

CALEYI



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

March 2023

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 March 2, 2023.

7.15 pm. Lesser plant family. **Plantaginaceae - Lorna Scott.**

7.30 pm. **Presentation 'Show & Tell'** Always a fun session. Remember to bring your plant specimens, photos and stories to share with the other members.

8.30 pm **AGM**

Supper. **Anne & Jennifer**

Saturday March 11, 2023 APS NSW Gathering - Bundeena, hosted by Sutherland (details p.5.)

Wednesday March 15, 2023. 10.20 am **APS Northern Beaches** visit **Cicada Glen Nursery** Registration essential with Anne Gray 0466 309 181 or annepsgray@optushome.com.au

Many thanks to Anne Gray and Penny Hunstead for their invaluable contributions.

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

TALK BY STUART READ ON 2ND FEBRUARY, 2023. "THE HISTORY OF GARDEN DESIGN USING AUSTRALIAN NATIVE PLANTS (1788 - NOW)"

Report by Penny Hunstead



Pic: Royal Botanic Garden Sydney c.1900.

Those of us who attended the meeting on the 2nd February were treated to an excellent presentation by Stuart Read on the history of garden design using Australian native plants from 1788 to the present day.

The earliest documented arrivals at what was then known as Terra Australis, were the Dutch and the French. None of these early explorers settled here, but the French took many of the native plants and animals back to France. The Empress Josephine's garden, Malmaison, was full of these Australian native plant species and also had a few of the animals.

Stuart illustrated the types of gardens from 1790 to the present day with projections of maps, photographs, paintings and diagrams, etc. The reasons for the various styles covered the fashion at the time, function and the built elements. The earliest illustrations of gardens were those of the first governors, John Hunter and Lachlan Macquarie. These showed the selection of native trees and tree-like shrubs, planted in formal gardens, full of ornamental exotics.

From early in the 19th century, there were plantings of Australian native trees in the main streets of cities and the larger country towns.

From the 1820s, there was a craze for conifers and the most popular were the *Araucarias*, *Callitris* spp. and *Podocarpus spinulosa*. The next group to capture the public imagination were the ferns and from the 1840s to 1870s many ferneries were established in public gardens and the large private gardens. Charles Moore, director of the Royal Botanic Garden, Sydney, for 50 years, from 1848, was passionate about Australian native figs and

selected *Ficus macrophylla*, *F. rubiginosa* and *F. hillii* to be planted extensively, throughout the RBG. He supervised the planting of figs at Sydney University and in large public parks.

From the 1870s to 1890s hundreds of public parks in all the major Australian cities were planted with Australian native species, largely through their being chosen for their characteristics, superior to exotics. Rookwood, the World's largest cemetery, was extensively planted with Australian native trees.

A 19th century garden designer, William Guilfoyle, introduced curves into Australian private gardens, to get away from the previous rigid straight lines of English and European classical design.

Sydney artists, notably, Margaret Preston, Margaret Olley and Ellis Rowan, drew public attention to Australian native flowers, with their beautiful and popular paintings.

In the Federation era, there was a growth in the output of books on Australian native plants, by writers in Sydney and Melbourne. More and more, suburban gardens incorporated native plants with attractive flowers. A more left field choice of Australian native trees in Sydney's North Shore, was to capture the dust that arose from unsealed roads.

After the 1914-1918 War, memorial gardens were established and along with the traditional Rosemary bushes, many of these gardens had Australian native shrubs. The early garden guides of the 1920s had sections on Australian natives plants.

Two authors who popularised native plants were Thistle Y Harris and May Gibbs. May Gibbs books, portraying native plants as personalities, are still popular, today!

From the 1930s architects started to choose Australian native plants in private and public gardens. Walter Burley Griffin and his wife Marion were the first in Australia to start using the title "landscape architect". Notable landscape architects were the Griffins, Edna Walling, Paul Sorensen and Jocelyn Brown. There was extensive use of native plants by these people. In the mid to late 20th century, the well-known garden designers were Betty Maloney and her sister Jean Walker, Ellis Stones, Kath Carr, Paul Thompson and Bruce McKenzie. The Burnley Campus at the University of Melbourne was planted almost exclusively with native plants.

Many people from our APS group, have visited the local Waterfall Cottage garden, at Bayview, with its lovely setting in coastal rainforest. Stuart showed us a quirky nod to the importance of local trees at Mona Vale, with a footpath making a circuitous route around eucalypts.



Pic: WA Historic Garden Society.

