



# Isopogon & Petrophile *Study Group*

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*Isopogon divergens*, Hawks Head Road, Kalbarri National Park, July 24, 2016. Photo: Mike Beamish. See page 7 for our profile of this species. See page 17 for Mike's account of his and Cathy's WA trip.

Back issues of the Isopogon and Petrophile Study Group Newsletter are available at  
<http://anpsa.org.au/iso-petSG/IPSG-news.html>.

## From the editors

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Dear fellow isophiles,

By all accounts it's the best wildflower season in southwest WA in years. Members have reported wonderful shows of isopogons and petrophiles. We have articles from Mike Beamish and also Neil Marriott on their trips in this issue, with great photos. Neil Marriott and Margaret Pieroni have promised some more goodies for the next newsletter. Those who print the I&P newsletter out might want to note there are quite a lot of photos this issue.

Both correspondents were lucky enough to see *Petrophile nivea* (declared rare flora and only recently named) in full flower at Hi Vallee with Don & Joy Williams and take some excellent photos. As many of you know already, the Williams property at Badgingarra is an I&P hotspot and they have recently published a field guide to Hi Vallee. Field identification is a real challenge in WA due to the level of variation even within species, the number of different species, and lack of reference material. Our WA reporters have certainly found this so we greatly appreciate their efforts in identifying the I&Ps they saw. Phil and I also made it to WA this year – however we were in the Great Sandy Desert way up north on a botanical survey team for Desert Discovery – we saw plenty of 'pogons' but they all turned out to be grasses (cymbopogons, enneapogons, etc.).

Our plant profiles this issue are both WA species – *Isopogon divergens* and *Petrophile drummondii*. Both are spectacular plants and well worth having in your garden. If you get to see them flowering in the wild, even better! It is a real sight to remember, as the display they put on can be quite breathtaking. We also cover *Isopogon latifolius* which has the largest flowers of all I&Ps, and how to address its reticence in flowering. John Knight discusses the eastern species *Isopogon prostratus* and Catriona reports on the amazing I&P display at Pangarinda Botanic Garden at Wellington, SA.

Hopefully our last issue inspired you all to get into more propagation. We certainly had some good feedback on the newsletter but haven't had many reports on progress so far. Phil reports on his grafting trials in this issue. Also, please note the proposed arrangements for exchanging cuttings and seed set out on page 6. At this stage, only the species in our own garden are listed but as we know many of you are growing great specimens we hope the list will expand. Remember the aims of this study group to study and promote propagation. Could any members able to provide cuttings/seed please send us your species list so that we can include these details in the next newsletter.

There has been quite a bit of interest in I&Ps following our recent talk on the subject to the Canberra ANPS group. We appear to have corrected an impression from some in this group that isopogons are too hard to propagate and that petrophiles are impossible to deal with full stop. One suggestion which came out of the meeting was to feature I&Ps among the examples at the Bush Friendly Garden at Floriade. They are always on the look-out for showy natives that will survive in the Canberra region and they aim to educate the public (perhaps 20,000 a year) beyond their existing impressions of native plants. They currently borrow plants from a local nursery but there may be some way we can introduce some I&Ps – we will look into it for next year's Floriade. Phil also generated interest in growing spectacular WA natives at a local garden club – naturally he emphasised I&Ps in terms of their beauty and ease of propagation.

It has been a relatively dry winter/spring for us, unlike much of eastern Australia, but that is not bothering our isopogons and petrophiles. Most of our isopogons have put on a great spring show as usual. Many petrophiles are also doing well but as many are not yet out we will report on them later. One of our *I. dawsonii* has grown so tall it has fallen sideways in our winter westerly winds and will have to be knee-capped or taken out. We quite fortuitously created a picture in shades of purple/pink on the south side of our house with a massed display of *I. dubius*, *I. 'Stuckey's Hybrid'* and *I. cuneatus* interspersed with *Thomasia purpurea*, *Eremophila*

*mackinlayi*, *Eremophila cuneifolia* \**fraseri* and Angus Stewart's purple kangaroo paw *Anigozanthos* 'Landscape Violet'. This 'pretty in pink' scene has only just finished.

As usual the many plants of *I. anethifolius* have been very floriferous and a highlight for many garden visitors. For the first time, we have had a dwarf form of this species grow well and flower, a plant with great horticultural potential. *I. anemonifolius* (standard and dwarf forms) has flowered a little later (in terms of timing as well as maturity) but has been even more floriferous and for a longer period. A cultivar of this species, 'Sunshine', has also put in an outstanding performance and is a real feature in its prominent position (unfortunately another plant in a different spot did not make it).

We were excited this year about a new graft of *I. formosus* in our garden which although still small is going very well and has flowered. This species has been a real challenge in grafting terms but using *P. pulchella* for the stock looks very promising. Also performing very well is a grafted *I. sphaerocephalus*, now about a metre high and covered with flowers, and a graft of the endangered *I. fletcheri* (no flowers yet but in great condition unlike previous ungrafted plants we have tried). For us, probably the real highlight this spring has been two grafted *I. divergens*, both pale pink and covered with inflorescences despite being only a couple of years old.

Before we sign off, the ANPSA webmaster has made a change to the I&P web addresses – a redirection means you won't lose any links so no need to take any action. Here are the new details.

The Home page for the I&P Group is: <http://anpsa.org.au/iso-petSG/>

The Newsletter page is: <http://anpsa.org.au/iso-petSG/IPSG-news.html>

There are some questions from members highlighted in the members' section – you may have some answers.

Happy growing

Catriona & Phil

## From our members

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### Anthony Meyer, Canberra

Proteaceae in general have always fascinated me and I grew the local Isopogons and Petrophiles from the Hawkesbury Sandstone when I lived in Sydney up to 1993. I managed to find *Isopogon prostratus* at Bald Trig on the Newnes Plateau and have been back to check on it many times since moving to Canberra in 1993. No seed to buy though, and I think it's a most desirable little plant deserving dissemination by the Society. [John Knight and Mark Noake certainly agree Anthony – they have grown beautiful plants of this species. See John's article on page 10.]

