

Australian Native Plants Society (Australia) Inc



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Newsletter No. 106 – February 2017

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GSG Vic Programme 2017

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Contact Neil for queries about program for the year. Any members who would like to visit the official collection, obtain cutting material or seed, assist in its maintenance, and stay in our cottage for a few days are invited to contact Neil.

See page 3 for details on Victorian activities.

GSG Living Collection

There has been further extensive planting of the collection, with the development of a South Australian Grevillea bed, a *Grevillea alpina* hill, many areas of Western Australian Grevilleas and a lovely NSW Grevillea bed. Any volunteer help would be greatly appreciated as the garden is now getting just too much to care for alone. Special thanks must go to those members who have donated plants recently to the collection: Brian Weir, Graeme Woods, Phil Vaughan, Neville Collier, Dave Binch, Barry Teague, Mike Williams, Humphris Nursery and Kuranga Nursery. Any members wishing to get seed or cutting material are most welcome – come and have a look around and collect your own.

Inside this issue:

Editorial	2
Upcoming events at Panrock Ridge.....	3
Report on GSG Vic Grevillea Crawl to Central Victoria, 20-21 August 2016	4
Travelling South	6
Free plants	6
A New Cultivar in the 'Canning' Stable	7
Pruning Australian Plants	7
The Hunter Region Botanic Gardens since 1986.....	8
Experiences with "slow release" fertilisers	9
Summer flowering Grevilleas.....	10
Revegetation by Stockton Landcare.....	13

Special thanks to the Victorian chapter for this edition of the newsletter. Queensland members, please note deadlines on back page for the following newsletter.

GSG NSW Programme 2017

For details contact **Peter Olde** 02 4659 6598.

GSG SE Qld Programme 2017

Meetings are usually held on the last Sunday of the even months. We meet for a communal morning tea at 9.30am after which the meetings commence at 10.00am. Visitors are always welcome. For more information or to check venues etc please contact **Ross Reddick** on 0405 510 459 or **Denis Cox** on (07) 5546 8590 as changes can occur.

Sunday, 26 February

VENUE: Garden of Bev & Bill Weir,
151 Warriewood St., Chandler

SUBJECT: Small white flowering Grevilleas with
different petal arrangements, by Denis Cox

PHONE: (07) 3245 4537

Sunday, 30 April

VENUE: Garden of Laylee & Steve Purchase,
41 Rocklyn St., Toowoomba

SUBJECT: Cold Climate Flowering Grevilleas

Sunday, 25 June

VENUE: The original offer of visiting Bryson Easton's garden at Kooralbyn was reinstated. Arrangements for this meeting will be advised when known. The Mole River nursery trip proposed for April at our last meeting, will be considered for a future meeting or a separate field trip.

Sunday, 27 August

VENUE: Garden of Jim & Fran Standing, Mt Clunie
SUBJECT: We are hoping to attract a guest speaker,
so watch this space.

PHONE: (07) 4666 5118

IMPORTANT

See Peter's editorial on page 2 for changes to the Grevillea Study Group.

Membership will now be free but newsletters will only be available via email. If you haven't already registered your email address please send your details to bruce.moffatt@tpg.com.au

New Financial Arrangements

Following discussions on the modus operandi of the Isopogon & Petrophile Study Group with Phil Trickett and Catriona Bates, I have decided to emulate their great model forthwith.

All future newsletters of the Grevillea Study Group from Issue 107 will be FREE to individual members. There will be no hard copies posted. Members will need to register an email address with Christine and you will be notified of the next newsletter. You can download it to your computer along with all the enhanced images at no charge. There you can either print it off or store it digitally. This not only removes a great deal of administrative burden from Christine who does all the banking and distribution of newsletters but also eliminates most of our costs. Groups and members can still make individual donations but we have closed our business cheque account (thereby saving even more money!).

Members who have paid subscriptions in advance can ask for a refund by supplying their bank details or they can leave the money as a donation, which we will assume if you do not contact us. The newsletter will not be available from the website for 12 months except to registered recipients.

I do not anticipate any problems with this arrangement. Most people now can do email or know someone to whom documents can be sent digitally.

Grevillea Study Group Web Page:
<http://anpsa.org.au/grevSG/>

The GSG is indeed fortunate to have among its members two very talented individuals, Brian Walters and Mark Noake. Brian has already treated over 50 species of *Grevillea* and put them up as separate pages on the website. Mark has taken up the challenge of putting the remainder there. In each treatment we will make available the full illustrations of each species by Collin Woolcock who donated his services in the 1980s during a time when he was being treated for cancer. Collin and wife Dorothy travelled

all over south-west Western Australia in 1985, making botanical collections and doing botanical illustrations for the Grevillea Book at the instigation of Bill Payne. We were unable to make full use of them because, while they are artistically rendered, in some ways they were not always of sufficient botanical accuracy for our purposes. They are however worth having online because they are such pleasing works.

I want to thank all the people who have donated digital images which are used for the web page and for illustrating the newsletter. In particular images have been sent or made available by (late) Peter Althofer, (late) Cliff Coddington, Merv Hodge, (late) Dave Mason, Alice and John Newton, Mark Noake, Peter Ollerenshaw, Bernie Shanahan, Warren Sheather, Kevin Stokes. We still need more. If you have any images you would like to donate, please contact me personally by email.



