

CALGAROO

April 2022



Eucalyptus parramattensis - Calgaroo

**Newsletter of the Parramatta and Hills District Group
Australian Plants Society NSW Ltd**

What's on in 2022

Saturday 23 April 2 pm: Bushwalk at Vineyard Creek Reserve, Dundas.

We will explore the upper valley of Vineyard Creek, a tributary of the Parramatta River. The creek is named for the vineyard which was established at its junction with the Parramatta River by Phillip Schaeffer in 1790.

Where we will be walking is not country for planting grape vines. Be prepared for a steep walk down to a hidden fern gully and then an easier walk to the dam



created to provide water for the Oatlands Golf Course. Below the dam the walk is among tall trees - blackbutts, angophoras, bloodwoods and turpentines - in a beautiful shady valley. Some of the more interesting understory plants include *Trachymene incisa* and *Astroloma humifusum*.

Meet at the entrance to the Reserve in Robert Street Telopea.

Further information apsparrahills@gmail.com

Saturday 21 May: NSW Region Gathering Hosted by our group at Gumnut Hall, Gumnut Place Cherrybrook.

The 2 pm meeting will be preceded by a garden visit from 9.30 am to Boongala Gardens in Kenthurst, followed by a BYO Lunch at Gumnut Hall. The speaker will be Peter Olde who will be talking about "Grevilleas suitable for pots and patios". Please keep this date free to be able to help with the many tasks required to make this meeting a success. See Page 13.

Saturday 25 June 2 pm Members' Meeting at Gumnut Hall, Gumnut Place Cherrybrook.

Saturday 23 July 2 pm: Bushwalk Jones Road Kenthurst.

Saturday 27 August 2 pm: Bushwalk Cobar Ridge, Marramarra National Park.

Saturday 24 September 2 pm: Garden Visit to the Wright's Garden at Baulkham Hills.

Saturday 22 October 2 pm: Bushwalk.

Saturday 26 November 2 pm: Members' Meeting and Christmas Party.

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Australian plants on clay

Grahame Forrest

Many Eastern Australian plants flourish in the sandstone soils close to our coasts in the sandy environment of the Great Dividing Range. Eremophila flourishes in the dry sandy soils of Western Australia but in New South Wales Eremophila often resists the humidity of our coastal environment but resists, even more, our clay soils.

***Eremophila nivea* (grafted)**

El Nina pours rain widely east and west of the GDR and in this unusual circumstance challenges us on how to prevent our Aussie plants from rotting in this unusual water logging situation. On Radio National, Saturday, 12/2/22, Angus Stewart fielded many questions on this subject. One thing we can be sure of is that waterlogging will pass (between such downpours that the east coast of Australia is experiencing more as a result of global warming) and our climate may revert to its normal routine of limited rainfall. Clay may be slow to absorb water but is equally slow in releasing it.

This article considers some of the problems faced by the gardener who wishes to grow Aussie plants on clay soils.

This is the situation of my garden in Carlingford. Local histories declare that Carlingford exists in an area where orchards flourished, roses were raised, propagated and sold widely from Hazelwood's nursery. Close by in Rose Hill the first successful crop of wheat was raised



by James Ruse, after whom the most successful public high school in Sydney was named and is found in Carlingford.

Choosing which plants to attempt to grow encounters a problem for the gardener on clay soil presenting at a nursery where Australian plants could be expected to be available. So often the suggestions on the plant labels include the instruction: "Plant in sandy, well-drained soil." Unlimited financial resources would enable the gardener to import corrugated iron raised garden beds into which several tons of specially mixed growing medium could safely be spread. When I was a new gardener planning a garden in my never-before built on property, I was not in such a financial situation. In any case, to raise Aussie plants in such an unnatural environment seemed like cheating. I made do.

My original thought turned to my father's garden in Earlwood where he had gardened in a similar soil situation. He grew wonderful roses, raised vegetables supported by fowl manure from the egg layers in the rear of the block and he loved dahlias and carnations. The only Aussie plants he had were Bottle Brush, Queensland Fire Wheel Tree, and a Macadamia tree whose nuts resisted my enthusiastic efforts to hammer them into surrender.

I knew very little about Aussie plants and started with planting exotics. Azaleas flourish in clay soils. I enjoy their flowering each spring, as do passers-by who remark on the show, now approaching sixty years old. I also have four different citrus trees that provide lots of fruit.

Then, in a visit to the Royal Easter Show, I encountered the Australian Plants Society display and I was hooked.

