

# CALGAROO

February 2021



*Eucalyptus parramattensis* - Calgaroo

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

## **Annual General Meeting Saturday 27 February**

Our AGM will be held on Saturday 27 February at 2 pm in Gumnut Hall Cherrybrook with reports and election of officers. All positions will be open for election.

Officer Bearers for 2020 were:

- |                            |                 |
|----------------------------|-----------------|
| • President                | Vacant          |
| • Vice President           | Vacant          |
| • Secretary                | Jennifer Farrer |
| • Treasurer and Membership | Pip Gibian      |
| • Immediate Past President | Tony Maxwell    |
| • Publicity                | Ben Turco       |
| • Conservation             | Daniel McDonald |
| • Editor                   | Leone Ferranti  |
| • Librarian                | Sue Gibbons     |
| • C'ttee Member/Facebook   | Marilyn Cross   |

Sue Gibbons has decided to step down from the Committee. This is after many years serving on the committee in several positions including Secretary and President. In recent years she has served as Librarian. This has involved her in countless hours finding new homes for our library books. This was necessary as we no longer had a place to keep the library and make it available to members. Her persistence and devotion to this task has ensured that it is now successfully completed. We appreciate the many years of service that Sue has given to our Group and wish her well.

Leone Ferranti has moved to the Central Coast and is no longer editing *Calgaroo*. We appreciate the contribution she has made to the group particularly as our Editor over a number of years. We are looking for new members to serve on the committee.

### **2021 Program**

The uncertainty which has become part of our lives for the past twelve months continues this year. The committee has planned a draft program for this year. At this stage there will be fewer members' face to face meetings at Gumnut Hall and more outdoor activities such as bushwalks and garden visits. This could change if the vaccine rollout proves successful and permits life to return to more normal activities.

At this stage this is the Program:

- 27 February AGM
- 27 March Garden Visit location to be confirmed
- 24 April Bushwalk Quarry Road Dural
- 22 May Members' Meeting Propagation Workshop
- 26 June Bushwalk
- 24 July Members' Meeting
- 28 August Bushwalk
- 25 September Bushwalk
- 23 October Visit Mt Annan Botanic Garden
- 27 November Members' Meeting

### **Speaker for 27th February Meeting**

Our next meeting will feature a talk about birds. This is a topic which has not been featured for many years. Our speaker will be Doug Meredith. He is to speak on the delicately balanced relationship between native woodland plants and native birds, in terms of distribution, feeding and breeding of the birds, and pollination, distribution and health of the plants. Doug is a member of our APS group, having moved to our area a few years ago.

For over 60 years, Doug has had an interest in biodiversity, especially for the local woodland birds. He is a member of the Cumberland Bird Observers and stepped down as their President in 2020. He is also a member of Birdlife Australia, as well as APS. He has completed official bird surveys in NSW, especially in the Cumberland Plain area. He is also on the board of the Cumberland Land Conservancy, which owns and regenerates properties in Western Sydney, aiming to re-establish authentic Cumberland Plain Woodland.

Doug's talk promises to be very interesting indeed.

## Fungal Walks

In 2019 Ray Kearney gave our Group a very interesting talk on fungi, and some of us attended one of his walks at Sydney Olympic Park. Here is information about the next walks he will be conducting for the Sydney Fungal Studies Group. Our members are welcome to attend.

### **Bola Creek Saturday 20th March 2021**

Wet weather alternative: Saturday 27th March

Co-ordinators: Ray & Elma Kearney - Ph: 94285336 (h)

Meet at the gate of Lady Carrington Drive at 9.45am for 10am start. This site is in the Royal National Park.

Turn off the Princes Hwy at Waterfall, cross the railway and turn into McKell Ave. After the bridge over the Hacking River, turn left into Bertram Stevens Drive, and the Lady Carrington Drive gate is approximate 0.5 km on the left- hand side. Bola Creek and the survey site, Wallamurra Track, is approximately 600 metres from the gate.

