

Native Plants for New South Wales



\$5.00

Journal of the Australian Plants Society NSW Ltd Vol 50 No 2 April 2015



Native Plants for NSW

Published quarterly in January, April, July and October by the Australian Plants Society NSW Ltd ACN 002 680 408

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Proof Reading: Rhonda Daniels
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Layout: Lachlan McLaine

The Journal is a forum for the exchange of views of members and others and their experiences of propagating, conserving and gardening with Australian plants.

Contributions are warmly welcomed. They may be emailed, typed or hand written and accompanied by photographs and drawings. If handwritten, please print botanical names and names of people.

Photographs may be submitted as either high resolution digital files, such as jpg, or prints.

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Deadline for the July 2015 issue is 1 June 2015.

Deadline for the October 2015 issue is 1 September 2015.

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Number of Copies: 1400

Printed: Elect Printing, Fyshwick ACT.

Print Post Approved: 100000848

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ISSN 1323 – 7314

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Front cover: *Swainsona formosa*. Photo by Carol Drew of East Hills Group.

Back cover: Mass flowering of Sydney Red Gum (*Angophora costata*). Photo by Carol Drew of East Hills Group.
See page 55 for more information.

Introduction

David Crawford, Editor Native Plants for NSW

A year or so ago some members were advocating that *Native Plants for NSW* should be available in electronic form. The Board looked into the practicalities of such a change and decided that print was the preferred option at least for the short term. Members can however read this newsletter on the APS NSW website – www.austplants.com.au. A pdf version is generally available before the hard copy is printed or distributed, so if there are production delays you don't have to wait. This option has been available for about one year now, but I am advised that very few members have used it. Perhaps you are not aware of it, or the push for electronic format was not widespread?



This is a bumper issue. Again the articles are varied in style and content, hopefully reflecting the diversity of members' interests and providing some items of appeal to all members.

Fire is a perennial factor in the Australian landscape. In this issue we begin a series of articles by Gwyn Clarke of Coffs Harbour Group, giving first-hand experience of designing a garden and house for fire protection, experiencing bushfire, and recovery after the devastation. See page 4 to start the journey.

In the January 2015 issue I asked members to nominate their favourite websites for native plants. Alas, I have not received any feedback at all! This is very discouraging. Perhaps I was wrong and members are not using the internet to explore the 'world of native plants'? Can this be true? Please give my request some thought and make a contribution for later issues. In the meantime, Brian Walters, who manages the ANPSA website, has written a timely article to mark 20 years online (p 24). I hope his article will encourage more members to make use of this great resource that has grown out of our Society.

Events that members need to be aware of include the May gathering and NSW AGM to be held in southern Sydney (p 20), the 2015 NSW Get-together in the Blue Mountains (p 41) and the biennial national conference in Canberra later in the year (p 22).

For this issue the cover images are by Carol Drew, a member of the East Hills Group. *Native Plants for NSW* is your newsletter: members' contributions – images and articles – can only make it better and more relevant for us all.

FIRE! FIRE! Part 1

Gwyn Clarke, Coffs Harbour Group

Gwyn and Geoff Clarke live on a property on the back road between Coffs Harbour and Grafton. They love the Australian bush but they know its greatest hazard, fire. They designed their house and garden with a love of native plants and the need to ensure safety and survival. Last year that design was put to the test. This is the first of three articles about their experience. Those to follow will cover the fire and its immediate effects and finally the recovery of the garden and regeneration of the bush.

Ominous smoke clouds billowed into the sky over the forest in the south east. There was a light breeze from the same direction but it was quite a cool late winter's morning, Saturday 2 August 2014 to be exact. The forecast temperature was 19°C but the fire danger rating was very high because of the extreme dryness. Geoff and I walked back up the hill at the end of our morning's walk. Would the fire come our way today, should we take what we had planned and leave, or should we prepare to stay and fight? Our bushfire plan was to stay unless the fire danger was extreme or catastrophic in which case we would leave a day earlier. We always knew that one day it would come to this but you never really feel totally prepared and I was certainly feeling apprehensive.

We bought our 40 hectares of dry sclerophyll forest and woodland in 1985. There was a shabby, dusty photo in a real estate agent's window in Coffs Harbour. It looked like a large rock garden with ferns, grasstrees and huge lilies scattered through the rocks. We wanted to see it, so the agent provided us with a map of the subdivision, and told us how to get there. The rest was up to us. Fortunately he gave good instructions.

Of course it didn't all look like the photo and we had looked at quite a few blocks before we found the one where the photo had been taken. The block itself had many different aspects, some areas were level some steep and rocky. This meant that the flora on it was diverse. How could we resist?

We always knew it would be fire-prone, both of us having lived near sandstone areas in our youth. At the time we bought the block bad fires in this area occurred at around 50 year intervals (the last one from the south west in 1983), often in late spring as this is the driest time here. Our summer is usually wet. Times change though, and the advent of more people living in the area on blocks of between 40 and 80 hectares and the changing of the climate means more fires. Usually these have been burn offs which have got away in the rugged gullies here.

For many years it was just used as a holiday retreat. The good thing about it was that there were no weeds to worry about and control, and there were lots of interesting plants. The big lily from the photo turned out to be *Doryanthes excelsa*, which was rather a surprise to us as at that time it had only been recorded as far north as the Newcastle area. We found *Boronia rosmarinifolia* now *B. hapalophylla* and an unknown *Dodonaea* which has recently been named *D. crucifolia*. There was *Ricinocarpus pinifolius* with its showy white flowers and strange greenish pom-poms (female flowers). There were five different banksias, lots of different peas and amazing number of small plants to identify, but best of all *Actinotus helianthi*. We'd always wanted to grow flannel flowers but pot culture was the best we could manage in our former home in Canberra. We now have a plant list and never seem to have finished adding to it.

It was great in winter because it was much warmer than Canberra and we enjoyed sharing it with friends and family. It was always our intention to build a home here for our retirement but we kept putting it off. Our grandchildren and then travelling got in the way. The day dawned when we realised that if we didn't do it soon it would never happen.

In 2009 we left Canberra which had been through a major bushfire in 2003, and was suffering from a long drought, for the much warmer and wetter north coast of NSW. We lived in our caravan on the block while our home was built and moved in, in October 2009. By the time we

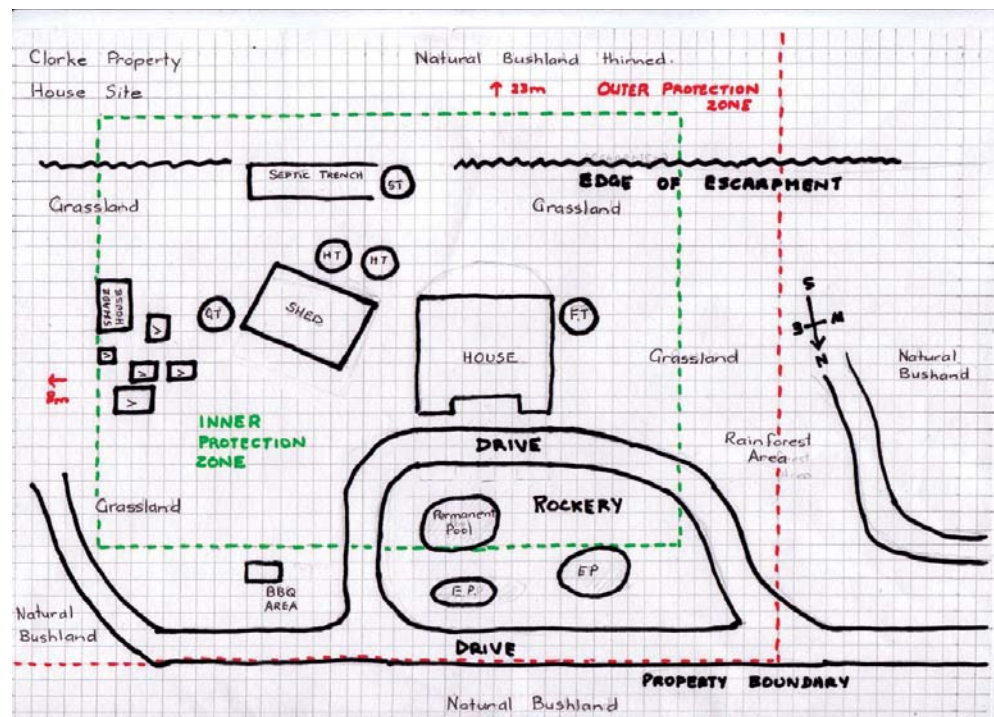


Typical bushland in the area around our house

built, the rules for homes in such areas as ours had become very strict. We had to have a bushfire consultant and outside our home as well as the home itself were planned carefully in order to keep us as safe as possible in case of bushfire.

The house had to be built on a concrete slab with external walls of non-flammable materials. No wood was allowed externally and the roof had to be steel. To protect the northerly glass we have steel mesh screens and we also have these on the southerly deck. They are made to help disperse embers driven towards the glass and veranda. All glass and aluminium had to be of a higher standard than usual. We also decided on stand-alone solar power. This was because normal power would have cost nearly as much and poles and wires can contribute to increased fire problems. We use wi-fi for our phone and computers. Again this means no unnecessary poles and wires.

The council also required asset protection zones around the house and shed. These are dependent on slope in each direction. There are few trees in the inner protection zone (marked in green on the diagram.) Those we have are short, not close to others and if they fell wouldn't hit the house. The level ground to the west was cleared for 15 metres and to the east was cleared for 15 metres beyond the buildings. No tree branches should be overhanging any part of the buildings. No



Plan of the area around the house showing the inner and outer protection zones



Looking from the house across the wide gravel drive to the rock garden which includes a permanent pond

garden beds should be beside the buildings, so we have a gravel path all around the house. We also have a designated fire tank with a Storz fitting which allows fire tankers to fill up when necessary to fight local fires. In the outer protection zone (marked in red on the diagram), the natural bushland is thinned. There is a larger protection zone to the south because of the steeper slope. The tree canopies must not touch and we removed many of the more flammable species in the understorey. The rest of the 40 hectares remains in its natural state.

We designed the garden keeping in mind the fire situation. Road access is from the west and we have a circular gravel drive 4 metres wide to allow good access for the fire-fighting vehicles. This is in front of the house and the area in the middle of the drive is a large rockery with one permanent pool and two which are ephemeral. On the house side of the drive there is a semi-circle of sandstone rocks which allow for small garden beds facing the house. These have herbaceous plants, small lomandras, flannel flowers, daisies and other low growing plants including a number of local species. On the inside of the rocks are garden beds some raised, some not. All plants in this area should grow to 1.5 m at maximum. There are concrete and gravel paths as well as rock areas dividing this space. I have provided a diagram of the house area with everything marked so it makes it easier to interpret my notes.

Plantings began in 2010 and it has been a slow process because much of the area has sandstone very close to the surface. We have plenty of rocks for raised bed building and Geoff has dug many of them out so we can plant. We have very sandy soils with pH of 4.5 to 5.5 and Geoff has added composted soil to most of the raised beds. Our climate is also very different from Canberra. Gone is the heavy clay soil, frosts, long cold winters and low rainfall. Even though we live in a rain shadow we

average 1,000 mm a year and since we have lived here it's been higher than that around 1,250 mm I would think.

As well as the rockery at the front we have planted up a rainforest area to the west and an outside barbecue and grassland area to the east. You will notice that there are several grassland areas marked. These areas were originally forest and were cleared to provide the house site. We have allowed local grasses to grow here and they are mown to keep them short. The area around the shed, the shade house and the raised vegie beds are pebbled over weed mat. However we do need to spray for weeds in this area to keep them under control. As soon as we disturbed the area the weeds arrived from all our neighbours and the roadside verges. East of the septic tank is a trench for the waste water. This area is mainly planted with *Lomandra longifolia* with a few other species in between. Behind the house is a steep rock bank planted with low growing species including some locals. The level area at the base is kept mown and then there is a 2 m rocky drop over the escarpment and a sloping area down to a track.