Since joining APS I have found friends in the propagation group, where, alongside the various protocols of trimming cuttings and mixing the appropriate growing medium, I have had opportunities to talk plants with the enthusiastic and knowledgeable participants. I recommend joining.

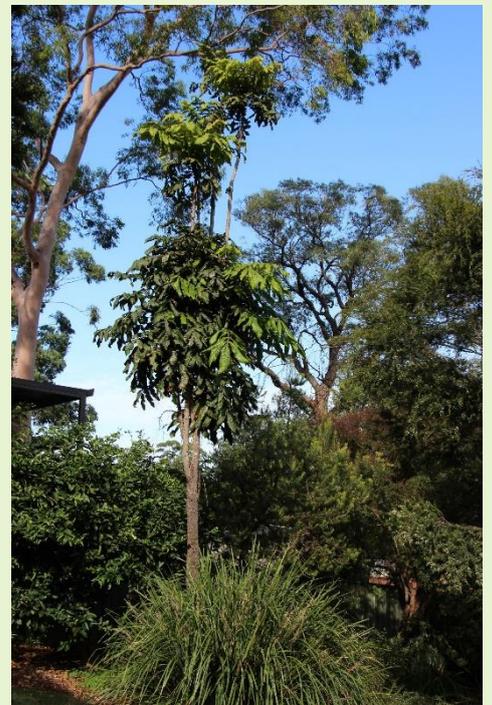
My very small collection of books which I browse for information is somewhat short of the suggestions that I seek to help me to choose the right plants for my situation of thick topsoil, on a clay base with underlying slate. Just the right place for sand-loving species it is not.

My bible for Aussie plants is my copy of the 4th edition of Wrigley and Fagg's Australian Native Plants. This tome has very little to say about how and what to plant in clay soils. It does suggest the addition of gypsum to assist in drainage. Its group listings, e.g. climbers, palms, scented plants, ground covers etc, ignore the soils. Of course, the label "requires good drainage" is very often advised.

Angus Stewart's interesting "Creating an Australian Garden" concentrates heavily on native varieties. He has much to say on building up the quality of Australian soils through fertiliser and compost while limiting phosphorus, but much less on clay soils. He recommends a mixture of one part clay, one part builder's sand and one part organic matter. When starting to build a garden on clay soils the suggestion seems reasonable. However, the problems of cost, time and energy involved in implementing the project, and the height of the gardens resulting from the improved growing medium and its edging, give cause for caution.

Angus Stewart's recommendation "not on clay" is found in 213 of his 450+ plant descriptions. I acknowledge that his list presents only varieties developed from the original plants found in Australia of each genus that he includes. It is possible that varieties are not typical of the original forms and his genera are not encyclopaedic. The "not clay" warning includes a large majority of Grevilleas, Correas, Acacias, Hakeas and Isopogons. I am relieved to find that Leptospermums, Callistemons and Telopeas, amongst others, can be planted with safety in clay soils.

Plants growing well in my garden include **five trees**. Two Lillipillis, (*Syzygium*), an Illawarra Flame (*Brachychiton acerifolius*), a Lemon Scented Myrtle (*Backhousia citriodora*) and a Davidson's Plum (*Davidsonia pruriens*) (pictured) are all mature and healthy.



Most gardeners have room for some shrubs and small trees. Some of these that I have successfully grown include the Callistemons of which I have the varieties Captain Cook, Endeavour and Little John. The latter has grown to a height of 4 metres.

Medium Shrubs and Small Trees

Acacia boormanii which has quickly reached 150 cms and seems ready for greater height.

Banksia Golden Candles. Very showy in flower. The name says it all.

Banksia ericifolia is mature but not excited to be in my garden.

Hibbertia vestita, in a group of four, are carrying their heads and flowering well though not putting on much height. **H. scandens** (pictured) has almost doubled its length against the fence in the recent downpours and will be trimmed back from its wanderings across the ground as well.



Alyogyne huegelii comes from Western Australia and a warning against it from Angus. Mine has been in situ for about 5 years and flowers beautifully.

Grevillea lanigera lasted longer than 20 years before it died. **G. "Poorinda Royal Mantle"** has been running down the side of my drive for over 40 years and hasn't aged a bit.

G. "Robyn Gordon" deserves its high popularity. **G. rosmarinifolia** is young but determined to continue to make its way.

Correa baeuerlenii (also known as "Chef's Hat") is quite at home, while Angus's warning against Correas is well-founded. Three died in the recent heavy rains.