TV garden programmes have popularised Australian native plants and there have been inspirational gardens of great beauty, using native plants in difficult sites, such as windy coastal headlands and alpine regions. In

recent years, there has been a growth in varieties of native plants, especially of flowering characteristics and of hardiness and of dwarf form, to suit small gardens and balconies. Native plant use in rooftop gardens is now popular.

Stuart has now accumulated eighty pages of Australian native plants, translated into the names given to them by many of the First Nations peoples.

After the presentation, there were a number of books, pertinent to the presentation, set out for our perusal.

2022 APS NORTHERN BEACHES PRESIDENT'S REPORT

Conny Harris



APS NB on a favourite walk at North Head. Pic: Anne Gray.

I would like to thank Northern Beaches APS for our impressive come back after, or better even with, COVID. The events and walks were terrific and all involved in organisation deserve applause.

I'd call three events the highlights:

- 1) a visit to the Botanical Gardens Where Paul Nicholson spoke about the 'Evolution of Australian Flora- Before and after the 'Evolution of Australian Flora- Before and after the triumph of the Gun trees'
- 2) a talk with a large number of fossil plant specimens at the Australian Museum.
- 3) the visit to Mount Annan's new purpose built premises holding the botanical collection.

Our spring festival was also a success and we contributed with walks to the big APS conference with tours here.

With all the rain we saw last year, I just marvel how we managed to have such a great run of events. Again a special thank you to everyone who put a foot or hand forward to help arrange, run or help with activities!

As stated over and over again, with this group and the division of jobs and activities the president's role is super simple and I really do not deserve that hat. It is a pleasure to be part of this group.

Thank you all.
Conny

PITTOSPORACEAE

Presentation by Anne Gray at the February meeting.

Pittosporaceae is family of about 200 species in 9 genera, mostly in Australia and South -East Asia, although there are some species in Africa.

Rhytidosporum

Genus of 4 species endemic to eastern Australia.

Rhytidosporum procumbens

Dwarf to prostrate shrub, 10-25cm, white star like flowers in spring and found most commonly in damp sunny heath.

Billardiera

Genus of 9 species with bell-shaped flowers and cylindrical fruit.

Named in honour of James Julian la Billardiere, botanist on 1791-93 French expedition in search of la Perouse under D'Entrecasteaux.

Billardiera mutabilis

Climbing Apple Berry

Slender climber with elliptical leaves, pendulous yellow-green flowers in spring and cylindrical fruits. Found in moist site in forests on the coast from the Royal NP south.

Billardiera scandens

Hairy Apple Berry, Dumplings

A slender climber, flowers greenish yellow to cream in spring, fruits cylindrical and are common in open woodland of the coast and ranges of the eastern states. The fruits are edible but really horrible to eat unless they are purple!



Billardiera heterophylla
Bluebell Creeper

It is a vine-like plant and twines around the stems of other plants. The flower has up to 5 petals, white to deep blue or pinkish and can hang singly or in groups of up to 5. It is endemic to South western Australian. However it has now become naturalised in parts of South Aus, Tasmania, NSW and Vic.

Bursaria

Genus of 6 species.

Bursaria - Latin- purse-like or pouch-like referring to the shape of the capsule.

Bursaria spinosa subsp. *spinosa*

Native Blackthorn

Erect shrub to 5m tall. Light foliage with side branches ending in thorns. Fragrant white flowers are found in late summer Jan-April. It is common on the Cumberland plains where it now dominates the understory. It also occurs near streams in sandstone country.

Citriobatus

Genus of small shrubs with 4 species in Australia.

Citriobatus- Greek orange-thorn

Citriobatus Pauciflorus
Orange Thorn

A stiff wiry shrub to 1.5m tall with numerous fine thorns. The flowers are small, white, solitary and axillary and occur from Sept-Nov.



Pittosporum

Genus of 150 species worldwide and about 50 species in Australia.

Greek= resin-seed referring to the sticky coating on the seeds.

Pittosporum undulatum

Sweet Pittosporum

Small tree 3-10m. Originally the inhabitant of shady rainforest gullies but highly opportunistic and now colonises any moist shady location especially where there is urban run-off. The seeds were ground as food by the Aborigines in the Sydney region.

The leaves have wavy margins and lines of brown blisters along the leaf surface (these are the excavations of tiny pittosporum leaf miner grubs).

The flowers are white, sickly sweet and occur in Sept. and Oct.