As this site is within the National Park, the entry fee will be waived on production of an authority from the National Parks. A copy of this authority can be obtained from the Coordinators Ray & Elma Kearney ray.kearney@sydney.edu.au

Place this authority on the dashboard of your car so that it may be viewed by the ranger, or a fine may be issued. The main gate to the National Park at Mc Kell Avenue is usually unmanned, but if not, the gatekeeper will have been informed to allow entry of members of the SFSGI.

Extra authorities will be obtainable from the Coordinators at the parking area.

Bola Creek Reserve is in the Royal National Park leading from the township of Waterfall.

### **Coachwood Glen Saturday 1st May 2021**

Wet weather alternative: Saturday 8th May

Coordinators: Elma & Ray Kearney - Ph: 9428 5336

Meet at the Coachwood Glen Nature Reserve at 9.45am for 10 am start.

Travel by road to Blackheath. In the centre of Blackheath, turn left over the railway at the level crossing and immediately turn left into Station St. After one block, turn right into Shipley Rd.

After about 0.75 km on this road, turn left into Megalong Rd. Coachwood Glen is 3 km along this road on the left. There is limited parking at the entrance of the reserve but a larger parking area is on the right-hand side of the road about 100 metres beyond the entrance. If it has been raining this site can be wet underfoot and suitable waterproof footwear is advisable.

After collecting, we will have lunch and discuss the specimens in Blackheath Park, Prince Edwards St., left off Govetts Leap Road. Govett's Leap Road is directly ahead after crossing back over the railway and the Great Western Hwy.

Coachwood Glen is near Blackheath a short distance down Megalong Valley.

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## In Search of Rare Plants

### **Chris Cheetham**

Australia has a truly stunning array of spectacular and unusual plants, some of which are to be found in the Hawkesbury district where I have been seeking out these botanical treasures.

There are quite a number of sites I know well, though I only have room to tell of one.

One of the best sites in my region is located north of Kurrajong, where many species converge at the edges of their range. The most notable species to be found here is *Melaleuca deanei*, which flowered in late 2020 to great effect, making the entire plant turn brilliant white. This individual is very large at about 4m tall, and clearly flowers regularly due to the large number of seed pods held in its canopy. This plant is not the only one of note to be found there, for the canopy is dominated in some areas by the uncommon *Eucalyptus squamosa*, which also reaches a very large size for its species, and is to be found in very large numbers throughout the site.

Beneath these rarities are other equally spectacular though more common species such as both the pink and white flowering forms of *Eriostemon australasius*, which are still to be found there in substantial numbers making a stunning show with their large blooms. These are accompanied by the common but colourful *Boronia rubiginosa*, *Calytrix tetragona*, *Grevillea buxifolia*, various *Gompholobiums*, *Banksias* and *Hakeas*.



Left: *Melaleuca deanei*. Right: White form of *Eriostemon australasius*. Photos Chris Cheetham.

Almost all of these plants provide a massed display every year in October, giving the bush a mid-spring splash of colour to anyone who cares to look and to any bees which happen to fly past a welcome splash of nectar, making the location a great place to also see our native insects!

A short distance from the first site is the very different vegetation surrounding Mountain Lagoon, where the very rare *Macrozamia elegans* can still be found in small numbers, though once, it appears, would have dominated some parts of this area. This small cycad is one of the most notable plants found here and is restricted to the surrounding area, most of which is inaccessible, making the site one of the few where it can be easily found.

In close proximity can be found other uncommon plants such as *Blandfordia grandiflora*, which flowered en masse this season in the small area it occupies, an area normally easily overlooked due to its lack of other bright flowering plants. Just on the other side of the ridge in a dense scrub understory can be found *Prostanthera rhombea*, if you are lucky enough to find it, which is easily identified by its aromatic foliage and short-lived mauve flowers. In this same scrub in

moist, steep rocky areas can be found the very unusual mint family ally *Chloanthes stoechadis*. This weak shrub scrambles over the rocks it grows amongst and produces large tubular flowers which are either an off white, yellow-green or a very strange and unique blue green. I do not know of any plant that produces flowers quite like it.