Grevillea arenaria opened seed capsule. Photo M. Noake

Fruits and Seeds

One taxonomic feature of *Grevillea* which is almost completely lacking in some species is the fruits and seeds. What we need to accumulate are images of these, and in particular, the way in which they are situated inside the follicle. Two images attached illustrate the point. The image on the next page of *Grevillea stenostachya* made by John Edmonds-Wilson is truly astonishing I think you will agree and has never previously been observed. DNA evidence is accumulating that this species and its relatives in Group 41 may not be true species of *Grevillea*. Now is the time, as the fruits of various species open up, to take the informative image. While you are at it, take some time too to collect seed for the study group seed bank.

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Grevilla stenostachya (J. Edmonds-Wilson)

Herbarium boxes

It seems to be uncommon for GSG members to take a serious interest in the botanical side of *Grevillea*. However, I have some herbarium boxes to give away for free to anyone wishing to store plant specimens. These are discards from the Royal Botanic Gardens, Sydney, who have moved to storage in plastic boxes. They make for excellent hardy storage.



Free Herbarium Box

Neil Marriott, Vic

Upcoming events at Panrock Ridge

The Living Collection at Panrock Ridge, Black Range, Stawell, Victoria is now becoming almost a full-time job, and Wendy and I have had to employ a gardener for several months now to keep the winter grass and weeds down and under control. Following record winter rains last year, the gardens need a lot of pruning and cleaning up.

A number of members have urged Wendy and I to hold another couple of GSG working Bees to help out in the gardens, get together and catch up and visit a few local areas of bushland and native gardens.

As a result, we have decided to hold 2 working bees as follows:

**Labor Day Long Weekend:
March 11th – 13th 2017**

Easter Friday 14th – Monday 17th April 2017

Each working bee will be a combination of work in the gardens, workshops on *Grevillea* identification and cultivation, and field trips to local gardens and nurseries etc. There will be free plants and cutting material for all helpers.

Please advise Neil and Wendy ASAP if you can come to help out at one or both of these special GSG events.

There will be beds available for those that book in early, otherwise bring a mattress and sleeping bag and we will find a space for you. Camping on site is also a good option for those wishing to. Showers and communal cooking and meals will be shared. Please bring all you need, though Wendy and I will shout all helpers out to dinner on one evening. We really look forward to hearing from you.

**Illawarra Grevillea Park
NEXT OPEN DAYS 2017**

May 6, 7, 13, 14

Opening hrs are 10am – 4pm

Location

The Park is located at the rear of Bulli Showground, Princess Highway, Bulli.

Admission

\$5 adults, children with adults are free

email info@grevilleapark.org or
visit www.grevilleapark.org

Report on GSG Vic Grevillea Crawl to Central Victoria, 20-21 August 2016

Abyl led by our great Central Victorian Grevillea expert Ian Evans, we all assembled on Saturday morning at the superb garden of Neville and Helen Collier. Neville and Helen's garden is on the edge of the bush at Bung Bong east of Avoca. Their garden is full of superb grafted *Grevilleas* (many as standards), *Eremophilas* and a host of other wonderful plants. After a delightful tour of the Colliers garden we headed off to Moonambel where we soon located the rare local form of *Grevillea dryophylla* discovered here by local native plant enthusiast Bernard Abadee. Bernard has only found 3 populations of this grevillea around Moonambel, which is at its westernmost location. The showy plants have attractive divided green leaves and unique flowers with a black perianth and red styles.



Grevillea dryophylla - Moonambel form. Photo Neil Marriott

From Moonambel we continued on to a laneway off the McIntyre-Inglewood Rd between McIntyre, where Ian had located the most beautiful Goldfields form of *Grevillea alpina* – now just a handful of plants along a degraded roadside surrounded by miles of cleared farmland. The grevilleas were dense rounded, grey foliaged shrubs with massed pink to red flowers. Unfortunately it was such an exposed site it was almost impossible to get a good photo of the flowers, and we soon were on our way to Kingower search for other grevilleas.



Grevillea alpina - 2 colours of the McIntyre form. Photo Neil Marriott

Travelling through the town of Kingower we soon stopped along the road to Inglewood where we found a handful of plants of the more typical flowered *Grevillea dryophylla*. A feature of the Kingower form however is the attractive grey leaves. Sadly many of the plants in this area have now died out due to the changing rainfall as climate change kicks in.



Grevillea dryophylla - Kingower form. Photo Neil Marriott

From Inglewood we travelled along the Inglewood North Road to the edge of the bush where Ian had discovered an unusual form of *Grevillea rosmarinifolia* ssp *glabella*. These were now almost entirely confined to a handful of plants in a farmer's paddock, as the Department of Environment had burnt the bush so frequently that the grevilleas and many other shrubs were now extinct in the bushland reserve!!



Grevillea rosmarinifolia ssp *glabella* - Inglewood North Road. Photo Neil Marriott

The afternoon sun was dropping as we headed on to the outskirts of Bendigo to Ian and Lynne Evans property at Eaglehawk. Here, Lynne had a most welcome afternoon tea ready for us before we were lead around Ian's superbly landscaped new garden, full of the most delightful and rare native plants, including many wonderful Grevilleas.

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Grevillea rosmarinifolia ssp glabella – 'Lara Dwarf' in Ian's garden. Photo Neil Marriott

After a wonderful evening meal and get together at a local pub we had a chance to talk over the day's events and what Ian had in store for us the next day.

Day 2:

After our morning rendezvous we headed off to a powerline break in the Mandurang forest where we found a wonderful colony of flowering *Grevillea alpina* – Goldfields form (numerous colours) as well as the fawn and yellow flowered Bendigo form of *Grevillea dryophylla*.



