

Australian Native Plants Society (Australia) Inc



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Newsletter No. 103 – February 2016

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GSG Vic Programme 2016

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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
Victorian activities.....	3
Obituary Ken Arnold.....	3
<i>Grevillea burrowa</i>	4
An exploration of <i>Grevillea alpina</i> variation; are pollinator switches evident?.....	5
<i>Grevillea buxifolia</i> and bee pollination.....	5
A new subspecies of <i>Grevillea repens</i>	6
Variation in the Creeping Grevillea.....	6
Stimulation of flowering in plants.....	7
In the garden.....	8
<i>Grevillea calliantha</i> Black Magic.....	12
<i>Grevillea johnsonii</i>	13
<i>Grevillea acropogon</i>	14

GSG NSW Programme 2016

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

GSG SE Qld Programme 2016

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 **Bryson Easton** on 0402 242 180 or **Noreen Baxter** on (07) 3871 3932 as changes can occur.

Sunday, 28 February

VENUE: Home of Jan and Ken Matheson, 5 Strathdarr Drive, Toowoomba Qld 4350
PHONE: (07) 4630 4145
TIME: 9:30am for 10am meeting

Sunday, 24 April

VENUE: Gondwana Nursery
148 Creegans Rd, Barkers Vale NSW
(As this is quite a distance to travel some members will go south to Kyogle on the Saturday and meet up for a communal dinner)
SUBJECT: The proprietor, Gahan Gilfedder, will be invited to speak about the Nursery's Propagation techniques.
PHONE: (02) 6689 7544
TIME: 9:30am for 10am meeting

Sunday, 26 June

VENUE: Home of Peter and Carol Bevan, 10 Patrick St, Lowood, Qld 4311
SUBJECT: Update on Peter's propagation techniques and a tour of the grounds
PHONE: (07) 5426 1690
TIME: 9:30am for 10am meeting

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

Here we go again. A new year full of exciting *Grevillea* news and activities. Welcome to 2016. Thanks to Victorian members for producing this excellent newsletter. If you are from Queensland, you are producing the next newsletter and we welcome articles on any subject concerning this beautiful genus. Of course, you do not have to be a Queenslander to make a contribution to this issue. You can discuss any species or hybrid, any aspect related to your horticultural or bushland experience with *Grevillea*, propagation or history. Have a think - it's not that difficult. The important thing is to not leave everything to one or two people. Active study group members should at least attempt to make one contribution each year.

In November I attended the ASGAP Federal Conference in Canberra. The quality of the speakers was outstanding and along with the field trips formed, for my wife and me, a very enjoyable few days. The pre-conference field trip in particular was excellent and we went to some favourite haunts and saw some very rare species. One of these is a *Grevillea* population at Granite Falls currently treated as a form of *Grevillea sphacelata*. This population was described by Gandoger in 1919 as *Grevillea scabrifolia* and will be reinstated in a paper I hope to publish this or next year. I am assisting a DNA study of *Grevillea buxifolia* and *Grevillea sericea* being presently conducted by Maurizio Rossetto and his team at the NSW herbarium. I was pleased to receive the Australian Plants Award at the Conference which I accepted as much on behalf of the Study Group as myself. It is very gratifying to have your contributions acknowledged. Thanks in particular to John Aiken, president of the Sutherland Group, who was particularly instrumental in pushing my barrow.

Shortly I will be publishing a paper on *Grevillea phanerophlebia*, not a commonly grown species, but one that Dave Gordon used to grow and which used to play havoc with his garden with seedlings and hybrids coming up everywhere. I visited the site near to where Ludwig Diels

collected this species in 1901. I was shocked to find that the population comprised a clear hybrid swarm, not a species. A consistent population has never been found. In fact we found a new population of three plants, each plant different. No two plants were the same in the large population examined at Mingenew. This species will be deregistered as a recognised species in the near future. At present it is regarded as a rare species and many dollars are spent studying it and protecting it. This money could be spent more productively elsewhere. The parent species are *Grevillea amplexans* and *Grevillea biternata*. It reminded me of *Grevillea gaudichaudii* which was recognised as a true species for more than 100 years before its true status was recognised.



John Arnott, Angus Stewart and Peter Olde in Canberra after receiving the Australian Plants Award

Victorian activities

Easter Working Bee 'Panrock Ridge'

There is a lot of work to be done on the Grevillea Study Group Living Collection, so please come along for a day or two or the whole of Easter. There is still one single bed free, as well as several sofa beds, and lots of mattresses and floor space. Outside there are lots of sites for caravans/tents.

Please register with Neil ASAP if interested: neil@whitegumsaustralia.com or 0353 562404

Tentative itinerary:

Friday 25th March: Arrive and tour of Grevillea Collection, BBQ and social evening

Saturday 26th: Working bee in Grevillea Collection. Stir-fry night – bring a dish to share. Neil to talk on the rarer Grevilleas in the official collection.

Sunday 27th: Day trip to Grampians to discover the rarer Grampians species, incl visit to 3 native nurseries at Pomonal. Tea at renowned Indian restaurant Halls Gap.