2014 started off with a very dry period; January and February which are usually very wet months yielded a total of 50 mm. By end of July the year's total had crept up to only 300 mm. The previous year we had over 1,000 mm by the end of March. The starting date for requiring a permit for burning off was brought forward to 1 August. Our bushland was the driest we had ever seen it, but the weather was cool with only light winds so we hoped for some rain to help the situation. It was not to be. On 1 August a fire was lit about 5 km from us. As there was a light wind from the north we didn't even realise there was a fire burning to the east of us and being driven into the position that would send it our way the next day.

Our early morning walk next day took us north and it was not until we were returning that we noticed the ominous smoke clouds billowing into the sky over the forest in the south east. There was a light breeze from the same direction but it was quite a cool late winter's morning, Saturday 2 August 2014. The forecast temperature was 19°C but the fire danger rating was high because of the extreme dryness. Would the fire come our way today, should we take what we had planned and leave, or should we prepare to stay and fight? Our bushfire plan was to stay unless the fire danger was extreme or catastrophic in which case we would leave a day earlier. We always knew that one day it would come to this but you never really feel totally prepared and I was certainly feeling apprehensive.....

To be continued.

Growth and Promotion

What's that on your head?



Left: Example of the APS NSW branded hat

Below: Helen Ray of North Shore Group wearing the hat she purchased at the March gathering.

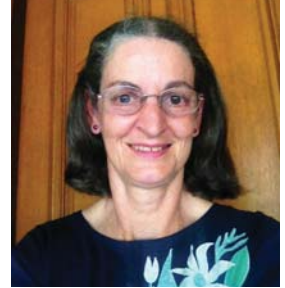
Look out for the new APS NSW hats for sale at the 23 May Quarterly Gathering and NSW Get-together on 4–5 July. Made from cotton in a light colour with a wide 7.5 cm brim, UPF50 rating, strap and air holes, they are great for protecting your head and promoting APS while you are out and about. Available in four sizes (55 cm, 57 cm, 59 cm and 61 cm) for just \$15 each – that's cost price only. If you can't buy one at an event, contact the APS NSW office for postage costs and payment at office@austplants.com.au

Having sold out of our old stock of APS NSW T-shirts, the Growth and Promotions Committee is looking at new clothing. In the mean time, we have organised APS green aprons for volunteers at the Easter Show and other events – one size fits all, and they have a handy pocket too. The aprons, and other promotional items, can be borrowed by groups to use at a group event. Contact the office.



How to rescue a pot-bound plant

This article by Lesley Waite, a member of Parramatta and The Hills District Group, first appeared in their newsletter, Calgaroo, in November 2014. It has been updated and illustrated for Native Plants for NSW.



Have you bought plants from a nursery with great excitement, only to have life get in the way and find them languishing several months later with their roots tortured and twisted in their prison? I am ashamed to admit that I have, but I was determined to nurse them back to health. One success led to another, and soon I was seeking out pot-bound plants so I could save them! This is the 'system' that I have developed.

Kinks and curls

When a plant has been in a pot too long it becomes limited by that pot so that the roots can no longer grow outwards to seek nutrients and water, and to stabilise the plant to withstand winds. Instead, the roots curl around the outer limits of the pot (round pots) or the reach the sides of the pot and kink downwards (square pots). Over time the fine white roots will age and become woody, and their shape will 'set'. The roots will never be able to expand outwards to seek nutrients and water. Kinks and curls do not allow good water and nutrient flow, so they will always impede the growth of your plant. Yes, these plants can be planted in the garden, and if the weather is mild and they have sufficient water, they will survive and even seem to thrive. However, the first sign of heat or water stress and they won't be able to cope, and won't be able to



Left: A small *Leptospermum* sp. with sharp and woody kinks. Although the overall root-mass was large, it still depended on the kinked roots and did not survive in the garden when planted out.

be revived. So you have invested time, water and emotional capital in them, all for nothing.

So the bottom-line to growing a thriving specimen from a pot-bound plant (PBP) is to take care of **the roots**. This involves getting rid of all the roots that have curled or kinked and become woody, and to release the young white roots so that they can do what nature intended.

Step by step

The photos on pages 13, 14 and 15 show the step by step approach with a specimen of *Prostanthera ovalifolia*, the Round-leaf Mint Bush.

The steps for recovering your pot-bound plants are as follows:

1. Soak the plant and pot in a proprietary seaweed solution (Seasol, Eco-Seaweed etc.) for at least an hour, but for as long as possible up to 24 hours. This prepares the roots and insulates them somewhat against the intense shock you are about to inflict upon them. It also thoroughly wets the root ball so your watering over the next few weeks will go direct to the roots and keep the plant alive as it recovers.
2. Dig a hole as deep as you can, so that up to $\frac{3}{4}$ of the plant can be buried. Many PBP have long stems and good top growth. These are the ideal specimens as you can bury the roots deeply – away from the heat of the day, away from competition from other roots, and closer to the water table. In addition, more roots can form from the branch nodes that will now be in soil. As a rule of thumb, the more bound the plant was, the more the roots need the protection of a deep planting and the assistance of extra roots along the stem.
3. Pour 1 litre or so of the seaweed solution into the hole and note how long it takes to drain, so you can match the drainage needs of your plant to the location.
4. Take the plant out of the pot. This can be tough. The roots may be fairly firmly wedged in there, so you can try pushing the sides of the pot down heavily with the heel of your hand and then upending the pot and striking the edge on the corner of a table. As a last resort, you may need to cut the pot off! The more pot-bound it is, the more savage you will have to be in cutting the roots back. Instead of planting it in the ground, you may need to re-pot it and keep it in the shade house until it has recovered.
5. Now, be warned – this is the scary bit. Take your sharpened pair of secateurs and cut off all the curled or kinked woody roots. If roots

have taken on the shape of the base of the pot, slice through this entire base (usually 1–2 cm) with a sharp knife. Any soft white roots may be able to be teased from the root mass and ‘freed’. Support these with soil underneath as you plant it. Ideally you will be left with a fuzzy/hairy root ball (no smooth bits) with all roots pointing out or down, with no kinks.

6. Duplicate the amount of savagery you inflicted on the roots now in the upper growth. Take a good look at the plant and imagine the future growth and how you want the plant to look. Cut back to an even shape with short branches. Trim the branches that will soon be below the soil level, as the nodes will form roots. Remove any flowers – you want all energy to go to repairing the roots, not maintaining flowers.
7. Plant. Ensure any protruding roots are gently supported by soil, heading outwards and downwards. Gently spray with water as you backfill to ensure there are no air pockets. Leave a bowl-shaped depression around the trunk to direct water down into the root ball and so that there is no horizontal runoff. Mulch in the depression, but keep the mulch away from direct contact with the stem as it introduces a humid environment that is an ideal location for fungus, mould spores, microorganisms and snails. This advice is independent of whether a plant is deep planted or not.
8. Water regularly for the first week, then water in another seaweed solution. Gradually wean off the water as the root system strengthens and the plant puts on new growth.

Long stem planting

I have drawn heavily from the work on long-stem planting (LSP) by APS Central Coast Group at Katandra Reserve. However, I believe that my experiments have shown there is a new and exciting area of application for LSP.

- LSP works on pot-bound plants even though they have not been grown in specific pots or with a strict fertiliser regime.

Captions (for opposite page)

- i. *Prostanthera ovalifolia* with good top growth, untidy and straggly lower branches and minor root restriction from the 5–6 inch pot.
- ii. Evidence of root restriction whilst in the former tube style pot.
- iii. Fine bottom roots have taken the shape of the pot.
- iv. The bottom 1 cm is cut off, allowing the roots to grow freely.
- v. The side roots are scuffed (on left) to free them also.
- vi. The woody roots that were pot-bound in the tube are cut so new free roots will form.



- LSP can virtually revive plants otherwise destined for the compost heap.

There is one important caveat. Because of the heavy root pruning often required, the plants do not have the rapid and strong burst of growth associated with traditional LSP. The rescued PBPs tend to 'sit' for a while as they heal, before bursting forth with new growth. However, thanks to their deeply buried roots, they can survive happily in full sun in Sydney's hot temperatures after being in the ground for less than a month.

Disclaimer and background

This article is based on experiments I have conducted in my garden over the last five years or so. The guidelines that I have developed work well for me, but you will probably need to experiment to find the system that works for you and your garden. I live in Kenthurst, on sandstone ridge-top soils that comprise 10–20 cm of low-nutrient sand over clay. I invariably need to dig into the clay when I am following this method, so I find a good couple of handfuls of gypsum in the bottom of the hole helps with drainage. It usually takes 1 to 2 hours for the water to drain from the hole, which is tolerable even for plants that don't like wet feet. If it takes longer than 2 hours to drain, I usually find somewhere else to



(vii) The straggly and dead lower branches are removed.



(viii) The straight branch is retained, leaving several nodes from which new roots will form.



(ix) 2 litres of water fills hole and is drained, the plant is soaked in *Seasol* for 24 hours and deep planted. Water soaks straight down from the depression.



(x) *Prostanthera ovalifolia* with a new lease on life!

plant. Using this method, I have planted *Grevillea*, *Hovea*, *Eucalyptus*, *Corymbia*, *Angophora*, *Correa*, *Leptospermum* and *Ricinocarpos*, and all are still growing well after at least 1 year with natural rainfall only. I have found that water-sensitive *Prostanthera* do not accept heavy root pruning. It is better to be gentle on the roots, and be severe on the foliage, pruning to just one small branch, if that is what it takes to have a good deep planting.

I am going to try *Lambertia formosa* next. I am particularly interested in it because I wonder what will happen if you bury lignotuber cells? My theory is that if the plant is young enough, it will be able to adapt.

What do you think? Will you give this a try? Let us know how you go!

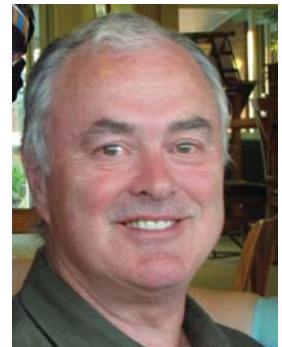
Advertising in *Native Plants for NSW*

Size	Members		Non-members	
	Single Issue	4 Issues	Single Issue	4 Issues
Full page	\$122.50	\$416.50	\$175	\$595
½ page	\$63	\$214	\$90	\$306
¼ page	\$31.50	\$107	\$45	\$158.50

Native plant profile

If only I weren't a *Zieria*

John Knight continues his regular series, this time promoting the growing of Zieria.



We are probably all guilty of perusing catalogues or books, researching, wondering just what plant to put in that 'certain' place. We start at A and by the time we are half way through, the right plant has been found, and off we go to the nursery. Plants such as *Zieria* are generally overlooked, because we don't start at the back of the book.

The genus *Zieria* honours the 18th century Polish botanist and Cryptogam specialist, Johannis Zier – the Germanic origin suggests pronunciation as ZEER-ee-a. Since the naming of the genus in 1798, botanists have had difficulty classifying the plants. In 1980 there were 26 species recognised, and today there are 59 in Australia and one in New Caledonia. Eastern Australia is the stronghold for *Zieria*.

Our current knowledge of *Zieria* is based on work by James Armstrong. His study, *Zieria (Rutaceae): A Systematic and Evolutionary Study*, brings together a lifetime of research and was the basis for the recent treatment of the genus in Volume 26 of *Flora of Australia* (George et al. 2013).

The Tribe Boronieae contains genera which include garden plants such as *Zieria*, *Boronia*, *Correa*, *Phebalium*, *Asterolasia*, *Eriostemon*, *Philotheca* and *Crowea*. In *Boronia*, *Correa* and *Zieria*, the leaves are opposite rather than alternate, and usually have four petals. Both *Boronia* and *Correa* have eight stamens, whereas *Zieria* has only four.

Zieria may be prostrate ground covers, small to medium shrubs or even small trees. Foliage is usually trifoliate (leaves appear to be in threes) and often aromatic, though not always pleasantly so. Some species contain toxic chemicals in their leaves which can be dangerous. Take care when handling the foliage if allergic reactions occur and note that when preparing cuttings in enclosed situations the oils released can be overpowering. Both the Swamp and Red-necked wallabies feast on my shrubs.