Grevillea dryophylla – Bendigo form. Photo Neil Marriott

We then headed off to the nearby home of Marilyn Sprague where we were treated to an amazing array of delightful goldfield plants as well as a host of unusual WA species. Marilyn's collection is so diverse that we spent a bit too long there, but we were treated superbly with a lovely morning tea before heading off north of Bendigo to the Whipstick area.

Clays Rd Bagshot Nth we soon came to the site where there used to be a lovely population of the now extremely rare Whipstick form of *Grevillea rosmarinifolia ssp glabella*. I think this is where the cultivar *Grevillea* 'Limelight' came from many years ago. Sadly, today there are less than a handful of plants left, however we still succeeded in finding several flower colours at the site.



Two colours of the Whipstick form of *Grevillea rosmarinifolia ssp glabella*. Photo Neil Marriott

From Jensen Rd we then headed down Reedy Creek Rd, Bagshot Nth to admire yet another one of Ian's fantastic forms of *Grevillea alpina* before continuing south into Wellsford forest just off Barnadown Rd where Ian had located a dwarf suckering population of *Grevillea rosmarinifolia*, so different to those in the Whipstick, and clearly showing that there are a number of un-named species in the rosmarinifolia complex. Fortunately, Peter is working on these and should soon have his paper published on his research.



Dwarf suckering form of *Grevillea rosmarinifolia ssp glabella* Wellsford. Photo Neil Marriott

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With the day slipping away from us, we then drove south-east to Heathcote and then into the forest at Costerfield to find the last plant for the day. With a bit of searching we soon found lovely flowering plants of the rare, low form of *Grevillea alpina* confined to Costerfield forest. This most distinct plant warrants recognition as a distinct species or subspecies with its silky silver leaves and showy clusters of red flowers.



Grevillea alpina ssp nov Costerfield. Photo Neil Marriott

At this point we all said our farewells after a hearty round of applause for Ian and all the hard work he had done over previous weeks searching out flowering plants for us to enjoy. I am sure all those who attended had a wonderful time and like me, will look forward to our next Grevillea Crawl. **Suggestions on the day, proposed a possible trip to the Eyre Peninsula for a future crawl!!**

Travelling South

In February 2015 I moved into Dunkeld, 25 minutes to Hamilton, 1.25 hours to Warnabool (beach) & 2 hours to SA. It is a small town in the Grampians range & the photo taken from my driveway is of a volcanic mountain which is the very end of the Great Dividing Range. I was going to move up to Harden which is better for growing plants than in Murrumburrah but I thought it would still be -4 or -5 degrees, bummer that!

Here I have the scope to grow a wide range of plants like in Sydney and I have done a lot of research before choosing this area. Hamilton has around 12,000 people & 4 supermarkets. The 3 bedroom house was built about 1995 and is on 1 acre with many trees and shrubs all planted from 1995 onwards with the exception of one large old gum tree. The lady who lived here with her husband was the gardener but she is not well and they had to sell this, their holiday home. With the house I got all furniture, the cupboards are all stocked including sheets, towels, plates pots and pans, whipper snipper, ladders, all gardening equipment and tools. The clincher was

Bernie Shanahan, Dunkeld, Victoria

a brand new ride on lawnmower. Of course I was keen to get a new house and looked at other towns around here but I'm glad I didn't get too impatient as this one was only on the market for about three days. An old bloke named Neil said don't settle for less than an acre or I would be disappointed. Thank you old bloke! Why did I move to Victoria? I am allowed to because I was born here and when I have an afternoon nap I won't feel guilty.



Free plants – We have had many *Grevillea mcutcheonii* seedlings come up under our plant. We have potted up approximately 200 seedlings which we will give to anyone if they contact us. The plants will not be available until autumn. We can be contacted prior to autumn to see how the plants are progressing – Barry Teague 0429 351 087 or 03 50331020, Elva Teague 0427 309 433, or email edt9@bigpond.com.

A New Cultivar in the 'Canning' Stable

A number of years ago, Grampians APS members and grevillea growers Dave and Linda Handscombe found a number of seedlings that came up after the 2006 bushfire that engulfed their gardens. One of these, from their plant of *Grevillea* 'Canning Classic' proved to be most attractive. After several years, Dave succeeded in grafting a number of plants, donating one to the GSG Living Collection. This is now establishing rapidly, and is proving to be a very long-flowered showy medium sized shrub. Dave and Linda have named their new plant *Grevillea* 'Canning Cumquat' due to its spectacular cumquat coloured flowers.

Unfortunately, like its parents, it has proven to be rather difficult to propagate by cuttings, but grafted plants are proving to be hardy when grafted onto *Grevillea* 'Bronze Rambler'.

For those in dry summer areas, the use of this hybrid as an interstock on *Grevillea robusta* would make a very hardy and showy shrub.



Grevillea 'Canning Cumquat'. Photo Neil Marriott

Max McDowall and Neil Marriott, Vic

Pruning Australian Plants

Plants should be regularly tip-pruned in the pot and during growth after flowering to promote bushiness and vigour, and hence more copious flower production. Young fast-growing plants (eg, *Grevillea eremophila*, *Grevillea magnifica* etc) can become vulnerable to strong winds and heavy rains, and may need some reduction pruning and staking until the root system becomes more stable and the trunk and main branches become strong.

