



Isopogons & Petrophiles

The Association of Societies for Growing Australian Plants Isopogon & Petrophile Study group Newsletter



Petrophile helicophylla, in cultivation, WA November 2004.
(See page 3 for more information about this species.)

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EDITORIAL

Hello all, and welcome to the study group's 11th newsletter. Surprisingly it is once again late this time. ☺ The year seems to have flown past and already we are in 2008. I had a reasonable flowering season over spring but after some promising early winter rains the weather in Melbourne returned to the all too familiar hot and dry pattern. The forecasters have informed us that we are in a "La Nina" weather pattern which should lead to higher than average rainfall but that has failed to arrive south of NSW. At the moment we have moved onto stage 3B water restrictions which at least allows some watering. I really feel for those of you who don't have the luxury of town water. The plants that gave the best show were *P. biloba*, *P. longifolia*, *I. mnoraifolius*, *I. formosus*, and of course *I. anemonifolius* "woorikee". Once again my *Isopogon divergens* developed buds that then aborted. You may remember that this is a seed grown plant from a rare white flowering parent, and I was waiting to see if it was white or the more common pink. I had previously rooted some cuttings from it and given them to Phillip Vaughan near Geelong. He has grown these on and managed to coax them into flowering this spring. (He certainly has the green to my brown thumb!) Anyway, he has told me that the flowers were white and so hopefully this rare form will be further propagated and thus preserved.

In October I attended the biennial ASGAP seminar in Newcastle, NSW. I had been invited to give a talk on Isopogons and took the opportunity to show off some of these spectacular plants. I had some really positive feedback and hopefully we will get some new members. The whole conference

was excellent with a great balance of wonderful speakers, outings and garden visits. I would like to congratulate the organisers for their sterling job. Whilst I was there I spoke with a Queensland attendee named Ruth Crosson who comes from Gladstone. She mentioned that there were *Petrophiles* in the bush near her place. I had been under the impression that the only *Petrophiles* in Queensland were in the far south east around Morton Bay. She posted down some interesting information on the flora of Queensland. This showed that *Isopogon petiolaris* makes it into the Darling Downs and south east areas, and also that three *Petrophiles* can be found there. These are *P. shirleyae* and *P. pulchella*, both of which are found in the south east, and *P. canescens*. This latter species can be found as far north as Gladstone, as well as some distance into the adjacent inland Leichhardt pastoral region. This is one of the great things about the conference as one gets to meet, catch up with and chat with people from all over the country. ASGAP certainly has a wealth of knowledge in its combined brains trust!

The newsletter details one of the more unusual *Petrophiles* this month, as well as updates and observations from you, the members. I hope you enjoy it and that the summer is not too hot and dry.

All the best.

David Lightfoot ☺

PETROPHILE HELICOPHYLLA FOREMAN

This species was relatively recently described, in 1990, by the late Donald Foreman in *Muelleria*, the journal of the National Herbarium of Victoria. The type specimen was collected by him in 1985 near Ravensthorpe, WA.

It is a small lignotuberous shrub with a prostrate growth habit that can be up to 40 cm high and 1.6 m wide. It has spirally twisted, deep green leaves that reach to 30 cm, and tend to be packed together near the ends of branches. They usually have an erect habit, growing upwards from the prostrate branches on the ground. This unusual leaf habit gives rise to its specific name and makes it a unique and horticulturally desirable plant.

Its flowers, which appear between October and February, are about 3.5 cm long, hairy and usually cream to white. When open the flowers reveal a deep red interior with bright yellow, pollen presenters that age to orange. Some individuals have creamish-pink to pale pink flowers. The flowers are held together as a terminal inflorescence that can be up to 6 cm in diameter. They can be very conspicuous and showy.

When finished the inflorescence develops into a 2.5 cm diameter globose to ellipsoidal fruiting cone. It contains a



number of broad glabrous scales.

The plant has a limited distribution in Western



Australia, north-west of Ravensthorpe and north-east of Jerramungup. It can be found in a variety of ecosystems, including low heath and scrub, as well as open woodland. Soil types are usually sand and/or laterite, or occasionally sandy clay.

P. helicophylla is virtually unknown in cultivation, although it can be grown from seed and should be amenable to cuttings from semihard new growth. I would suspect it does best in full sun and needs excellent drainage, without a wet summer. Given its unusual leaves and showy flowers, as well as its compact shape, this plant would make an excellent addition to a rockery, especially in the southern and drier parts of Australia.

