



# Isopogons & Petrophiles

*The Australian Native Plant Society's Isopogon & Petrophile Study group Newsletter*



*Isopogon trilobus*, Ongerup, WA October 1988.  
(See page 3 for more information about this species.)

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## EDITORIAL

Hello to all the *Isopogon* and *Petrophile* enthusiasts out there. I am writing this editorial at 10668m above sea level whilst flying back home after a family holiday overseas. The map on the plane shows we are over Alice Springs and only a couple of hours from home. Although we had a fantastic time away, I have missed the “wide brown land” and was enthused every time I saw some Australian plants in a garden or park. We so take for granted the look, feel and smell of our land, that is so different from all the other places on earth. It is only when one leaves, that one really appreciates the sensational place that we call home. Unfortunately I didn't see any *Isopogons* or *Petrophiles* whilst away but there were a few *Grevilleas*, *Eucalypts*, *Scaevolas* and Australian daisies to be seen.

We continue to have drought conditions in the southern parts of the nation, and I really wish that some of the inundation from northern NSW and southern Qld would find their way south. In Melbourne, we had some early autumn rains but not too much since. I am hoping for a little more and then a nice spring flowering. The warm weather continued into autumn this year

and allowed some later plantings than normal. I am hoping they will survive the hot weather of summer.

This issue we profile one of my favourite *Isopogon* species, *Isopogon trilobus*. This shrub is one I have grown from seed and had in my garden for a short while, but never managed to keep going for more than a year or too. It has an unusual flower arrangement within the inflorescence, and can be a stunning plant when in flower. If anyone has had long term success with this plant, could they please please let me know their secrets!

We also have a number of letters and emails from members, which is great to see. Keep them coming and let us all know what's happening in your gardens and in the wild. You also get a first look at a newly described, rare species of *Petrophile* from inland WA. Thanks to all those who have contributed and, once again, to Margaret Pieroni and Tony Cavanagh for the use of some of their excellent photos. I hope you enjoy it.

All the best.

David Lightfoot ☺



*ISOPOGON TRILOBUS* R. BR.

When one travels along the Southern coast of Western Australia, one of the more common *Isopogons* seen is *Isopogon trilobus*. It can be found from the Stirling Ranges to the coast and east to Israelite Bay, where it grows in heath and low scrublands, in deep sand or sand over laterite.

*I. trilobus* is a shrub up to about 2m in size, but often smaller, with dense foliage and attractive terminally held inflorescences. The branches of the plant are often covered in hairs that can be quite dense.



The leaves are up to 8cm long by 3cm wide, and generally have a wedge/fan shape with broad teeth at the end.

Although some leaves are simple, the majority have three lobes, thus giving the plant its specific name. Some individuals, in fact, may have five to nine teeth. A subset of plants have deeply lobed leaves, rather than blunt teeth. In the past these individuals were classified as a separate species, *Isopogon tripartitus*. It has been found however, that in populations there is often a gradation in depth of division and thus they are actually forms of the same species. *I. tripartitus* is therefore no longer a recognised name. (Indeed the plant has another



A deeply lobed form

synonym, having been misclassified at one point as a *Petrophile*, *P. trifida*). One very attractive aspect of the foliage is the new growth that can be dusky



Regular toothed form

to bright red and enhances the plant when it is not in flower.

The flowers appear from August to December. They are yellow and are up to 1cm long. The inflorescence is about 3cm in diameter, and ovoid to globose in shape. The individual flowers are first held upright but fall downwards as they open. This gives the flowerhead a somewhat barreled shape which may explain the common name of barrel cone flower. The inflorescences appear in profusion and can be quite spectacular.

The large grey fruit are somewhat hairy.



*Isopogon trilobus* is found in cultivation and may be purchased at many specialist Australian plants nurseries. It requires excellent drainage and a sunny spot to ensure best habit and flowering. It responds well to pruning and in order to maintain a compact habit with

maximum flower numbers, I would recommend cutting it back about a third after flowering has finished. It can be grown from seed, with germination in about 1-2 months. Cuttings of young growth have been reported as striking readily. I have not seen this species grafted but would recommend investigation of this technique to improve hardiness in east coast gardens and in areas without well drained soils.

## MEMBERS' LETTERS AND EMAILS

From Lyn Thompsen, Blue Mountains,  
NSW

January 2008

Apart from those which occur on our property in the Mountains, I have only a bedraggled *I. dawsonii* that was planted. It was overshadowed by a *Callitris* which put out inhibitors against competitors and now that the tree has been removed and we have had rain, I am wondering whether it will be invigorated.