Monday 28th: Working bee and collection of cuttings for participants. BBQ and discussion on future activities for Vic Chapter.

Tuesday 29th: Cleaning up, packing up and heading off home.

Grevillea Crawl Central Victoria

Saturday 20th – Monday 22nd August

Ian Evans will be leading us to see some of the more unusual and new Grevillea sites that he has discovered around the Bendigo region, as well as visits to top native gardens and nurseries.

Please register with Neil ASAP if interested: neil@whitegumsaustralia.com or 0353 562404

Tentative itinerary: (detailed itinerary will be emailed/sent out to all registrants prior to trip)

Saturday 20th: Meet at Bealiba (*G. ilicifolia*), Kingower (*G. dryophylla, alpina, micrantha*), Rose Hill - Nth of Inglewood (*G. alpina, rosmarinifolia*), Terrapee (*G. rosmarinifolia*), Quambatook (*G. rosmarinifolia*), Derby (*G. rosmarinifolia*)

Return to Ian and Lynn Evans at 29 Evans Rd, Myers Flat for BYO BBQ and social get together.

Overnight stop at Eaglehawk for a motel or Maiden Gully for a caravan park.

Sunday 21st: Jackass Flat (*G. alpina, dryophylla*), Bagshot (*G. rosmarinifolia, alpina*), Barnadown (*G. rosmarinifolia, alpina*), Costerfield (*G. sp aff alpina*), Heathcote/Mt Ida (*G. alpina*), James Ck (*G. rosmarinifolia*), Elphinstone (*G. alpina, dryophylla ? rosmarinifolia*), Taradale (*G. alpina, obtecta*) Lauriston (*G. repens ?*). Return to Bendigo for tea at local pub.

Monday 22nd: Garden visits to Beth and Geoff Hosking garden and Marilyn Sprague's garden, Mandurang. Nursery visit to Goldfields Nursery, Tannery Lane Mandurang.

Peter Olde

Ken W. Arnold (1934–2015)

Ken Arnold was an active supporter of the Grevillea SG in New South Wales attending meetings, supporting the plant sales and writing a few short newsletter articles. I met Ken and wife Elaine while a member of Sutherland Society for Growing Australian Plants. They lived then at Jannali where they had a lovely native garden with many grevilleas and where Ken propagated plants for sale at meetings or for giving away. After several moves, they eventually re-settled in Narellan. Ken suffered great debilitation from diabetes in his later years and needed specialist care, which was provided by Elaine, and which prevented him from attending activities. Ken worked for AGL and was

responsible for testing gas appliances during his pre-retirement days. Ken was an extremely loyal and keenly interested member of the Study Group, providing a jovial presence at meetings where his subtle observations and wit often interrupted the conversations. Like all our hard-working and ever-decreasing volunteer members, he will be missed.

At the funeral, which I attended, it was pleasing to catch up with our old friend Bruce Wallace, who has turned his interest these days to photography. He tells me that he still has a keen interest in *Grevillea juniperina*, plants of which are growing reliably in his garden.

Grevillea burrowa

'A new species *Grevillea burrowa* (Proteaceae) from the Burrowa-Pine Mountain National Park, North Eastern Victoria' Bill Molyneux and Sue Forrester.'

This is the title of a new paper published in *Muelleria* 34: 47–54 published online in advance of the print edition, 16 November 2015.

Grevillea burrowa

Molyneux & Forrester sp. nov.

Diagnosis: Differs from *Grevillea brevifolia* in having prominently raised venation on upper and lower leaf surfaces, longer and wider leaves, larger perianth limb and perianth wider at widest point, densely subsericeous and hardly constricted below the limb. Differs from *G. oxyantha* subsp. *oxyantha* in having prominently raised venation on upper leaf surface, juvenile buds reflexing only to c. 90°, perianth limb which is transversely elliptical or rarely subglobose, shorter and wider and not strongly keeled, and a distinctly wider perianth. Differs from all other members of the *G. victoriae* complex excepting *G. victoriae* subsp. *brindabella* with which it shares the unique character of hairs present on the ovary which, in this species, are retained at maturity.

Type: Australia, Victoria. Burrowa-Pine Mountain National Park. On the Burrowa Walking Track c. 1.5 km N by foot from the junction of the Mount Burrowa Walking Track with Hinces Walking Track. On ridgeline and c. 150 metres down NNW slopes, 1.56 km SE of Mount Burrowa. 28 October 2002. 36° 06' 03" S 147° 42' 28" E; Alt. 1143 m, V. Stajsic 3314, W. Molyneux, S. Forrester, P. Ashton and H. Merkel. On broad rhyolite N-S running ridge line and down NW slopes. Holotype: MEL 2190712A and MEL 2299595 (same collection, comprising a dry sheet and spirit, respectively); Isotypes: AD, BRI, CANB, HO, NSW, K, NY, WELT.



Grevillea burrowa – young plant in cultivation
Photo: Bill Molyneux

Etymology: The epithet recognizes the collection of the type material on a walking track to Mt. Burrowa and also its location in the Burrowa-Pine Mountain National Park in north-eastern Victoria where it is apparently endemic.