In the wild, *Zieria* species are often found growing on light soils in rocky situations. In south east Queensland and along the NSW coast, I have observed many species on sandstone or granite derived soils. I will always investigate a rocky area where *Kunzea ambigua* grows, as invariably there will be one or two species of Rutaceae in company, either *Phebalium*,

Leionema, *Nematolepis* or *Zieria*, and sometimes a *Crowea* as well. Many of the species have very limited distribution, and are considered rare. In fact some are endangered in their natural environment.

Zieria is often overlooked when choosing plants for the garden. The flowers, though often prolific, are usually small to very small, the petals white, cream or light pink, the foliage smells. The plants once settled-in need little attention, and are generally well behaved. Consider some of the following species.

The cultivar *Zieria* 'Pink Crystals' is widely grown, even by people who say they 'don't grow natives'. Always presenting well in nursery pots, it is a strong growing shrub to a metre or more with large pink flowers well displayed through spring. Adaptable in cultivation, it will grow in sun or shade but does need good drainage. In common with many plants, it performs better when pruned after flowering, developing a pleasing shape. The presumed parents of this cultivar are *Z. cytisoides* and *Z. laevigata*, both of which are also well suited to cultivation.

Z. cytisoides is known as the Downy Zieria, referring to the greyish foliage. Some forms may grow to 2.5 m high and wide, but are mostly around 1.5 m in cultivation, and may be kept smaller with regular pruning. Flowering is from winter to early summer, but being small and white, the flowers are somewhat lost in the foliage. However native bees are frequent visitors, so find a space, especially under eucalypts where other plants can struggle.

The smooth green foliage of *Z. laevigata* contrasts well, and these two grown together add a unity to understorey planting. This one grows from southern Queensland through north eastern NSW, usually on sandstone-derived soils. An upright shrub to 2 m, it grows happily as an under shrub, flowering from late winter through spring. Flowers are about 15 mm across, usually white, and conspicuously displayed. The common name Native Candytuft delights, but the alternative of Twiggy Midge Bush might leave some to wonder.

Z. aspalathoides is a dwarf shrub to about 1 m, but often less, found in drier situations west of the divide in Queensland and NSW, and into central Victoria. With well-drained soil and plenty of light, it will grow into a tidy bush. Flowers are large for the genus, about 10–12 mm across, and the dark pink forms are particularly attractive.

Z. veronicea is another small plant with large pink flowers, which grows in sandy mallee country in Victoria through to South Australia. It is usually a small spreading shrub less than 50 cm high with attractively lemon-scented leaves. Good drainage is essential to keep this plant alive, and it

will tolerate full sun or dappled light. Its common name of Lemon-scented Zieria is a bit confusing, as there is another small plant from the NSW southern tablelands, *Z. citriodora*, which more rightly owns the lemon-scented title. It is uncommon in its natural habitat, but certainly worth a place in any garden. A low, spreading plant about 20 cm high and about 50 cm wide, *Z. citriodora* will self-layer if grown in open soil. Flowers are small, about 6–8 mm across and white or pale pink, borne from late winter till early summer in coastal NSW. It makes a lovely rockery plant, and exudes a delightful lemon fragrance on warm, humid days.

Z. pilosa is found in central coastal NSW, a shrub 50 cm to 1 m high and somewhat spreading. Foliage is dark green and usually glabrous, but hairy below, from which the common name Hairy Zieria derives. The white flowers are small but well displayed against the foliage, and this spring-flowering shrub makes a lovely garden plant, adapting to most well-drained situations.

The rare *Z. prostrata*, from coastal headlands of north east NSW, makes a bright, dark green ground cover in full sun and is equally at home when grown in shade. It can spread up to 2 m, but is easily maintained by pruning after springtime flowering. Flowers are mostly white or light pink, about 5 mm, but the cultivar *Z. 'Carpet Star'* has pinker flowers. Well drained soil is essential, and the plants cope well with dry soils once established. *Z. prostrata* tends to self-layer and to sucker in the garden.

Z. adenophora is found only on the southern tablelands of NSW, where a small population was re-discovered after being thought extinct for 100 years. This much-branched endangered species is an ideal garden plant of about 1 m, with attractive green foliage and reddish, warty stems. Flowers are only 5 mm across, and white to light pink, borne from late winter through spring. It appears that the plants are often pollinated by



Zieria aspalathoides



Zieria prostrata



Zieria citriodora
(cultivated, labelled)
Royal Botanic
Gardens Melbourne,
Australia
Photo: 'Melburnian'
[commons.wikimedia.
org/wiki/File:Zieria_
citriodora.jpg](https://commons.wikimedia.org/wiki/File:Zieria_citriodora.jpg)

unknown insects, as garden seedlings are not uncommon. Try well-drained, open-structured soils to ensure success.

Z. baeuerlenii is another rare plant, this one from coastal sandstone near Nowra on the NSW south coast. It has greyish green foliage with recurved margins. The 3 leaflets are roundish in outline, about 8–10 mm long with an unusually waxy surface. It is believed that the plant is sterile, growing only from suckers. Insignificant flowers, from late autumn to spring, with creamy white petals, are held within the foliage.

Propagation of these small *Zieria* is usually successful using firm new growth. Soft growth often wilts too quickly to allow root initiation. Growth of new season wood which has hardened over summer has proved reliable, and hormones have improved success. A mix of IBA 1500 ppm and NAA 500 ppm gives very good results, and Purple Clonex at 3000 ppm IBA also works, especially later in the year.

Let's hope that some of these can be sourced from your local nursery. If not, asking about them will suggest to nurseries that people want plants other than grevilleas. Members who already have *Zieria* in the garden should be propagating so some can be offered at APS meetings.

References

Armstrong, J. (2002) *Zieria (Rutaceae): A Systematic and Evolutionary study*, United Nations Environment Program, Switzerland, Volume 15 of Australian Systematic Botany, CSIRO.

George, A.S., Duretto, M.F. & Forster, P.I (2013) *Zieria* in *Volume 26, Flora of Australia*, Australian Biological Resources Study, Canberra, CSIRO Publishing.

Future APS NSW event

APS NSW 2015 AGM and gathering

Saturday 23 May 2015

The AGM and quarterly gathering is on Saturday 23 May. East Hills Group will be hosting the event, which will be at the Lugarno Uniting Church, 909 Forest Road Lugarno, directly opposite the Chivers Hill shopping centre. In the morning, guided walks will be available in Oatley Park in conjunction with Oatley Flora and Fauna Conservation Society. Access to the park is from Oatley Park Ave, Oatley (see the map on the opposite page).

The guest speakers after the AGM will be Jeremy Smith, from the Wildflower Farm at Somersby and a representative from Neutrog Fertilisers.

Jeremy will share his experience on the use of fertilisers for growing Australian native plants. He has been in the horticultural industry for over 30 years, and in particular with his family business, the Wildflower Farm at Somersby, which grows native flora for buyers in Australia and Europe. During this time he has gained extensive experience in the use of fertilisers for growing Australian native plants. Jeremy is a past-President of APS NSW and is currently a teacher of urban horticulture at The Northern Sydney Institute Ryde Campus (TAFE NSW).

There will also be a representative from Neutrog Fertilisers who will discuss a new fertiliser specifically developed for Australian native plants in association with Angus Stewart. The company is proposing an exciting partnership in which APS NSW would endorse the fertiliser in return for royalty payments and an offer to provide APS NSW members with the fertiliser at a discounted rate.

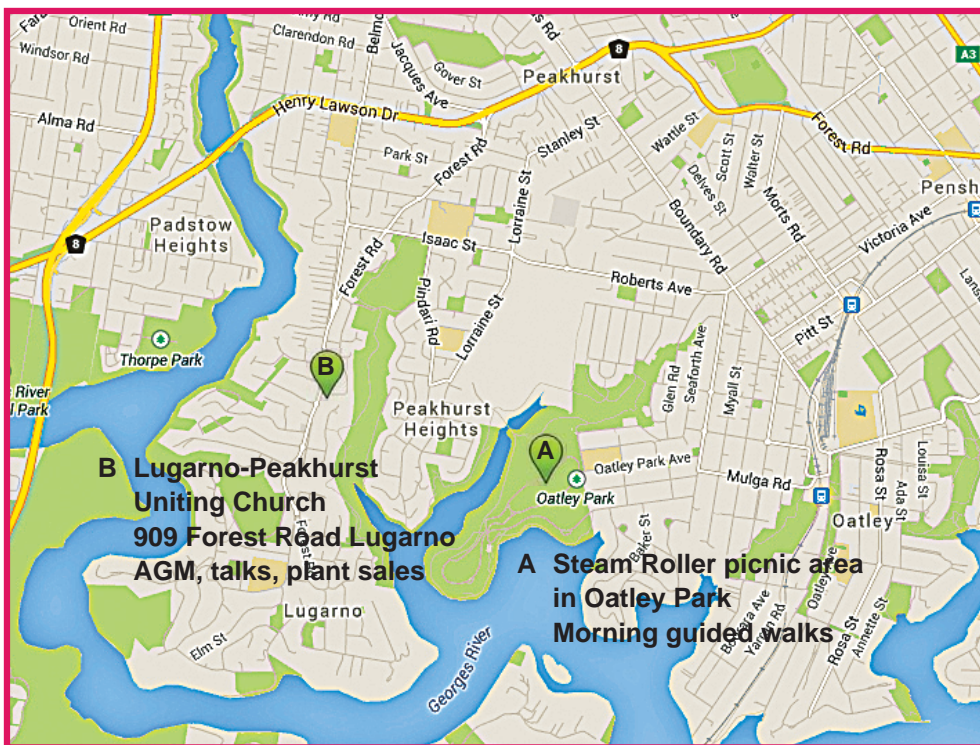
Program:

- from 10 am Attendees arrive at Steamroller picnic area in Oatley Park. Cold drinks, tea and coffee provided.
- 10.30 am Guided walks to various locations in Oatley Park.
- 12 noon Lunch either in Oatley Park or at the Church Hall. (Self-catered – there are cafes and shops opposite the Church at Chivers Hill, but no food outlets in Oatley Park.)
- 1 pm AGM for APS NSW

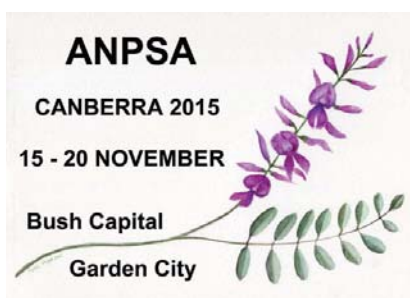
1.30 pm Guest speakers

3 pm Raffle, afternoon tea, plant sales and socialising with keen and enthusiastic native plant people

There is a \$5 charge to cover the guest speakers, but the AGM is free!



2015 Biennial National Conference



A reminder that the ANPSA 2015 Conference is being held in Canberra next November. It could not be handier for APS NSW members unless it was in Sydney – and then we would be busy organising. So this is the perfect opportunity. Don't let it slip through your fingers.

For more information and expressions of interest:

Email: conference2015@anpsa.org.au

Post: ANPSA Conference 2015

Website: <http://conference2015.anpsa.org.au>

P.O. Box 187

Deakin West, ACT 2600

Pools to ponds

Converting your backyard swimming pool into a habitat pond

Peter Clarke runs the Wildthings Program for Ku-ring-gai Council on Sydney's North Shore. He was the guest speaker at the March gathering hosted by North Shore Group.

The two principal initiatives of the program are the Stingless Native Bee Program and the Pools to Ponds Program.



Peter's background is Bushcare, working with volunteers restoring native vegetation in an urban environment. He observed that urban fauna were not faring well and doubted the common mantra 'repair the vegetation and the animals will automatically be OK'. Bushcare was not delivering all the outcomes he was hoping for.

The Wildthings Program concentrates more directly on providing positive outcomes for fauna. The bee program now has about 400 hives in Ku-ring-gai. The Pools to Ponds Program leads to changes in attitude and behaviour. People start to learn about the aquatic plants, fish, frogs and birds that use their ponds. This leads to a flow-on effect as they become concerned about native fauna and therefore begin to value the environment required to sustain them.