Pittosporum revolutum

Yellow Pittosporum

A shrub growing to 3m high.

Flowers are in terminal clusters with yellow petals and occur in spring.

The fruit are about 25mm in diameter and split into 3 to reveal bright red seeds.

It is found in sheltered forest and rainforest margins.



Hymenosporum

This is a monotypic genus meaning there is only one member of this genus.

Hymenosporum flavum

Native Frangipani

This is a tree which grows up to 25m in tropical areas but when cultivated in the southern states it grows to 10m. It can be found in the Lower Blue Mountains.

The flowers are cream to yellow, scented, silky-hairy inside and occur in Oct-Nov.



SUBURBAN BUSHLAND RESTORED WITH 150 TYPES OF NATIVE TREES BY RETIRED ENTOMOLOGIST OVER 10 YEARS

ABC Capricornia February 18, 2023, Michelle Gately



Bob Newby set out to keep himself busy in retirement by restoring a patch of bushland. (ABC Capricornia: Michelle Gately)

The land opposite Bob Newby's house looks like any other slice of suburban bush. But if you venture off the concrete footpath towards the creek, you'll find some rustic tracks and dozens of trees in varying stages of growth.

"When I retired, I thought I needed to have something to keep myself occupied," Mr Newby said. "I had been watching for a long time the decrease in habitats, the falling levels of biodiversity.

"And I thought, 'Well, this is something I can do that have will have a positive effect, I can plant some trees.'"



Mr Newby has planted more than 150 types of native trees. (ABC Capricornia: Michelle Gately)

But it was more than just planting some trees and now he's a proud OGRE — that's Old Guy Restoring Ecosystems.

Mr Newby's career as an entomologist gave him a unique insight when it came to choosing species that would bring more birds, bugs and butterflies to his neighbourhood in north Rockhampton, central Queensland.

A decade later, the area has become a training ground for conservation students and an example of how communities can restore suburban bushland.

Slow, steady and specialist

When Mr Newby retired, the land was so densely covered with lantana that it was impossible to make it from the footpath down to a small creek.

After clearing that, he started planting – but these weren't just any old trees. They had to be native and local to central Queensland.

"I had a bit of a bias towards things that were unusual or rare or threatened," Mr Newby said. "I also wanted things that were going to be hosts for the butterflies."

Mr Newby explained that families of butterflies will often only feed on one type of tree, so attracting new species required thoughtful planting. The trees he has planted can be hosts for more than 30 species of butterflies, and Mr Newby has so far spotted 15 of those ranging from large swallowtails to small blues.

While some butterfly species are not uncommon in the area, Mr Newby said he's seeing them in "reasonable numbers" and he believes that's down to the more favourable habitat.



The blue triangle butterfly is among the species that have been attracted to the native habitat. (Supplied: Deborah Metters)

Over the years, he's collected dozens of seeds through fellow plant specialists, Landcare groups, and even through raffle prizes. What started as just a few seedlings has grown into more than 150 types of trees, attracting dozens of new bird and butterfly species.

It has been a slow and steady process, though, with Mr Newby never planting more than he could maintain. "I didn't plant thousands of trees to begin with and then just walk away, which so often happens with revegetation projects," he said. "It's the follow-up that really is the key."

Call for community restoration

Planting, weeding and maintaining the area is an almost-daily undertaking. But Mr Newby is driven by hope his grandchildren will get to grow up playing for hours in the bush like he did as a child.

"Within a generation, maybe two generations, we have lost so much native bushland," he said. "It's important, I think, to preserve what we've got left, and also to try and restore some of the areas."

Mr Newby hopes his project can be a model for "what we can achieve" and inspire communities to take care of suburban bushland. "I think school groups, other youth groups, Indigenous groups, could easily adopt a piece of a creek and maintain it and restore it," Mr Newby said. "It does require a little bit of organisation.

"The limitation that you can run into is that quite often those sorts of projects depend on an individual to get it going and keep them going – if you lose that enthusiast, the project's in danger of falling over."

Conservation students replicate work

One such enthusiast is Kay Pearson, who is building on Mr Newby's work by restoring an adjacent section of bushland with conservation students.



Kay Pearson leads a group of students in native habitat restoration. (Supplied: Kay Pearson)

Ms Pearson teaches horticulture and ecosystem conservation for CQUniversity, and groups of her students head to the north Rockhampton site each month.