Distribution, habitat and ecology: *Grevillea burrowa* is apparently endemic to the Burrowa Plateau in northeastern Victoria (Fig. 2) where it is currently known only by two populations on adjoining ridgetops and upper slopes c. 3 km apart in the Burrowa-Pine Mountain National Park. The population from which the type collection was taken, comprising many hundreds of plants, is on the Mt Burrowa Walking Track and occupies c. 2.1 ha. The second population of many thousands of plants is on a ridgeline running north-east from Black Mountain where it is subdivided by a narrow rocky saddle into two stands c. 9 ha and 12 ha in extent respectively. The substrate is mid Palaeozoic rhyolite supporting impoverished shallow to skeletal soils.

Phenology: Flowering has been recorded in late winter, spring, summer and sporadically in early autumn. Eastern Spinebill, and White-plumed Honeyeater are the two most active nectar feeders recorded on *Grevillea burrowa* during the cooler parts of the day in late spring and early summer. The observed activity of nectarivorous birds suggests the species is primarily ornithophilous. The species is apparently an obligate seed regenerator.

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Conservation status: Molyneux and Forrester estimate the age class distribution to be ca. 15% veterans to 4-6 m height assumed to have germinated following the 1952 wildfire, ca. 50% mature plants of intermediate size and apparently representing a sequence of germination events independent of fire, and ca. 35% seedlings and juveniles. Very few dead older plants are evident. The overall impression is of a healthy regenerating population. It is important to note though, that there have not been any landscape scale fires in this section of the Burrowa-Pine Mountain National Park since 1952.

Area of occupancy is estimated at 23 ha and extent of occurrence is estimated at 4.5 square km. Total population is estimated at 2000-4000 mature individuals. The species is therefore assessed as **critically endangered**.

Cultivation: *Grevillea burrowa* has been cultivated for a number of years now, having been introduced into the nursery trade through the Austraflo range as *Grevillea* 'Supanova'. It is an outstanding looking medium-large shrub, with most attractive silvery architectural leaves and showy bright red and fawn flowers for many months of the year. It is cold and frost tolerant, and needs a well-drained sunny to dappled shade site in a cool to temperate climate. Drought tolerance is untested but like most of the *G. victoriae* group, it probably requires summer watering during long dry spells.

Reannon Smith* and Trevor Edwards (La Trobe University)

An exploration of *Grevillea alpina* variation; are pollinator switches evident?

Grevillea is one of Australia's iconic plant genera however relatively little is known about its pollination ecology. *Grevillea* is dominated by bird-pollination but switches to insects vectors also occur throughout the genus. This is in line with recent findings for *Hakea* where Bird pollination is basal. In *Grevillea alpina* floral diversity suggests that shifts in the pollination vectors may be influential in the microevolution of 5 geographically separate forms in Victoria. Preliminary studies have shown that floral

characters such as colour and nectar constituents vary between the *G. alpina* forms however further investigation is required. Our research is handicapped by limited field time and it would be great if we received reports/photographs from this group regarding floral visitors. Is a pollinator shift occurring due to declining bird numbers allowing insects to take the lead in pollination efficacy and in turn influencing floral evolution?

* Email rl12smith@students.latrobe.edu.au

Wendy Grimm

Grevillea buxifolia and bee pollination

This is a photo taken by Noel Rosten (APS North Shore Group) on 27/1/2012 at Wisemans Reserve. The pollen colour seems consistent with *Grevillea buxifolia*.

I am still digesting your Study Group article, Peter. Congratulations on your award at the ANPSA Conference.



A new species of *Grevillea repens*?

While carrying out research for our revision of the *Grevillea alpina* complex I visited the Jim Crow Range, or as on some maps, the Crowe Range, west of Shepherds Flat to the north of Daylesford in 2013. Here, in quite dry grassy woodland and Box woodland I collected a distinct, low mounded form of *Grevillea alpina* growing on the tops of the dry gravelly ridges of the range. To my amazement, growing amongst the alpinas were large mats of *Grevillea repens* with the typical Daylesford race shaped leaves. The Daylesford population is widely separated from the type form from the Kinglake Ranges to the north-east of Melbourne and will shortly be published as a new distinct subspecies, exhibiting numerous characters that readily separate it from the Kinglake race.



Grevillea repens – Jim Crow Range form Photo: Neil Marriott

Both the Kinglake and the Daylesford races of *Grevillea repens* favor wet forest type communities, in areas where rainfall is above 800 to around 1000+ mm p/a. I haven't been able to find the annual rainfall of the Jim Crow Range, but it would have to be no more than 600 mm p/a judging from the vegetation. Furthermore, the soils are dry and gravelly or shaley, making for rather dry growing conditions compared with its other two populations.

I have not had time to closely examine this population morphologically; however there is one immediate distinction from the other populations and that is the flower colour as depicted in the photo above. Amazingly, all plants at Jim Crow Range are of this colour, while the other two races have red to burgundy-red flowers!!