Established plants should be pruned annually once they reach the desired height and spread before they become leggy or intrude on the living space of other adjacent plants. Neglected plants which start to lean too far can collapse sideways and sprawl over their neighbours pushing them sideways and making them grow leggy.

With large shrubs and small trees, I find it beneficial every year or two to selectively remove long high thick leggy branches devoid of foliage along more than half their length to enable more slender and leafier branches to take over. Plants growing close to buildings and among larger shrubs, where access to sunlight is uneven, may require some permanent staking to maintain the trunks upright. Over time, wooden stakes eventually rot and fail, even if

painted with pitch. Star pickets are more durable but, like wooden stakes may eventually lean and fail to keep the plant vertical. Garden ties to stakes may need replacing after 2-3 years before they perish and fail to support the plant. More durable rope ties may be needed in some cases, but can look unsightly. Some years ago I was given some lengths of nylon rope used by a Telstra team installing fibreglass internet cables in the ducts, but it is yellow and turquoise and rather conspicuous when used for tree ties. I tried painting it with green fencecoat to make it less visible.

Eventually plants will become woody with thick branches that cannot be pruned with hedge clippers or secateurs and may require drastic pruning with the saw to enable them to regenerate in an acceptable form. Not all plants respond well to heavy pruning and may falter or die. The risk of this can be minimised by timely pruning during early growth.

If the plant shows a capacity after pruning to produce new shoots on the stem below the pruning cut or from the base, then it is likely to be able to tolerate heavy pruning.

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I am currently cutting back hard *G. georgeana*, *G. 'Firesprite'* and *G. banksii* and I am reasonably confident of success. *G. banksii* and many of its hybrids like 'Moonlight' and 'Superb' respond extremely well to heavy pruning even back to the stump! It would be useful if members would list some of their experiences with pruning grevilleas etc. to the NL editor or the authors. I regret removing a large leggy plant of *Persoonia pinifolia* which I could have regenerated from the stump if I had known at the time. Knowledge of species which do not readily regrow new shoots from the old wood would also be helpful.

Approximately one third of all species burnt out at Panrock Ridge in 2006 bushfires recovered from epicormic growth and/or basal lignotubers. The list of those species that recovered is now available in a report on the fires in a back issue of this newsletter.

Most species of *Banksia*, *Dryandra*, *Hakea*, *Eucalyptus*, *Melaleuca*, *Callistemon*, *Calothamnus*, *Eremophila*, *Graptophyllum*, bipinnate Acacias and many phyllodinous ones like *Acacia beckleri* and *A.*

amblygona also show this regenerative capacity. Regeneration is facilitated by access to sunlight and adequate irrigation after pruning. I lost a specimen of *Eucalyptus caesia* subsp. *magna* because I cut it back to the lignotuber at the wrong season where there was insufficient direct sunlight on the stump to stimulate the epicormic shoots.

High quality and efficient ratchet secateurs and extendable ratchet loppers and hedge cutters are now available from time to time at remarkably cheap prices on some supermarket specials. These tools and an inexpensive cordless electrical hedge cutter of the Osito brand have greatly facilitated my garden management despite my debilitated shoulder muscles. However, with my condition I am unable to hold or operate extension tools for pruning high branches, and am happy to have the services of GSG member and garden maintenance expert Craig Dodgson who is also handy with the chainsaw and, alongside other members, worked strenuously over several Easter working bees on the GSG Live Collection of Neil and Wendy Marriott at Panrock Ridge.

Kevin Stokes, Chairman Hunter Region Botanic Gardens

The Hunter Region Botanic Gardens since 1986

This year the Hunter Region Botanic Gardens celebrated the first opening of the gates to the public in 1986, 30 years ago. The Gardens are a demonstration of what a group of dedicated people acting as volunteers can achieve.

Situated on the Pacific Highway just north of the Hexham Bridge crossing over the Hunter River, the gardens have developed into a major tourist attraction and a significant botanic gardens with approximately 33 ha of developed garden beds and 100 ha of naturally occurring Blackout/Angophora forest with a number of walking tracks. Within the Gardens there are a number of Theme Gardens and an Herbarium containing significant historical Hunter Valley collections and a developing collection of Hunter Valley plants, including a collection of the Hunter area and HRBG fungi.

The Theme Gardens include a garden devoted to the Genus *Grevillea* that was initiated soon after the opening of the main Gardens. The *Grevillea* Garden has undergone a number of guises since Heather Clarke first began the initial plantings almost 30 years ago, the most significant of

these was the rather heart wrenching decision to remove a number of magnificent hybrid *Grevilleas* that had grown so successfully they were taking over the available space. The *Grevilleas* removed were some of the most popular cultivar *Grevilleas* including *G. "Moonlight"*, *G. "Sandra Gordon"* and even some *G. banksii*. There were a number of species of birds that delighted in those cultivars so it wasn't an easy decision. The reason they were removed was so the Garden could display more of the incredible array of species *Grevillea* that are found in Australia.

This trend has continued and there are many species *Grevilleas* now growing in situ including threatened species and a number of grafted, difficult to grow species and the birds have been very forgiving and returned. The volunteers at HRBG recognise the support extended by members of the *Grevillea* Study Group over the years that has been a major factor in the development of the *Grevillea* Garden into a significant collection of the genus *Grevillea*.

For more information please visit our website at www.huntergardens.org.au or find us on Facebook.

