



*Corymbia maculata* Spotted Gum and  
*Macrozamia communis* Burrawang

## South East NSW Group

### Newsletter 202

### December 2023

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#### For your diary:

##### Next meeting,

**February 3<sup>rd</sup> 2024**

**2024 Annual General Meeting**

**Eremophila, Lyndal Thorburn**

**Details will be presented in the  
newsletter closer to the day.**

##### Future meetings

#### **WATER RESTRICTIONS**

Note from Dylan, that from the  
**2<sup>nd</sup> of December Eurobodalla  
entered level 1 water  
restrictions. However, due to  
recent rains these restrictions  
were lifted on December 16.**

Water conservation measures are  
still in place, details can be found  
on Council's website.

[www.esc.nsw.gov.au/water](http://www.esc.nsw.gov.au/water)

Dear Members,

Here we are again at the end of the year and the beginning of new one. The last few weeks have brought precious rain to this area and pumped new life into the ailing bush and garden. New life means new weeds, but it seems to be the price to pay for trying to create a garden. The resilience of plants has to be a reason for feeling hope.

Apart from the weather, I would like to comment on the year that we have been through. It has been a tough one. I am hoping that this group has helped you take time out from your everyday concerns and provided a place to learn, share plants and knowledge, laugh and recently enjoy pizza. All plant based activities.

I would like to thank everyone for participating in our activities, either by presenting or coming along and enjoying the day. The committee have sought to make the activities interesting, varied and enjoyable. There are others that contribute to the newsletters and those that rely on the newsletter for connection. Hopefully, something for everyone.

I trust this summer season you manage to stay stress free and enjoy the people and environment around you. Keep up the good work sharing your passion for Australian Plants with other people and take care.

On behalf of the committee I would like to wish you all a safe and peaceful season.

**That's all for now, Di.**



**Native Holly,  
*Graptophyllum ilicifolium*  
Pinterest**

# Next Meeting:

**Saturday 3<sup>rd</sup> February 2024,**

## **Annual General Meeting at ERBG**

### **Annual General Meeting**

Members will note that our Annual General Meeting is planned for February 3<sup>rd</sup> 2024.

The current committee is seeking support from other members to join, to bring new ideas and enthusiasm, and ensure our group remains vibrant and relevant.

Please give this some consideration. Feel free to discuss options with President Di, or any existing committee member. Contact details are on page

### **Last Meeting ,**

**People, Petrophiles, Plants, Pizza, Perfect weather, and all up a wonderful finish to the year's activities.**

President Di welcomed over 30 members to our December meeting at Lesley and Norm Hulands Moruya property. Saying how pleased she was with the response to the Plant Swap, which morphed into a fundraiser for the ERBG, Di thanked all who donated plants, which totalled over 200, well in excess of the expected 50. Whilst we settled into morning tea, Norm busied himself with finding more tables onto which the plants could be displayed, whilst Sue wandered through the crowd 'selling' tickets for the plant draw, which was to take place after our speakers completed their presentation.

### **Phil Trickett and Catriona Bate, leaders, since 2015, of the Isopogon & Petrophile**

**Study Group**, began their presentation on Australia's Drumsticks (Isopogon) and Conebushes (Petrophile) by detailing the current standing of each Genera.

**Isopogon** contains 49 taxa, including 3 yet to be described species. Generally small to medium shrubs, 84% of plants are endemic to Western Australia, and over 90% are spring flowering, although weather plays a part, with some flowering during late winter, and some even into summer.



*Isopogon divergens*, one of the many spectacular pink flowered W.A. species





*Isopogon anethifolius*, Narrow-leaf Drumsticks



*Petrophile pulchella*, Conesticks

Petrophile contains 74 taxa, including 2 undescribed species. A staggering 92% of taxa is endemic to W.A., and again a high proportion are spring flowering, around 90%

Even among native plant experts, there is little known about these interesting and spectacular Proteaceae genera.

Because the Genera look somewhat similar, they can be difficult to tell apart, but as the photo to the left shows, Isopogon has more or less rounded cones, whilst Petrophile cones are elongated, taller than wide. Both tend to hold onto their seed within the cones for some to many years, only releasing seed after a fire, or if the plant is damaged in some other way.