Graptophyllum ilicifolium is amongst my favourite natives. Known also as "Holly Fuschia", its bright green holly leaves and striking red flowers mark it out from its neighbours. I have had to stop it from growing higher than 210cm so that it does not cover the window above it in its shady situation.

Zieria smithii and **Z. prostrata** are so different from each other but equally deserve their place.

Leptospermums are recommended by Angus. I have two which enjoy their place but their variety names are lost.

Eremophila nivea when grafted onto Myoporum stock is a feature amongst my plants. The drive on my home is built on rocks, bricks and other rubble leading from the road to the garage. This base allows great drainage, and the attractive leaves and wonderful mauve flowers are a delight.

Austromyrtus tenuifolia, with its edible berries, is growing well in two partly-shaded positions.

Ground Covers

Zieria prostrata is mentioned above.

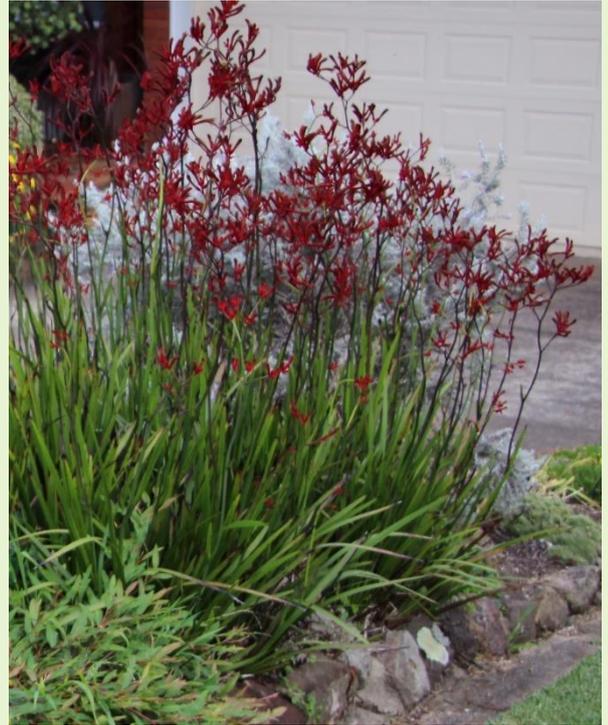
Anigozanthos (Kangaroo Paws - pictured) can be found in many places and situations in my garden. I love the range of reds, greens and yellows that show when they are flowering. The clumps continue to spread year by year.

Myoporum parvifolium has been growing happily under my orange tree for many years.

Hibbertia aspera (?) (name lost) has reached a full metre across and threatens to overwhelm nearby *H. vestitas*.

Viola hederacea appeared without notice and has spread slowly for many years providing almost continuous flowers.

Dichondra repens is also an intruder and is spreading across the ground, where its presence among other small plants is becoming unwelcome. A very good ground cover nonetheless.



Plectranthus is a safe plant in clay. It suckers easily and may need keeping in check. The leaves have cream edges to their light green interior. Wrigley and Fagg do not list my specimen.

I'm pretty sure it's Plectranthus parviflorus 'Blue Spires' – Ed.

I hope that my notes have provided interest, and encourage gardeners on clay to try some plants that aren't yet in your inventory.

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This month we have a segment on *time* . . .

"It's about time", you might say . . .

First Nation's Proverb:

We are all visitors to this time, this place.

We are just passing through.

Our purpose here is to observe, to learn, to grow, to love . . .

And then we return home.

‘Time is their secret weapon’: the hidden grey army quietly advancing species discovery in Australia

Rachael Fowler, University of Melbourne

Part of an article from [The Conversation](#)

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.



Russell Wait in his Eremophila garden.

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

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.

Ron Dadd helps advance knowledge of emu bush. Bevan Buirchell

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.

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Good timing is everything . . .

At the graveside

Time is like a river. You cannot touch the water twice, because the flow that has passed will never pass again. Enjoy every moment of life.

As a bagpiper, I play many gigs. Recently I was asked by a funeral director to play at a graveside service for a homeless man. He had no family or friends, so the service was to be at a pauper's cemetery in the Nova Scotia back country. As I was not familiar with the backwoods, I got lost and, being a typical man, I didn't stop for directions.

I finally arrived an hour late, and saw the funeral guy had evidently gone and the hearse was nowhere in sight. There were only the diggers and crew left and they were eating lunch. I felt badly and apologised to the men for being late.

I went to the side of the grave and looked down, and the vault lid was already in place. I didn't know what else to do, so I started to play. The workers put down their lunches and began to gather around. I played out my heart and soul for this man with no family and friends. I played like I've never played before for this homeless man.