Grevillea repens from both Kinglake and Daylesford districts have all died out at Panrock Ridge with climate change. Remarkably, and as if to prove the distinction in habitat mentioned above, seed-grown and cutting grown plants grown from Jim Crow Range have been planted out in our gardens and so far are doing very well, flowering and now large enough for grafting material to be supplied to several members of our study group. Grafted plants on *Grevillea robusta* are also now thriving and flowering superbly.

G.D. Holmes, RBGV

Variation in the Creeping Grevillea: a rare Victorian endemic

Grevillea repens is a rare holly grevillea species restricted to disjunct areas in central Victoria. There are some differences in appearance of this prostrate shrub across its range, but the differences tend to intergrade. For example, plants from the western part of its range have flowers varying from green through to red, while those from eastern populations vary from red through to deep maroon. Part of my research was undertaken to assess the relationship of *G. repens* to other species in the *G. aquifolium* group and to assess genetic and reproductive differences within, and among, its populations. Some of the findings include: a confirmation of the close relationship between *G. repens* and *G. obtecta* (Holmes et al. 2014) and the identification of three main genetic groups; plants from the Daylesford

area (which includes the 'Sailors Falls form'), the nearby Lerderderg Gorge area, and the Kinglake area (inclusive of the 'Mt Slide form') (Holmes et al. 2009). The research also highlighted that plants from the Kinglake can reproduce both clonally by 'suckering' and sexually by seed; those from Daylesford and Lerderderg rely solely on the latter. But the suckering reproductive strategy can come at a cost; some clones have retained a genetic mutation in which they have three sets of chromosomes instead of the normal two rendering them sterile. This 'triploidy' has since been found to be the likely cause of sterility in two other holly grevilleas: *G. infecunda* (James et al. 2012) and *G. renwickiana* (James et al. 2014). The results of this work provide support for the recognition of at least two *G. repens* subspecies.

Stimulation of flowering in plants

We all have grown plants in the garden that take years to flower for the first time or then produce a disappointing display of flowers year after year, or in later years, but what do we do about it? Grumble and go on hoping, prune the plant from time to time, apply a general (organic?) fertiliser, or pull it out and plant another one in a different location? Well consider this: books on plant nutrition recommend application of potassium (K) and nitrogen (N) fertiliser (K:N 0.8-1.2 w/w) during the period of growth prior to flowering to optimise the development of flowers. Note that pelletised potassium sulfate contains 45% K and could be applied together with a general organic fertiliser suitable for native plants to boost the proportion of potassium if needed.

So! I've just tried potash and it's true! (Of course it's true!) Can I tell you a story?

Grevillea 'simplex' ms. Olde and Marriott 2.5 x 2 m, has been growing in my garden for 9 years and only flowered sparsely and sporadically (white with fragrance of banana custard) in September-October and February for most of that time. Last spring, I applied potassium sulfate after the first sparse spring flowering, watered in and within one month the entire bush was covered with white flowers.

Grevillea 'Firesprite' (see February 2015 GSG newsletter), introduced into cultivation by Merv Hodge, which had flowered sparsely in spring 2014 with weak flower heads this year had grown to 3.5 m and after application of potassium sulphate pellets flowered strongly from September to December. This plant can be kept in an upright habit by removing the lower growth up to 1 m. Now all the branches have been cut back by 1/3 and should bush out and flower more profusely in 2016 like the specimen in the Grevillea Park at Bulli.

Neil Marriott reports says that *Grevillea* 'Bonnie Prince Charlie' (*G. alpina* x *G. rosmarinifolia*) selected from a shower of hybrids between the local *G. alpina* and the introduced *G. rosmarinifolia* beside the turning circle in McDonald Park north of Ararat tends to set few flowers. This could respond similarly to applications of potassium sulfate.

Eucalyptus preissiana (now 3.5 m high) which was lopped to the lignotuber about 4 years ago flowered profusely after 2 years, but tended to flower less in subsequent years, especially if the old fruits were retained. This spring I did not prune but applied potassium sulfate after a second late flowering in October. This produced an immediate copious formation of flower buds on the new growth of branches which had not flowered, but little on the growth of branches bearing new fruits. I could either remove the fruits or prune back the fruiting branches. I plan to apply a general organic fertiliser this autumn to balance the nutrient levels.

A large shrub of a deep violet-flowered form of *Melaleuca decussata* collected by the late Glyn Sago from near Sheet of Water in the Grampians had always flowered very sparsely in my garden, but this year responded to application of potassium sulfate by an estimated 5-fold increase in floral production.

Currently, I have several plants which look healthy but produce few flowers. Several plants of *Banksia spinulosa* (dwarf), *Banksia media* (dwarf) at least 5 years old, *Regelia inops*, *Eucalyptus cernua*, and *Hakea orthorhyncha* (after its third year of flowering). These could also respond to some pruning and annual applications of potassium sulfate, in addition to low phosphate organic fertiliser.

We would like to learn of similar experiences of readers with the flowering of grevilleas. If you are having similar problems with sparse flowering of some of your grevilleas, please try out this simple treatment and then report back via this newsletter to let other readers know of your successes or failures. This may well be a very important break through!