Left: *Prostanthera rhombea* photo Wikimedia Commons. Centre: *Blandfordia grandiflora* photo Chris Cheetham. Right: *Chloanthes stoechadis* photo Chris Cheetham.

In the gullies and on moist ridges *Livistona australis* can occasionally be found, though not in large numbers. This species of palm is reputed to have once been common throughout the Hawkesbury and it is certain that it has been severely reduced in its number over the past 200 years. So much so that this is one of the few places in the district where mature plants can still be found.

Further away on the T3 track, which allows access to the Colo River at Tootie Creek, several more rare and unusual plants can be found. The most numerous and noticeable is *Platysace clelandii* which since the fires has experienced a substantial increase in numbers particularly around the carpark at the track head where there was a very substantial number in flower last year, giving a surprising contrast with the still blackened bush. Further down the track, small numbers of the unusual and locally rare *Isopogon dawsonii* can be found near cliffs overhanging the river if you know where to look. The final species which I will mention is by far the rarest and most localized on my list. *Leptospermum spectabile* is extremely rare, and is only found in the riparian zone of the Colo River where it is easily overlooked unless in flower, when it produces masses of bright red blooms. Even then it is difficult to locate as it is only ever found in very small numbers among other riparian shrubs. At the end of the T3 track only one plant is to be found, though perhaps there are more nearby.



Left: *Isopogon dawsonii* photo Cas Liber. Right: *Leptospermum spectabile* photo Brian Walters.

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## A Native Peperomia

### Pip Gibian

Over the years we have grown a variety of rainforest trees in pots indoors, decorating them at Christmas and adding presents around the pot. Eventually they all outgrew their pots and were deleted. Of course, many fern species can be successfully grown indoors.

Some years ago I was given a native peperomia. It grew happily in its pot in a semi-shaded area along with other potted plants, being watered regularly. Rather belatedly I decided to try it inside, putting it near a window in a bathroom. It has proven to be an excellent indoor plant.

It is *Peperomia banda* from Queensland's subtropical rainforests. It also occurs in damp, shaded forests, often on wet rocks, in coastal New South Wales, as far south as the Illawarra region. It is a semi-succulent, and ridiculously easy to propagate by cuttings. The shoots send up thin stems vertically above the foliage, along which tiny flowers appear. Pruning these resulted in more leaf stems and later more flowers. It seems to remain happy after many months indoors.



## Betty's Fern Garden

Ian Cox

At the Hills Council's Community Environment Centre (CEC) at Annangrove where I work as a volunteer, there's a garden affectionately called "Betty's fern garden".

Now, the Betty mentioned is Betty Rymer. Betty will be well-known to some of the long-term members of the Parramatta and Hills Group and the Fern Study Group, as she was a very active member until a few years ago. Indeed, Betty was a very active, respected and knowledgeable member of APS NSW, and was the main organiser of the fabulous Wildflower Spectacular Shows at Castle Hill and Rouse Hill in the 1980s and 1990s that sadly don't happen any more. These shows attracted many thousands of visitors and created tremendous publicity for native plants. For her efforts Betty was honoured in 1991 by an award of life membership by APS NSW.

At the CEC there are demonstration native plant and vegetable gardens, and we give presentations to residents about sustainability, growing native plants, soil improvement, composting, and various other environmental topics.

When Betty moved away from the Annangrove/Kenthurst area

about ten years ago she donated some of her ferns to the CEC, and these formed the basis of her fern garden. The garden is along the northern side of the CEC building, and now comprises mainly *Blechnum cartilagineum*, *Microsorium diversifolium*, *Pteris umbrosa* and *Doodia aspera*. There may have been other ferns that haven't survived. It's part of the native garden demonstration area.