And as I played "Amazing Grace", the workers began to weep. They wept, I wept, we all wept together. When I finished, I packed up my bagpipes and started for my car. Though my head was hung low, my heart was full.

As I opened the door to my car, I heard one of the workers say, "I've never seen anything like that before, and I've been putting in septic tanks for twenty years."

Apparently, I'm still lost . . . it's a man thing.

Out of the past . . .

Recently we have written about two former members who contributed profusely to our Group over many years, and who passed away in 2021 – Betty Rymer and Gordon Brooks.

Another former member who we should never forget is Klaus Engelhard. Klaus passed away unexpectedly in January 2000 – 22 years ago. Some of us remember Klaus very well.

Klaus was our Group' President 1990-91, State Delegate 1988-89, Vice President 1987-88, and Committee Member 1985-86.

Klaus led us on walks to memorable and wild places. He was leader of the Proteaceae Interest Group, and was involved in most of the Group's other activities. We miss his friendship, enthusiasm, knowledge, inspiration, and above all, his passion for the Australian bush and its flora.

From Calgaroo March 2000:

"We have said farewell to Klaus Engelhard. The huge funeral attendance reflected the esteem with which he was regarded. It is hard to believe that Klaus is no longer with us. But he will be in spirit when we think of some of the places he took us to – the Blue Waterholes, Wollongambie Crater, Mount Banks, Lockleys Pylon, the Colo River, the tracks through the Snowies – there were so many special places. Klaus' ashes were scattered at one of them – a favourite vantage point in the heart of his beloved Snowy Mountains. Klaus was never happier than when surrounded by nature in the wildest parts of his adopted country.

Klaus' busy schedule did not allow him as much time as he would have liked in the bush. He would have loved retirement – where he could have pursued his passions with unrestricted time – but it was not to be. His were the simple pleasures – like looking at a flower, cooking over a camp fire, having a yarn while sitting on a rock in the bush. To talk to Klaus was pleasurable and inspirational. He was so enthusiastic. He was an endless source of information on just about anything, and could tell you a story about any situation."

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Spring in the Hawkesbury

Chris Cheetham

From '*Weed all about it*', Hawkesbury's Bushcare newsletter, Summer 2022

This spring has been an excellent season for our local native plant life, and has seen extensive displays of flowers all around the district.

But why? Especially after the recent drought. This year has been one of mild weather with plenty of water and sunshine, everything plants need to grow. But even better is that this is the second such year in a row of good conditions, which has allowed plants to establish and produce even more flowers!

The fires of 2019-20 have also played a role, encouraging many species such as flannel flowers (*Actinotus helianthi*) to germinate en masse, and the smoke has probably had a much further reaching impact too!

Most of our main plant groups are putting on spectacular displays, particularly our proteaceous (Waratah, Grevillea, Conospermum, Banksia, Hakea) and myrtaceous (Eucalypts, Bloodwoods, Angophora) flora as well as all the orchids, Acacias, pea flowers and many others we are all familiar with.

This boom will no doubt be a great benefit to our native pollinators and other animals and replenish the soil seed banks so that we may see these displays for years to come.

A very brief selection of what could be seen over the past few months is in these photos:



A collage of photos from Chris:-

L to R, top down: *Actinotus helianthi*, *Clematis glycinoides*, *Conospermum longifolium*,
Epacris microphylla, *Glossodia major*, *Gompholobium latifolium*, *Gompholobium minus*,
Grevillea juniperina, *Grevillea speciosa*.



More photos from Chris:

Micromyrtus ciliata, *Mirbelia rubiifolia*, *Patersonia sericea*, *Philothea hispidula*, *Podolobium ilicifolium*, *Prostanthera ovalifolia*, *Prostanthera rhombea*, *Telopea speciosissima*, *Thelymitra ixioides*.

The Wardian Case: How a Simple Box Moved Plants and Changed the World

In 1829, surgeon and amateur naturalist Nathaniel Bagshaw Ward placed soil, dried leaves, and the pupa of a sphinx moth into a sealed glass bottle, intending to observe the moth hatch. But when a fern and meadow grass sprouted from the soil, he accidentally discovered that plants enclosed in glass containers could survive for long periods without watering.

After four years of experimentation in his London home, Ward created travelling glazed cases that would be able to transport plants around the world. Following a test run from London to Sydney, Ward was proven correct: the Wardian case was born, and the botanical make-up of the world's flora was forever changed.