In Peter's opinion, the pools program achieves benefits for fauna in the local environment with considerably less effort than a Bushcare program. This may be heresy to many of us – but conventional wisdom needs to be challenged occasionally to see if it really is wise!

Pools to ponds is reversible, meaning that ponds can readily return to being swimming pools. It is sustainable, as owners are no longer using toxic chemicals and water is available for garden irrigation: the pond is effectively a tank without a lid. Converted pools save money on energy by not running the pool pump and filter. This is estimated at up to \$1000 per year. Further savings come from not buying pool chemicals.

The pond does not need to be labour intensive and can be made to be very attractive. It provides habitat for fish, frogs, plants and birds. In Ku-ring-gai threatened native fish species can be used, providing a biobanking benefit, with the owner being part of a larger environmental effort. It is not necessary to put gravel or rocks in the bottom of the pool.

Water quality in a converted pool is suitable for recreational use and is generally much cleaner than urban creeks.

Fencing is a big issue as ponds must meet pool compliance requirements and generally this means no plants within 0.5m of the fence. This will be a major issue for all pool and pond owners.

Three steps for converting your pool to a pond

1. Stop the chlorine or remove the salt water
2. Turn off the pump and filter
3. Let nature do what is natural i.e. there is no third step

After steps 1 and 2 algae colonises the water and this turns it green. Bacteria begin to feed on the algae and waste products and over a period this will change the type of algae in the water and the water will turn clear. To speed this process you can 'seed' the pool with pond water but you should expect the process to take up to 18 months to complete.

Mosquitoes are owners' and neighbours' greatest concern. In Sydney there are about 60 mosquito species. The three or four species that like human blood breed in water less than 30 cm deep. A converted swimming pool is not suitable. Other mosquito species will use your pond. Fish are your best option to control wrigglers (mosquito larvae).

There is no smell from a pond unless you disturb the sediment.

Frogs are loved by some and hated by others. They can be noisy. Their numbers are best controlled by the managing the type of habitat you create. Fish will feed on tadpoles, so if cover is reduced and fish are encouraged, frog numbers will be low. Conversely you can manage for lots of frogs.

Structures are required for aquatic plants as most prefer 10–20 cm water depth. These are limited by your imagination: floating, fixed to bottom, suspended from above. It is not necessary or desirable to do anything that damages the pool and hinders its ability to return as a functioning swimming pool.

Some local government areas in Sydney are actively interested in the program while others are strongly opposed. In Ku-ring-gai the program provides free plants and fish, technical advice and support for managing council health officers and unhappy neighbours.

Those wanting to know more should visit the website at www.wildthings.org.au

20 Years Online – the ANPSA Website

www.anpsa.org.au

In the last issue of Native Plants for NSW, your editor asked members to suggest some of the websites they find useful for native plants and to write briefly describing the site and its features. To start things off Brian Walters, the webmaster for the ANPSA website, has written to mark the 20th anniversary of that site.

It all started simply enough.

Back in early 1995 I had just obtained my first internet connection and OzEmail, in their enormous generosity, had given me 5 MB of server space to do with whatever I wished. 5 MB! How could I possibly fill all that up?

Why not use it to get the NSW Region of SGAP (as it was called then) online?

And so the first tentative steps into the World Wide Web began – just a few notes on plant propagation and some scanned articles from the hand-outs that NSW had produced for its annual wildflower exhibitions. But then came the idea of putting plant photos and plant descriptions online as well – that's when the limits of 5 MB started to become clear!

Although the website was started under the banner of NSW, it was clear that the content was of a wider nature and I suggested that it would be more logical for it to be an initiative of the national body – now Australian Native Plants Society Australia, hence the initials which appear in the website (ANPSA). APS NSW agreed and, later in 1995, the website officially became national.

From the start, the late Bill Payne, the long-term editor of *Australian Plants*, was a keen supporter of the website and it was through his contacts that we were able to gain access to much larger server space with the Farrer Centre of Charles Sturt University – an arrangement that continued for many years. Even when that arrangement eventually came to an end due to a restructure at CSU, we were able to continue on a private server run by Geoff Fellows, one of CSU's IT experts, who could see the value of the site in his teaching role. Eventually even that arrangement had to end, so in early 2014 we moved the site, now comprising several thousand individual 'pages' and including well over 1,000 images, to a commercial server.

Over the years, new content was gradually added to the website including an online quarterly magazine, *Australian Plants online*,



Typical banner from the website at www.anpsa.org.au with title and logo, tabs, revolving image, search feature and links to the latest news

commencing in 1996. Although it was discontinued at the end of 2008, the several hundred published articles remain available for viewing on the website.

In the past few years new content addition has slowed. There are now many more online resources on Australian plants than there were when the site began, so the need for plant profiles is less. Greater emphasis is now being placed on maintaining and updating existing pages and supporting the Study Groups through providing a digital repository for newsletters and other material. Another recent initiative has been setting up a website for the biennial ANPSA Conferences as a sub-domain of the main site.

So what can you find on the website:

- About Us – history of ANPSA and its member societies
- Detailed guides to numerous plant families and genera
- Plant profiles and photographs of about 750 species and cultivars
- Guides to native and exotic weeds, plants for fire-prone areas, plant name changes and native plants at risk
- Lists of native plant nurseries and seed suppliers
- Study Group information, including newsletter downloads
- Specific Study Group websites for Acacia, Banksia, Garden Design and Grevillea

- A sub-website for the 2015 ANPSA Conference in Canberra
- 'What's On' – events Australia-wide
- Hundreds of articles reproduced from Society newsletters and journals
- Downloads
- Links to Australian plants online resources.

Currently being developed is a 'Members Only' section of the site where members will be able to access papers from the ANPSA Conferences as well as other information.

As you might imagine, keeping all of that information up to date and relevant is a challenge. You can help! If you find errors or omissions, please let me know. Any and all feedback is extremely welcome!

Oh, yes. The addresses:

- Main website: <http://anpsa.org.au>
- 2015 Conference website: <http://conference2015.anpsa.org.au>

See you there!



Coates Wildlife Tours
Specialists in Nature Tours since 1986 (Small groups 12–14 passengers)

Kimberley Discovery
 15 Day Camping / Accom Tour – Departs 13th June 2015
 Explore Purnululu N.P, Gibb River Rd, Mornington Station and beautiful gorges.

Western Explorer
 13 Day Camping Tour – Departs 11th August 2015
 Highlights: Karijini N.P, Mt Augustus and Kennedy Ranges.

W.A.'s Mid West Wildflowers
 10 Day Accommodated Tour – Departs 5th September 2015
 See botanical hot-spots north of Perth during wildflower season.

Helena Aurora Ranges and Great Western Woodlands
 15 Day Camping Tour – Departs 26th September 2015
 See the wildlife of the world's largest temperate woodland.

Contact us for our full 2015 tour program:
 Free Call: 1800 676 016
 Web: www.coateswildlifetours.com.au • Email: coates@iinet.net.au
GSA Coates Tours Licence no 9ta1135/36

From the Board

AGM, 23 May 2015

The Annual General Meeting for APS NSW will be held on Saturday 23 May at 1 pm, before the quarterly gathering (see page 20).

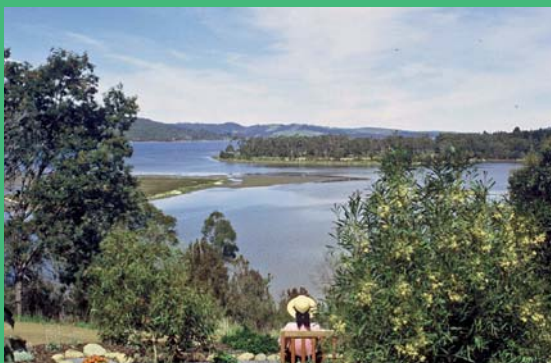
An agenda, nomination form and proxy form are included as inserts with this issue of *Native Plants for NSW*. The annual report will be available in April on the APS NSW website at www.austplants.com.au

The APS NSW Board is composed of office-bearers elected at the AGM and delegates nominated by each District Group. We did not elect a President or Treasurer at our last AGM. Our two Vice-Presidents, Graeme Ingall and Mark Abell, have indicated they will not stand for re-election. It is important that these leadership positions are filled to help share the workload of current Board members and help us achieve the objectives of APS NSW. The Board meets on Monday evenings about 8 times a year at the office at Wentworthville, but members can attend meetings by Skype.

Apart from the elected positions, it is important that we have members volunteering to undertake the many tasks required to run the Society. You can undertake work without attending Board meetings. Please consider how you can contribute using your specific skills or interests. Contact the office on office@austplants.com.au or an office-bearer.

Inverawe Native Gardens

Tasmania's Largest Landscaped Native Garden



Be Inspired! Thousands of colourful native plants, stunning views, interpretive signs and bird life add to the experience.

Open 7 days,
1 September to 31 May,
9.00am last entry 6.00pm.
Behind the Margate Train,
15 minutes south of Hobart.

www.inverawe.com.au p 6267 2020 gardens@inverawe.com.au

New members April 2015

Merle Thompson, Membership Officer

The Australian Plants Society NSW warmly welcomes the following 38 new members (28 memberships) and wishes each of you a long, rewarding and enjoyable association with the Society.



Kevin Archer	Blaxland
Angela & Michael Astles	Mandalong
Ben & Betty Bennett	St Ives
Glenda Browne & Jon Jerney	Blaxland
Mary Copping	Kotara
Helen Dakin	Petersham
Don Folbigg	New Lambton
David Forbes	Padstow
Eva Hamilton & Tim Haddad	Falls Creek
Janice Elizabeth Haworth	Mosman
Carlie Ireland	Bowral
Peter & Gail Lette	Hillston
Elizabeth Looije & Christian Grennan	St Peters
Jan & Peter Marshall	Bilgola
Anne Matheson	Gordon
Joanne McLaren	Ashtonfield
Neil & Vivienne Peters	Hornsby
Robyn Price	Norah Head
Margaret Tolmie	St Ives
Brenda Wild	Edgeworth
Judith Woodward	Castle Hill

We welcome back the following former members

Denis Child	Grays Point
Fred Dunford	Shortland
Joanne Foley	Crescent Head
Abdul Ghafoor & Dagmar Timmel	Valentine
Garry Hayes	Raymond Terrace
Paul & Patricia Johnson	Dolans Bay
Dorothy Walker	Maryland

Vale

It is with sadness that we learnt of the deaths of **Beatrice Duncan** of the Newcastle Group and **Stanley Oakes** of Wyoming. The Board extends condolences to their families and friends.

District Group directory

District Groups are located in many areas throughout New South Wales and range in size from fewer than 20 to over 100 members. Group members are able to take part in many activities including bushwalks, bush regeneration and conservation projects. Regular meetings enable members to keep in touch with people of similar interests and to hear expert guest speakers. Contact the Secretary of a specific group for further information.

Armidale and District

President: Philip Rose
Email: prosecarwell@bigpond.com
Secretary: Helen Schwarz ☎ (02) 6772 1584
PO Box 735, Armidale NSW 2350
Email: apsarmidale.secretary@gmail.com

Meetings: Native Plant Forum, TAFE Library Seminar Room, Beardy Street, Armidale
3rd Tuesday of the month at 7.30 pm (excluding December, January, June, July).

Blue Mountains

President: Dick Turner ☎ (02) 4739 5362
Secretary: Alix Goodwin ☎ (02) 4739 1571
PO Box 23, Glenbrook NSW 2773
Website: www.apsbluemtnsgroup.org

Meetings: Native Plant Reserve, Great Western Hwy, Glenbrook
1st Friday of the month at 8 pm (Sep-May) and
1st Sunday of the month at 10 am (Jun-Aug).
No meeting when there is an outing in the month.