Looking at the photo of *Isopogon anemonifolius* after recent fires, you can see the disintegrating cones, leaving just the inner woody core, the scales having fallen with the fruit, which shaped somewhat like a rice grain.



**Isopogon refers to hairs which surround the fruit. Iso = equal, and pogon, a beard.**



However, for Petrophile, as seen on the cone of *P. semifurcata*, you can see the thickened woody scales simply open, like a pine cone, to release the fruit, but the scales remain firmly attached to the inner core.



The dry fruit in which the seed is enclosed are flat.

As is common with much of the Australian flora, the plants have adapted to fire, but in response to fire, only 39% of Isopogon, and just 29% of Petrophile are able to resprout from lignotuberous growth. The majority are obligate seed reproducers, and as has been demonstrated by much scientific research, viable seed production varies widely between species, and plants require large seed banks accumulated over many years to ensure successful establishment of populations after catastrophic fires such as experienced in the 2019-20 fires. Even the resprouters will decline over time, and be no longer vigorous enough to keep producing new shoots. These too will require seedlings to replace senescent populations, with possibly an even greater requirement for extensive seed banks.





The inflorescence of each Genera both contain many individual flowers, and although superficially similar, are on close inspection quite different.

When a flower opens (anthesis) the perianth tube splits into 4 tepals which peel back to reveal the pollen presenter. Isopogon only peel back for about 20% of the perianth length, whereas Petrophile tend to peel all the way to the perianth base.

This distinction is demonstrated in the photos, with Isopogon above, and Petrophile the lower photo. Because of this, the styles and pollen presenters are much more noticeable on Petrophile.



Close inspection of both Isopogon and Petrophile flowers reveal some amazing detail, as this photo of Isopogon by Catriona shows. This individual flower shows the perianth tube with 4 recurved tepals and the pollen presenter revealed to attract a pollinator. The swollen portion towards the end of the style is where pollen is placed before the bud opens

Both Isopogon and Petrophile plants produce a huge number of flowerheads, and thousands of flowers which begin to open from the bottom of the flowerheads with flowers opening progressively to ensure availability over time, and therefore increasing the opportunity of fertilisation for seed production.



Each individual flower has easy access for pollinator insects, and a large pollen load to reward them. Flowers offer a landing which is easy to grab, and pollen is removed in one go by the insect, which uses forelegs to scrape off the pollen, which is carried away on the rear legs.



Take note of the Isopogon flower above. The pollen presenters which are yellow signal that there is pollen available, or that the pollen is taken but the stigma is receptive. The red pollen presenters indicate that there is no pollen, and the stigma is not receptive. As insects do not see the red spectrum, they do not visit these flowers.

## Naming of the Genera.

Originally, species of both Genera were combined in a single Genus, *Alytus*, by Richard Salisbury in 1807, but were separated by Robert Brown in 1809. Recent DNA analysis supports this separation, but shows them to be even further distantly related. *Isopogon* is closest to *Adenanthos*, and the South African Genera *Leucadendron*, *Serruria* and *Leucospermum*. *Petrophile* is related closely with the South African *Aulax*.

There is still much discussion between botanists as to where to place the various species, with some ambiguity as to where they fit. Whilst most agree that morphological differences are sufficient, recent DNA classification of Proteaceae by Weston and Barker placed *Isopogon* in a newly established tribe, *Leucadendreae* whilst *Petrophile* was placed within the tribe *Petrophileae*.

In our local south east NSW area, there is 3 species of *Isopogon*,

*I. anemonifolius*, *I. anethifolius* and *I. prostratus*,

with 4 *Petrophile*,

*P. canescens*, *P. pedunculata*, *P. pulchella* and *P. sessilis*.

Whilst beautiful plants in their own right, all are yellow flowered, with all the spectacular pink flowered plants belonging to Western Australia.

*Isopogon prostratus*, first collected by Ferdinand von Mueller at Twofold Bay (Eden) in 1860, is an easily grown and reliable garden plant.