Ward's invention spurred a revolution in the movement of plants — and many of the repercussions of that revolution are still with us, from new industries to invasive plant species.

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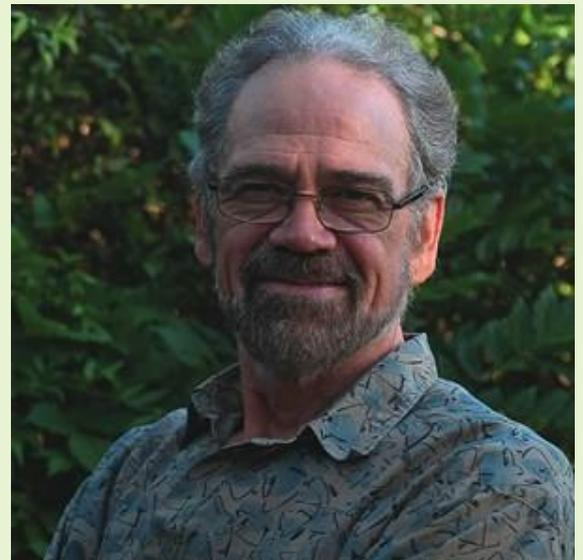
Invasive species: What is the issue?

Tim Low, Invasive Species Council co-founder, ecologist and author

From the Invasive Species Council's newsletter '*Feral Herald*'

Australia's extinction record makes that clear. According to a 2019 journal article, 15 animals have been lost since 1960 and 12 of those extinctions can be blamed mainly on invasive animals and pathogens. The invasive species responsible include wolf snakes, chytrid fungus, foxes and cats.

That article was produced by the Threatened Species Recovery Hub, a consortium of universities and other bodies coordinating research in this area. It reviewed all of Australia's animal and plant extinctions since European arrival to conclude that 43 extinctions were caused mainly by invasive species (including diseases), 31 by habitat loss, and 10 by all other impacts combined.



Species capable of causing extinctions keep entering Australia. Chytrid fungus arrived in the 1970s, wolf snakes in 1987, red imported fire ants in about 2000, myrtle rust in 2010. Three plant species are now critically endangered from the rust.

Extinctions are only one form of loss. Wherever invasive species swamp landscapes we lose something of the very essence of Australia. The waters between Tasmania and Sydney now have stretches of seafloor dominated by New Zealand screw shells (*Maoricolpus roseus*) living at densities of up to several hundred per square metre, at depths of up to 80 metres. Invasive ants, including yellow crazy ants in the Wet Tropics, are forming vast super colonies in which they eliminate other insects.

Weeds dominate vast areas, including mimosa, a prickly invasive shrub now in possession of more than 140,000 hectares of grasslands and wetlands on 15 river systems and 3 islands. Four rangers are employed in Kakadu National Park to keep it out. Other weeds include invasive pasture grasses fuelling hotter fires that by killing trees in many places are worsening the impacts of climate change.

As you can see, the continued impacts of invasive species are devastating, and the work to tackle this issue is huge. That why the Invasive Species Council was founded by myself and 7 others in 2002. The organisation is determined to lessen the impact of these invaders, and couldn't do this work without its dedicated supporters. Thank you so much for being an important part of our community, fighting for our wonderful, unique country.

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Shady Gardens

Jennifer Farrer

Angie Michaelis was the speaker at our meeting on 26th March. As well as being an experienced horticulturist she also has a garden with only one small sunny patch.

Photo of Angie's back yard:-



Inspiration from Nature

When thinking about designing a garden in a shady area it is always good to think about plants that grow in a shady environment. Rainforests are a good source of inspiration. In a rainforest, there are many different light levels and layers of plants. There is the canopy above, plants that are growing on tree trunks such as epiphytes and ferns, climbers twining around trunks, and the plants growing on the forest floor. The predominant colour is green, but there are many different shades of green from green/brown to green/white with an occasional flash of colour. There are also many different leaf shapes and textures.

Understanding Your Site

What is causing your shade? Is it a solid wall or tree canopy? Is it shady all day/year? Often there will be sun at some times of the day/year. The shade may be dense, or filtered through the leaves of your canopy. Is the problem really shade or lack of water? Often plants struggle more from root competition than from the shade of the canopy.

Possible solutions

Removing trees entirely is not a good idea, as gardens feel best with at least one tree to provide shape to the garden.

Broad-leaved plants and ferns have evolved to get enough light in a low light environment.

Prune shrubs or canopy trees from below to let in more light.