Central Coast

President: Richard Street ☎ 0414 762 324
Secretary: Liz Hoese ☎ (02) 4339 1274
Email: aps.cc.secty@gmail.com

Meetings: Phillip House, 21 Old Mount Penang Road, Kariong
Generally 2nd Friday of the month (excl. Jan, Dec) at 7.30 pm but winter meetings on Saturday afternoons. Check website for details.
Website: www.australianplants.org

Central West

President: Gillian Baldwin ☎ (02) 6332 1583
Secretary: Lyn Burgett ☎ (02) 6331 9170
Email: l.burgett@bth.catholic.edu.au

Meetings: Bimonthly at alternating centres.
Contact the secretary for details.

Coffs Harbour

President: Dr M Duggan ☎ (02) 6649 3202
Email: morris@guarana.org
Secretary: Gwyn Clarke ☎ 0419 414 324
123 Sandstone Dr, Kungala NSW 2460
Email: gcl.38500@bigpond.com

Meetings: Coffs Harbour Botanic Gardens Display Room normally on the 2nd Wednesday of alternate months at 7.30 pm (excluding Jan).
Website: www.coffs.australianplants.info

East Hills

President: Graham Walters ☎ (02) 9534 3039
Email: agwalters@bigpond.com
Secretary: Karlo Taliana ☎ (02) 9709 6135
Email: karlo.taliana@optusnet.com.au

Meetings: Lugarno–Peakhurst Uniting Church
909 Forest Road, Lugarno
1st Wednesday of each month at 7.30 pm (excluding January).

Hawkesbury

Contact: Arthur Rutter ☎ (02) 4577 3271
99 The Terrace, Windsor NSW 2756
Email: aande42@bigpond.com.au

Meetings: This group was re-launched at the APS NSW gathering in November 2014.

Hunter Valley

President: Michael Belcher ☎ (02) 4930 1458
Secretary: Kevin Mantle ☎ (02) 4937 3200
29 Wallaroo Road, Seaham NSW 2324
Email: Mantlejanet@yahoo.com.au

Meetings: The Polish Hall, Cnr Grant & Old Rose Sts, Maitland
3rd Wednesday of the month (Feb-Nov) at 7.45 pm.

Illawarra

President: Kath Gadd ☎ 0414 333 475
Email: kath@malleedesign.com.au
Keith Hunter ☎ 0481 599 008
Email: keithjohnhunter@gmail.com

Facebook: type 'APS Illawarra' in the Facebook search bar.

Activities: This group is aiming to have an activity each month – check the Facebook page or contact the leaders.

Continued page 32

Membership application and renewal form

Please select your application type.

- New member
- Renewing member: Membership number _ _ _ _ _
Please tick if any details have changed from last renewal
- Gift membership. Donor name _____

Include any personal card you wish to accompany the new member's pack.

1. Complete your details

Name(s) _____

Address _____

Postcode

Email _____

Phone () _____

Mobile _____

District Group affiliation _____

2. Select your membership type

12 months membership. Rates at 1 January 2015. GST inclusive. Joint membership applies to two people at the same address. Each receives a membership card. A concession is available to Seniors, people on a limited fixed income and full-time students.

- | | | | |
|---|----------|--|------|
| <input type="checkbox"/> Individual | \$53 | <input type="checkbox"/> Individual – Concession | \$45 |
| <input type="checkbox"/> Joint | \$61 | <input type="checkbox"/> Joint – Concession | \$53 |
| <input type="checkbox"/> Overseas | A\$60 | | |
| <input type="checkbox"/> Optional donation to APS NSW | \$ _____ | | |

3. Select your payment method

Cheque or money order payable to Australian Plants Society NSW

Visa MasterCard

Card number _ _ _ _ / _ _ _ _ / _ _ _ _ / _ _ _ _

Expiry date _ _ / _ _ CVV/CSC: _ _ _
(The last three digits printed on the signature panel on your card)

Cardholder's name _____

Cardholder's signature _____

Direct deposit

Bank Commonwealth Bank of Australia
Account name Australian Plants Society NSW Ltd
BSB 062 217
Account no. 0090 7163

Please use as the reference your surname and 6-digit membership number which is on your membership card and your journal mailing envelopes. Please email merleaps@bigpond.com to advise of your deposit.

4. Return your form

APS NSW
Membership Officer
PO Box 3066
BOWENFELS NSW 2790

Membership inquiries

Merle Thompson, Membership Officer

merleaps@bigpond.com

Ph (02) 6352 3805 Fax (02) 6351 2384

District Group directory continued

Macarthur

President: Robin Davies
Secretary: Rod Bray ☎ (02) 4647 9928
147 Holdsworth Drive, Mt Annan NSW 2567
Email: yarbdor@westnet.com.au
Meetings: Jack Nash Club Rooms, Nash Place
Currans Hill NSW 2567. 3rd Wednesday of the
month at 7.30 pm (Feb-Nov).

Menai

President: Jason Cockayne ☎ (02) 9570 8559
Email: Jay.shaz@hotmail.com
Secretary: Annette Tuckfield ☎ (02) 9543 1490
Email: menaiwildflower@austplants.com.au
PO Box 3104, Bangor NSW 2234
Meetings: Illawong Rural Fire Service.
2nd Wednesday of the month at 7.30 pm
(excluding January).

Newcastle

President: Colin Lawrence ☎ (02) 4965 6110
Email: president.aps.newcastle@gmail.com
Secretary: Maree McCarthy ☎ (02) 4943 0305
Email: secretary.aps.newcastle@gmail.com
Meetings: The Wetlands Centre, Sandgate Rd,
Shortland
1st Wednesday of the month at 7.30 pm
(excluding January).

Northern Beaches

President: Conny Harris ☎ (02) 9451 3231
Email: conny.harris@gmail.com
Joint Secretaries:
Jan Krone ☎ (02) 9938 3857
Julia Tomkinson ☎ (02) 9949 5179
PO Box 393 Dee Why NSW 2099
Meetings: Stony Range Botanic Garden, Dee
Why. 1st Thursday of the month at 7.15 pm
(February-November).

North Shore

President: Barry Lees ☎ (02) 9653 3691
Email: barrylees99@bigpond.com
Secretary: Sue Bowen
PO Box 344, St Ives NSW 2075
Email: secretary@blandfordia.org.au
Meetings: Willow Park Community Centre,
25 Edgeworth David Ave, Hornsby.
2nd Friday of the month at 8 pm (Feb-Nov).
Website: www.blandfordia.org.au

Nowra

President: Lesley McKinnon ☎ (02) 4443 4004
Secretary: Gwen Smith ☎ (02) 4443 3497
PO Box 140, Sanctuary Point NSW 2540
Email: rapidpulse@bigpond.com
Meetings: Nowra Town Band Hall,
174 Kinghome St, Nowra. 2nd Thursday of the
month (Feb-Nov) at 7.30 pm sharp.

Parramatta and The Hills District

President: vacant
Secretary: Brodie Sutcliffe ☎ (02) 8809 0833
Email: brodie.fuller@hotmail.com
Meetings: Bi-monthly meetings 2 pm on 4th
Saturday of Feb, April, June, August, Sept and
Nov at Gumnut Hall, Gumnut Place, Cherrybrook
Website: www.apsparrahills.org.au

South East Region

President: Margaret Lynch ☎ 0408 447 678
Email: yaraan@southernphone.com.au
Secretary: Michele Pymble ☎ (02) 4473 8587
Email: mishpymble@gmail.com
Meetings: At various locations, generally on
1st Saturday of every month except January.
Contact President or Secretary.

Southern Highlands

President: Wendy Johnston ☎ (02) 4883 6376
Secretary: Jane Pye ☎ (02) 4862 3750
Email: iandjpye@gmail.com
Meetings: CWA Room, next to council building
in Elizabeth St, Moss Vale. Bimonthly at 2 pm on
the 1st Thursday of February, April, June, August
and November.

Southern Tablelands

President: Bob Galland ☎ 0407 248 154
Email: rcgalland1@bigpond.com
Secretary: Gudrun Delbridge ☎ 0417 651 811
Email: gudrun.delbridge@gmail.com
Meetings: Only when essential – our group is
concentrating on walks and other activities.

Sutherland

President: John Aitken ☎ (02) 9589 1363
Email: jeaitken@gmail.com
Secretary: Leonie Hogue ☎ (02) 9528 6083
Email: leoniehogue@gmail.com
Meetings: Gymea Community Centre, Gymea
Bay Rd, Gymea. 3rd Wednesday of the month
at 8 pm (February-November).
Website: www.sutherland.austplants.com.au/

Tamworth

President: Matt Cosgrove ☎ (02) 6765 2693
Email: cosgrove72@bigpond.com
Secretary: Kerrie Gray ☎ 0427 652 986
PO Box 1193, Tamworth NSW 2340
Email: dyso57@bigpond.com
Meetings: Botanic Garden Meeting Room.
10 am on 4th Saturday Feb to Nov. Outings
and field trips at other times – contact the
Secretary.

APS NSW Bequest Fund grants

APS NSW invites applications for an APS NSW Bequest Fund grant. Each year APS NSW offers grants to individuals or groups to partially or fully fund special projects that promote the objectives of APS NSW for the growth, propagation and conservation of Australian native plants. Past projects include the Lisle Pearse Garden in Oberon and the Threatened Species Project at the Tamworth Regional Botanic Garden.

There is no application form. An application for a grant must describe the proposed project, the way in which it supports the objectives of APS NSW, the time frame and contain an itemised budget. It is usual for money to be reimbursed upon receipt of paid invoices. Recipients must acknowledge the grant from APS NSW with appropriate signage.

Applications for a grant must be emailed to office@austplants.com.au or posted by **Monday 3 August 2015** to:

The Secretary APS NSW
PO Box 5026
Old Toongabbie NSW 2146

Contact APS NSW for more information by phone on (02) 9631 4085 or email at office@austplants.com.au .

Vice Presidents' Report

Mark Abell & Graeme Ingall

The 'Open Garden Scheme' is drawing to a close on 30 June 2015 so if you have the opportunity to visit the gardens, please do so as many contain ideas that can be used in your garden. To those members of the Society who have allowed the public to visit their gardens, thank you for publicising the Society.

The Board thanks all the entrants in the RAS flower Show and all the volunteers who assisted at the RAS display. It's a great way for us to reach many potential members. The Board hopes to see you all at the Annual General Meeting on 23 May hosted by East Hills Group and the Get-together on 4–5 July hosted by Blue Mountains Group.

The Annual General Meeting is a very important event, please see the separate article about this on page 27 and the information about walks and guest speakers at the gathering being held in conjunction with the AGM on page 20.

Seed Bank 2015 Annual List

John Randall, Seed Bank Curator

Requests for seed can be sent by mail to:

John Randall
8 Coachmans Place,
Mardi NSW 2259



Seed is available free to members. The seed list is published annually in the April issue of *Native Plants for New South Wales* with additions and deletions being published in the other three issues. The list can also be found on the APS NSW website www.austplants.com.au by selecting **Seed Bank** in the **Resources** pane on the Home page, or it can be accessed directly by pasting <http://austplants.com.au/seedbank.html> into your browser.

There is a limit of six seed packets per request. Inquiries can be made to John at johannette@dodo.com.au or on (02) 4353 9390. Please enclose a stamped (\$1.40) self-addressed envelope (110 x 220 mm) for return of the seeds. Please list seed requests in alphabetical order and include a list of alternative selections.

Seed donations are always welcome and are vital if the seed bank is to remain viable. Please state the source of the seed, whether from natural or cultivated material. Please do not send seed from hybrid plants.

