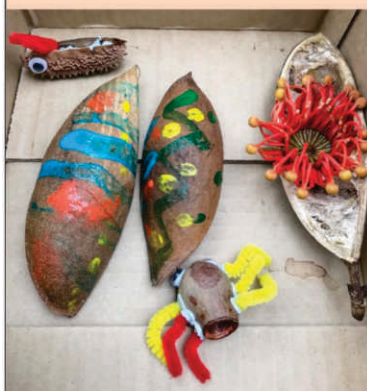
If you have any questions please contact John Aitken at <http://office@austplants.com.au>



STONY RANGE SPRING FESTIVAL

Stony Range Regional Botanic Garden is an oasis of Australian native plants located at Dee Why in the heart of the Northern Beaches.

**61st
year**



Sunday 30 October

9 am - 3 pm

Stony Range Regional Botanic Garden

SALE OF NATIVE PLANTS

Take advantage of expert cultivation advice from Stony Range Botanic Garden volunteers & members of Australian Plants Society Northern Beaches Group.



Fun for children

face painting, treasure hunts, native animals



Fun for all

**live music, native bees, guided walks
Sausage sizzle, Coffee Shop, Home made cakes.**

**Stony Range Regional Botanic Garden
810 Pittwater Rd, Dee Why stonysrange@gmail.com**