Use tree trunks to display epiphytes.

Areas with summer sun and winter shade are the most difficult to manage. The best solution is to plant something which is happy in the sun but not to expect too many flowers because of the shady periods.

Look at ways to increase the water to areas where there is competition from tree roots. Often in these situations, it is better to use pots or raised beds.

Plant Selection

Up High

Use trunks to grow Birds Nest and Stag ferns, orchids, climbing ferns, climbers such as *Hibbertia dentata*, *Pandorea jasminoides* or *pandorana*, *Clematis*, *Eustrephus latifolius*, Understorey trees such as *Backhousia myrtifolia*, *Dodonaea viscosa*, Tree ferns. Structural plants such as Cordylines and Gingers. Baskets for ferns or *Viola hederacea*.

The Middle Storey

Shrub Layer *Indigofera australis*, *Correa bauerlenii*, or *reflexa*, *Graptophyllum ilicifolium* or *spinigerum*, *Hymenosporum* "Gold Nugget", *Rhododendron lochiaie*, *Croweas*, *Boronias*, *Bursaria*, *Philotheca*, *Syzygium*, *Pittosporum revolutum*, *Prostanthera scutellarioides*, *Zieria*, *Austromyrtus dulcis*, *Pultenaea blakelyi*, *Grevillea shiressii*. Structural Plants, Cycads.

Ground Covers

Hibbertia, *Dichondra repens*, *Violas*, *Doodia aspera*, *Adiantum hispidulum* and other ferns, *Zieria prostrata*, *Podocarpus spinulosa*, *Goodenias*, *Ajuga*, *Brunoniella*, *Dianellas*, even mosses.

Change in the Garden

Change is inevitable in the garden. Look for different solutions to problems.

Reinvent your garden. Do you need to keep trying to grow plants under a large tree? Maybe the solution is paving, a seat, a sculpture or a pool.

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NSW Region Gathering 21 May hosted by our Group

We need your help!

This is an all-day event. Members have been invited to visit Boongala Gardens in Kenthurst in the morning. The gardens will be open from 9.30 am for inspection as well as a tour of the rainforest. We will be providing a simple morning tea at the gardens. Joan Hayes has volunteered to make sure there is enough water in the urns and that there is enough milk, sugar, tea and coffee.

Meanwhile, at Gumnut Hall we need able-bodied members to set the hall up for the afternoon meeting. The hall is booked from 10.30 am so we can get this job done in time before members start arriving for lunch from 12 noon.

Last time we did not permit parking in Gumnut Place. We need some volunteers to be parking marshalls to make sure everyone parks in Gumnut Road.

Members will provide their own lunch but we will provide tea and coffee. We need someone to watch over the drinks table at Gumnut Hall to ensure the urns have enough water, and there is still enough tea, milk, sugar etc. available.

We are providing afternoon tea. The last time we hosted one of these, there were around 75 members to feed. We need volunteers to provide very nice fresh food for afternoon tea, e.g. sandwiches, biscuits and cakes, and savoury things which can be cut up into serving pieces. Because of Covid restrictions shared food like dips are not allowed.

Ricki Nash has agreed to keep a record of what members are going to provide, so please contact her if you are able to bring something, just to ensure we have a range of different foods: nashje@bigpond.com 0419 626 848.

If you wish to be reimbursed for the ingredients, you must keep receipts and give them to Pip in exchange for the money. APS NSW will reimburse us for costs, but needs receipts.

When all the visitors have gone home, we will need more volunteers to help clean up.

Please email Pip at pgibian@tpg.com.au or phone 9651 1962 to let her know what you are able to do. Those members who have already volunteered to help do not need to contact Pip or Ricki again.

Jennifer Farrer
Secretary

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Professor Michelle Leishman, the guest speaker at our February meeting, recently delivered the Royal Society's Clarke Memorial Lecture hosted by Macquarie University: *"From bulldozers, pests and pathogens to climate change and urban futures: the tough life of plants"*.

You can watch the recording of this lecture [here](#) via youtube.

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The Collectors Plant Fair will be held on Saturday and Sunday 9th and 10th April at Clarendon.

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Share your stories . . .

What have you been doing?

Email me at itcox@bigpond.com for the next Calgaroo.

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In the spirit of reconciliation, we acknowledge the Traditional Custodians of our Country, the people of the Dharug nation, whose cultures and customs have nurtured, and continue to nurture, this land since time immemorial. We pay our respect to Elders past, present and future, and their connections to land, sea and community, and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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Parramatta and Hills District Group

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