Experiences with “slow release” fertilisers

There are 4 main RELATED ISSUES for controlled release fertilisers for Australian native plants:-

1. Low phosphorus (P) content.
2. Release rate.
3. Sensitivity and susceptibility of Australian plant genera in Proteaceae (grevillea, banksia, hakea, etc.) to too much available nitrogen - available too quickly.
4. Urea as the major source of nitrogen (N₂)

Urea CO(NH₂)₂ is a colourless solid, very soluble in water; and rapidly decomposes in soils to Ammonium and Bicarbonate ions.

All of these factors interact. Other Exotic and Australian plant genera may tolerate readily available high N₂ formulations.

My disaster, (and my fault) was caused by using controlled release fertiliser, “Grow”, 3 month (Fig.1), where ~ 94% of its 21.4% N₂ was from Urea (Fig 2), and therefore very readily available, too quickly. This product states “All purpose including natives” which is misleading. The product is a continuing Bunnings offering.

Another 3 month formulation has a specific warning, “Not for Australian natives” and only 37% of its total N₂ is from Urea.

A much better result is from Osmocote Pro - a slower release, 8-9 month, low P, and NO Urea, but at time of writing, not yet available in small 2-5 kg buckets.

OUTCOME:- The product was used as directed and I lost in excess of a hundred plants in 300mm pots. I saw the label “suitable for natives” but not, at first, the analysis - where 94% of N₂ was from Urea.

NOTES:-

1. UREA is the cheapest source of N₂, therefore much more likely to be used in cheaper products.
2. BIURET is a common impurity in synthetic urea; it is detrimental to plant growth and could be part of the problem.
3. READ the analysis data; avoid high Urea content products.

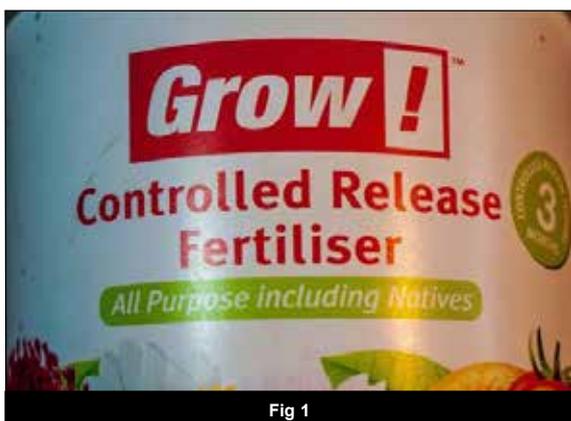


Fig 1

Guaranteed Analysis		
Nitrogen (N)	21.4%	Calcium (Ca)
as Ammonium Nitrogen	0.7%	Magnesium (Mg) (17000mg/kg)
as Nitrate Nitrogen	0.5%	Iron (Fe) (17000mg/kg)
as Urea Nitrogen	20.2%	Trace elements - mg/kg
Phosphorus (P)	0.5%	Boron (B)
as Water Soluble	0.45%	Copper (Cu)
as Citrate Soluble	0.05%	Manganese (Mn)
Potassium (K) as Sulphate	13.7%	Molybdenum (Mo)
Sulphur (S)	12.1%	Zinc (Zn)
as Sulphate	7.4%	
as elemental	4.7%	
NPK 21.4 0.5 13.7		

This product contains <1mg/kg cadmium (Cd), <20mg/kg lead (Pb) and <0.2mg/kg mercury (Hg). Therefore this product may be used without restriction on food and animal feed crops.

Fig 2

Summer flowering Grevilleas

The White Summer Grevilleas

I am always amazed when I visit the West to see *Grevillea annulifera*, *G. candicans* and *G. leucopteris* in full flower in spring time! Over here in the East these species all flower in early to high summer! They are amongst a group of Grevilleas that create a real show in the garden at a time when very little else is in flower.

I particularly love the white flowered species, as they rely on native insects to pollinate them, and so are normally strongly perfumed, and create a spectacular attraction for our native bees, butterflies, wasps and beetles when in flower. This makes our gardens so much more interesting, and many of these insects are also valuable predators of insect pests in our gardens.

First to come out in late spring-early summer is *Grevillea eriobotrya* with its masses of showy woolly cream flowers in prominent brushes above the fine foliage. This is a very rare and endangered large bushy species from around Mukinbudin in the extreme NE corner of the Northern Wheatbelt of Western Australia.

Sadly this species only flowers for a few weeks for us, although it then remains attractive in the garden for several more months as the showy white seed follicles develop. Grafted plants on *G. robusta* are long lived and hardy.



Grevillea eremophila in front of *G. georgiana* and *G. excelsior* taken at Panrock Ridge, Dec 2016. Photo Neil Marriott

Then in November-December comes *Grevillea eremophila*, from the north of Calgoorlie in inland WA. This is also a large shrub to 3 or 4

metres in height so needs a large space in the garden. However, the reward is a spectacular, long flowered grevillea that flowers almost the entire summer. Grafted plants on *G. robusta* are long lived and hardy, although I have found that large old plants tend to split and lose branches with age.

At the same time, the lovely *Grevillea ceratocarpa*, which, due to its touchiness, is quite rare under cultivation. Fortunately, it can be grafted onto *Grevillea* 'Royal Mantle' or *G. 'Bronze Rambler'*, or even better, onto *G. robusta* when either of these cultivars is used as an interstock.



Grevillea ceratocarpa. Photo Neil Marriott

Grevillea biformis ssp *cymbiformis* comes into flower in early December, and like *Grevillea eremophila* it keeps on flowering over the long months of summer, providing a lovely show of its attractive erect flower spikes above the beautiful boat shaped grey-green leaves.