In the garden

Further notes on the effect of fire on Grevillea species

As most members would remember, in January 2006 nearly the entire Grevillea Living Collection was burnt out in a large bushfire that engulfed the Black Ranges. Following that bushfire, at least one third of all cultivated species recovered by way of seedling recruitment, while another third recovered by way of re-shooting of epicormic buds on the trunks and/or branches, from basal lignotubers or from epicormic buds on underground roots. The final third of species failed to recover in any way, resulting in the loss of many rare and endangered species and subspecies as well as a large number of species sadly not replicated in any other GSG collection!

Since that time we have been very busy re-establishing the missing species in the living collection as well as distributing one-off species and rare and endangered species to as many other members of the study group as we can. In this way we are spreading the risk in case of future catastrophes!

In late August I burnt out a large area of our property as part of our annual control burning program to reduce fire risk in the coming summer. A large area below the Grevillea collection was burnt and carefully mopped up to ensure no smoldering embers remained alight. Sadly we did not realize that a stump that we put out continued to burn underground, despite there being no visible surface signs of smoke or glowing embers. While we were out the next day, this flared up and started another fire that ran up the hill right through a large section of the Grevillea collection. We arrived home to discover at least a third of the garden burnt out by the fire!

After several months the following species have shown signs of recovery:

Grevillea anethifolia

– Rankin Springs, NSW race –re-shooting from basal lignotuber and roots

Grevillea calliantha

– re-shooting from basal lignotuber.

Grevillea flexuosa

– plants killed, recruiting from seedlings up to 20m from parent plants

Grevillea helliosperma

– re-shooting from epicormic buds on major branches

Grevillea hookeriana

– yellow flowered form: one plant re-shooting from root 3 metres from burnt and dead plant

Grevillea johnsonii

– south coast race: numerous seedlings germinating below burnt out dead plants

Grevillea johnsonii

– Cox's Gap race – re-shooting vigorously from lignotuber, no seedlings

Grevillea magnifica subsp remota

– recruiting by seedlings

Grevillea nudiflora

– medium leaf: dozens of young plants re-shooting from basal lignotubers as well as from roots up to 2 metres from parent plant

Grevillea sarissa subsp rectitepala

– re-shooting from semi-basal lignotuber

Grevillea spinosissima

– re-shooting from basal lignotuber as well as from roots up to 1m from parent plants

Grevillea stenomera

– re-shooting from basal lignotuber as well as from epicormic buds on branches

Grevillea whiteana

– re-shooting from epicormic buds on major branches

Approximately 8 other species have so far failed to re-shoot or recruit by seedlings and are now assumed to be lost from the collection. The following photos taken in the Grevillea garden exhibit some of the recruitment events.



Grevillea johnsonii – South Coast race: seedlings germinating below burnt out plants. Photo: Neil Marriott

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Grevillea johnsonii – Cox's Gap race –re-shooting vigorously from lignotuber. Photo: Neil Marriott



Grevillea hookeriana – yellow flowered form re-shooting from roots. Photo: Neil Marriott



Grevillea nudiflora – re-shooting from lignotuber. Photo: Neil Marriott

Rare Plants in the GSG Living Collection

One of the listed aims of the Australian Native Plant Society is 'Preservation by Cultivation'. Under this aim, our organization has, for many decades grown and increased the total number of many Australian plants by cultivating them ex-situ in our gardens. Here they can often be

safer than in the wild, particularly so for those WA species that are sadly now confined to roadsides in that state. Incredibly the WA government, both state and local are not only failing to protect their roadsides, but are these days actively destroying them in the name of road safety over most of the state. One WA local told me last spring to come and see the WA roadsides as soon as you can, as in 20 years time they will all be cleared!!

Peter and I have been establishing a data base of our living collections around the country –if you are interested, contact Peter or myself and we will send you the complete species list as an Excel Spreadsheet –fill in a column of your plants you are growing and send a copy back to me. In this way we can develop a comprehensive list of all the species and subspecies we currently have under cultivation. From this we can then target those species still not being cultivated.

Listed Rare and Endangered Species

From our database, there are currently approximately 158 listed rare and endangered species in the living collection at Panrock Ridge. When combined with other collections around the country the Grevillea Study Group is growing and conserving approximately 200 listed species!! It is vital that we spread these species around as many members' gardens as possible, to ensure they are secure ex-situ.

One-offs

As well as the extensive list of rare and endangered species we are growing, there are many species that, while not necessarily listed as rare or endangered in the wild, are rare under cultivation, often with only one or two plants growing in our gardens. Sadly some are both rare in the wild and rare under cultivation. It is very important to spread these plants around amongst the membership to ensure their long-term survival. If lost, it often requires time, long distance travel and great expense to get them back into cultivation again!! If you are interested in obtaining cutting/grafting material then the best option is to book in for the upcoming Living Collection working bee this Easter and come along and get a pile of cuttings. All active members are most welcome.