Acacia – amoena, buxifolia, conferta, cognata, covenyi, cultriformis, deanei, decurrens, elata, elongata, falcata, falciformis, fimbriata, iteaphylla, littorea, linophylla, macradenia, melanoxydon, myrtifolia, neriifolia, obtusifolia, pravissima, prominens, pubescens, pulchella, pycnantha, rubida, saligna, simsii, sophorae, suaveolens, terminalis, ulicifolia, ulicifolia var. brownei, verniciflua, vestita, victoriae

Allocasuarina – distyla, littoralis, nana, torulosa, verticillata

Angophora – costata

Anigozanthos – flavidus

Artanema – fimbriatum

Baeckea – virgata, virgata (Clarence River form)

Banksia – ericifolia, integrifolia, oblongifolia, serrata

Billardiera – cymosa

Bossiaea – stephensonii

Brachychiton – acerifolius

Callistemon – linearis, montanus, pallidus, pinifolius (red), rigidus, rugulosus, sieberi

Callitris – intratropica, muelleri, oblonga, preissii, rhomboidea

Calothamnus – quadrifidus

Casuarina – cunninghamiana, glauca

Clematis – gentianoides

Corymbia – (formerly *Eucalyptus*) citriodora, intermedia, maculata, tessellaris

Dodonaea – baueri, peduncularis, rupicola

Doryanthes – palmeri
Drypetes – australasica
Eucalyptus – acaciiformis, acmenoides, apiculata, astringens, bancroftii, behriana, botryoides, caesia ssp. caesia, caesia ssp. magna, camaldulensis, capitellata, clelandii, coccifera, cordata, cordieri, coronata, crebra, curtisii, delegatensis, dumosa, dwyeri, ebbanoensis, elata, erythrocorys, eudesmioides, fibrosa, gardneri, globoidea, grandis, grossa, luehmanniana, longifolia, macrandra, maidenii, moluccana, nicholii, nutans, ovata, paniculata, pellita, phoenicea, pilularis, piperita, platypus var. platypus, pleurocarpa, polyanthemos, preissiana, punctata subsp. punctata, racemosa, resinifera, rhodantha, robusta, saligna, siderophloia, sideroxylon, stowardii, torquata, viminalis, woodwardii
Flindersia – australis
Gahnia – melanocarpa, sieberiana
Gossypium – sturtianum
Grevillea – banksii (red)*, johnsonii, longistyla
Hakea – grammatophylla, saligna
Hardenbergia – violacea (white/pink)
Hibiscus – geranioides, panduriformis
Hovea – acutifolia, lanceolata
Hymenosporum – flavum
Indigofera – australis
Isopogon – anethifolius
Ixiolaena – brevicompta
Kennedia – macrophylla, rubicunda
Kunzea – ericoides
Leptospermum – arachnoides, continentale, juniperinum, laevigatum, lanigerum, petersonii, polygalifolium, rotundifolium, rupestre, speciosum, squarrosium

Libertia – paniculata
Linum – marginale
Lomatia – fraseri, myricoides, silaifolia
Lophostemon – confertus
Melaleuca – armillaris, hypericifolia, nesophila, preissiana, quinquenervia, saligna
Notelaea – ovata
Olearia – axillaris
Pandorea – jasminoides, pandorana
Paraserianthes – (syn. *Albizia*) lophantha
Pelargonium – australe
Philydrum – lanuginosum
Pittosporum – angustifolium, revolutum
Rhodosphaera – rhodanthema
Senna – acclinis, aciphylla, artemisoides subsp. artemisoides, barclayana, clavigera, coronilloides, nemophila var. zygophylla, odorata, odorata (prostrate)*, planitiicola, sturtii.
Sophora – tomentosa
Stenocarpus – sinuatus
Swainsona – sejuncta (yellow)
Syncarpia – glomulifera, hillii
Tecomanthe – hillii
Toona – ciliata
Viminaria – juncea

* Where colours and specific growth habits are shown against the name of the species, this indicates that the seed came from a plant with those features. There is no certainty that the colours or features will be retained by seedlings.

Conservation Report

Proposed changes to NSW biodiversity legislation

Dan Clarke, Conservation Officer, APS NSW

The Independent Biodiversity Review Panel released the final report on its review of biodiversity legislation in NSW in December 2014. It is available at www.environment.nsw.gov.au/BiodiversityLegislation/BLRevProcess.htm



There are 43 complex recommendations which, if implemented, would give the current legal protections for biodiversity in NSW a major shake-up.

The recommendations include abolishing the *Threatened Species Conservation Act 1995* and the *Native Vegetation Act 2003* and repealing parts of the *National Parks and Wildlife Act 1974*, to be replaced with a new *Biodiversity Conservation Act*. The panel acknowledges that the proposed reforms are complex but claim that they uphold the goals of the review for:

- better environmental outcomes (and better monitoring and documentation of progress)
- reduced compliance burden and greater potential productivity gains for regulated parties
- minimal increase in program delivery and administration costs to NSW taxpayers (but some reallocation of effort).

Some recommendations are encouraging, such as recommendations 31–33, outlining a more balanced focus on types of threatened species, and adopting a more strategic approach to managing their existing status and protection which includes periodic review.

However, some recommendations cause alarm to conservationists. Recommendation 6 calls for categories of exempt development involving land clearing on private land, which would involve trusting the landowner to act responsibly. The panel recommends increased fines for clearing in excess of what is permitted. However, this needs to be enforced. Many land-clearing cases currently detected end up in the Land and Environment Court, which is a lengthy drawn out process.

Many of the panel's recommendations make sense and appear to be useful for more effective and efficient biodiversity protection.

The NSW Government is yet to respond formally to the recommendations in the report, and may wait till after the state election in March. However, it is hoped that this report is not a smoke screen for the watering down of biodiversity protection in NSW. I will be monitoring what critics say about the recommendations and any new legislation, and will write a submission for the strengthening of biodiversity protections when the time comes.

On a more local note, Sutherland Group has scheduled our search for the threatened flora species *Prostanthera densa* for June 2015. This is part of our contribution to the NSW Save Our Species Program. The search will take place in the Royal National Park, in the Marley Beach area. The details will be in the Sutherland Group newsletter at www.sutherland.austplants.com.au as the date approaches. Members from all groups are welcome to join us. I look forward to reporting on the outcomes later this year.



Close-up of *Prostanthera densa* leaves and flowers. Photo: Alan Fairley

Future APS NSW event

APS NSW 2015 Get-together

Blue Mountains 4–5 July 2015

The Blue Mountains District Group is hosting the 2015 Annual Get-together on the weekend of 4–5 July 2015 and it promises to be as interesting and informative as previous years.

Friday 3 July – Glenbrook Native Plant Reserve

Home of the Blue Mountains District Group, the delightful Glenbrook Native Plant Reserve and nursery will be open from 2 pm for walks and plant purchases. A gentle guided walk through the Reserve will commence at 2.30 pm. For information about the Glenbrook Native Plant Reserve see www.apsbluemtngroup.org

Saturday 4 July, 9.30 am to 2 pm – Seminar at Lapstone Public School

The annual Blue Mountains Group seminar will be the main feature of the weekend. Commencing at 9.30 am and ending with lunch from around 1 pm, guest speaker Margaret Baker will give two talks: Blue Mountains World Heritage – International Recognition of our Special Plants; and Rare and Endangered Plants and Communities of the Blue Mountains. The cost of attending the seminar is \$30 per head including morning tea and lunch.

Saturday 4 July – Post seminar activities

Following the seminar there will be an easy wander through Darks Common, located beside the Lapstone Public School. Darks Common offers diverse native vegetation, as well as great views of Glenbrook Gorge and the Blue Mountains National Park. Glenbrook Native Plant Reserve and nursery will also be open for walks and plant purchases from 2 pm to 4 pm.

Saturday 4 July, 6.30 pm – Dinner at Emu Plains Sports Club

The Annual Get-together dinner will be held at the Emu Plains Sports Club at a cost of \$40 per head. The Emu Plains Sports Club is located at the base of the Blue Mountains and offers a relaxing environment in which to enjoy the company of APS NSW friends.

Sunday 5 July – Garden visit, bird watching and bush walks

There will be a range of activities to choose from on Sunday as follows:

Knapsack Bird Watching – 8.30 am to 10 am

Enjoy guided bird watching with life member of the Blue Mountains Bird Observers Club and APS NSW member, Dick Turner. Expect to see a wide variety of local species.

Phil Bendall's Garden – 10 am to 12 noon

Our nursery manager, Phil Bendall, has kindly offered to open his garden in Springwood to APS members. This is an opportunity to visit a well-loved and tended native garden featuring plants local to the Blue Mountains and other parts of Australia. Morning tea will be provided for those visiting Phil's garden.

Knapsack Reserve to Marges Lookout – 10.30 am to 12.30 pm

Margaret Baker will lead this easy walk through several threatened communities. The walk ends with views across the Cumberland Plain to the Sydney skyline.

Charles Darwin Walk, Wentworth Falls – 11 am to 1 pm

The Charles Darwin walk is a 40 minute drive from Glenbrook in the Upper Blue Mountains. This very special and easy walk, led by one of our members, provides the opportunity to view flora most at home in a hanging swamp. The walk ends at Conservation Hut, a great place for lunch with sweeping views of the Blue Mountains National Park and Mt Solitary. See www.nationalparks.nsw.gov.au/blue-mountains-national-park/charles-darwin-walk/walking

Cliff Drive Walk, Katoomba – 11 am start

Katoomba is a 50 minute drive from Glenbrook in the Upper Blue Mountains. This is a medium-grade walk with stunning views of the Jamison Valley. We will start the walk in Katoomba heading toward Leura. Choose either a short walk along this trail retracing your steps and returning to Katoomba, or a longer walk continuing to Leura having made suitable pick up arrangements. Members of our group will lead this walk. See www.nationalparks.nsw.gov.au/blue-mountains-national-park/prince-henry-cliff-walk/walking

More information and maps will be provided to attendees closer to the event. Check the APS NSW website at www.austplants.com.au

Presidents' Dinner

Information about the annual dinner on the evening of Friday 3 July 2015 at the Springwood Sports Club will be sent to Presidents and Secretaries.

Registration

To attend, please complete and return the registration form **by no later than Friday 19 June 2015**. Registration forms should be posted to:

AGT 2015 – APS NSW
c/- Jim Plummer
73 Rickard Road
WARRIMOO NSW 2774

Registration forms can also be scanned and emailed to alix.goodwin@bigpond.com.

Payment

Payment in full must be made at the time of registration. Payment can either be made by cheque or direct deposit.

Cheques should be made payable to *Australian Plants Society – Blue Mountains Group*.

Payments by direct deposit should be made to the following account:

BSB: 032 370
Account No: 114271
Account Name: Australian Plants Society – Blue Mountains Group
Reference: AGT15 **followed by your last name**

If using the direct deposit option, you must also send an email to Jim Plummer at jimmyandpat@bigpond.com advising him that you have made payment and the amount paid. Don't forget to send Jim your registration form also.

Accommodation Options

There is a range of accommodation options within the Penrith area and across the Blue Mountains, including motels and self-contained accommodation. Both the Trip Advisor and booking.com websites have accommodation listings for Penrith and the Blue Mountains. Penrith is close to Emu Plains Sports Club where the Saturday night dinner is being held. Penrith is well serviced by taxis – see www.taxifare.com.au for fare estimates.

2015 Annual Get-together registration form

Person 1	
Surname:	First Name:
Person 2	
Surname:	First Name:
Postal Address:	
Email Address:	
Home Telephone No:	
Mobile Phone Number	
I/we will be attending the seminar at \$30 per head (Yes/No)	
I/we will be attending the dinner at \$40 per head (Yes/No):	
Person 1 meal requirements (e.g. vegetarian, gluten-free):	
Person 2 meal requirements (e.g. vegetarian, gluten-free):	
Total Cost:	
Method of payment (Cheque or direct deposit):	
Signature:	
Date:	

FJC Rogers Seminar 2014

Brachychitons and allied genera

The FJC Rogers Seminars commemorate the life of Fred Rogers who was an enthusiast for Australian plants as lecturer, broadcaster, tour guide and author. He served the Australian Plants Society in Victoria in various executive positions. The seminars are held biennially in locations throughout Victoria. The 2014 seminar was the tenth and was based in Bendigo last October. Graham Walters is a member of East Hills Group, and together with his wife, Margaret, made the trip to his first FJC Rogers seminar.

For many years Brachychitons (and allies) have been included in the family Sterculiaceae. Recently botanists have merged Sterculiaceae into the larger Malvaceae family.

The seminar on Brachychitons and allied genera was hosted by the Bendigo Native Plant Group at the All Seasons Hotel Conference Centre with attendees from a wide area of Victoria and many from interstate including seven members of APS NSW.