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About the same time the superbly perfumed *Grevillea polybotrya* bursts into bloom, filling the garden with its delightful caramel perfume for several weeks, making a real spectacle of itself. Normally white flowered, there is also a rare pink flowered form. This species has proven to be quite hardy on its own roots for us, given a well-drained site. This is very lucky as it has proven to be not suited to grafting onto *G. robusta* in my experience. Also, it has proven to be quite easy for cuttings to strike from firm new growth.



Grevillea polybotrya -the rare pink flowered form. Photo Neil Marriott

Grevillea annulifera creates a truly spectacular display for several weeks from early to late December. The flowers are at first a lovely green in bud, changing to a mass of large white terminal inflorescences. Within a week of opening, the flowers begin to turn a rich pink colour as they have been pollinated, creating a breathtaking show of massed pink and white all over the deeply divided prickly green leaves. Sadly, this beautiful grevillea has also proven to be impossible to graft onto any rootstock. As a result, it is only able to be grown as seedlings that require perfect drainage. Cuttings, like grafts have all failed to take.



Grevillea annulifera. Photo Neil Marriott

The closely related *Grevillea leucoptervis* comes into flower for us in mid-December lasting for 3-4 weeks, and filling the garden with its lovely spicy perfume by day, and the strange, musky “smelly socks” smell by night. This grevillea normally sets copious quantities of seed, and seed grown plants are extremely fast and easy to grow given a reasonably well drained site. In poorly drained soils and summer rainfall areas it is best grafted onto *G. robusta*. Strangely, despite being very closely related to *G. annulifera* and in fact occasionally found to hybridise with this species, neither *G. leucoptervis* or the hybrid between the two have so far failed to support grafts of *G. annulifera*.

The summer ‘orange gang’

If you wish to attract birds to your garden, the orange summer flowered group are winners in this department. In early November, the weird and lanky, but beautifully flowered *Grevillea eriostachya* begins its long flowering season, continuing over the whole of summer so long as there is sufficient moisture in the soil. Plants are usually difficult to grow on their own roots unless you have deep sandy soils. Grafted plants on *G. robusta* are easy to grow given an open sunny site.



The lanky *Grevillea eriostachya* at Kings Park. Photo Neil Marriott

By the start of December *Grevillea excelsior* starts its spectacular floral display, with its big bright orange flowers held high up on the tall branches for the clamoring honeyeaters. As with *G. eriostachya*, it will flower right through summer given enough soil moisture. Also like *G. eriostachya*, *Grevillea excelsior* is difficult to grow on its own roots unless perfectly drained, but thrives when grafted, with a suitable interstock onto *G. robusta*.

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Grevillea excelsior. Photo Neil Marriott

Also at this time both subspecies of *Grevillea juncifolia* begin to flower, continuing for the whole of summer in most years. This species can be grown on its own roots given good drainage, however it is so much easier to grow when grafted onto *G. robusta*.

The natural hybrids *Grevillea* 'Canning Classic' and *G.* 'Canning Gold' from the Canning Stock Route put on a truly spectacular display from

early December to mid-February, also attracting a host of honeyeaters to the garden. These are best grown as grafted plants, using a suitable interstock onto *G. robusta*, as they are very hard to strike from cuttings and similarly difficult to grow on their own roots even if you succeed.



This is just a brief introduction to the wonderful summer flowering grevilleas. Perhaps members may like to write about summer flowered grevilleas that they are growing?

Max McDowall , Vic

Stimulation of Flowering in Australian Plants Part 2

Several members have expressed interest in the original article in GSG NL Feb 2016. Most would like to know the rate of application of potassium sulfate. Neil Marriott and I would appreciate written reports from readers of any results they have from their trials.

Potassium Sulphate

The best product, sold as Sulfate of Potash, is the granular form of the Richgro brand only available here from Bunnings. It is easy to scatter and less likely to damage the foliage. The foliage should be dry at the time of application, but the plants should be spray-watered by hose to displace any fertiliser caught in the foliage, and occasionally thereafter in periods of dry weather to enable the fertiliser to reach the roots. I have made no comparative field tests of the dosage, but have had success with spreading one handful (about 36 g) of the granulated potassium sulfate over the root area (of about 3 sq. metres) beneath the canopy of medium large shrubs 2-2.5 x 2

metres. This corresponds to a rate of 12 g per square metre. This dosage may not be optimal, but has been successful in improving flowering for *Grevillea longistyla* x *venusta* 'Firesprite' and *G.* 'simplex' ms.

Potassium sulfate is best applied once per annum during the later stages of leaf shoot growth just prior to or during the appearance of the first flower buds. Plants which regularly produce a copious display of flowers need no treatment. It may prove desirable to use a small amount of a general native plant fertiliser concurrently with or between successive applications of potassium sulfate. General fertilisers if needed are best applied during periods when plants are actively growing, especially after pruning, and when receiving some regular rainfall or watering. Many Proteaceae do not tolerate fertiliser high in phosphate such as Blood & Bone and chicken manure products such as Dynamic Lifter.

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This is because they have evolved in soil low in phosphate and are able to extract the available phosphate efficiently through dense networks of proteoid roots. Higher levels of phosphate are toxic to proteoid roots. Exceptions are *Grevillea robusta* e.g. as used as a grafting stock and perhaps some of the *G. banksii* hybrids such as *G. 'Superb'*. (Information would be appreciated from readers about grevilleas which respond well to Dynamic Lifter or other similar pelletised animal manure products).