The aim is to remove weeds and revegetate the area with natives, but Ms Pearson said the students also looked at soil erosion control to protect against loss of the creek bed during future flooding. "We've been working on it now for just over a year and a half and you can really see the results of the students' work ... it's a wonderful feeling," she said. The students have been able to benefit from Mr Newby's work, harvesting seeds from his more mature plants.

What you can do in your backyard

Don't have a piece of bushland to adopt, or not up to the task of restoring one?

Mr Newby said there was still plenty you can do in your backyard. "If you live in a small suburban backyard, you can plant little native plants ... or little bushes that are going to attract butterflies," he said. "On a slightly bigger scale, you can start planting things that attract small birds."

Ms Pearson's advice is to start reading up about native plants – because while it would be "absolutely fantastic" to see more people restoring suburban bushland, planting exotic species is another problem.

She recommends the Australian Native Plants Society for a place to start learning.

APS NSW GATHERING - BUNDEENA, HOSTED BY SUTHERLAND

Saturday March 11, 2023
Bundeena Community Hall

Registration - including afternoon tea and talks - fee payable on entry \$5/\$10
<https://austplants.com.au/event-5075009/Registration>

The first gathering for the year will be held at Bundeena, which is one of southern Sydney's best kept secrets. Bundeena is named after the Dharawal Aboriginal place name, said to mean either "daughter from the hills" or "noise like thunder".

Bundeena is accessible by either ferry or car. The ferry leaves Cronulla every hour. By car, Bundeena is 56 km from Sydney. You do not require a NPWL permit to drive to Bundeena, however you will if you plan to join the beautiful bushwalk from Bonnie Vale to the adjoining suburb of Maianbar.

For those who wish to travel by ferry from Cronulla, contact 0458 366 022 prior to departure from Cronulla to arrange transport from the wharf.

Program:
10-12 noon

Visit to Richard and Sandra Laney's well established Australian native garden at 27 Baker St., Bundeena. If coming by ferry from Cronulla, walk towards the shops from Bundeena wharf, turn left at the first street, Loftus St., then first right Bournemouth St, then first left, Baker St.

Guided bushwalk from Bonnie Vale to Maianbar. A relaxing flat walk for most of the way through beautiful cabbage tree palms, luminescent *Angophora costa*, and magnificent *Xanthorrhoeas*. Meet John Arney from the Sutherland Group who will be leading the walk at the boom gate to the Bonnie Vale camping area. You will have to park either park in the parking areas along the Bonnie Vale Access Road if you have a NPWS permit or you can buy a day pass from one of the pay machines. Bonnie Vale Access Road is the first road on your left as you enter Bundeena.

Visit the 'Balconies' in the Royal National Park, a spectacular geological formation where the cliff top has been eroded by the weather over thousands of years into a series of irregular jagged layers of sandstone. If you are not prone to vertigo, you can take a sit on one of the balconies jutting out from the cliff and soak in the scenery as your feet dangle 30 meters above the thundering surf below. This is the beginning of the Coast Track to Oford. If coming by ferry from Cronulla, follow Brighton Street from Bundeena wharf, turn left on Scarborough Street and then right on Eric Street that will take you all the way to the park. It is a pleasant 1.5km walk through the laid-back community of Bundeena. If you come by car, there is plenty of parking on the streets near the park gate. Enter the park gate and walk a short distance to a spectacular geological formation known as the Balconies



12-1 pm Lunch and plant sale

– Bring your own and enjoy it on the shores of the Port Hacking River,
– or Purchase lunch at the Bundeena shopping centres
– or You are welcome to enjoy your lunch in Richard and Sandra Laney's garden, where tea and coffee will be provided.

1-3pm: Meeting at the Bundeena Community Hall, 17-37 Liverpool St, Bundeena

Talk by Ann Young: Mosaics of vegetation - the rocks and dirt story.
Anne will discuss different plants and different plant communities form mosaics across a landscape? How do different rock types and different soils affect these patterns? How do we read the landscape to understand the beautiful and often intricate patterns of vegetation? What are the common elements in different environments? Ann will explore the varied and fascinating relationships between vegetation and the underlying rocks and soils.

Following Anne's talk, afternoon tea will be provided by members of the Sutherland Group of APS NSW.

RSVP by registering: 4 March. <https://austplants.com.au/event-5075009/Registration>

DON'T KILL THE CURL GRUBS IN YOUR GARDEN – THEY COULD BE NATIVE BEETLE BABIES

The Conversation January 23, 2023. Tanya Latty, University of Sydney, Chris Reid, UNSW Sydney

Have you ever been in the garden and found a large, white, C-shaped grub with a distinctive brown head and six legs clustered near the head?

