



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

APS Northern Beaches meeting Thursday July 6, 2023 at Stony Range Botanic Garden, Dee Why.
7.15 pm. Lesser plant family. Santalaceae - Russell Beardmore.
7.30 pm presentation. Wendy Grimm. "A Beginners Guide to Native Orchids".
Supper. Conny & Pam.

Saturday July 22 APS Northern Beaches plant identification walk 10.30 am Ralston Avenue, Belrose followed by lunch at **Club Belrose**.
Registration essential with Anne Gray 0466 309 181 or annepsgray@optushome.com.au. More details p. 5.

Many thanks to Lorna Scott, Trish Holloway, Anne Gray and Penny Hunstead for their inspiring contributions to this edition of Caley.

If you have story to tell or have a strange botanical occurrence in your garden please share them with us. Send stories, photos (as attachments please) etc for Caley to **Jane March** march@ozemail.com.au

HARRY LOOTS GARDEN VISIT June 21st

Lorna Scott

APS members had a very enjoyable and informative visit to Harry Loots' native garden in Cremorne on a very crisp winter Wednesday in June. About 14 people attended.

The house was built by Harry's father in the 1950s and he has been creating a naturalistic garden on this steeply sloping site, over looking Middle Harbour and Primrose Park, for many years.

The first impression was of a planted council verge with very tall *Xanthorrhoea* species, two of which must have been 4-5 metres tall and very dramatic indeed.

There is a council planted water gum under which are many heath land plants.

A graceful *Persoonia* and some pretty epacris species which were in blossom, *Woolfsia*, with delightful white flowers. It is known as snow heath and grows in eastern Australia from NSW south coast as far as Queensland.

Phyllothea in bud, and some flowering *Pimelia* which had been seeded from an old straggly parent plant., and several flowering *Crocea exalata*. Many flannel flowers (*Actinotus helianthi*).

Harry has had to deal with so many seedlings of *Doryanthes excelsa* (Gynea Lily) that he has to weed them out and give them away to gardeners.

On the Eastern side of the house the garden is very steep and had been originally road fill and clay. Considerable quantities of rocks has been placed in a relaxed terrace formation and planted out. The structural components of





Exploring Harry's garden. pic: Anne Gray.

this area has been the planting of some advanced *Banksia* species, in particular a big old *Banksia serrata* and a *Banksia ericifolia* with large striking bright orange flowers.



Glowing Banksias - pic: TH



Microsorium diversifolium . pic: AG

This has made a shady dry garden, and the area is filled with ferns, orchids and cordylines. A large patch of *Microsorium diversifolium* (kangaroo fern) has beautiful spores underneath the leaves. This rhizomatous fern only grows to be about a foot tall, but rapidly fills out a space.

There were a number of orchids attached to logs and old *Xanthorrhoea* trunks including Sydney rock orchid (*Dendrobium speciosum*) and much smaller dainty *Dendrobium kingianum* and a "tongue orchid" *Dockrulia linguiformis*.

The west facing back garden is extremely steep. There is a lovely green shady canopy from a "Cheese Tree" (*Glochidion ferdinandi*) and tall tree

ferns (*Cyathea cooperi*). Nevertheless many plants have made their home in the rocky crevasses and continue to self seed, such as *Rulinga hermaniifolia* which we saw was popping up everywhere flowing over contours and crevasses of the rocks. This plant occurs naturally in the Sydney sandstone and coastal regions and can form a delightful low groundcover with little white to pink star flowers and deep green wrinkled leaves.



Darwinia fascicularis. pic: TH



Styphelia longifolia. pic: AG

Also planted *Stylidium* grass and *Doodia* ferns which are very hardy in sun or shade. *Hovea lanceolatus*, *Darwinia fascicularis* with delightful red bi-colour flowers. Also "Drumsticks" (*Isopogon anethifolus*), a black wattle (*Acacia callicoma*) and an unusual umbrella fern.

Harry has been propagating native plants from his garden in containers on the rock platform in the backyard, especially many little flannel flowers. They have been planted out and are thriving on the rock shelf in the sun.

We are grateful for a chance to view this garden and for Harry's expertise in discussing the native plants and the conditions they enjoyed. Also thanks to Lindy for a delicious and social morning tea. The view from the house down over the back garden gave a lovely different perspective of the canopy and the view to the harbour.

Anne, Harry & Lorna enjoy morning tea. TH.



FUNGAL BIODIVERSITY AND ITS INTERACTION WITH PLANTS

A presentation on Thursday 1st June by Michael Gillings, Professor of Molecular Evolution, and Vanessa McPherson, student, Macquarie University

Report by Penny Hunstead



At our June 1st meeting, we were treated to an excellent presentation on fungi, by Professor Gillings and his student, Vanessa McPherson. Vanessa gave a fine, illustrated presentation of fungal fruiting bodies, followed by Professor Gillings' talk on the details of fungal biodiversity and its interaction with plants.