Growing Grafted Plants

For this reason it is important to know what species has been used for the stocks of your grafted grevilleas. Ideally this should be specified on the label, but is seldom done. Where possible contact the grower. *Grevillea robusta* is the ideal stock for most grevilleas but some species are incompatible with *G. robusta* and other stocks such as *G. rivularis* hybrid = *G. 'Carrington Cross'* (for moister climates) and *G. 'Poorinda Anticipation'* have been successful for some of these. See Peter Olde's added comment on suitable stocks for *G. alpina* in my article on *G. alpina* in the June/July 2016 NL.

Revegetation by Stockton Landcare

(From correspondence between Peter Cousins, Stockton Landcare, and Peter Olde)

December 2016

Peter Cousins:

I've been a member of Stockton Landcare for several years. The Group has an area of responsibility along the Stockton beachfront (a suburb of and immediately north of Newcastle City), extending from high water mark back to around 50-100m and covering around 4ha. After many years, the Group has mostly removed the Bitou Bush infestation, kept other weeds under control, and planted many (albeit from a very limited range) native plants. They're now at the stage of wishing to increase the range of plants used to assist in the Group aim of increasing overall flora and fauna diversity within its area. This is the basis of my request to you.

As a Landcare unit, the Group works under the control of Newcastle City Council and is subject to using its range of plants supplied (unless the Group purchases others). Council's supplied plants (so far as shrubs and small trees are concerned) comprises only *Acacia sophorae*, *Banksia integrifolia*, *Correa alba*, *Cupaniopsis anacardioides*, *Leptospermum laevigatum* and *Westringia fruticosa*. These all grow quite well in our climate/weather conditions. There are no *Callistemon*, *Grevillea* or *Melaleuca* species

supplied (which generally fit our criteria for improving biodiversity), although these are commonly grown (with success) in house gardens adjacent to the Group area. So far as *Grevillea* are concerned, *Banksii* and hybrids/cultivars such as 'Robyn Gordon', 'Misty Pink' and 'Moonlight' are some that seem to do well in adjacent gardens.

Council approved the Group applying for external funds to purchase suitable plants from these species and the Group's been successful in its application for a modest sum. While I've studied various texts on what may be suitable, it's all a tad confusing when trying to compare many different criteria.

My request of you is that you consider providing a list of, say, half a dozen suitable *Grevillea* species for the Group to purchase. All should have a matured height in the range of from about 1 to 3 metres. The Group anticipates using from 5 to 10 plants of each selected *Grevillea* species (plus other species) to test the suitability of these plants to both survive and meet the Group aims of increasing biodiversity. Plants purchased are likely to be in 100 -150mm pots, possibly some in 200mm pots.

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The Group is particularly interested in attracting insects (especially bees) and birds to the area. For these purposes, plants which have a long flowering period, and/or flower at different times of the year, are preferred. The Group is not concerned that the plants selected should have been at any time endemic to the area – just that they will be suitable to its aims and are unlikely to become pests or a future problem.

The planting situation is generally that the species selected will be 2nd line coastal; ie, they will be grown in the shelter (land side) of existing mostly tea tree, banksia and wattle. They will however be grown in sand – which has a small organic component (mostly past litter drop from existing plants), will suffer some salt deposits from the strong winds which occasionally hit the area; and for the greater part will be in full sun – or at least afternoon sun.

Seasol, water-retaining crystals and mulch are incorporated when planting, and new plants are watered and re-mulched for the first 6-12 months. Planting will occur in early Autumn 2017 after the weather has cooled down. Once established, plants will receive only limited ongoing care except for weed clearing and some pruning/lopping to shape. The area has generally good rainfall, although summers may have some hot, dry spells.

Thus, in a nutshell, do you have the time and would you be willing to suggest around half a dozen *Grevillea* species which you believe would be suitable for Stockton Landcare to purchase and plant under the conditions I've outlined?

Peter Olde:

I do appreciate the detail you have provided in outlining the aims of your Landcare group. I can tentatively recommend a list of species that could be trialled but in recommending plants from nursery situations, you cannot know their provenance. The fact is that very few *Grevillea* species occur naturally in the subcoastal terrain you are working in.

Recently I was walking in Lake Munmorah and Catherine Hill Bay where *Grevillea sericea* (insect attracting) occurs naturally. It would be good if you used that provenance because it is, to some degree, salt tolerant, whereas plants from the Blue Mountains are unlikely to be. In Lake Munmorah also two *Hakea* species were also present, *H. dactyloides* and *H. bakeriana*. Both of these carry seed that could be germinated. In the *Proteaceae*, *Banksia oblongifolia*, *B. serrata*, *Isopogon anemonifolia* and *Lambertia formosa* would be good bird-attractors. *Grevillea linearifolia* (insect) grows on the Gosford sandstones as do *G. buxifolia* (insect), *G. montana* (bird) and *G. mucronulata* (bird). You could also try *G. shiressii* which is a good bird-attractor and a rare and endangered species that should do well. *G. speciosa* could also do well. Further north in Queensland, I could recommend *G. banksii* (bird). By a process of deduction, its hybrid successors should also do well, though these may not suit the plant associations you are trying to make. Altogether, they are inappropriate when trying to establish a natural biological area (my opinion). Of these, *G. 'Moonlight'* is extremely hardy.