MEMBERS' LETTERS AND EMAILS

From Barbara Rye, DEC, Perth, WA
November 2006

There is a drive on at the moment in W.A. to publish names for new taxa, especially in the areas affected by the current boom in mining. This has resulted in a few papers being prepared for a number of the new *Isopogon* and *Petrophile* species in Western Australia. Hopefully, these papers will be included in a special issue of *Nuytsia* that should be put together next year. There will still be a few problem taxa not treated, notably a big complex in *Isopogon* that will have to be tackled later.

Barbara works at the WA herbarium and specialises, amongst other things, in Isopogons and Petrophiles. She has described a number of new species and contributed to this newsletter in the past (See issues 3 & 4). I am not sure whether this special issue has been released yet, but eagerly await its arrival. Ed

From Fiona McCallum, Greta West, Vic
August 2007

Two of my plantings from last year survived the summer - which is a pretty good achievement considering the summer we had. One of them was *P. ericifolia* which was lovely in flower. Our dam has filled a little but it looks like it will be dry again before Christmas so I have decided not to do any propagating or planting until I have a reasonable chance of getting them through the first summer. On the bright side, it means my back won't be sore from planting/weeding and won't need to waste the tank water on a spa to soothe the aches and pains!

Unfortunately I suspect you didn't get the wished for rain, Fiona. Lets hope La Nina provides more in '08. Ed

From Graeme Krake, Brogo, NSW
August 2007

I've been busy propagating at the moment but I haven't done many *Petrophiles* and no *Isopogon* seeds as yet. I'll get into those soon. Of the *Petrophiles* I tried the only one that germinated was *P. filiformis*, but the other couple may still come up. Our decomposed granite soil is waiting anxiously to receive some seedlings next autumn. I'll keep track of what I propagate and give the study group an update of how they go.

Graeme has only recently moved to a new property and so has a "blank canvas" to work on. We'll be looking forward to your updates Graeme and good luck. Ed

From Barbara Buchanan, Myrree, Vic
September 2007

It's been a bad year for "Petropogons", more than most genera I fear. However, I plan to try again when I can start planting in Benalla. We are no nearer to moving in so the garden preparation is going very slowly.

Sorry to hear that Barbara. All the best with the new place. Let us know how everything goes. Ed

From Judy Barker, Vic
October 2007

I have been a member of the Aust. Daisy Study Group since it began in 1981. Peg McAllister and three other friends have been trying to germinate small species other than daisies as an extra activity for the last seven years. During this time we have formed the hypothesis that the genera in most families produce similarly shaped cotyledons. Of the *Proteaceae* we have grown *Dryandras*, *Banksias*, and *Grevilleas* and found the theory correct. To our surprise (and distress) we found that *Isopogon formosus* produced cotyledons of a different shape bright green, quite thick, linear with acute tips. We managed to hold on to our theory by thinking that genera in different subfamilies might have differently shaped cotyledons. To test this we sowed seed of what was purported to be *Petrophile linearis* and were not happy to see that the resultant single seedling had a cotyledon like a *Dryandra*, quite thick, almost oblong, with a notch in the outer margin. The first true leaves are green, thick, and terete. It could be a ring-in as it is the only seedling to come up.

Could you advise me again, please? Can you tell me what the cotyledon of a *Petrophile* species looks like? We may have to modify our ideas.

My reply to Judy was: "Hi Judy, Isopogons and Petrophiles have different looking cotyledons. All Isopogons I have seen have cotyledons like you describe for I. formosus. All Petrophiles that I have seen have "heart shaped" cotyledons with the tips "kissing", just as you describe for Petrophile linearis. Sorry to ruin your theory about the families, but the genera seem to have similar shaped cotyledons. Cheers, David". Ed.

From Lloyd Carmen, Eden Hills, SA
January 2008

Not very good news from my garden. I have one plant of *Petrophile serruriae*, spindly to 2m. It has flowered for 2yrs.

Also, another *Petrophile* sp. that just survives & has flowered for the last 2yrs. It has terete leaves about 40 to 50 mm long, while the flowers are small and yellowish, it may be a form of *P. Media*?

The most healthy *Isopogon* is growing in sand & is approx. 1m x 1m. I believe it is a form of *Isopogon polycephalus*. It flowers well but I consider them to be rather insignificant, creamy in colour & bunched closely along the stem. The drought & high temperatures are causing many plant losses this year of various types. Have a great New Year.