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Currently flowering in the garden



Grevillea nivea – 12 month old grafted plant on *G. robusta*.
Photo: Neil Marriott



Grevillea bipinnatifida 'Jingle Bells' Photo: Neil Marriott

***Grevillea bipinnatifida* 'Jingle Bells'** is sold as grafted standards by Humprhis Nursery, Mooroolbark. It is a spectacular form of *G. bipinnatifida*, exhibiting massed large racemes of flowers for many months of the year. In fact Humprhis state that it flowers ALL year. It certainly seems to always have flowers on it for me, although I have only been growing it for the last 6 months. Does any member know of its origin in the wild? It is definitely one worth looking out for!

Problems with grafted plants

For many years I advocated the use of rootstocks for grafting to be anything other than *Grevillea robusta* 'Silky Oak'. That was due to the fact that MANY *Grevillea* species may graft onto *G. robusta*, but some exhibit minor to serious major incompatibility problems. These range from very slow growth, to poor habit and sick looking foliage and very few if any flowers. These plants also often respond by re-shooting of the rootstock from below the union, thereby requiring regular inspection and removal of shoots.

Rootstocks that I trailed and found to be excellent here at Panrock Ridge (average annual rainfall 650-700mm), were *Grevillea* 'Moonlight', *G. 'Poorinda Royal Mantle'*, *G 'Bronze Rambler'* and to a lesser extent *G. 'Carrington Cross'* (*G. rivularis* x *G. acanthifolia*). Then along came climate change, and our annual rainfall crashed down to 400-450mm/year for the last 20 years. This dramatic drop in annual rainfall of approximately 30% resulted in the loss of ALL grafted plants on the above rootstocks –they were clearly no longer suitable for dry inland climates.

Today, I find that by grafting onto *G. robusta* with the use of an interstock of the above hybrids I can grow an extensive range of species that I could not previously, or grew very poorly when grafted straight onto *G. robusta*. The use of interstocks is nothing new in exotic grafting circles, but is still relatively new for native plants. It is a bit more work, but the resultant grafted plants have the double benefits of:

- a. A hardy, flood, drought and fungus tolerant rootstock
- b. A compatible interstock which allows the scion plant to thrive in areas where it would fail on its own roots.

Fortunately there are quite a few members of the Study Group including Richard Tomkin, Robert Brown, Neville Collier, David Binch and Brian Weir who are all doing interstock grafting where needed.

I have found that *G. robusta* thrives when given lots of fertilizer and summer water. I now fertilize when planting with a handful of normal slow release native plant food, two handfuls of 'dynamic lifter' and half a handful of superphosphate!! They love it and take off and grow superbly.

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I am now finding similar compatibility problems with a number of our wonderful Grevillea cultivars, including *Grevillea* 'Canning Classic', probably the most beautiful of all Grevilleas in my opinion, as well as its seedling *Grevillea* 'Ochre Pokers'. Both of these cultivars either fail completely or make very sad looking plants when grafted straight onto *G. robusta*. The photos below illustrate the problems outlined above:



Grevillea 'Ochre Pokers' – 2 year old grafted as a standard onto *G. robusta*. Photo: Neil Marriott



Grevillea 'Ochre Pokers' – ungrafted plant exhibiting vigour and free flowering habit. Photo: Neil Marriott

***Grevillea rhyolitica* 'Duea Flame' grown as a hedge**

For a number of years now Wendy and I have been enthralled by the superb display put on by a hedge right across the front of a Stawell accountants office. This species really struggles locally, although a superb clone, collected by Max McDowall on our GSG Grevillea Crawl down the south coast a number of years ago seems to be a lot hardier. However the hedge is all the 'Duea Flame' selection, and the plants are growing and thriving in a well-drained gravelly loam with regular watering via drippers.



Grevillea rhyolitica 'Duea Flame' grown as a hedge in Stawell . Photo: Neil Marriott

**Illawarra Grevillea Park
OPEN DAYS 2016**

May 7, 8, 14, 15

July 2, 3, 9, 10

September 3, 4, 10, 11

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

Grevillea calliantha 'Black Magic'

For many years *Grevillea* 'Black Magic' was only available through Zanthorrea Nursery at Kalamunda near Perth. The nursery's owner Alec Hooper was given a parcel of cuttings of this strange *Grevillea* by a Nick Foote, a beekeeper mate, who had found the plant close to where he was farming his bee hives. After some urging, this gentleman revealed that it occurred 'on creek lines' in the Cataby area. Alec marketed the new plant as *Grevillea* 'Black Magic'.

When I first saw *Grevillea* 'Black Magic' in the early 1980s I could see that it was a new species so I took a specimen to Don McGillivray in Sydney Herbarium. Don was completing a full revision of the genus at that time. He did not recognize the *Grevillea*, thinking that it was perhaps a garden hybrid! However I knew that Alec's mate had collected it out of the wild, so Peter Olde and I encouraged its cultivation back here in the East. I had it for sale at my old White Gums Nursery at Deep Lead.