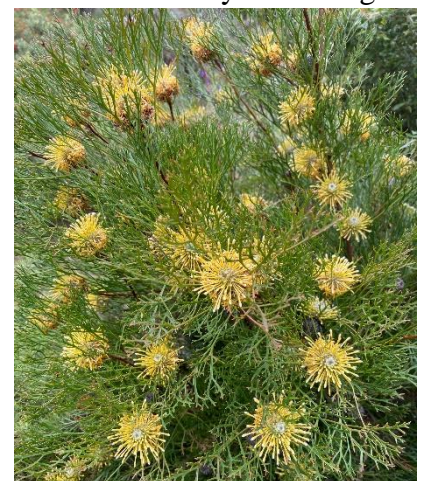
However there are conservation concerns, for although **Leioproctus** bees are regular visitors, and pollination / seed set occurs, (up to 153 seeds per cone) with viability rates of up to 80% in laboratory conditions, there is apparently little increase in natural populations. It is thought that the flower heads decay rapidly when buried in leaf litter, are predated upon by insects and rodents, and there is not enough light to allow for growth. Germination tests by members of the study group are inconclusive.



## Successfully growing Isopogon and Petrophile in your garden.

There is little difference in growing these Genera as with other plants in the Proteaceae family, such as *Banksia* and *Grevillea*. It should be noted that many of the very attractive Western species occur naturally in what is described as a Mediterranean climate, with wet winters and dry summers. For those of us on the NSW south coast, with a summer wet climate (mostly!) the western species are certainly a challenge to keep these plants growing successfully. Wet and warm soils are perfect for root pathogens to thrive, to the detriment, and often a quick, sudden death of such plants. The best gardeners in these areas can do is ensure that drainage is not impeded, by raising up garden beds and adding coarse sand or small gravel. Adding humic material is not advised as this can increase the water holding.

Phil is an avid supporter of grafting difficult plants, and as the eastern state species are rarely difficult in cultivation, he uses these as rootstock for western species, with great success. He and Catriona came across a hybrid *Isopogon petiolaris* x *Isopogon mnoraifolius*, which they recorded as *Isopogon* “Coaldale Cracker” in reference to the location it was discovered, Coaldale Road north of Grafton, and the fact that it has proved a cracker of a garden plant.



*Isopogon* "Coaldale Cracker"



The plant has soft bright green foliage, and an upright habit to about 1.2m, although over time the lower growth may become spreading, indicating the parentage of *I. petiolaris*, which is a low spreading plant. So impressed is Phil with the hardiness of this plant, and the fact that it is easy to propagate by cuttings of barely firm new growth, that he now uses this as his main rootstock for all the difficult Isopogons.

It was recommended that western species should not be watered at all over summer, therefore plants should be planted in Autumn to give them time to establish before the summer rains. To keep plants vigorous and in check, regular pruning is desirable, but this should be done as soon as the current flowers fade, as most set the next year's flower buds very early after flowering.

So many of the spectacular western species are quite amenable to growing in containers, being naturally compact and appreciating regular pruning, and it was suggested (recommended) that members consider this as an alternative. Pictured is the low form of *Isopogon formosus*, "Pink Sparkler" which is easy to propagate, and flowers for a long period. *I. formosus* is one of the easier W.A. species grow in the east.

Some others suggested, *I. latifolius* "Dazzler", *I. latifolius* "Lollypops",



*Petrophile ericifolia*, *P. serruriae*, *P. biloba* which is fairly adaptable, and *P. filifolia*, photo at right, a very low growing species with long, fine, almost grass like foliage and showy cream to yellow flowerheads almost at ground level. This is a great container plant.

We should not discount the reliable eastern plants, for there is a range of smaller forms now available, including *Isopogon anemonifolius* "Woorikee 2000", "Little drumsticks" and one simply listed as "compact form". Each grows as low spreading shrubs about 0.6m high, and produce heavy cover of flowers for months. There is also a couple of dwarf forms of *I. anethifolius* which makes a lovely garden plant about 1m. with fresh green foliage and massed flowers.



### Propagation.

Both Genera are traditionally grown by seed, but this presents many problems for home gardeners. Seed is hidden within a nut, and there is no visible evidence of viability, and in fact study group members have noted that less than 10% of seed collected germinates. In some species the viability is much lower. Generally, seed needs to be fresh, say 1 – 2 years for reliable germination, but young seedlings are very susceptible to damping off. Some growers recommend passing the seed over a naked flame to remove the hairs and hopefully crack the nut to allow water penetration. Others have suggested smoke treatment may enhance germination, but trials are generally inconclusive.