Australia is estimated to be home to over 150,000 species of fungi, only about 5% of which, have been described. The reason for which, said Professor Gillings, is that their fruiting bodies are small, ephemeral and variable.

Fungi are important ecosystem engineers. The saprophytic species feed on dead plant and animal remains and break down organic material into humus, minerals and nutrients that can be utilized by plants. The mycorrhizal fungi have a mutually beneficial symbiotic association with the root systems of green plants, in which the mycelium of the fungus absorbs nutrients and translocates them back to the host plant. The parasitic fungal species form symbiotic relationships with other living organisms, with only the fungus benefitting from the relationship.

Except for Droseraceae, most parasitic plant species, most Proteaceae and aquatic species, about 85% of the world's plant species depend on fungi.

In disturbed ecosystems, the mutually beneficial ectomycorrhizal fungi are replaced by saprophytic fungi. A mine site was described as having no ectomycorrhizal fungi, 25 years after mining ceased.

In the earliest stages of the life cycle of all orchids, they are dependent entirely on their mycorrhizal fungi for all nutrients, including carbon. The species of Rhizanthella, the underground orchids, depend on mycorrhizal fungi for their entire life.

We saw many images of the different types of fruiting bodies. These included the following:

- Gilled and Waxcap – colourful, rare and endangered species.*
- Ascomycete – the “bird’s nest” fungus*
- Bracket and crustaceous*
- Fleshy bracket fungi*
- Club and coral fungi*
- Puffballs – spores emitted by rainfall*
- Earth tongues*

Cordyceps and their allies – parasites of insects and spiders. Often called “Zombie fungi”, these species can change the behaviour of their host, by interrupting the biochemical pathways.

Much of Professor Gillings' research has involved species found in areas of the Lane Cove valley. Under scientific licence, specimens are located, collected, photographed, the GPS location recorded, DNA extraction done in the lab and the specimen stored in ethanol. The DNA extraction and sequencing leads to the ability to group specimens in families. For example, with the *Clavaria* and *Ramaria* species, there is wide diversity of form.

Professor Gillings has found three hotspots of fungal diversity in the Lane Cove Valley. They are, Sheldon Forest, Browns Field and Coups Creek.

After the presentation, both Vanessa and Professor Gillings answered a wide range of questions from the audience. We had a most rewarding interaction with two knowledgeable and charming presenters.

RHAMNACEAE

As presented by Conny Harris on 1st June

Conny told us that she knew little about the members of this plant family, before her research. She said that she was delighted to discover that the family contained 900 species, in 58 genera, a number of which were used as dyes and for medicinal purposes.

Commonly known as the Buckthorn family, no members of it have thorns! Comprising mainly trees shrub and vines, the species have simple, spiral or opposite leaves and are unisexual or bisexual. The flowers are radially symmetrical, with 4 or 5 sepals and 4 or 5 petals, the stamens attached to either the rim of the disc surrounding the ovary or to the floral tube. Petals may be white, yellowish, greenish, pink or blue. Fruits are mostly berries, fleshy drupes or nuts.

Although the economic uses of most species are mainly as ornamental plants, some species (*Rhamnus saxatilis* and *R. utilis*) are the source of many brilliant green and yellow dyes. The wood of *Rhamnus frangula* was used to make charcoal for use in gunpowder, before the development of modern propellants. Some species in the following genera were used as medicines – **Alphitonia**, **Helinus**, **Rhamnus** and **Ziziphus**.

There are 160 species in 17 genera in Australia. In the Sydney area, three genera can be found. These are **Alphitonia**, **Cryptandra** and **Pomaderris**.



Alphitonia excelsa. Pic Wikipedia

The three **Cryptandra** species are small wiry shrubs with white flowers.



Pomaderris ledifolia. Pic Wikipedia

The Sydney **Pomaderris** are mostly tall shrubs and there are 10 species. They are characterized by having flowers clustered in dense panicles and “furry” leaves.

Conny passed around specimens of the species mentioned and books illustrating Australian species from other states.

Penny Hunstead

WHY THESE SYDNEY GARDENS ARE RENAMING THEIR PLANTS

SBS News June 3, 2023 Jennifer Scherer

The Botanic Gardens of Sydney is embarking on a special project to reflect the First Nations names of its plants.

At the Botanic Gardens of Sydney, a decolonisation initiative is underway. In consultation with traditional custodians, Elders, and local language knowledge holders, horticultural displays will be updated as part of a 'multi-naming project' to reflect the First Nations, scientific and English names of plants.