Grevillea calliantha 'Black Magic' Photo: Neil Marriott

With the retirement of Don McGillivray due to ill health, Bob Makinson took over the work on *Grevillea* at Sydney Herbarium, and when the location for *Grevillea* 'Black Magic' was finally revealed, he and Peter published the new species *Grevillea calliantha* –an apt name referring to its beautiful flowers. These first open with jet black styles and a creamy yellow perianth, however the flowers, which are extremely profuse and pendulous, soon begin to change colour, with the styles becoming a rich burgundy-red while the perianth turns to a glowing orange-yellow.

The location where *Grevillea calliantha* came from in the wild was the Cataby area south of Badgingarra on the sandplains north of Perth, WA. Peter Olde and I checked it out in 1988 and were rather alarmed to see that it was largely confined to the verges of one roadside, and that there were only about 20 plants. However another small population was apparently discovered nearby. I sincerely hope this is correct as on a trip to the site with Keith Alcock and Margaret Pieroni last year, Wendy and I could not find a single plant remaining!! It has always been listed as a critically endangered species, but now it may well be close to extinction in the wild. Thank goodness for our cultivated plants and our motto – "preservation by cultivation" invaluable yet again!!

Fortunately it is now well established in cultivation by APS members and native plant lovers across Australia, although it is, and it has never has been common in the nursery trade. I think this is because it is not that easy to propagate, although it is stocked in Victoria by *Grevilleas* Maximus Nursery, Kuranga Nursery and Vaughans Nursery and possibly others I do not know of. Cuttings strike slowly and often unreliably, however once struck, plants are generally hardy, given a well-drained sunny site. Grafted plants are very hardy and will grow strongly in most soils so long as the site is sunny.

Grevillea calliantha is a spectacular, flat topped shrub usually less than a metre in height and around 1.5m across. It flowers heavily for many months of the year from spring to early summer and often responds to summer rains with an extra flush. The massed pendulous flowers are displayed at the ends of the horizontal branches, giving the plant a distinct and unique layered appearance. Its neatness, hardiness and spectacular display make it a prime plant in the landscape, and it deserves to be grown in gardens far more widely than it is at present.

In 2015, Peter Olde, Ray Brown and Gordon Meiklejohn visited the second population west of Cataby and found a small healthy population of 7 plants with one seedling. No adult plants were seen along the roadside where we first visited and found the species, although a walking inspection was not carried out only a drive-by. Could the total wild population now consist of only 7 plants? It seems so.

Grevillea johnsonii – orange flowered form

Undoubtedly one of the showiest of all the Eastern *Grevillea* species, but despite this fact it remains virtually unknown in cultivation. At the same time, its larger and far less showy red and cream flowered form remains a relatively common garden plant for those with room for it in their garden.

The orange flowered *Grevillea johnsonii* grows naturally in the Goulburn River catchment at Cox's Gap and several other close by areas – all on the western slopes of the Great Divide and NW of the Blue Mountains, NSW. Here I have observed it growing at the foot of massive sandstone cliffs in deep sandy loam soils. The common garden red and cream form on the other hand comes from way down south on the Brogo River on the south coast of NSW. It was this form that was originally introduced into cultivation by George Althofer way back in the 1950's.

Material from George's southern, red and cream flowered form made its way into the nursery trade in Victoria, and due to our Mediterranean type climate, to this day remains relatively common in cultivation. However due to its requirement for well drained soils in the garden, the species is rarely grown in NSW as their summer rains usually cause its demise. Here in Victoria, it has proven to be a most hardy plant so long as it is planted in a well-drained site.



Grevillea johnsonii orange flowered form Photo: Neil Marriott

It is hard to explain why the orange flowered form is so uncommon in cultivation as it is just so showy. Perhaps its size and the fact that the red and cream form was already so commonly cultivated were part of the answer. However for those of you who have enough space, the orange flowered form, growing to around 2.5 x 3m is hard to beat. Unlike its southern brother, its flowers are prominently displayed at the ends of every branch for several months over mid to late spring. Both forms have most attractive deeply divided soft green leaves, and even when not in flower it makes a most attractive screen plant.

When our gardens were burnt out in 2006 I was amazed to see that the orange flowered form recovered rapidly from a basal lignotuber. The common red and cream form however was killed outright and only regenerated by seed. This gives us clear evidence that the two populations warrant recognition as separate subspecies, having evolved separate reproduction strategies as well as different coloured flowers and slightly different leaves. As the type form is from Cox's Gap, the common form in cultivation will become a new subspecies when this species is revised. When this occurs the orange flowered form will become subspecies *johnsonii* and the southern form could become subspecies *brogoensis*!!

Grevillea johnsonii – orange flowered form is an extremely showy large shrub in the garden, attracting lots of honeyeaters and creating a wonderful showpiece or feature plant. Once established it tolerates hot and dry summer conditions, cold, wet and frosty winters and sets copious quantities of seed which germinates readily once soaked in smoked water for 24 hours and sown in a well-drained mix.

continued >

***Grevillea acropogon* 'Unicup Grevillea'**

Lovers of the genus *Grevillea* will know that this species does not feature in our *Grevillea Books*, as the species at that time remained unknown to science. It was not discovered until 1996, when a forester discovered the plant in state forest 6km NE of Lake Unicup, in the lower SW of Western Australia. This is an isolated, heavily forested region near the town of Frankland, and is in the higher rainfall forested region of the lower SW of the state –hardly the type of area one would expect to find a special *Grevillea*!