If so, you've had an encounter with the larva of a scarab beetle (family: Scarabaeidae) also known as a "curl grub".

Many gardeners worry these large larvae might damage plants. So what are curl grubs? And should you be concerned if you discover them in your garden? Our mission is to share knowledge and inform decisions.

What are curl grubs?

Curl grubs turn into scarab beetles.

There are more than 30,000 species of scarab beetles worldwide. Australia is home to at least 2,300 of these species, including iridescent Christmas beetles (*Anoplognathus*), spectacularly horned rhinoceros beetles (*Dynastinae*), and the beautifully patterned flower chafers (*Cetoniinae*).

While the adults might be the most conspicuous life stage, scarabs spend most of their lives as larvae, living underground or in rotting wood.



Curl grubs make an excellent meal for hungry birds. Shutterstock

Scarab larvae can help the environment

Soil-dwelling scarab larvae can aerate soils and help disperse seeds. Species that eat decaying matter help recycle nutrients and keep soils healthy.

Most scarab larvae are large and full of protein and fat. They make an excellent meal for hungry birds.

Besides being important for ecosystems, scarabs also play a role in cultural celebrations.

For example, the ancient Egyptians famously worshipped the sun through the symbol of the ball-rolling dung beetle.

In Australia, colourful Christmas beetles traditionally heralded the arrival of the holiday season.

Sadly, Christmas beetle numbers have declined over the last few decades, likely due to habitat loss.

Are the curl grubs in my garden harming my plants?

Most scarab larvae feed on grass roots, and this can cause damage to plants when there's a lot of them. In Australia, the Argentine lawn scarab and the African black beetle are invasive pest species that cause significant damage to pastures and lawns.

Native scarab species can also be pests under the right circumstances. For example, when Europeans began planting sugar cane (a type of grass) and converting native grasslands to pastures, many native

Australian scarab species found an abundant new food source and were subsequently classified as pests.

Unfortunately, we know little about the feeding habits of many native scarab larvae, including those found in gardens. Some common garden species, like the beautifully patterned fiddler beetle (*Eupoecila australasiae*), feed on decaying wood and are unlikely to harm garden plants.

Even species that consume roots are likely not a problem under normal conditions. Plants are surprisingly resilient, and most can handle losing a small number of their roots to beetle larvae. Even while damaging plants, curl grubs may be helping keep soil healthy by providing aeration and nutrient mixing.



Most plants can handle losing a number of their roots to beetle larvae. Shutterstock

How do I know if I have 'good' or 'bad' beetle larvae in my garden?

Unfortunately, identifying scarab larvae species is challenging. Many of the features we use to tell groups apart are difficult to see without magnification. While there are identification guides for scarabs larvae found in pastures, there are currently no such identification resources for the scarabs found in household gardens.

Since identification may not be possible, the best guide to whether or not scarab larvae are a problem in your garden is the health of your plants. Plants with damaged roots may wilt or turn yellow. Since most root-feeding scarabs prefer grass roots, lawn turf is most at risk and damage is usually caused by exotic scarab species.

What should I do if I find curl grubs in my garden?

Seeing suspiciously plump curl grubs amongst the roots of prized garden plants can be alarming, but please don't automatically reach for insecticides.

The chemicals used to control curl grubs will harm all scarab larvae, regardless of whether or not they are pests. Many of the most common treatments for curl grubs contain chemicals called "anthranilic diamides", which are also toxic to butterflies, moths and aquatic invertebrates. And by disrupting soil ecosystems, using insecticides might do more harm than good and could kill harmless native beetle larvae.

So what to do instead?

Larvae found in decaying wood or mulch are wood feeders and are useful composters; they will not harm your plants and should be left where they are. Larvae found in compost bins are helping to break down wastes and should also be left alone.

If you find larvae in your garden soil, use your plant's health as a guide. If your plants appear otherwise healthy, consider simply leaving curl grubs where they are. If your plants appear yellow or wilted and you've ruled out other causes, such as under-watering or nutrient deficiencies, consider feeding grubs to the birds or squishing them. It's not nice, but it's better than insecticides.

Lawns are particularly susceptible to attack by the larvae of non-native scarabs. Consider replacing lawns with native ground covers. This increases biodiversity and lowers the chances of damage from non-native scarab larvae. Scarab beetles are beautiful and fascinating insects that help keep our soils healthy and our wildlife well fed.