I have had no problems germinating Sydney species with seed less than 6 months old (I didn't realise there was a problem with older seed, I just never had a shortage of fresh seed). In recent years in Canberra I have germinated some of the WA species with seed from Nindethana and had maybe a 50% success rate. I use bottom-watered tubes with coarse sand and bottom heat when needed. I do have a fair amount of trouble with damping off though. I've recently discovered "Phos Acid" fungicide in Bunnings, having been aware of its use many years ago for Banksias in WA. Anyone know if it is suitable for damping off in Isopogons?

### Patrick Laher, Uralla NSW

It's been the wettest winter that I have experienced on the Northern Tablelands and there doesn't appear to be an end to it, now heading into spring. My three plants of *Isopogon mnoraifolius* are flowering prolifically and so far appear to be unaffected by sitting in water on three occasions. The plants have been unaffected by frosts down to – 6 centigrade on several occasions. *Isopogon formosus* plants, whilst not as hardy to frost, are so far handling the wet and have lots of flower buds ready to open in a couple of weeks' time. The other *Isopogon* plants I have in my garden are the local forms of *I. petiolaris*. It will be some weeks before they come into flower.

The *Petrophile* plants in my garden are *P. biloba* and a low growing form of *P. teretifolia*. The latter are much hardier to frost and are both putting on flower buds. *P. biloba* plants are in sheltered positions from frost and are in full flower. I have lost quite a few of these plants in an attempt to find a suitable site for them.

In a pot on my veranda lives a grafted *Isopogon cuneatus* which has been growing very well but so far has refused to flower. It put out four strong shoots earlier this year which I pruned back, and in doing so, probably cut off its flowers! I've tried *I. cuneatus* previously in a garden and found it to be frost tender. [*Might be worth trying again Pat as it has grown well in Canberra.*] *Isopogon Stuckey's Hybrid* is beginning its flowering. It also lives in a pot on my verandah.

### Karlo Taliano, Georges Hall, Sydney

Regarding *Isopogon latifolius*, this year has seen more flowers than previous years (probably double the number) but I'm not sure if that's because I hadn't pruned it back so much last year. There would have been over 15 flower-heads this year – still not all that many considering the grafted shrub has been in the ground for 8 years. I agree with your suggestion that for most years, the majority of flowers do stop short after budding up.



The *Petrophile teretifolia* I have growing is still very young (3 years in the ground) – although it has doubled the number of flowerheads each year (2104 -1, 2015-2, 2016- 4 buds) – I'd be happy if this sequence continued...

### Paul Kennedy, Elliminyt (Colac) VIC

[Paul recently visited WA on a hakea crawl.] I saw some lovely *Isopogons* on a roadside going out to Watheroo NP. Will give you the location when we meet. This year from May onwards has been extremely wet at home, averaging 100mm per month up to August. September looks like being 150mm, so I am pleased the flowering *Isopogons* are in built up beds. Looking forward to planting more as they become available. This is my report on the *Isopogons* I have growing:

*Isopogon Stuckey's Hybrid*. This is one you gave me. [*It's grafted*] It has been flowering for two months and looks like flowering for another two. Planted April 2016 and now 400mm high. Has five flowers so far.  
*Isopogon formosus*. Grown to 500mm in height. It is another one you gave me. It is very attractive. Bought [more] plants in October 2015 and planted up against west facing brick wall of house in raised bed. Have done very well. Bright green foliage twice to three times divided. Leaf peduncle about 2cm long and leaf length overall about 4cm. the branches have bent down to the ground under the weight of flowers.  
*Isopogon trilobus*. Planted April 2016, still small but looking healthy.  
*Isopogon attenuatus*. Planted April 2016, still small but looking healthy.

### Liesbeth Uijtewaal, The Netherlands

Our summer has been rather lousy with four **very** wet weeks in June, followed by some very dry and hot spells.



...do you feel this might be a bud in my *cuneatus*? [*That's definitely a flower bud.*] I'm not sure since when checking the plant thoroughly I found that new shoots sometimes tend to have scales at the base as well. It would be great if they turn out to be flowers! There are three of these structures on the one plant, the other plant has none... I'm quite confident that this is a first bud on *latifolius*. Can't wait!... it produced the same structure last year which may have been smaller though. It produced leaves. I received several cuttings from Jo O'Connell (California, originally from Sydney) in January 2014 of which *latifolius* didn't produce roots until Feb 2015! Very LATE...this makes it easy to remember its name.

Did I mention all new –to me- Isopogon species are budding up, i.e. *dawsonii*, Stuckey's Hybrid and *mnoraifolius*? Can't wait to see them flower. It's a shame flowering will probably take place in winter, are there any summer flowering Isopogons? I haven't found any so far. For me the spring or even summer – if there are any - flowering species will be the most desirable ones. Are there no summer flowering Isopogons? Hm, I checked the Is/P field guide, only *I. drummondii* flowers in late summer/autumn. [*Those 3 species are spring flowering. Some of the others go through to December in Australia.*] Do you have a clue why your *anethifolius* is particularly floriferous? Good climatic conditions or is it a particularly floriferous clone? [*Probably it's just a particularly good, vigorous form.*]