Jake Ferguson is a Bidjigal-Dharawal, Wailwan, Biripi and Bundjalung man who runs bush tucker tours through the Royal Botanic Garden. He says the initiative is a step in the right direction.

"Our language is a part of us," he said. "Our language words also bring massive insight ... it's not just a place name but also spiritual knowledge, understanding of the geography of the area. "Being able to walk through the Botanic Gardens and see the multi-naming on the plants allows for a greater understanding and connection."



Jake Ferguson leading a bush tucker tour. SBS News / Jennifer Scherer

On Mr Ferguson's tour, he stops by the Davidson's Plum, named after John Ewen Davidson, the 'owner' of the land at Rockingham Bay in Far North Queensland where the tree was 'first found' in the 1860s. But it has another name. "Ooray" is one of the First Nations names given to the plant, Mr Ferguson tells the group, before inviting everyone to take a bite of its sour fruit.

While the Botanic Gardens of Sydney are still in the early consultation stages of the project, some signs can be found in the gardens already. It's hoped it will become a meaningful reconciliation initiative.

Across Australia, there are more than 250 First Nations languages, including around 800 dialects, which has led to many plants being given multiple First Nations names.

As a result, the Botanic Gardens of Sydney — made up of The Royal Botanic Garden, the Australian Botanic Garden Mt Annan and the Blue Mountains Botanic Garden — says it plans to undergo a vigorous verification process as the collection holds many native plants sourced locally as well as from across Australia.

"It can be a complex process to find, verify and use the correct scientific, colloquial and First Nations names for trees and other plants," Royal Botanic Garden curator manager Jarryd Kelly said. "First Nations plant names are embedded in rich cultural knowledge that reflects diverse plant uses, ecological relationships, seasonal changes, and other significance."



A sign at the Royal Botanic Garden in Sydney, showing visitors the First Nations name, common name and scientific name of a plant. SBS News / Jennifer Scherer

And it needs to be done in the right way, he says.



Jarryd Kelly says the naming project is complex. SBS News / Jennifer Scherer

"The process of the gardens working with the community to find out the names ... it's actually going deep into the understanding," he said. "It's not just having it at face value, it's actually having legitimate insight into language, which are the oldest languages on planet Earth." "The Botanic Gardens is on Farm Cove, one of the first points that first contact was made, so the decolonisation of this area is important."

Sydney's Royal Botanic Garden was established in 1816 on Gadigal land along the shores of Sydney Harbour. Now the three Botanic Gardens of Sydney contain one of the country's largest collections of native and overseas plants, but the institution is reckoning with its own role in colonisation.

"The Botanic Gardens is where our flora has been captured," said Ray Ingrey, a Dharawal person from the La Perouse Aboriginal community and chairperson of the Gujaga Foundation. "It's happened since day one with the Endeavour voyage; Sir Joseph Banks and the crew of the Endeavour were collecting plant species during their eight days of their stay at Kamay at Botany Bay."

The name Botany Bay was coined during this period as the collection of plants there was deemed bountiful. For the Dharawal people, the flora at Kamay is of great significance. Plants are markers of seasonal change, hold deep connections to ancestors, are prominent in creation stories and provided food as well as medicine. "Because there was no engagement with Aboriginal people during that time ... there was a lot of information that could have been gathered there which was a missed opportunity, but that practice then continued."

Most Australian plants are named by European botanists who studied specimens sent back from early colonial expeditions and titled them through Western scientific conventions. In the case of Joseph Banks, a British naturalist, botanist, and patron of the natural sciences, the banksia was named after him.

"Back in the 19th century, many taxonomists were funded by rich people, which meant many plants and animals were named after the rich

patrons," said Dr Kevin Thiele, a taxonomist and adjunct associate professor at the University of Western Australia. "But some of those rich patrons were rich because of egregious activities." Dr Thiele gives the example of the plant genus *Hibbertia*, commonly known as guinea flowers.

"George Hibbert was a slave trader, he ran ships across on the trans-Atlantic slave trade and he made a motza out of slavery," he said. "He was a rich and wealthy person who could become a patron of the arts and sciences, he had a garden and employed gardeners and was the first person to grow many Australian plants in London.

"Because of his wealth, he was honoured with the genus name *Hibbertia*, but his wealth was very ill-got."

APS NORTHERN BEACHES JULY VISIT

On Saturday July 22 members of APS Northern Beaches members will take part in a plant identification walk on the Ralston Avenue track at Belrose. This walk is a well kept secret on the sandstone ridge. A virtual jewel box of *Boronias*, *Dillwynias* etc



Boronia ledifolia. Pic Russell Beardmore.