As you can see from the photo the ferns are thriving. This is despite receiving very little care, living through drought and heatwave conditions, and being partially sheltered from rain. It just shows how resilient some ferns are.

Last year I had the pleasure of meeting up with Betty and her daughter Vicki. Betty is active for her age - well into her nineties - and is still voicing her opinions about things and buying plants for her garden. She is very resilient just like her ferns!

## NSW RFS helps save resilient wattle from extinction

From Bush Fire Bulletin Vol. 42 No. 2 (2020)

**Dr Joanna Haddock, NSW Department of Planning, Industry and Environment**

With acknowledgement of contributions from Trent Forge, Ahamad Sherieff, Dave Monahan and Steve Douglas.

Among the fire-scarred forests and heathlands of the Blue Mountains, sit the hopeful little yellow pom-poms of the endangered Gordon's wattle, *Acacia gordonii*. The NSW RFS and National Parks and Wildlife Service (NPWS) have been working together to save this rare wattle since 2018, with hopeful twists and disappointing turns along the way. After the devastating bush fires of the summer, scientists feared the loss of nearly half of all known Gordon's wattle plants. But the resilience of the natural world is always a delightful discovery.



*Acacia gordonii*. Photo Barry Collier / NSW DPIE.

### **The Ecology of Gordon's Wattle**

Gordon's wattle has a beautiful yellow pompom flower that blooms in spring but is a rare sight for residents of the Blue Mountains. It is found at only a handful of sites in the world and until recently, there were less than 3,000 individual plants in total. Gordon's wattle only occurs in the northwest of Sydney in isolated patches, from the Maroota and Glenorie area in the east, to the lower Blue Mountains in the west.

One of the largest populations, around 300 individual plants, is tucked away on sandstone rock platform in the Blue Mountains National Park near Falconbridge. Through the efforts of the NSW RFS and NPWS, its chances of survival are looking a lot more promising. The endangered plant is one of more than 400 species that the NSW government has committed to protecting in the wild – it is a plant fighting for its very survival.



The NSW government's 'Saving our Species' (SoS) program has been monitoring the wattle for four years, and has learned much about its ecology, how it disperses its seed and what conditions it needs to germinate and survive.

While nobody likes the sight of a burned forest, there are a few ecological silver linings. Some plants have evolved to rely on fire to spread their seeds, either through higher soil temperatures incubating the seeds during and after the fire, or through the fire breaking open the hard-coated seed and allowing it to disperse.

Many fire-dependent plants need cool burns to thrive, some need hot burns. Some need frequent burns, and some would perish in a frequently burned ecosystem. As with so much of nature, survival is a fine balance.

Only rarely do plants genuinely do well in very hot burns. Through many years of observation, plant scientists have recently concluded that Gordon's wattle is one of those species – it is highly reliant on hot and infrequent burns for seed dispersal and germination. But with most populations of the wattle growing close to urban settlements, hot and intense burns are a rare and dangerous thing for residents. It can be tricky to balance ecological needs with protecting people and assets.

### **A Collaboration**

The NSW RFS, NPWS and scientists from the SoS program wanted to plan a project that balanced the safety of the community with the conservation of the Gordon's wattle. In April 2018, an opportunity presented itself. The NSW RFS was planning to conduct a hazard reduction burn at Falconbridge Point to protect neighbouring communities. The Falconbridge Point populations of Gordon's wattle were old, and on long-unburnt country. Scientists assumed that fire was needed to germinate the seed bank and encourage seedlings to grow in these populations. So, as part of the larger strategic hazard reduction burn, the team carefully designed smaller ecological burns near the wattle plants, simulating an intense summer bush fire.

This was a risky plan for a threatened species with such low numbers. There was a real possibility that a fire would kill the adult plants, and if a successful germination of the seed bank did not follow, then an entire population could be wiped out. The hope was that the high temperatures would break open the hard casing of the Gordon's wattle seeds and help the Falconbridge Point population germinate and thrive.