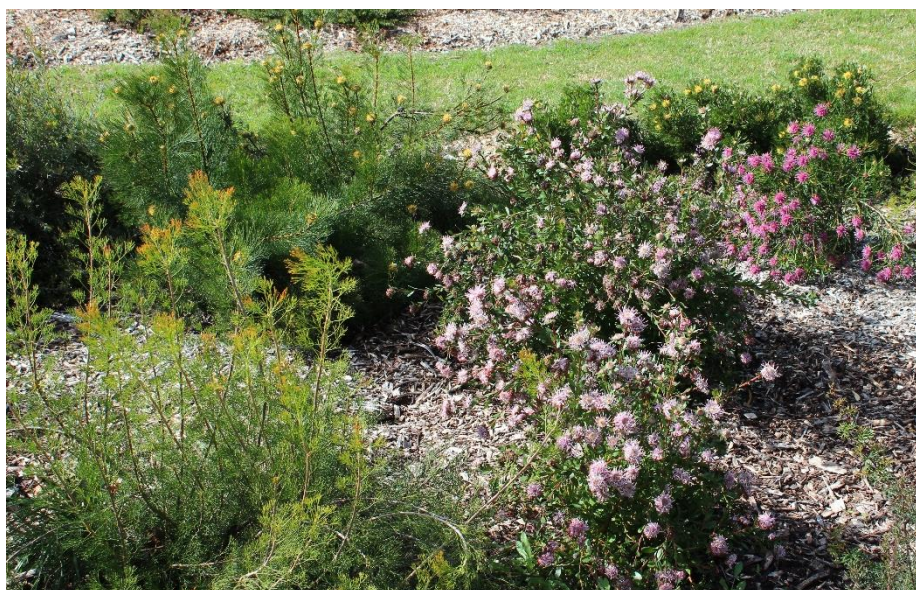
My *Petrophile linearis* and *Iso divergens* and *petiolaris* seedlings are doing well. No signs of buds though even though there are some slightly swollen tips visible in one of the two *petiolaris* plants. Has anyone in the SG has ever got seedlings to flower, keeping record of how long it took? I suppose this can be very variable. I've still got plenty of 'Stuckey's Hybrids', they all survived the wet period albeit with purple spots on their leaves. I did take them inside after a while but they have been soaking wet for a week at least. ...I am quite sure that it is showing some first buds which is very quick compared to e.g. *cuneatus*. Can't wait to see them develop and flower!... The four *formosus* plants from your cuttings are thriving as well despite the wet period...

### Margaret Pieroni, Denmark, WA

It's been wildflower trips one after the other [this spring]... But... I will be writing a report of my trips this season and sending plenty of photos. I thought of you so often when we saw so many isopogons and petrophiles during our travels especially at one roadside location on South Coast Hwy, just east of Bluff Creek Rd. I alerted Neil Marriott and his tour group spent more than an hour there as I did again, last week. It is just breath-taking. The flowers everywhere were amazing. We were lucky with the weather, too – just managing to avoid almost all the rain and road closures.

### Mark & Carolyn Noake, Moruya NSW

Mark & Carolyn's I&P bed, featured in our last issue, keeps going from strength to strength. This spring it was a riot of colour. They have been particularly impressed with the flowers on their *I. formosus* and *I. latifolius* (both ungrafted). If you compare this photo with that in NL18, you will see the remarkable development since last year. Note the striking pink flowers of the 'Candy Cones' cultivar in this photo from Mark.



## Exchanging cuttings and seed

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It would be great if members could supply cuttings or seed to other members using the four steps below. At present we are the only source of material for other members, and we need to expand the species list available to the Study Group by including species growing in other members' gardens.

All States apart from Western Australia allow cuttings to be mailed from NSW. If you would like us to send cuttings or seed to you, here are the steps (may vary for seed-only requests):

1. Email us to check that material is currently available ([catrionaandphil@gmail.com](mailto:catrionaandphil@gmail.com)).
2. Once availability is confirmed, purchase a 500g Express Post satchel from Australia Post (costs \$10.55), self-address it, put in an envelope and send to:  
Isopogon and Petrophile Study Group  
PO Box 291  
ULLADULLA NSW 2539
3. We will then package up your cuttings/seed and send it back to you Express Post.
4. An email will be sent to you on the day the package is mailed so that you can be ready to propagate as soon as the parcel arrives!

Here are the species that we can provide cuttings or seed at this stage. We plan to expand this range rapidly:

**Isopogon** – anethifolius, anemonifolius (1.5m shrub, 0.3m shrub), buxifolius var. spathulatus (now I. spathulatus), cuneatus, dawsonii, divergens, dubius, formosus, latifolius, mnoraifolius, petiolaris, sphaerocephalus, tridens, trilobus, 'Stuckeys Hybrid'

**Petrophile** – canescens, pedunculata, pulchella, serruriae, sessilis, shirleyae

Could any members able to provide cuttings/seed using the above arrangement please send us your species list so that we can include these details in the next newsletter.

## Encouraging *Isopogon latifolius* to flower

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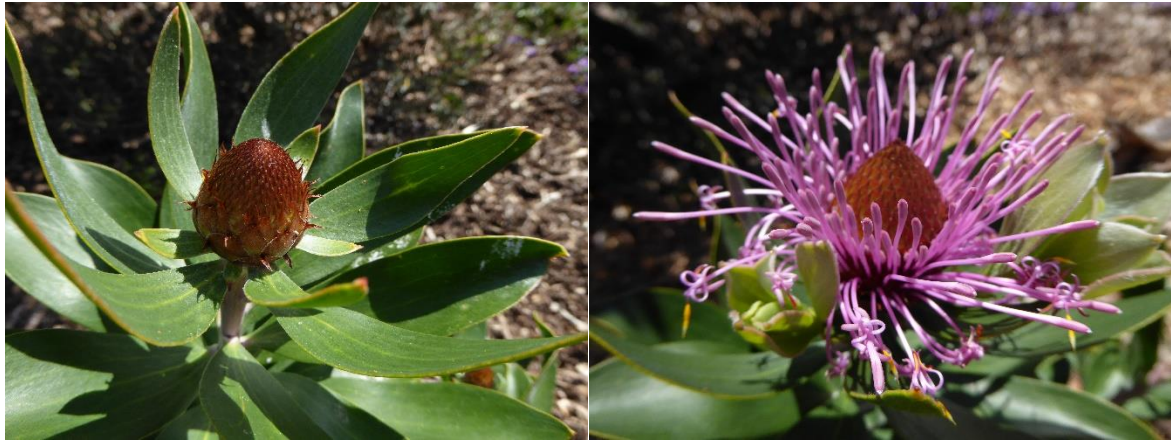
Karlo Taliana and Mark & Carolyn Noake report a good year for flowering. However, for many years members have noticed that their *Isopogon latifolius* plants set flower buds which refuse to open and end up aborting. In the Netherlands, Liesbeth Uijtewaal had this problem with her young plants last year. She also notes it took a long time for cuttings of this species to produce roots. Like many I&Ps, they set buds very early but seem to take even longer (up to nine months) to begin to flower, and flower later than other isopogons in our garden.