Our appetites will be suitably raised for a delicious lunch at the Club Belrose.

Full details will be emailed by Anne Gray closer to the date. It is essential that everyone registers for this event with Anne at 0466 309 181 or annepsgray@optushome.com.au.

APS NORTHERN BEACHES CALENDAR NOTES

Thursday July 6 APS Northern Beaches meeting
Presentation 'A Beginners Guide to Native Orchids' Wendy Grimm.

Thursday August 3 APS Northern Beaches meeting
Presentation 'Plants for gardens in the shade' Angela Michaelis.

Thursday September 7 APS Northern Beaches meeting
Presentation 'Beside the Seaside' Brian Roach.

Saturday September 9 Set-Up for SR Festival.
Sunday September 10 Stony Range Festival.

Saturday September 16 APSNSW GTG Corrimal.

Thursday October 5 APS Northern Beaches meeting
Show & Tell, Committee Meeting.

Thursday November APS Northern Beaches meeting
Presentation "Creating a frog-friendly garden". Gracie Liu



ANPSA BIENNIAL CONFERENCE 'GARDENS FOR LIFE' VICTORIA

30 September - 4 October 2024

Melbourne Convention and Exhibition Centre

The next ANPSA conference will be hosted by APS Victoria.

During the conference we will hear about all types of gardens and their impact on our life and the life of our world. We will visit spectacular gardens during the in-conference excursions including the world renowned Australian Garden at Cranbourne. Pre and post conference tours to Gippsland, the South West and the Grampians will be offered.

If you are interested in the conference, please go to the website (apsvic.org.au) and register your interest.

TOURS

The tours will visit some of Victoria's best scenic areas and spectacular displays of wildflowers. We are offering each tour pre and post conference. Conference attendees will have the opportunity to choose up to two out of the three tours. Each tour will visit areas of wildflowers in natural bushland, public and private gardens.

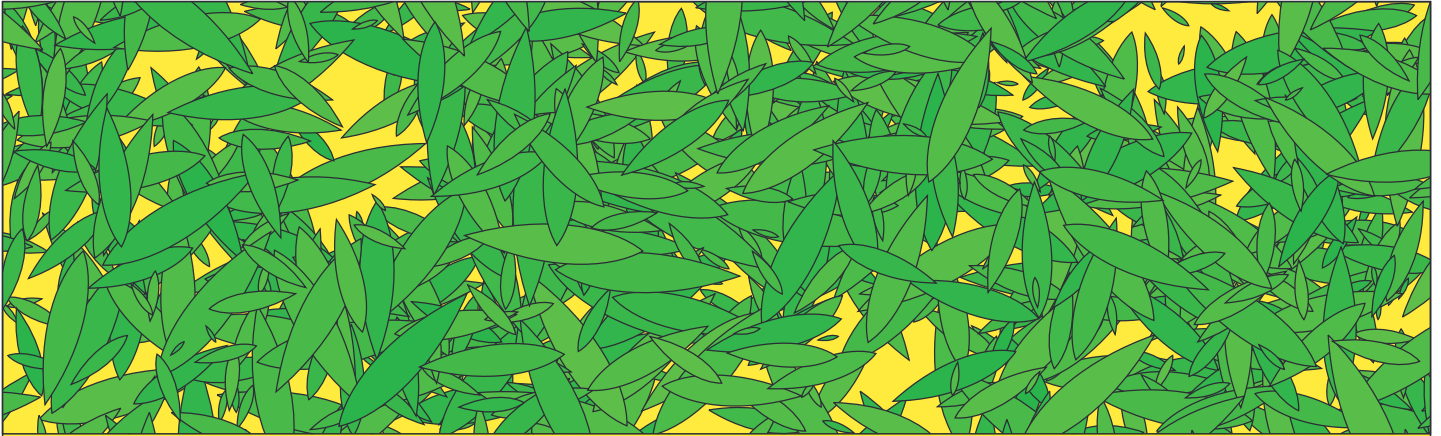


Australian Botanic Garden Cranbourne.

This is an opportunity of a lifetime as some of the gardens are only available through these tours. Each tour will be accompanied by experts. The pre conference tours are from Monday 23 September to Saturday 28 September 2024 and post conference from Saturday 5 October to Thursday 10 October 2024. Each tour covers 6 days.



Desert Garden - Australian Botanic Garden Cranbourne.



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.

Sunday 10 September

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

Treasure hunts, face painting, Australian Wildlife.

FUN FOR ALL

**Live music, Display of prints by renowned Australian bird artist Lars Knudsen
Sausage sizzle, Coffee Shop, Home made cakes.**

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