**Seeds of Gordon's wattle broken open by fire.**

**Photo: Barry Collier / NSW DPIE**

The NSW RFS successfully carried out a cool hazard reduction burn to lower the risk of bush fire affecting nearby properties. In collaboration with the NSW RFS, NPWS also undertook a hot



ecological burn in a very small area of bushland further from houses.

The collaboration and success of the project proved that efficient cross-organisational partnerships could deliver precision burning with outcomes for residents and the ecosystem alike. Scientists also learned a lot about how the species responded to different types of fire, and everyone watched expectantly for signs of recovery.

As the plants occur in pockets of soil interspersed across rock platforms, fuel was limited, so extra fuel was added and incendiaries were dropped. The intense flames were fanned by NPWS helicopters hovering above the fire, generating very high temperatures on the ground.

### **Germination . . . followed by tragedy**

The ecological burn hit the spot; Gordon's wattle started to germinate and grow. In some areas where the ecological burns hadn't been as hot, some of the burned adult plants had started re-sprouting! The beautiful yellow pom-poms were seen in great numbers during the spring of 2019.

However, the tragic fires of the 2019/20 summer burned through large parts of the Blue Mountains. The same firefighting heroes that had carried out hazard reduction burns to protect people's safety and to help the little Gordon's wattle, fought to protect property and bush from the Gospers Mountain fire. The NSW RFS and NPWS once again collaborated – this time to save properties and lives.

Eighty percent of the Blue Mountains world heritage area burned, affecting thousands of people. One-third of the world's population of Gordon's wattle was burned over the summer in mega fires. The absolute devastation and intensity of the burn was feared too much for many plant species to survive.

### **A story of resilience**

Some parts of the Blue Mountains, including a few sites of Gordon's wattle, were burned so badly that scientists held concerns for the plants' local survival. As communities rebuilt after the devastating summer, the NSW RFS, NPWS and SoS watched the recovering dry sclerophyll forest and heathlands of the Blue Mountains . . . and waited.

It wasn't until autumn before NPWS officers and SoS scientists were able to safely visit one of the badly burnt sites, a recently discovered population east of Bilpin. Among the blackened bush, across bare and shining rock platforms – the only recognisable landmarks in the burned area – stood a defiant little population of Gordon's wattle.

**The defiant post-fire population of Gordon's wattle discovered east of Bilpin**

**Photo: Steve Douglas / NSW DPIE**

While many of the adult plants had perished in the fire, thousands of seedlings had germinated and taken their place! Once again, the NSW RFS, NPWS and SoS will cooperate to protect Bilpin's new population of seedlings from fire, in the hope that the plants can establish.

### **The fight for survival continues**

Gordon's wattle survived this devastating summer of fire, helped along by the hot ecological burns that the NSW RFS, NPWS and SoS executed in 2018. But this endangered plant is not out of the woods yet, faced with multiple threats to its habitat. The SoS program continues to invest time, science and money in threatened species conservation, partnering with organisations like the NSW RFS with specialist knowledge and skills.

Gordon's wattle will continue to be monitored by rangers and scientists, with the hope that the resilient yellow flowers will still be found in the wild in 100 years' time and beyond.



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## *Your Calgaroo*

This is my first attempt at editing *Calgaroo*. I hope you have enjoyed it!

*Calgaroo's* future depends on YOU – I'd welcome your contributions for future issues.

Please send your articles, comments, observations and photos to me at [itcox@bigpond.com](mailto:itcox@bigpond.com). They can be about plants in the wild, in your garden, successes, failures, conservation, ecology, propagation, plants you see on bushwalks, in fact anything about Australia's flora.

Thanks in advance,

Ian



*Blandfordia cunninghamii* after the fire near Mount Hay in November 2020. Hundreds of these rare plants were flowering here in a prolific and spectacular display. Photo: Andrew Cox.

To view a report on the natural distribution and ecology of *Blandfordia cunninghamii*, [go here](#).



**Australian Plants Society NSW Ltd**

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