The 'as big as your fist' flowers, the largest of the isopogons and petrophiles, do seem to demand certain circumstances. Perhaps they naturally only flower on an infrequent basis. David Lightfoot has previously noted: 'I think [conditions] have to be just right before they go into flower, as it is so energy expensive and the soil in the Stirlings is so poor that they cannot afford to waste the flowering in the wild.' Karlo Taliana wonders about the role of cold weather – it certainly gets cold in the Stirlings!: 'I visited 'Silky Oaks' several years ago, Peter [Olde]'s shrub had a good show – not sure whether this may be to do with the frosts there. The coldest it ever seems to get in winter at my place is around 2-3 degrees Celsius.'

Even when they do flower, the number of inflorescences varies greatly from year to year. Over the years some half dozen members have successfully grafted this species and many others are growing or have grown grafted plants. In theory, grafting should encourage flowering if the scion is taken from a more mature plant, however, grafted plants still often seem to be shy to flower, even allowing for grafting issues such as appropriateness of stock or lack of compatibility.



Last year one of our members John Knight suggested that we try some sulphate of potash around the base of the plant to address this issue. And bingo, out came the flowers within a couple of weeks. This year the same thing occurred. We checked the flower buds through August and September before splashing some sulphate of potash around the base of the plant and watering it in. And almost immediately the flowers started to emerge. These are young plants so it will be interesting to see if they continue to need this treatment in future years. So, if your *Isopogon latifolius* refuses to flower, try the sulphate of potash and let us know how it goes.



*Isopogon latifolius*: before and after

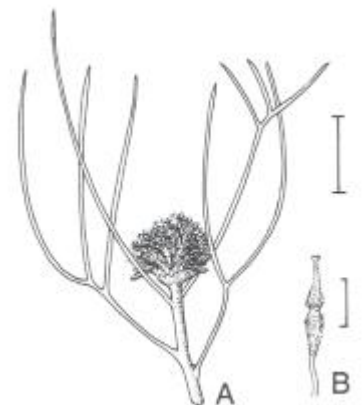
## Plant Profile – *Isopogon divergens* Robert Brown, Suppl. Prodr. Fl. Nov. Holl. 7 (1830)



*Isopogon divergens* was first described by Robert Brown in 1830 using material collected by Charles Fraser along the Swan River. The species name *divergens* appears to refer to the divergent characteristic of the leaves which can divide up to three times.

**Description** – the spreading coneflower is a non-lignotuberous low, bushy shrub up to 1.5-2 m in height. Its foliage is soft and pliable despite both the petiole and lamina

being terete. The leaves are mostly divided but sometimes simple, and comprise a petiole up to 5.5 cm, and a lamina up to 10.5 cm. It produces masses of terminal flowers between August and October. The most common flower colour is pale pink, often tinted with mauve, but there is also a darker pink form found in the south in the Frankland District. A rare white flowered form has also been reported from Kalbarri. The cones are ovoid (egg-shaped, broadest below middle) to oblong-cylindrical, to around 18 mm diameter. It is naturally rounded in shape.



scale bar A = 2 cm, B = 2 mm



**Distribution** – *Isopogon divergens* is endemic to WA and is widely distributed between Kalbarri north of Perth down to Frankland north-west of Albany in gravelly or granitic soils.

**Cultivation** – This is one of the most beautiful isopogons, displaying masses of delicate pink

terminal flowers throughout spring. As with many isopogons, it is a highly desirable garden plant but is currently very rare in cultivation. This is probably a reflection of its unreliability on its own roots in summer-wet climates. However, it grafts readily onto *Isopogon anethifolius*, and this is how it should be sold in nurseries so that it can fulfil its considerable horticultural potential.



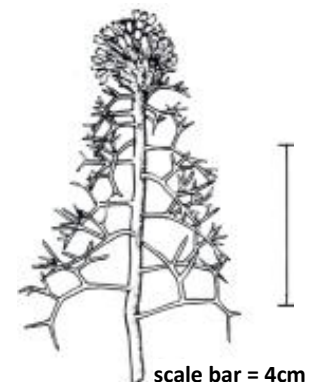
## Plant Profile – *Petrophile drummondii* Meisner, C.D.F. in J.G.C. Lehmann, *Pl. Preiss.* 1: 496 (1845)



*Petrophile drummondii* was first collected by botanist James Drummond in the Swan River District in 1839. The prolific Swiss botanist Carl Meisner described the species in 1845, naming it after Drummond.

**Description** – *Petrophile drummondii* is generally a low, bushy shrub up to 1.2 m in height. It is a prickly, non-lignotuberous plant with terete, pinnate leaves 2-3 times divided. The upper leaves are less than 20 mm long whereas the lower leaves are 20-50 mm in length. It produces bright yellow or white-cream flowers between August and December, mostly terminal. The cones are ovoid (egg-shaped, broadest below middle) and 25-30

mm in length. It is a relatively low, compact rounded bush with branches erect to ascending.



**Distribution** – *Petrophile drummondii* is endemic to Western Australia and is found mostly north of Perth up to Geraldton with more isolated populations reported just west of Perth and some outliers towards Albany. It occurs in kwongan areas of the Geraldton Hills, Lesueur Sandplain and Avon Wheatbelt in grey or yellow sand and sandy laterite in biodiversity hotspots like Three Springs, Wickepin and Moora.



**Cultivation** – This is a very striking plant in flower, displaying masses of yellow terminal flowers. The buds are shiny and brightly coloured and are highly decorative against the interesting foliage. It has a naturally rounded shape like *P. fastigiata* and is a highly desirable ornamental feature plant as yet very rare in cultivation. The best place to see it in a garden setting is at Pangarinda, Wellington, SA (in deep sand). It also appears to be grown by the Botanic Gardens of South Australia.



It tolerates drought and moderate frost and is suitable for second line coastal areas, coastal footslopes and plains. It prefers acid loam or sandy soils and like most WA petrophiles requires very good drainage. Although it has not yet been successfully grafted, on the east coast it should be grafted for introduction to gardens. It should be a priority plant for Study Group members to study in cultivation as it is one of most striking WA petrophiles with tremendous horticultural potential.



Bud; plant in bud; emerging flowers



Although petrophiles appear to set more seed than isopogons, *P. drummondii* appears to be very difficult to grow from seed. In I&P Newsletter No. 5 (Feb 2004) David Lightfoot reported the results of a germination trial he conducted using 60 seeds of this species and six different treatments. The results were very disappointing with not one seed germinating. This was less success than with other petrophiles David had tried to raise from seed. Cuttings or grafts may be the best way to propagate this species.