A fine display of flowering plants in tubs included examples of the 'allied genera' which was both attractive and practical, introducing attendees to some of the less well-known genera such as *Lasiopetalum*, *Guichenotia*, *Keraudrenia* and *Thomasia*. A variety of raffle prizes were also on display including books, packs of plant food, garden equipment, plant drawings by Jean Dennis, a lovely copper fountain, glass mosaics of *Lasiopetalum* and other interesting and useful items.

Ian Evans, President of the Bendigo Native Plant Group, chaired the meeting and the opening was followed by a presentation from Dr Carolyn Wilkins, a taxonomic botanist with the Western Australian Herbarium. She specialises in the tribe Lasiopetaleae in the family Malvaceae. Each genus was explained and illustrated, giving attendees a basic understanding of the beauty and diversity of these plants.

The next speaker was Trevor Blake, an author and illustrator of books about Australian plants and an expert on *Thomasia* and *Lasiopetalum*. He showed and discussed some of the species in each genus and explained how to differentiate between them. For example, *Guichenotia* has three or more veins on each calyx lobe. *Lasiopetalum drummondii* was recommended for dry gardens. *Thomasia macrocalyx* is good for cut flowers and *Lasiopetalum bracteatum* has been sold as *Thomasia* for many years and may be found in the nursery trade under that name.

Rodger Elliot is known to many native plant people as co-author of the nine-volume *Encyclopaedia of Australian Plants*. His presentation

included advice on cultivation of paper flowers and velvet bushes, the common names for *Thomasia* and *Lasiopetalum* respectively. Mid to late autumn is generally the best time to plant *Lasiopetalum*. Many occur in low nutrient soils and enjoy plenty of sunshine, although *Lasiopetalum micrantha* is a good ground cover which will tolerate shade.

Des Boorman, a very enthusiastic and lively character, gave an entertaining expose on his experience in the breeding of many tropical *Brachychiton* hybrids.

Kathy Musial from the Huntington Botanic Gardens in San Marino, California spoke on their experience of growing brachychitons on the US west coast over more than 40 years.

John Barrie demonstrated his expertise in grafting and Neil Marriott described his techniques for propagation from cuttings. Later in the afternoon there were workshops on photography, propagation by grafting and drawing. A great deal of information was shared by experts in their fields.

At the excellent dinner on Saturday night, there was a very interesting and informative talk from Rod Orr, a Bendigo environmentalist, illustrator and author, who described the forested areas surrounding Bendigo and the local animals and plants. The raffle prizes were drawn at this function.

Sunday was devoted to visiting three local gardens in four buses. The garden of Ian Evans, the current President of the Bendigo Native Plant Group and a landscaper, is on a residential block. Only recently constructed, it contained a substantial water feature and some quite large sandstone rocks. The growing area was mulched with a light-coloured gravel.

Beth and Geoff Hosking's garden is on acreage; it is quite natural nothing pretentious and is very colourful. It featured some attractive



Brachychiton and allied genera images from the FJC Rogers 2014 Seminar flyer



Water feature in Ian Evans' newly built garden in Bendigo. Photo: G Walters

yellow-flowering eucalypts and *Kennedia* ground cover. It also had a lovely silver birch which I believe was already there when the Hoskings moved in.



The Hoskings' garden in Bendigo. Photo: G Walters

We had lunch at a church centre then travelled on to the final garden, the largest of the three on about 12 acres owned by Marilyn Sprague (the former owner of Goldfields Nursery). This included an area being developed for commercial cut flower production. Most of the planted

areas were prepared by heaping the surrounding soil into garden beds with the paths creating swales between these beds. We saw some lovely flowering eucalypts, waratahs, prostantheras, pimeleas and many other fine examples of Australian native plants.



Marilyn Sprague's garden in Bendigo. Photo: G Walters

Overall, this was a very well organised event. It was a good opportunity to learn more about our fabulous flora and to meet and enjoy the company of many friendly people with a common interest.

The 2016 FJC Rogers seminar will be held in Hamilton in western Victoria and the topic is Native Orchids: Terrestrial and Epiphytic.



Another view of Ian Evans' garden in Bendigo. Photo: G Walters

Burrendong Arboretum

50th anniversary celebration

Harry Loots, Northern Beaches Group and APS NSW Board member

In 1964 the creation of the Burrendong Arboretum near Wellington in central NSW must have seemed an impossible dream, yet in October 2014 we celebrated 50 years of success. The Friends of the Arboretum gave a thanksgiving lunch for all Burrendong's supporters, donors, ex-trustees, ex-curators and other well-wishers of this grand project, including the Australian Plants Society which has contributed to Burrendong from its early days to the present.

In the mid 1960s, the Soil Conservation Service of NSW allowed two committed conservationists, George and Peter Althofer, to cultivate the wasteland above the future lake Burrendong. The dam was still under construction, there was no lake, the land was stony and dry, Burrendong was located at the end of a long rural road out of Wellington and few people lived in the vicinity. The arboretum was a daunting project. Many of these conditions still exist yet Burrendong is a wonderful arboretum.

Thanks to some early government grants and the Australian Plants Society volunteer labour, by 1976 Peter Althofer could be employed as a permanent curator. APS volunteers often came on long weekends to plant up to 1,000 seedlings, leaving the curator and friends to water them in. After the construction of the Fern Gully canopy, APS Fern Study Group members came to plant and weed. In 2011 Burrendong Arboretum hosted the APS two-day group get-together and APS financed an experimental garden bed in 2014. APS also has a representative on the Burrendong Arboretum Trust. Lyn Burgett from APS Central West Group has been nominated to carry on with that role.



Why not visit? The arboretum is open from 7.30 am till dusk every day. Or take a free guided tour on the fourth Sunday of each month from March to November. For more information see the website www.burrendongarboretum.org.

Under the canopy of the fern gully at Burrendong.



A selection of images from the 50th anniversary celebration lunch. Attendees included Hazel Althofer (who at age 93 who still comes out to propagate), Penny Cook (President Friends of Arboretum) and Rod Buhr (Mayor of Wellington).

Great Native Plant Photos

Many APS members are keen and capable photographers. This journal needs good quality images to adorn its pages. If you have outstanding photos of native plants please share them with other members by contacting the editor via the office. Several members have already provided great photos that members have been enjoying in the pages of *Native Plants for NSW*.



APS Out and about

Goulburn Wetlands – A project supported by Southern Tablelands Group

This is a regular column where APS groups are invited to write about an activity and share their story with members throughout NSW. The Southern Tablelands Group, based around Goulburn recently visited a wetlands rehabilitation project they are propagating plants for.

The Southern Tablelands Group (STG) began the year's agenda of monthly walks at the Goulburn Wetlands on a bright Saturday in February. It was a chance to see how all the plants we have propagated over the past few years have helped to change this landscape.

Rodney Falconer, of the Goulburn Field Naturalists Society, guided members around the area. He explained that prior to European settlement, the wetlands site was covered by tall open forest of mainly three *Eucalyptus* species: *E. viminalis* (Ribbon Gum), *E. amplifolia* (Cabbage Gum) and *E. bridgesiana* (Apple Box). Interestingly, the original understorey structure is something of a mystery, as no-one considered this information might one day be of value and recorded the details.

The abandoned brickpit began its transformation into public parkland and a natural stormwater treatment system in 2011. A troupe of volunteers have devoted time and effort to first complete structural landscaping



Some of the new plantings bursting out of their protective guards and Southern Tablelands Group members with their guide.

– particularly focusing on drainage, pathways and retaining structures
– and then tackled the enormous task of weeding, planting and ever more weeding.

The STG has propagated plants of local provenance in adequate numbers to help restore local ecosystems. Not surprisingly, there have been both successes and failures. Some of the successes included *Carex appressa* (Tall Sedge), which is a tough, grass-like plant that does not get eaten by rabbits or kangaroos and yet provides a useful source of seed for birds. Another noted success is the feathery leaved wattles which are particularly attractive to birds for shelter, nesting and food. One section, made up of *Acacia decurrens* (Early Black Wattle) and *A. dealbata* (Silver Wattle) as well as *Eucalyptus elata* (River Peppermint) and *E. melliodora* (Yellow Box) planted in November 2014 as tubestock, is now as tall as a person – assisted no doubt by the abnormally mild and wet summer.

Trees on the site are being planted at strategic points, with consideration for flight paths for bigger birds such as swans and egrets, which need space for landing and take-off. Other considerations include a buffer zone beside the golf course to prevent wayward shots from injuring wildlife or human visitors.

One example of a species which hasn't done well on the site is *Dodonaea viscosa* (Sticky Hopbush). It didn't cope well with the changing water levels on the site which range from flood to drought conditions. Others, such as *Hakea sericea* (Silky Hakea), which were expected to do very well as they are locally very common in open forest, are merely surviving.

Throughout the wetlands reddish/pink plant guards are used to protect newly planted tubestock. These have been found to enhance growth. Not only do they protect the plants from being eaten by kangaroos and other herbivorous locals, they also reflect red-spectrum light which is great for promoting plant growth.

It was clear from Rodney's talk that weed control has been a huge focus and challenge on the project, particularly because of the fertility of the site. The single most challenging weed is *Nassella neesiana* (Chilean Needle Grass). Although a recent arrival in the area (within the last 10 years), it appears to dominate large areas of the wetlands, even after herbicide spraying, mulching and seeding with native grasses. The needle grass employs our modern technology to spread, often on the tyres of vehicles. The best counter-attack has been through perseverance by volunteers in repeatedly weeding affected areas by hand.

Recent additions of interpretative signage have helped to make the vision of the project and the natural environment accessible to visitors. Ongoing work on the second bird hide, coupled with future plans for improving wheelchair access, will ensure that anyone may enjoy and learn more about the local natural world.

STG is undertaking an exciting new development on the site to develop a display native garden. The aim is to demonstrate a range of attractive and hardy specimens which could be successfully grown in any local garden. The display garden will not be restricted to locally indigenous species, but will embrace native plants which will contribute to any garden whether through flower, leaf, bark, form or by stimulating the senses. We hope that visitors will see and admire our garden and consider planting natives in their own garden. Members enthusiastically embraced the concept and a number of members volunteered to steer the project.



Chilean Needle Grass



Floor of the kiln from the old brickworks with a new bird-hide under construction in the background.

The Australian Plants Society - NSW



APS NSW on the web
www.austplants.com.au

For the latest information about your Society see the web site, where you can read articles and newsletters, and participate in the forum about all aspects of native plants.

Study Groups notes

Wendy Grimm, Study Group Liaison Officer

Reading this collection of Study Group newsletters has been a delight. Hopefully my excerpts will convey the breadth of observations and interesting articles provided by the newsletters. Thank you to Rhonda Daniels for her informative Study Group notes over the past years and for helping to get me started.



Acacia Study Group (Dec. 2014, No. 127)

Several members reported that *Acacia* seeds can germinate within 20 days if the seeds have boiling water poured over them and are soaked overnight before planting. Mark Hewitson documented that when germinating *A. terminalis*, it is important to remove the seed coat as soon as possible after it shoots out of the soil, as it can dry hard and become difficult to remove. Soften the seed coat by spraying, then using a pair of tweezers, pinch the bottom of the seed coat gently until the leaves are free.

In Victoria, a fungus on *A. baileyana* was found to be *Schizophyllum commune*, a saprotrophic fungus which rots organic material after it has died. Acacias do not form mycorrhizal associations with fungi; instead they form a similar relationship with bacteria.

If anyone has experience with *Acacia gnidium* or *Acacia carneorum*, please send your observations to the Study Group leader, Bill Aitchison at acaciastudygroup@gmail.com for a possible future article.

Joanne Saunders has been described as ‘the best recorder maker in the world’. Her popular soprano recorders are made from mulga, *Acacia aneura*, because, in Joanne’s words, ‘It’s a very dense wood and you can get good power out of it’.