But from the car between here and Lithgow we have seen lots of *Petrophile* species relishing the rain and putting on such attractive new growth and in some cases new flower heads. The trouble is that so much grows where it is really unsafe to stop. Merle was trying to photograph *Lomatia sialifolia* on Bells Line of Road where there are some lovely displays. There are some more accessible one on the road to Govetts Leap.

*The Blue Mountains, west of Sydney, are a fantastic place to see Isopogons and Petrophiles (as well as a myriad of other flora), not to mention some of the most spectacular scenery in the country. I would highly recommend a visit.*  
Ed

From Kevin Sparrow, Warrnambool, Vic  
February 2008

G'Day David,

Just enjoyed reading the latest newsletter. Thought I might be able to contribute something myself and maybe you could help me ID some photos.

Joyce and I flew over to WA last October, traveling around the south through Mandurah, Margaret River, Walpole through to Albany and on to Stirling Ranges, Ravensthorpe and Esperance/Cape Le Grand NP. All up we took some 1400 photos although many were subsequently deleted, we still ended up with some magnificent ones to show our group in a Powerpoint presentation. I struggled to ID many of the pea flowers (as we all do) and lots of others of course. *Isopogons* I ID'd were *formosus* (Albany, Stirling ranges) *trilobus* (Cape Le Grande) *scabriusculus* (north of Ravensthorpe), *divergens* (near Hyden) and *Petrophile longifolia* (Stirling Ranges). I was wondering if you could take a look at a few *Petrophiles*?? to see if you could shed some light on what I have taken.

The first "*Petrophile sp best*" was taken in Yalgorup NP near Mandurah, "*Petrophile 2*" in Stirling Ranges, and "*Petrophile sp3*" in Cape Le Grande

NP. I would be grateful for any suggestions.  
Cheers



"*Petrophile sp best*"



"*Petrophile 2*"



"*Petrophile sp3*"

*Hi Kevin, Thanks for the email. Nice to hear from you. Sounds like an excellent trip! "Petrophile sp best" is P. serruriae, pink version. You can also find it in with yellow flowers. Both are attractive but I must say I like the pink version best. Petrophiles 2&3 are both P. squamata which is a common species and has become a little weedy in the research garden at Cranbourne BG. All the best.* Ed.

From Marina Tyndale-Biscoe, Braidwood,  
NSW

March 2008

We've had the best *Isopogon* season this year, with some of my plants flowering for the first time. *Lanemonifolius* and *anethifolius* were fabulous. *I. formosus* flowered for the first time, as did *I. fletcheri*, and a hybrid *cuneatus* x *buxifolius*. Don't know if there will be any fertile seed from any of them. But I am very keen to grow as many species as will grow here. *I. fletcheri* is not terribly spectacular, am a bit disappointed in it because very few of the ?florettes on the inflorescence actually flowered, and there is a lot of white cotton-wool like stuff in

the inflorescence after it has finished flowering. I wonder if that might be a parasite?? Under separate cover am sending you two photos, one of *fletcheri* and the other of the hybrid in flower. The *Petrophile pedunculata* also flowered, but they are very slow growers (at my place) and the flowers are also



*Isopogon fletcheri*



"Stuckey's Hybrid"

unspectacular. With our winters of -12 degrees the range of species I can grow is somewhat limited. Maybe with global warming that might increase a bit? Kind regards

Hi Marina, Thanks for the photos. Not sure about your *I. fletcheri*. Most *Isopogons* have a white chaffy substance within the flowerhead after they have flowered, but this is once the fruiting cone is mature and ready to release the seeds. That species does have less flowers per inflorescence than some of the other *Isopogons*. Ed

From John Wrigley, Coffs Harbour, NSW  
April 2008

Hi David, Mostly sad news up our way. We had a very wet February and at one stage our garden was flooded with about 10 cm of water over most of it. Most of the WA plants turned up their toes. *Isopogon formosus* that had hundreds of flowers on it last spring just couldn't take the strain and is now in our green recycle bin. *I. petiolaris* also gave up.

We still have *I. mnoraifolius*, *I. anethifolius* and *I. anemonifolius* doing well - good hardy east coast plants. The last eight years we have had atypical weather for summers. They have been very dry as has much of NSW. When our normal summer rains appeared this year, our plants had quite a shock. However, that's life and we enjoyed the plants while they lasted and anyone that grows

West Australian *Proteaceae* in Coffs Harbour deserves what they get!! Cheers

Hi John, Commiserations. I know what you mean, when the prayed for rain sees one's favourite turn up its toes two days later. Thanks for the update and glad to see some of the locals soldiering on. Cheers Ed.