## Grafting update

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### By Phil Trickett

Trials using *I. mnoraifolius* as a stock look very promising. *I. mnoraifolius* has the advantage over *I. anethifolius* of being quicker to strike, and from all reports appears to be at least as tough as *I. anethifolius* in adapting to a range of conditions. Member John Nevin from Armidale NSW has grown it through extended drought and the severe Armidale frosts (down to -10 C and occasionally worse!), and calls it 'tough as old boots'. Patrick Laher notes it appears to be unaffected by too much water and frosts down to -6 C. *I. mnoraifolius* grows naturally in the high rainfall North Coast of NSW south of Yamba on the coast inland to nearby Grafton. Isopogons which I have struck on this stock and are starting to shoot include *I. cuneatus*, *I. latifolius*, *I. Stuckeys Hybrid* and *I. trilobus*. Other which I have grafted onto *I. mnoraifolius* over the last couple of months includes *I. divergens*, *I. formosus* and *I. linearis*. I will report on the progress of these grafts next issue.

I have also trialled a range of Western petrophile species grafted onto *I. mnoraifolius* in August/September and will report of their next newsletter. These include *P. squamata*, *P. drummondii*, *P. fastigiata*, *P. biloba* and *P. shuttleworthiana*.

Liesbeth Uijtewaal has been experimenting with cutting grafts in The Netherlands but so far has not been having much success. She successfully grafted *I. cuneatus* a couple of years ago using the traditional method, but has been trying cutting grafts with *I. cuneatus* and also *I. mnoraifolius*, *I. dawsonii* and *I. anemonifolius* scions. She uses the WA species *I. formosus* as the stock as she has had previous success with it and that is what she has available. She also tried 'Stuckey's Hybrid' as a stock recently, as it strikes very easily, thinking that as a hybrid it might accept more scions than true species (as seems to be the case with grevilleas). Her 4 cutting grafts all failed, but she is going to try again.

## WA Spring 2016: Southern Trip

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### Words and photos by Neil R Marriott

Each year I am fortunate to be employed to lead wildflower tours to WA with Neil Macumber, owner of Birdswing Wildflower and Wildlife Tours. Neil is an ornithological expert and hunts out the good birds as well as reptiles and native animals, while I do my best to identify the host of spectacular native plants we come upon. We drive a nice small 24 seater bus, and only take around 15 guests, so there is plenty of opportunity to stop and botanize wherever we see good patches of wildflowers.



Tour group admiring massed *Isopogon cuneatus* - near Bluff Creek

Last year we found that the spring flowers had almost finished by early October, so this year we had our tours in late September. This, combined with one of the best years the West has had for years, meant that the flowers were truly spectacular. We run two tours; the second tour runs south of Perth, through the Southern Wheatbelt to Lake King, then down the Cascades Rd to Esperance. We then tour around Cape Le Grand and Duke of Orleans Bay before heading west to Ravensthorpe Range, south to Hopetoun and East Mt Barren and the eastern end of Fitzgerald National Park. We then head through this park to the western end of the national park around Bremer Bay. From here the tour stops at Cheyne Bay and then on to Albany, before



heading north to the Stirling Ranges and stopping the night at Mt Barker. After visiting the Banksia Farm we head north to Narrogin and then slowly make our way back to Perth via Dryandra Forest.

Both tours take us to superb areas of natural bushland, and despite doing these tours for many years now, we always find new areas to explore and new plants to identify and photograph. As mentioned above, this year was one of the best ever, and below are some of the wonderful Isopogons and Petrophiles we discovered on the way.

### Kings Park

At the start of all our tours we spend half a day in Kings Park before heading out into the bush. This year, Kings Park was looking quite superb with masses of flowers at their peak, including a beautiful 'Isophyle' that sadly had no label!!



*Isopogon ?* –Kings Park

### Tarin Rock Nature Reserve

After a wonderful day around Narrogin and Harrismith, we stopped for lunch at Tarin Rock, where the flowers were quite amazing. Here we found the beautiful *Petrophile glauca*, a plant with superb blue foliage that we have growing in our garden at home.



*Petrophile glauca* – Tarin Rock

### Cascades Road

After an enjoyable night at Lake King pub we headed off early the next morning down the famous Cascades Road –boasting these days to be the best wildflower road in the West, although there was far more Myrtaceae than Proteaceae, with only a couple of Isophyles noted. One of the showiest was lovely mounded plants of *Petrophile fastigiata*, with showy yellow flowers and contrasting bright red new growth.



*Petrophile fastigiata* –Cascades Road

### Esperance to Ravensthorpe

After several days exploring around Cape Le Grand and Duke of Orleans Bay we began heading west, searching rich wildflower spots along the way, before arriving at Ravensthorpe for the first day of their famous wildflower show.



We normally spend a day going through East Mt Barren and the eastern end of Fitzgerald National Park, but sadly, due to the big rains, the causeway across to the Barrens had been washed out and the roads impassable, so the park was closed. As a result the ladies at the show gave us a whole list of superb substitute sites to visit around the district.



Superb compact plants of *Isopogon scabriusculus* –Cascades Road



*Isopogon scabriusculus* – Cascades Road

One of the best of these was Long Creek Rd, where along with the famous Qualup Bell *Pimelia physodes*, we also found lovely plants of the rare and beautiful *Petrophile helicophylla*.