Most species can be grown by cuttings, using just firm new growth, to almost semi hard wood, and Phil suggests Clonex Gel, Purple (3000 ppm) is suitable for most. The tricky stage is the potting on, and all species seem to require an open, well drained mix. Care should be taken in adding fertiliser at the potting stage, as most species require little for quality growth. Better to wait until the young cuttings are growing away happily, then maybe add a small amount of 9 – 12 month low phosphorous fertiliser such as Nurticote prills into the mix. Adding up to 30% Perlite to commercial potting mix has proved beneficial for the western species to improve drainage. Select potting mix which does not have added fertiliser.

**Grafting is a story for another time**, but many at the meeting pressed Phil to include a practical session sometime in the future. Those interested might dig out the Australian Plants Journal Winter 2021, Vol 31, No 247, in which Phil describes in detail his process of grafting, with many photos showing how to go about it. Even better, join the study group, details below.

AUSTRALIANNATIVEPLANTSOCIETY(AUSTRALIA)



# Isopogon & Petrophile *Study Group*

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Thanks Catriona and Phil for a superb presentation, a fitting finale to our group's year.

**Photos, and wording were sourced from Catriona's very comprehensive Powerpoint presentation.**

Following the Isopogon and Petrophile presentation, Dylan called for final sales of tickets before the crowd headed to the **"Plant Swap"**. Sue was besieged by members wishing to get more opportunity to get the 'best' plants from the many available. Final income from the Plant Swap reached \$166.00, and it was time to hit the tables. As Dylan was controlling the session, he again warned that he won't tolerate elbowing and tripping up of others as you get to the plant table. To ensure everyone got a chance to get a plant of their choice, tickets were drawn in an orderly fashion, with holders of multiple tickets not permitted to get more than one choice until everyone present has at least one plant. Thankfully this was adhered to, as at least one member, holding 15 tickets, was drawn 4 times in the first round. Of course there was some luck as to who gets the most prized plants, and first drawn was Annie Hood, who selected a large pot of *Hoya australis*, which I can confirm was coveted by some, and Annie has proudly placed her plant in the front entrance, brightly decorated in the Christmas spirit. Phil brought along 6 *Isopogon* **"Coaldale Cracker"** which were quickly snapped up, and Daniel brought a dozen very healthy *Isopogon formosus* which he propagated by cutting. These too went early.

There was something for everyone at the table, from orchids to trees, and everything in between. Once the first round was completed, and everyone had a plant, Dylan gave up on drawing tickets, so members were invited to walk conga style around the table, selecting until all the plants found new homes.

This event proved very successful, and Dylan thanked those members who had donated plants. He also recommended that the group do it all again next year, and asked that we all get stuck into propagating whilst the warm weather remains.





## The Big Pizza Party

Whilst we were all having fun at the plant swap, Norm was busy ensuring the oven was ready to feed the masses, and Lesley was busy preparing sauces. (We did put aside some plants for them) He had already prepared enough pizza bases for a crowd, and had also cooked up 22 loaves of bread, which very generously were offered to members to take home. Needless to say, there were none left !

**As soon as the bell rang to say all is in readiness, there was a line at the oven.**

For safety, Norm insisted that only he was to operate the oven, and members were thankful for this, as the heat from the opening was quite intense.

3 or 4 at a time, in for less than 2 minutes, we were soon all eating our colourful creations. Some even had leftovers to take home, but most had worked up a healthy appetite from the aromas emanating from the oven. Looking at the range of pizza toppings members brought, Lesley was pleased that she decided against supplying them. No doubt if given the opportunity we will all be happy to have another pizza party next year.

A big thank you to our tired but happy hosts.



### **But wait, there's more ! What about a garden visit.**

Once the lunchtime tables had been cleared, and the dishes away, Norm invited everyone to join him in a stroll around their extensive garden. Recent rain had greened up the lawns, and perked up the plants, and although the ground was a bit spongy in places, no one seemed to notice as we went around the various plantings. Having a large space in which to grow Australian plants, Norm and Lesley have many species which we don't see all that often. Norm did have a good collection of western Banksias which were quite successful whilst conditions were dry, but heavy rains since the 2020 fires sent many to an early grave, but his eastern Banksias are thriving.