Editor's Note:

As a retired bushland manager I would agree with Peter's opinion that it is inappropriate to use hybrids and other non-endemic species when rehabilitating natural systems. Although it may mean species diversity is low, local species are better adapted to local conditions and their survival rate is better. There is also less chance of introducing a species which, although native, may become a weed problem at a later stage.

Seed bank

Matt Hurst

37 Heydon Ave, Wagga Wagga 2650 NSW
Phone (02) 6925 1273

Please include a stamped self addressed envelope.

\$1.50 + s.a.e.

<i>Grevillea aurea</i>	<i>Grevillea nana</i>
<i>Grevillea baileyana</i>	ssp <i>abbreviata</i>
<i>Grevillea banksii alba</i>	<i>Grevillea newbeyi</i>
prostrate	<i>Grevillea nudiflora</i>
<i>Grevillea biternata</i>	<i>Grevillea occidentalis</i>
<i>Grevillea</i>	<i>Grevillea paniculata</i>
<i>candelabroides</i>	<i>Grevillea paradoxa</i> (ltd)
<i>Grevillea crithmifolia</i>	<i>Grevillea pilulifera</i>
<i>Grevillea decora</i>	<i>Grevillea polybotrya</i>
<i>Grevillea decurrens</i>	<i>Grevillea preissii</i>
<i>Grevillea eriobotrya</i>	<i>Grevillea pteridifolia</i>
<i>Grevillea eriostachya</i>	<i>Grevillea pulchella</i>
<i>Grevillea excelsior</i>	<i>Grevillea refracta</i>
<i>Grevillea floribunda</i>	<i>Grevillea ramosissima</i>
ex Coonabarabran	<i>Grevillea ramosissima</i>
<i>Grevillea glauca</i>	ssp <i>ramosissima</i>
<i>Grevillea johnsonii</i> (ltd)	<i>Grevillea stenobotrya</i>
<i>Grevillea juncifolia</i>	<i>Grevillea striata</i> (ltd)
<i>Grevillea leucopteris</i>	<i>Grevillea superba</i>
<i>Grevillea longistyla</i>	<i>Grevillea synapheae</i>
<i>Grevillea magnifica</i>	<i>Grevillea teretifolia</i>
<i>Grevillea magnifica</i>	<i>Grevillea tetragonoloba</i>
ssp <i>magnifica</i>	<i>Grevillea triloba</i>
<i>Grevillea manglesii</i>	<i>Grevillea triternata</i>
ssp <i>manglesii</i> (ltd)	<i>Grevillea vestita</i>
<i>Grevillea monticola</i>	<i>Grevillea wickamii</i>
	ssp <i>aprica</i>
	<i>Grevillea wilsonii</i>

Free + s.a.e.

<i>Grevillea banksii</i> prostrate white
<i>Grevillea banksii</i> prostrate red
<i>Grevillea banksii</i> prostrate red ex 1770
<i>Grevillea bracteosa</i>
<i>Grevillea glauca</i>
<i>Grevillea juncifolia</i>
<i>Grevillea johnsonii</i> red flowers
<i>Grevillea longistyla</i>
<i>Grevillea leucopteris</i>
<i>Grevillea magnifica</i>
<i>Grevillea</i> 'Moonlight'
<i>Grevillea petrophiloides</i>
<i>Grevillea plurijuga</i>
<i>Grevillea ramosissima</i>
<i>Grevillea robusta</i>
<i>Grevillea stenobotrya</i>

Please note: seed from hybrid -substitute -cultivated plants does not necessarily come true to type.

Fresh stocks of garden seed are desperately needed as most species are almost out of seed.

Can members asking for seed please give an alternative list in case some species are no longer in stock. It is preferred if requests are sent with a small padded post pack. It costs less to send at approx \$1.50 per letter than padding an envelope at \$2.00 each or more so the seed will survive the trip down the sorting rollers. It's a good idea to send extra stamps with requests as extra postage is usually needed to be paid with almost every request. Leftover stamps would be sent back with your seed.

Direct deposits can be made into the Grevillea Study Group account

BSB 112-879

Account Number 016526630

(St George Bank).

Please notify the Treasurer of transfer by email

(bruce.moffatt@tpg.com.au)

or by post to

**Grevillea Study Group,
32 Blanche St Oatley, NSW 2223**

Financial report – February 2017**Income**

Subscriptions	\$135.00
Donations	20.00
Interest	0.17
Transfer from Business Cheque Account	99.07
	<hr/>
	\$254.24

Expenditure

Newsletter publishing	\$240.00
Printing	98.18
Postage	70.00
Stationary	59.96
Transfer to Business Cheque Account	200.00
	<hr/>
	\$668.14

Amount in interest bearing deposit till 28/3/2017
\$19,220.18

Balance in current account 15/2/2017
\$1,016.76

Balance in business cheque account **\$0**
Account closed on 9/2/2017

Deadline for articles for the next newsletter is 31 May 2017, please send your articles to peter.olde@exemail.com.au before this date.

Donations

The newsletter is now free but if groups and individuals wish to make a donation, direct deposits can be made into the Grevillea Study Group account.

BSB 112-879
Account Number 016526630
(St George Bank).

Please notify the Treasurer of transfer by email (bruce.moffatt@tpg.com.au)

or by post to Grevillea Study Group,
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To be notified of the latest newsletter, email recipients must be registered. Please ensure your email address is registered and up to date and any changes are advised to Christine Guthrie - bruce.moffatt@tpg.com.au