*Petrophile helicophylla* heavily in bud -Long Creek Rd, Ravensthorpe

#### Bremer Bay to Albany

After a wonderful day around Bremer Bay we headed on towards Albany, stopping at one of the most amazing hotspots for Isophyles I have ever seen. This had been discovered by Margaret Pieroni, leader of the Dryandra SG the week before. The site was on the South Coast Highway approx. 44 km south of Wellstead and 1.3 km east of Bluff Creek Rd. Here we found massed flowering *Isopogon cuneatus*, *I. formosus* and *I. baxteri*, *Petrophile*



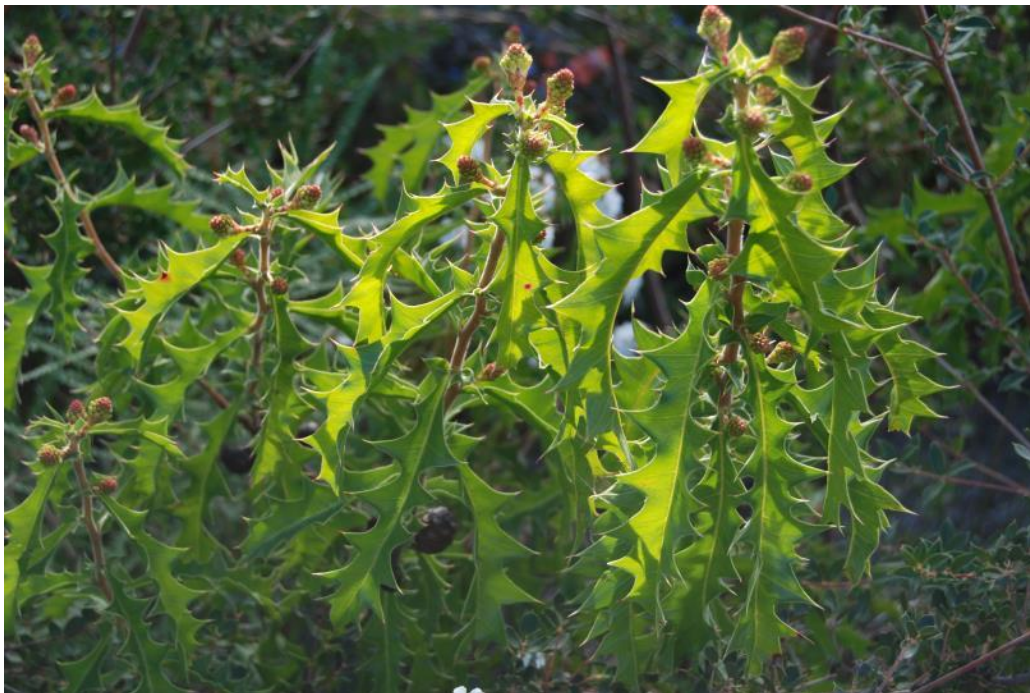
*carduacea*, as well as *Conospermum flexuosum* and *C.caeruleum*, a synaphea, *Hakea ferruginea*, an *Adenanthos*, *Stirlingia simplex*, *Banksia coccinea*, *Lambertia inermis* and much more.



*Isopogon cuneatus* –massed flower near Bluff Creek



*Isopogon baxteri* - near Bluff Creek



Spectacular foliage on *Petrophile carduacea* - near Bluff Creek

From Bluff Creek we travelled on to Albany and I will continue our trip from there in the next newsletter.



## *Isopogon prostratus*

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By John Knight

This species seems to be under-represented in home gardens. As the name suggests, it is usually a prostrate plant, sometimes with arching branches to 30cm or so, but in my experience staying flat. With a spread of 1.5m or so, *I. prostratus* is easily accommodated in the garden, grown as a sub shrub, or allowed to wander through other shrubs. It occurs naturally on the southern tablelands of NSW, usually at higher elevations, say 750m to 1100m, and interestingly, on the coast south of Eden, and there is also a couple of disjunct populations in Victoria, in the far east and also near Providence Ponds, Gippsland.

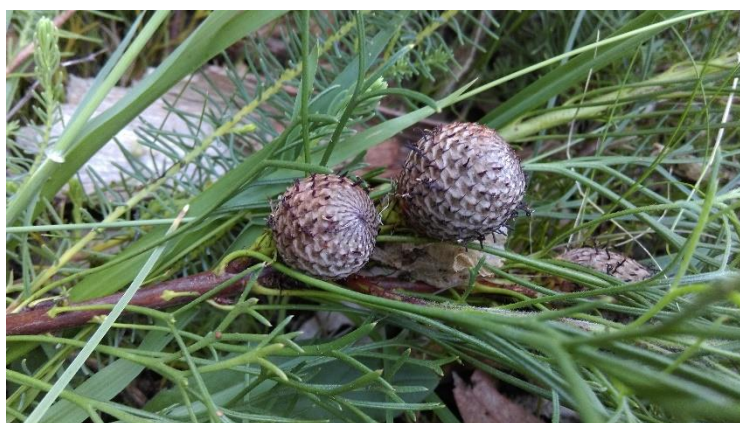


I have collected the plant from near Kydra on the southern tablelands, growing with nana scrub (*Allocasuarina nana*) at 1100m elevation. The country was sandstone, with broken gravel of silcrete. Conditions were apparently so tough, but the few plants encountered were very happy, full of flowers in November. Other collections were at Marble Arch, in the Deua N.P. at 750m, here in conditions which were more appealing. The variety of plants associated was more typical of what might be expected of sandstone country, with a number of peas, *Dampiera stricta* and *D. fusca*, *Grevillea juniperina*, *Persoonia chamaepitys*, *Stypandra glauca* and many sedges as understorey to a range of stunted Eucalypts. Here the plants were somewhat more rangy, but still quite happy with their lot.

Plants collected south of Eden were growing in sandy soil, associated with heathy plants such as *Epacris impressa* and *E. microphylla*, *Philotheca salsolifolia*, *Leonema diosmifolia* and *Chrysocephalum baxteri*. The adjacent forest was dominated by *Eucalyptus sieberi*, Silvertop Ash.

Cuttings of this plant are quite easy to strike, using any material other than soft new wood. My preferred cutting mix of 3 parts coarse sand and 1 part peat always seems to be successful, and hormones such as Clonex purple or Esi-root give satisfactory results. Propagation can be undertaken throughout the year when suitable material is available, although I do prefer late summer through autumn, as the cuttings root more quickly at this time.