Thanks for the update Lloyd. Your Petrophile sp. could be a form of P. media, but is more likely P. brevifolia, which is more widespread and quite closely related. I know the feeling with the drought and high temperatures, with many losses throughout my garden this summer. Ed

From Cas Liber, St Pauls, NSW

January 2008

Nothing major to report. The *Isopogon fletcheri* is still hanging in there. Seems to grow more when I water it more. Is in a dry bit of the garden and I keep meaning to move it. Must be several years old now. *I fletcheri, "in the wild" is found on sandstone cliffs in the Blue Mountains. These are often moist due to runoff from above. I would think that your observation of response to water may be based on its natural habitat. Let us know what happens if you move it to a moister area of your garden. Ed.*

From Phil Trickett, Belconnen, ACT

January 2008

We have added a number of *Petrophiles* and *Isopogons* to our garden over the last couple of years, a result of a few visits to Philip Vaughan's nursery near Geelong. However, some of these have not been identified and I need to spend some time to try to key them out.

One of our new *Isopogons* is truly spectacular in flower. I think Philip might have shown you this plant when you were at his nursery. I have attached a photo. Do you know what it is?

I also have another *Isopogon* called *Isopogon* sp. Newdegate, which has lovely creamy/pink flowers. It flowered well this year and has subsequently doubled in size to around 50cm. Other *Isopogons* which flowered well in spring include *I. dawsonii* (now 3m tall and flowers profusely each year - one of our best plants!), *I. mnoraifolius* (flowered for the first time this year), *I. dubius* (we have a number of these - they seem to have a very short flowering period - are there longer flowering versions?), *I. formosus* (always flowers well each year), *I. axillaris*



(also seems to have a short flowering period), and *I. anemonifolius* (in a very dry spot and didn't flower after a very dry spring). We also have some *I. latifolius* and *I. cuneatus* plants but the Canberra winter seems to stifle their flowering).

The best-performing of our *Petrophiles* is *P. biloba*. This seems to thrive in our garden no matter how dry the conditions. We have one around 2m tall which is still putting on lots of growth. This is an excellent species with interesting foliage and lovely soft pink flowers.

Other *Petrophiles* include *P. ericifolia* (very difficult species in the ground, our pot specimen just stays alive!), *P. pulchella* (just coming into flower), *P. pedunculata* (lots of flowers this year - seems to need plenty of moisture), Most of the other *Petrophiles* are 'unidentified' at this stage, but all are growing well. We put a dripper system in our garden last summer, and this has made a huge difference to the survival and flowering of our *Isopogons* and *Petrophiles*.

I have also started to try grafting some species. I have *I. tridens* and *P. propinqua* subsp. *squamata* so far, and intend to try a number of other species over the next couple of months. I'll let you know how they go. All will use *I. anethifolius* as the stock.

Thanks for the update Phil. The one in the photo is likely to be Petrophile teretifolia. This is certainly one that Philip has for sale and is a beauty. It was featured in the first issue of the study group newsletter. With regard to the flowering period of I. dubius, I don't know of any specific info. I have a couple of specimens in my garden, but only one has flowered with a single inflorescence. It seemed to hang around for a reasonable time. If one of the members has made any observations regarding this, could they please let me know? Ed.

Thanks David. It does look to be *Petrophile teretifolia*. I'll take some photos of some other mystery

ones and send them through to see if you can identify them. I'm also having problems with various *Dryandra* plants that I have that are obviously mislabeled. It's difficult to identify them when the plants are small and you have no idea what part of WA they come from.

How have your *Isopogons* and *Petrophiles* being going? Have you been able to water at all? Phil

Hi Phil,

Most are hanging in there. I have quite a few *Isopogon formosus* grown from cuttings scattered around the garden and have lost one or two of them but they do seem to perk up with a bucket of water from the shower. I did lose my *Isopogon teretifolius* (Nodding *Isopogon*) that I grew from seed and had had for about 4-5 years in the ground, which was a disappointment. [In Melbourne] we are able to water by dripper and hand held hose between 0600-0800 twice weekly, which has helped. Also I have been syphoning off the girls bath water and catching water in a bucket in the shower as an added treat to those most parched. Mind you another 40+ day today and tomorrow won't help. I have been trying to take cuttings from *I. minorifolius* and *Stuckeys hybrid*, as I only have one plant of each of those left in the garden. *Isopogons* seem to be relatively easy from cuttings, all things considered. Ed.