Unicup Grevillea *Grevillea acropogon* Photo: Neil Marriott

Peter Olde and I searched for at least 4 years until we eventually re-discovered it, and its habitat is truly unique within the genus. We had the latitude and longitude recordings for the site, but initially these turned out to be incorrect. After these were corrected by the forester we again seemed to be on a wild goose chase; after hours of searching in an area that was a vast dry swamp, we were about to give up yet again – no *Grevillea* grows as a permanent swamp dweller!! In one last vain attempt, I did a large circle away from the swamp's centre and eventually came across faint wheel marks of an old bush track. I immediately suspected that this may well have been the track the forester took through this area when he discovered the plant. Following this hunch, I set off along the track and gradually a series of low 'islands' in the swamp appeared in the distance. As I walked up on to the top of the largest of these rises, there was the new *Grevillea*; spectacular low mounds of green covered in superb bright red spider flowers!!

I screamed out to Peter and he was soon by my side admiring this incredibly rare plant. Further hunting failed to find any other populations –this one, small island in the middle of a large swamp in the middle of a vast forest appears to be the only population of this amazing *Grevillea*!! If the bush track did not run up and over this little island *Grevillea acropogon* would still be sitting there undiscovered –this is not an area that gets many visitors, let alone those that would recognize this *Grevillea* as a new species!

The re-discovery of *Grevillea acropogon* will long remain in our memories, as it took a number of years to achieve, and it occurred on a day that the world will never forget! When Peter and I were sitting in the car at the end of the day, our jubilation soon turned to dismay as we heard of the horror unfolding in New York where the twin towers were being destroyed by terrorists – September 11th 2001!!

To make matters worse, Peter's daughter was supposed to be flying into New York that day from Canada, and was planning to visit the twin towers!! An anxious drive to the town of Frankland ensued, but fortunately a phone call back to Pete's wife in Sydney revealed that Melanie had not been able to take the plane to New York!

Grevillea acropogon has proven to be an amazingly hardy *Grevillea* under cultivation. The habitat of the wild population (of which there are only around 18 plants growing on the lateritic gravel island in the middle of a swamp), seems to have ensured that the species is extremely adaptable, tolerating very wet conditions, obviously from when the swamp is full, to extremely dry when the swamp is empty. We have been growing it since 2002 and we have yet to lose a single plant. Add to this its ease of propagation by cuttings and its showy appearance and you have a winner.

In the wild the plants are only small domed bushes around 0.3-0.5m high and 1-2m across. However under cultivation it can get to around 0.8 x 2-3m across, so room must be allowed for its spread. However it makes a superb dense groundcover, with deeply divided rich green, only slightly prickly leaves and massed bright red spider flowers throughout winter to early summer. Visitors who help us in the garden are welcome to cuttings of this superb, unkillable *Grevillea*!

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 2016

Income

Subscriptions	\$240.00
Interest	0.72
	\$00.00

Expenditure

Newsletter publishing	\$240.00
Printing	135.56
Postage	47.60
	\$423.16

Amount in interest bearing deposit till 31/8/2016

\$19,002.58

Balance in current account 10/2/2016

\$4,387.22

Balance in business cheque account 10/2/16

\$32.68

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Email group

This email group was begun by John and Ruth Sparrow from Queensland. Free membership.

To subscribe, go to groups.yahoo.com and register, using the cyber-form provided. You must provide a user name and password as well as your email address to enable continuing access to the site which houses all emails and discussions to date.

You will receive a confirming email back and then you are able to access the site wherein you can select the groups to which you would like to subscribe. In this case search for 'grevilleas' and then subscribe.

Following this you will receive the latest emails regularly in your email to which you can respond. This is a good way to encourage new growers and those interested in the genus.

Postmessage: grevilleas@yahoogroups.com

Subscribe: grevilleas-subscribe@yahoo.com

Unsubscribe: grevilleas-unsubscribe@yahoo.com

List owner: grevilleas-owner@yahoo.com

URL to this page: <http://groups.yahoo.com/group/grevilleas>

Online contact

1. President's email address
peter.olde@exemail.com.au
2. The email group
grevilleas@yahoogroups.com
3. URL for Grevillea Study Group website
<http://anpsa.org.au/grevSG/>

Deadline for articles for the next newsletter is 31 May 2016, please send your articles to peter.olde@exemail.com.au before this date.

If a cross appears in the box, your subscription is due.

Please send to the Treasurer, Christine Guthrie, 32 Blanche Street, Oatley 2223.

Please make all cheques payable to the Grevillea Study Group.

2015 2016

If a cross appears in both boxes this will be your last newsletter.

Membership fees

The annual subscription is \$10 per year or \$40 for 5 years. If you choose to receive the newsletter by email there will be a 50% discount ie membership will be \$5 per year – \$20 for 5 yrs. I would encourage everyone to take advantage of the savings by paying for 5 years, and choosing email. Overseas membership \$20 if posted.