It seems quite odd that, given this plants' adaptability to cultivation, it is not seen in nurseries. I have found it tolerates full sun and dappled shade, and dry conditions once established, but not poor drainage. In my current small garden, I have just 2 plants, both growing beneath a mallee *Eucalyptus olsenii*, with *Grevillea patulifolia*, *Hibbertia acicularis*, *Conostylis candicans*, and *Lechenaultia biloba*, a nice suckering form with dark blue flowers. The plants are now 4 years old, have spread about 1m, and have flowered for the last 2 years from late Winter





to early Summer. Flowering is not as prolific as the plants shown in the photo which are from Kydra, but are still attractive. Fruit has been produced each year, the plants being visited by various insects, but never birds that I have noticed. Interestingly, Blue Banded Bees are often seen around the plant, but they might just be passing on their way to the *Isotoma axillaris* nearby. The larger plant has developed a lignotuber of reasonable size, indicating that the plant will cope with heavy pruning should it ever get out of hand.

## Pangarinda Botanic Garden

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### By Catriona Bate

Pangarinda Botanic Garden contains a wide range of plants from low rainfall areas of South Australia and southern Western Australia. Among these are many isopogons and petrophiles which flower beautifully each spring. Our most recent visit was in August on our way home from botanising in the WA desert. While a little early, the isopogons and petrophiles were already in flower or very close.

Located near Wellington, South Australia, Pangarinda Botanic Garden is a community based garden managed by Coorong District Council. The twelve-hectare site located on a sand drift by the great Murray River had only some remnant patches of *Callitris gracilis* among the weeds and erosion when established in 1993.

The garden is a link in a chain of endeavour to conserve Australia's threatened flora. The aim is to replicate the plants' natural conditions with very good drainage, low nutrient levels and good rainfall infiltration.



*Petrophile biloba*

Many of the plants there are renowned for failing in traditional gardens. A sign at the gardens notes that the WA species do well but eastern states species prefer more moisture and acid soils (referring to banksias but applying equally to I&Ps).

Stage 'B' targets WA hotspots where biodiversity is particularly vulnerable. The plants are grouped in three regions: northern sandplains, southern sandplains, and arid interior. Of greatest interest to isophiles like us is the section containing southern sandplains plants, although a couple of species can also be found near the southern gate where, according to the gardens leaflet, plants have been selected for visual appreciation.

The plants are always in great condition at Pangarinda although weeds are a major challenge for the volunteers and we always do a little weeding when we visit. There are few formal garden beds and often plants of the same species are grouped together.

The I&Ps love the deep sand! Needless to say, none of the plants have to be grafted. Eastern South Australia seems to have a great advantage with its sandy regions – other examples of successful WA gardens in SA include Max Ewer's old garden at Lucindale near Naracoorte and Ken Stuckey's at Furner near Millicent.



*Isopogon dubius*

There are approximately 15 species in the garden, nine isopogons and six petrophiles. All are western species except for *Isopogon dawsonii*. All the plants are well-established – there is no evidence of new I&P plantings, possibility indicating supply issues (also likely to be the case for other genera grown at the gardens). Particularly impressive in flower are massed plantings of *Petrophile drummondii*, *P. megalostegia*, and *P. biloba*; the buds of *P. megalostegia* were yet to explode when we were there this year but the other species were already looking spectacular. *P. drummondii* was not yet at in full flower but its display of buds and early flowers was almost as impressive as fully-open flowers.

Beautiful specimens of several isopogon species were flowering this August. Particularly attractive forms of *Isopogon cuneatus* and *Isopogon* ‘Stuckey’s Hybrid’ were at their peak, and had probably been flowering for some time. On the other hand, *I. dubius*, *I. scabriusculus*, *I. axillaris* and *Petrophile shuttleworthiana* were yet to come out. The buds were ready to go on *P. fastigiata*, *I. trilobus*, *I. divergens* and *I. polycephalus*. *I. dawsonii* was similarly biding its time.



*Isopogon* ‘Stuckey’s Hybrid’



*Isopogon cuneatus*

Pangarinda Botanic Garden is well worth a special visit. It is a must for isophiles in spring but at any time of year you will be gobsmacked by WA banksias, hakeas, grevilleas and eucalypts.



# Isopogons and Petrophiles in Western Australia 2016

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## Words and photos by Mike Beamish

Our trip commenced in late April and began with a 3 week road trip from home to Broome via Port Augusta, Alice Springs, Katherine and Kununurra. Then we put our motorhome in storage for a month in Broome while participating in the ANPSA Wildlife Tour of the Kimberley (with Coates Tours) from Broome to Kununurra, caught a flight to Darwin, hired a 4wd camper for a 6 day tour of Litchfield (horrendous mosquitos), then back to Darwin and onto a boat for a Kimberley Coastal Cruise (Coates & Aurora Expeditions) back to Broome. Then we were back in the motorhome for the drive down the west coast to Geraldton, zigzagged our way to the south coast on the western side of Fitzgerald River NP, zigzagged back up to Perth, then did the loop around the southwest corner. We are now nearing Albany and are planning to continue east across to Esperance before making the dash home across the Nullarbor before the end of the month.

We sighted our first wild Isopogons and Petrophiles in the Kalbarri National Park in late July and have been noticing different species coming into flower all the way south from there. It has been touted as the best wildflower season in years, and that might be true for the daisies north of Perth, but for the rest of the plants the cold, wet and windy weather has slowed everything down. We have found that we have been ahead of peak flowering most of the way, but that might be a good thing, as we have had sufficient flowers to look at, any more and we'd be suffering from overload. Still, we've not seen the swathes of colour as advertised and expected. Just an excuse to come back again one day!