From Bob O'Neill, Wandin, Vic
January 2008

It is heading for 40°C+ today early in Jan., a time to get done with the outside as early as possible then head inside for such things as writing up reports and working on the tax.

100mm of rain at the end of December certainly took some pressure off. Since then, we have resumed watering the young plants. Even so the extreme heat has found its mark with the less established plants, including *Petrophiles* and *Isopogons*. We find that the odd *I. latifolius* and *I. cuneatus* are able to drop their bundles almost unexpectedly, probably wet feet being a contributing factor. On the other hand *Isopogon formosus* do brilliantly, attaining a height of 1m+, dense and strong, this being one of the most adaptable species in our conditions.

I. fletcheri is interesting. Our plant is going well in a relatively dry site, yet references tell me that a moist site is preferred.

Petrophile serruriae – this is a beauty, a plant that is a spectacle in any company.

P. linearis – another outstanding plant that will have numerous replicas as soon as possible, one of the best.

P. diversifolia – 1.5m in height and setting seed. Ours is an upright plant with not really notable flowering.

P. plumosa – going well.

P. shuttleworthiana – 1m, leggy, sparse kind of plant. Rangy, a rough customer to handle.

We have had a fair degree of success with cuttings, but as is so often the case we need to do more. Generally we have more or less marked time and consolidated, not adding to our range because of difficulty to obtain new stock and a lack of time to pursue this desired end. For the main part, these plants are located in the better drained sectors of the garden.

As is always the case, I would love to obtain cutting material of new plants to here, and at the same time I would be delighted to respond likewise to other people.

The thought has struck me that I am still searching for a wider range of species and they are not easy to come by. The possibility is that we could have a group meeting somewhere, if all else fails then we would be happy to host it here. Apart from meeting others with the same plant afflictions as one another, I would be hoping for a useful exchange of plants or plant material. Here we would need some time to prepare and strike cuttings. We have the facility for slides and DVDs to be shown and a comfortable sheltered area for talking and eating. If you have a better or alternative suggestion then that is fine with me. The current heat has helped incur a number of losses amidst our 500 or so more recently planted plants. On the other hand many are going well, so I merely shrug the shoulders and keep going. It is puzzling to note some plants developing to a compact form from a tube specimen up to 40cm shrub within months, yet others wither or merely hang on for the same period. We finished up with 810mm+ of rain last year, compared with 700mm last year, so we have not done too badly.

Thanks for the update Bob. Are the *Isopogons* and *Petrophiles* in the article the only species you have at the moment? Phil Vaughan probably has the best range I have seen in a commercial nursery and has a couple of "special ones" I gave him last year coming through. I imagine they'll be up for sale in March or so. I like the idea of a study group get together once the weather cools a bit. Could members please let me know if they would like to meet at Bob's property and bring along some cutting material to swap? Ed.

GLOSSARY

Cotyledon- a simple embryonic leaf, often the first leaf after germination

Ellipsoidal- elliptical in cross section.

Glabrous- without hairs, smooth

Globose- ball or globe shaped.

Inflorescence- a group of flowers arranged as a distinct entity

Laterite- a reddish clay like mixture of iron and aluminium oxides and hydroxides formed from the weathering of basalt. Ironstone.

Lignotuber- a swelling at the base of the stem, often underground, that contains dormant buds and energy stores. If the top of the plant is destroyed, it can regrow from the lignotuber.

Prostrate- growing along the ground.

Taxa- (plural of taxon) comes from taxonomy, which is the science of classifying organisms into groups. A taxon is a group of plants sharing a relationship and so are categorised together. It is a unit of taxonomy.

Terete- circular in cross section

Terminal- at the end of a shoot.

Isopogon and Petrophile Study Group Balance Sheet

Financial Year 2006-2007

Balance brought forward	\$550.39
Deposits	
Membership subscriptions	\$205.00
Newsletter back issues fee	\$10.00
	\$215.00
Withdrawals	
Postage	\$50.00
Printing costs	\$150.00
	\$200.00
Balance at June 30 th 2007	\$565.39
Balance Bendigo Bank account	\$478.99
Cash at hand	\$86.40
	\$565.39

References

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Encyclopaedia of Australian Plants suitable for cultivation by W. Rodger Elliot and David L. Jones

Membership List 2006-07

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