From Barbara Rye, Perth, WA  
April 2008

My native garden is restricted to plants that are local to my area and as a result has just one species from the petropogon group - *Petrophile linearis*. This has been long established (at least 15 years) in my garden and is still thriving, flowering well each year regardless of the weather conditions. I never water it but it is in a relatively protected spot in the garden, i.e. with a fair amount of shade and growing intermingled with other shrubby plants, and of course it has the advantage of growing in its normal habitat. Best Wishes.

Hi Barbara, Nice to hear from you. I noticed you have had a few papers published in *Nuytsia* recently [*Nuytsia* is the journal of the Western Australian Herbarium]. Great work. There seems to be a few new *Petrophiles* in the wings, but no recently discovered *Isopogons*.

I must say I am a little envious of you having a 15 year old plus *Pet. linearis*, as I have found this a difficult species, to say the least, in Melbourne. All the best

*PETROPHILE VANA* CRANFIELD & T. MACFARLANE- A NEWLY DESCRIBED SPECIES

In the most recent edition of the WA herbarium's journal, *Nuytsia* a number of new plant species were described. This was a special edition of the journal, funded by the WA government's "saving our species" program, and details a number of new rare species from varied genera, including one *Petrophile*, *Pet. vana* (see references on page 7).

*Petrophile vana* was first collected in 1987 but not formally described until 2007. It is one of the most north easterly of the western *Petrophiles* and is one of only two western species known from outside the SW botanical province. The three populations discovered so far are inland from Kalbarri, in the Murchison and Yalgoo Interim Biogeographic Regionalisation for Australia (IBRA) bioregions. The species seems to be quite unusual in its flowering and fruiting characteristics and there is a little controversy as to whether it is an *Isopogon* or a *Petrophile*. The authors of the paper, Ray Cranfield and Terry Macfarlane, feel it is a *Petrophile* and have outlined their reasoning therein.



The plant is a shrub to 1.5m but usually shorter with terete leaves 3-6cm long that end in a pointed tip. The sessile inflorescences are born in the leaf axils, rather than terminally and unusually for *Petrophiles* contain only one to four white to cream flowers. They appear in spring. Mature fruiting cones and fruit have not been seen by botanists.

The specific name *vana* comes from the Latin *vannus* meaning trifling and refers to the less than showy nature of the plant.

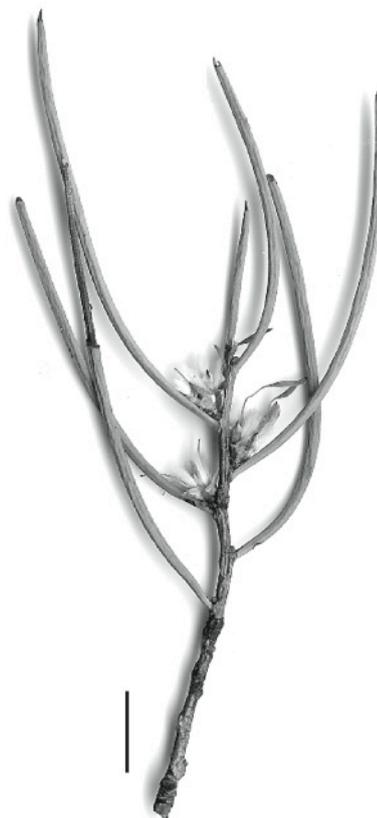
As mentioned above the plant is known from three populations spread over about 150km, and grows in "gritty clay soil pockets" over laterite.

The plant has been given a conservation status of priority one. Two of the populations are currently threatened by mining activities and feral goat predation.

*P. vana* seems to be related to *P. pauciflora*, which is also found in the same geographical area. *P. vana* can be distinguished from *P. pauciflora* as the latter has divided leaves and terminal pedunculate inflorescences.

The complete article describing this taxon can be downloaded from the *Nuytsia* website at <http://www.naturebase.net/content/view/951/482/> and then clicking on the contents link.

The illustration of the inflorescence and scan of the branch of *Petrophile vana*, are reproduced from the *Nuytsia* article describing the taxon.



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**GLOSSARY**

- 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.
- Lobe-** a leaf segment, usually rounded, that is not divided all the way to the midrib.
- Ovoid-** elliptical in shape with the base broadest
- Peduncle-** the stalk bearing a flower or fruit, or the main stalk of an inflorescence.
- Pedunculate-** having a peduncle
- Sessile-** borne without a supporting part e.g. directly from a branch without a stem
- Simple -** (leaves) entire without teeth or lobes.
- 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.

**REFERENCES**

A new species of *Petrophile* (Proteaceae) from south-western Australia. RJ Cranfield & TD Macfarlane *Nuytsia* 17: 153-158 (2007).

*Flora of Australia Volume 16 Elaeagnaceae, Proteaceae 1.* Melbourne: CSIRO Australia

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

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