*Petrophile conifera*, Howatharra Nature Reserve, July 29, 2016



*Petrophile shuttleworthiana*, Caron Nature Reserve, August 5, 2016



*Petrophile scabriuscula?* Western Flora, Eneabba, August 9, 2016





*Petrophile macrostachya*,  
Western Flora, Eneabba, August 9, 2016



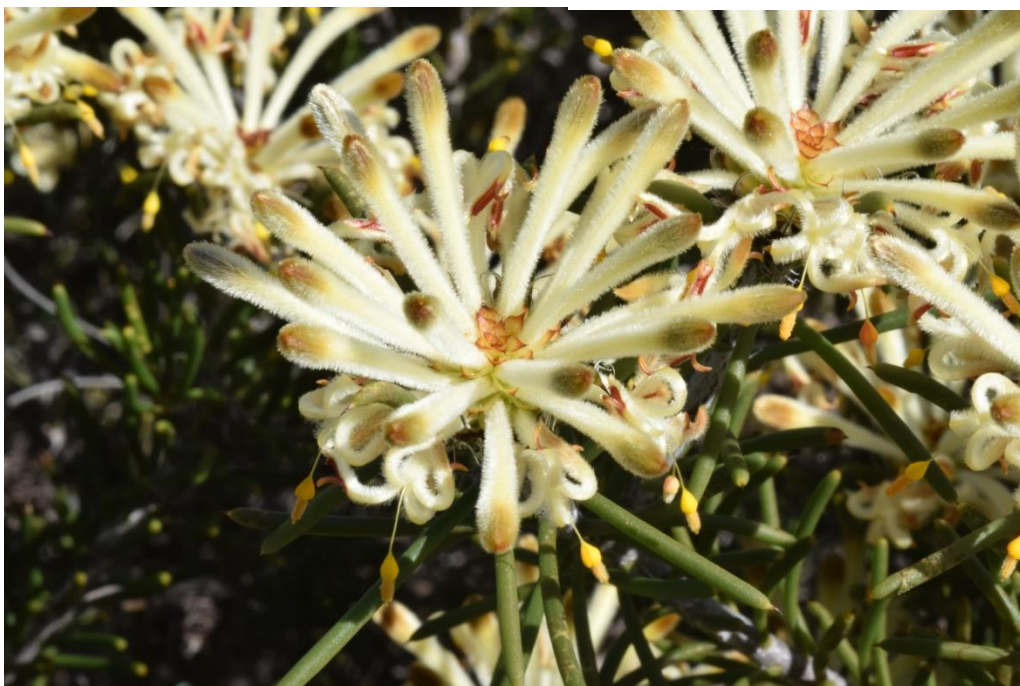
*Isopogon adenanthoides*,  
Watto Nature Reserve, August 12, 2016



*Petrophile serruriae*, Tathra National Park, August 12, 2016



*Isopogon panduratus*, Alexander Morrison NP, Aug 13, 2016



*Petrophile brevifolia*, Alexander Morrison National Park, August 13, 2016





*Isopogon dubius*, Alexander Morrison National Park, August 13, 2016



*Petrophile serruriae*, South Eneabba Nature Reserve, August 13, 2016



*Petrophile nivea*, Hi Vallee Farm, Badgingarra, August 15, 2016



*Isopogon asper*, Hi Vallee Farm, Badgingarra, August 15, 2016





*Isopogon linearis*, Hi Vallee Farm, Badgingarra, August 15, 2016



*Isopogon panduratus*, Coomaloo Nature Reserve, August 16, 2016



*Isopogon scabriusculus*, Nugadong Nature Reserve, August 22, 2016



*Isopogon teretifolius* subsp. *petrophiloides*, Frank Hann NP, September 4, 2016



*Petrophile scabriuscula?*, Reynoldson's Reserve, August 22, 2016



*Petrophile squamata*, Mt Desmond Reserve, September 5, 2016

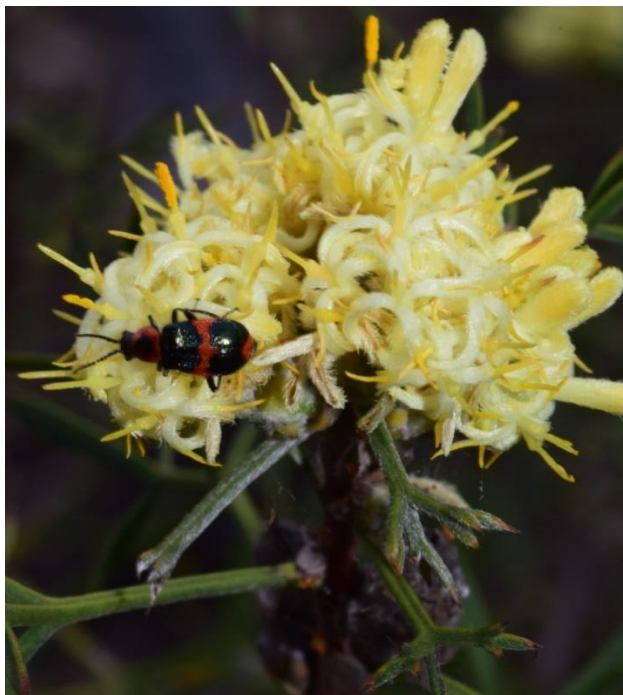




*Petrophile longifolia*, Fitzgerald River NP, September 6, 2016



*Isopogon formosus*, Fitzgerald River NP, September 6, 2016



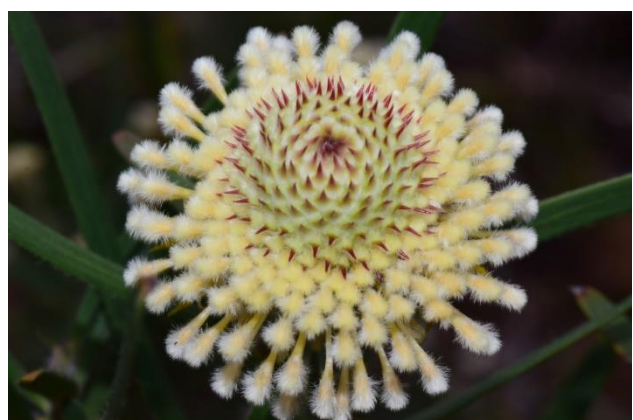
*Petrophile striata?*, Katanning Pistol Club, September 9, 2016



*Petrophile brevifolia?*, Harrismith Heath, Sept 10, 2016



*Isopogon attenuatus*, John Forrest National Park, September 18, 2016







*Petrophile divaricata*, Boyagin Rock NR,  
September 25, 2016



*Petrophile heterophylla*, Boyagin Rock NR,  
September 25, 2016



*Petrophile striata*, Dryandra Woodland, September  
26, 2016



*Petrophile* sp., Scott River Road, October 3,  
2016

## Financial Report

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Since the last newsletter we received donations from Queensland APS and ANPS Canberra Region.

Total 22/3/2016	\$982.31
Bank balance	\$865.62
Cash on hand	\$116.69
Donations	\$120.00
Total 31/10/2016	\$1,102.31
Bank balance	\$985.62
Cash on hand	\$116.69