***Grevillea* 'Burgundy Blaze'**

He is keen on Grevilleas, and the wide open spaces allow plants to reach their potential. One such plant is *Grevillea* 'Burgundy Blaze', a very hardy and adaptable hybrid between the rare *Grevillea caleyi* and *Grevillea* 'Bronze Rambler'. The plant grows to around 2m high with a wider spread, so it needs some space. Growers are rewarded with very attractive foliage and masses of pink/purple toothbrush flowers over a long period. As we noted, it was popular with small honeyeaters.

He also has a couple of Kings Park introductions, *Grevillea* 'Tangerine Dream' and *G.* 'Ruby Dream' both of which flower continuously.



Some stayed on for afternoon tea, but most were happy to call it a day after a couple of hours in the garden, especially those who travelled a distance to join us.

Phil and Catriona seemingly cannot get enough, travelling to the local Mountain View nursery to see what *Isopogons* they had on offer. They were surprised to find 5 different species, including some healthy *Isopogon latifolius* “Dazzler”. When they got home a message was waiting to say that plants were available, and we should go have a peek.

So now some are in my garden.

We did not forget our hosts, and 2 plants of **Dazzler** were donated to Norm and Lesley, from the committee, on behalf of all members, in recognition of the effort they made to ensure our final meeting of the year was a resounding success.



*Grevillea* 'Tangerine Dream'



Norm said that the next day he had a sleep in, and a quiet poke around, but did not have the energy to do much else.

Understandable, but unlike this energetic ex-farmer. Maybe turning 80 has something to do with it.

Or maybe taking note of the Jacky Lizard, deciding that lying around in Norm’s nursery pot is warmer than on the damp ground.

So that’s curtains for 2023. Let’s get excited about 2024, well maybe after the festive season.

Thanks to everyone who has contributed to the group this year. Keep up the good work, growing and being proud of Australian plants.

## In my Garden

Time for an update as to how I am getting on with the back yard garden. Work began during Covid recess, and has continued on and off over the past couple of years. One step at a time ! Down the steep slope, now 46 steps over a 9m fall, and I am nearly able to say “not many to go now !”

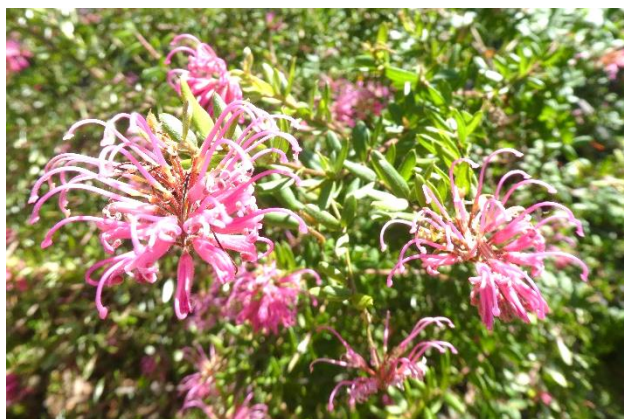
With no access for mechanical help, stone and timber has to be carted by hand. Stone in buckets which weigh 20kg, and timber with assistance from a not always willing helper.

Actually the soil is not too bad, with only small sections of shale. Most rock is just broken pieces, and with a crow bar, ground is readily broken. That is until the back complains, and it’s time for a rest.

Then the knees complain that the steps are too steep, but one must plod on. Plants put in over the past 12 months have thrived, some even a little too well, and need some assistance to maintain upright.







These are a few plants which members should consider to add variety for insect pollinators. *Grevillea sericea x speciosa* “Collaroy Plateau” is covered in flowers for much of the year, and is a magnet for all manner of insects, including native bees.

Thomasias don't get much attention these days, but are hardy small shrubs very tolerant of dry shady conditions. This is *Thomasia purpurea*, which will flower through the summer.

The local *Platysace lanceolata* is a dense, small and insignificant shrub for much of the year, but when it decides to flower it puts on a show. The range of insect visitors is incredible.



Another local plant which is rarely grown is *Lomatia ilicifolia*, a small, lignotuberous sub-shrub which is never bushy, tending to be overlooked even in the bush. That is until it decides to flower. The spikes of sweet white flowers are a beacon for many insects. I tend to favour plants which provide food for others than the large honeyeaters which are becoming more common in suburbia. Smaller birds are quite happy with this as well, for they can chase up a feed of protein rich insects on which they rely.

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