Waratah and Flannel Flower Study Group (Dec. 2014, No. 8)

Alloxylon pinnatum (next page), the rare Dorrigo waratah, with abundant flowers from October to January, fits into the deep red and green colour theme popular for end of year festivities. Establishing these plants from either seed or from cuttings has proven difficult. Tips are needed on how to cultivate these Proteaceae plants through to flowering. The notes also provide an extensive checklist of waratah species and cultivars, a measure of the huge variety in cultivation.



Vase of *Alloxylon pinnatum* flowers. Photo: M. Hitchcock



Flannel Flower in a pot.
Photo: Margaret Lee

Actinotus species are found in all states of Australia except SA; five species are local to NSW and *A. novae-zealandiae* is endemic to the South Island of New Zealand.

Fern Study Group (Jan. 2015, No. 132)

Sydney members donated ferns to the Sydney Survivorship Centre, Concord Hospital at their meeting at Yagoona in September. The April Group outing at the Hardy garden in Davidson will focus on growing ferns from spores and the May outing will visit the Cox fern garden in Kenthurst. A paper on the molecular phylogenetics and generic taxonomy of Blechnaceae ferns forewarns that many familiar *Doodia* species such as *Doodia aspera* may undergo a name change to *Blechnum*.

Eucalyptus Study Group (Dec. 2014, No. 63)

This issue reviews *Flooded Forest and Desert Creek, Ecology and History of the River Red Gum*, by CSIRO scientist Matthew J. Colloff (CSIRO Publishing, 2014, Victoria).

Research shows that trees of any sort impact on radio signals and a study of mobile phone signals found that the moisture content of the tree is the culprit: a dead tree absorbs fewer signals than a live tree without leaves, which absorbs less than a tree with leaves, and trees with wet leaves absorb the most signals. In other research, 'bud traces', which run from the centre of the eucalyptus tree through the wood to the bark, form buds in response to signals such as a lack of photosynthesis, which can happen when green leaves are removed from a tree by fire; and access to groundwater impacts the structural and functional traits

of trees and impacts *Eucalyptus* woodland productivity.

Dryandra Study Group (Feb. 2015, No. 68)

Margaret Pieroni detailed the many different *Dryandra* located during her trips around south west WA last spring. She advises that much of their habitat is disappearing, especially on roadsides, so anyone wishing to see the wonderful flora of WA should get there as fast as they can! The main points of Alex George's paper, *The case against the transfer of Dryandra to Banksia (Proteaceae)*, were listed and a copy of the full paper provided.



Dryandra purdieana. Photo: Margaret Pieroni

Garden Design Study Group (Feb. 2015, No. 89)

The Study Group aims to share their ideas and all their newsletters are on the ANPSA website at www.anpsa.org.au/design .

A native meadow, planted with grasses, forbs and lilies for Ros and Ben Walcott of Canberra, proved unsustainable, so after several years it was redeveloped into curved, pebble-mulched shrub beds accented with scattered trees. This satisfied the original design of relatively open space in front of the house in a more manageable way. The need to fine-tune the design of a garden and to learn from how a garden develops under prevailing conditions is a recurring theme in many of these case studies. Visits to neighbouring gardens provide both inspiration and observations of which plants thrive locally.

Catriona Bate and Phil Trickett describe their development of a former rainforest cum-dairy farm near Milton, NSW. The elevation, higher rainfall and richer soils suited their desire to create a sustainable garden which celebrates and displays Australian native plants.

Eremophila Special (Feb. 2015)

Colin Jennings has resigned as Study Group leader as a result of ill health. Please contact the interim editor nevpage@bigpond.com if you are a member of the Study Group but have not received this edition of the notes. Summer storms and steady rain brought on a mass germination of eremophila drupes on Ken Warnes' SA property.

Most seedlings were located just outside the drip-line of plants older than five years. Potting up to maximise recruitment was urgent as the ground rapidly dries and hardens after rain. Eremophilas have shown to hybridise readily when different species are grown together. Bev Rice found that severe pruning worked well for many eremophilas including *E. maculata* and *E. drummondii*, but it can take more than a year for the plants to recover.

Hakea Study Group (Feb. 2015, No. 57)

Bushfires near Adelaide, strong winds around Colac and high humidity in SE NSW produced unfavourable growing conditions for hakeas. These notes feature Hugh Stacy's absorbing account of half a lifetime of observations of the flowering of *Hakea bakeriana*.

Correa Study Group (Jan. 2015, No. 51)

Dot and Bob O'Neill are replacing the renowned Cherree Densley as Study Group Leader and they acknowledge her great influence over their enthusiasm for correas. They are planning a mid-year crawl with a possible focus in Gippsland and suggest that propagators might start striking cuttings now for an exchange of plants during the crawl. Dot and Bob maintain at least two stock plants of each variety, with the aim of ensuring that no correa varieties are lost. Careful record keeping of plant locations is vital. Sue Gymer singles out *Correa calycina* var. *halmaturorum* as an easy-to-propagate and hardy species in her Melbourne garden on heavy clay.

Grevillea Study Group (Feb. 2015, No. 100)

This information-packed 100th issue celebrates grevilleas across our continent, but posts a warning of the potential loss of species that may result from future climate extremes characterised by lower annual rain-falls and increased fire frequency over much of Australia.

John Knight reported the varied locations and uncommon species encountered during the *Grevillea* crawl by bus led by Peter Olde and Ray Brown around Sydney in October 2014. On the way from Oakville to Grevillea Park at Bulli, the first day's destination, *G. parviflora* subsp. *parviflora*, *G. ferruginea* and *G. sphacelata* were seen at Broughton Pass and a walk near Kings Falls revealed *G. longifolia*, *G. mucronulata* (large flowering form), *G. diffusa* subsp. *diffusa* and *G. sphacelata*. This was all before morning tea! Other species observed were *G. capitellata*, *G. oleoides*, *G. patulifolia*, *G. buxifolia* subsp. *buxifolia* and *G. diffusa* subsp. *constablei*. On the second day, North Head (Manly) and Frenchs Forest yielded *G. linearifolia* and *G. sericea* subsp. *sericea* while the highlight was *Grevillea caleyi* in its very restricted home range. Four

uncommon species including *G. parviflora* subsp. *supplicans* and a small form of *G. mucronulata* were found at Maroota. The Central Coast trip encompassed the many species seen during the Get-together including *Grevillea oldei* and *G. shiressii*. Peter was happy to explain the subtle features differentiating the various taxa. Day 4 took the team into the Blue Mountains. Peter's, Ray's and driver Gordon Meiklejohn's contributions were much appreciated by all.

Kyogle resident Helen Howard encourages gardeners to grow their local species of grevilleas, but she admits that sourcing commercial plants is difficult. A network of propagators in Vic and SA are solving this by swapping cuttings and preparing grafted plants for exchange.

Neil Marriott ponders whether the sticky exudate found on the follicles of *Grevillea petrophiloides* protects the seeds against predation by insects. Several species from northern Australia including *Grevillea pyramidalis*, *G. leucadendron* and *G. erythroclada* have caustic exudate on their follicles and this can cause severe chemical burns.

The Illawarra Grevillea Park at Bulli is open 10 am to 4 pm on 25–26 April, 2–3 May, 4–5 July, 11–12 July, 5–6 September and 12–13 September 2015. More details at www.grevilleapark.org .

Cover images

***Swainsona formosa* (Sturt's Desert Pea)** by Carol Drew

This is a stunning and iconic native plant that always attracts attention. It has specific growing requirements but that should not deter native plant enthusiasts as many of us can grow this plant in a container if attention is paid to drainage, aspect and protection.

***Angophora costata* (Sydney Red Gum or Smooth-Barked Apple)**
by Carol Drew

The mass flowering of this species late last year was an outstanding feature of the sandstone bushland around Sydney. This photo was taken from Carol's backyard looking across to a west-facing slope in Oatley Park. Members have the opportunity to visit this riverside, bushland park as part of the May gathering see p 20.

[Thanks to Carol who responded to your editor's request for cover images. More good photos of wonderful Australian plants and gardens are always welcome.]

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The following study groups are all in recess and require new leaders. If you are interested in a role contact the APS NSW Study Group Liaison Officer, Wendy Grimm at wagrimm@tpg.com.au

Australian food plants
Australian plants for containers
Calytrix
Daisy, the Australian
Fabaceae
Orchids, Indigenous
Palm and Cycad
Prostanthera and Westringia
Rhamnaceae
Succulents, Native
Verticordia
Wetlands (and Water Plants)
Wildlife and Native Plants

Membership discounts

Discounts are available from the following organisations to Society members who present their current membership card.

Sydney

⊗ **All GreenGold Nurseries**
5% discount, except on landscape materials, garden design services or discounted merchandise.

⊗ **Florilegium**
The Garden Bookstore
65 Derwent St, Glebe 2037
PO Box 644, Rozelle 2039
☎ (02) 9571 8222.
Mon–Sat 10am–6pm, Sun
11am–5pm.
10% discount on some titles. Please check before purchasing.

⊗ **Forests NSW Nurseries**
10% discount on all potted lines. West Pennant Hills, Narrandera and Dubbo.
For locality details
☎ 1800 000 123
www.forestrycorporation.com.au/business/nurseries

⊗ **Sydney Wildflower Nursery**
9 Veno St, Heathcote 2233
www.sydneywildflownursery.com.au
10% discount

Armidale

⊗ **Cool Natives**
Retail mail order nursery
16 Hitchcock Lane Armidale 2350
Open by appointment only
☎ (02) 6775 1139
0421 961 007
Email: maria@coolnatives.com.au
www.coolnatives.com.au
10% discount

Blue Mountains

⊗ **Glenbrook Native Plant Reserve Nursery**
Great Western Highway,
Glenbrook 2773
☎ (02) 4739 8597
Sat, Sun, Wed. 12 noon–4pm.
10% discount to members,
20% for roster participants.

Central Coast

⊗ **The Wildflower Place**
453 The Entrance Rd, Erina Heights 2260
☎ (02) 4365 5510
5% discount

Central West

⊗ **Wombat Gully Native Nursery**
1729 Coxs Creek Rd, Rylstone
☎ 6379 6202
10% discount

Hunter Valley

⊗ **Muswellbrook Forest Nursery**
New England Highway,
Muswellbrook
☎ (02) 6543 2622
Email: mfn@hlmaus.com.au
www.muswellbrookforestnursery.com.au
M–F 8.30am–4.30pm
Weekends 10am–3pm
10% discount

Nepean Valley

⊗ **Darvill Nursery**
Darvill Rd, Orchard Hills 2748
Contact for price list or
arrange to visit beforehand
☎ (02) 4736 5004
www.darvillnursery.com.au
10% discount

Newcastle

⊗ **Leearne Neal at Newcastle Wildflower Nursery**
260 Lake Road, Glendale 2285
☎ (02) 4954 5584
Open 7 Days 9am–5pm.
10% discount

North Coast

⊗ **Bonny Hills Garden Centre,**
1055 Ocean Drive, Bonny Hills 2445
☎ (02) 6585 5764
10% discount on all plant purchases

⊗ **Greenbourne Nursery**
Oxley Hwy, Wauchope 2446
(opp. 'Timbertown')
☎ (02) 6585 2117
10% discount

Mildura

⊗ **Native Nursery, Mildura**
10% discount on the purchase of any native plants or other products, including the Watertube ordered online at www.nativenursery.com.au

South Coast

⊗ **Wildgems Native Nursery**
Illawambra Valley Road,
Yowrie 2550
☎ 0427 937 398
Wholesale / retail nursery.
Please ring and arrange day
before arriving.
10% discount

⊗ **Verdigris Fern Nursery**
Currowan Creek 2536
Mail order is available through the website which includes useful information on fern cultivation. The nursery is open by appointment.
☎ (02) 4478 1311.
Email: verdigrisferns@gmail.com
Wholesale price for APS NSW members

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Editor <i>Native Plants for NSW</i>	David Crawford
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Study Group Liaison Officer	Wendy Grimm
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Australian Cultivar Registration Authority	David Murray
Australian Flora Foundation	Ross Smyth-Kirk
Burrendong Arboretum	vacant
Native Flower Growers and Promoters	Jonathan Steeds
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