

AUSTRALIAN NATIVE PLANTS SOCIETY (AUSTRALIA) INC

GREVILLEA STUDY GROUP

NEWSLETTER NO. 112 - FEBRUARY 2019

02 EDITORIAL

03 ACTIVITIES

GSG VIC CHAPTER:

- THE LIVING COLLECTION
- EASTER WORKING BEE APRIL 19-23
- GOODENIACEAE SEMINAR

04 IN THE WILD

FURTHER NOTES ON THE RARE AND ENDANGERED GREVILLEA FLORIPENDULA

GREVILLEA SQUIRESAE

07 IN YOUR GARDEN

GREAT GREVILLEA GARDENS PART 2

FURTHER OBSERVATIONS OF ROOT SUCKERING GREVILLEAS

GREVILLEA CHRYSOPHAEA

GEORGE PENTLAND BOTANIC GARDENS

GREVILLEAS IN LANDSCAPING

18 GREVILLEA NEWS

NEW MEMBERS

19 | SEED BANK

0 | FINANCIALS

GSG NSW Programme 2019

Leader: Peter Olde, p 0432 110 463 | e peter.olde@exemail.com.au

For details about the NSW chapter please contact Peter, contact via email is preferred.

GSG Vic Programme 2019

Leader: **Neil Marriott**, 693 Panrock Reservoir Rd, Stawell, Vic. 3380 **p 03 5356 2404** or **0458 177 989** | **e neil@whitegumsaustralia.com**

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 of Easter Working Bee 19-23 April.

GSG SE Qld Programme 2019

We gather at 09:30 for shared morning tea and a meeting at 10:00. We usually have a BYO lunch about midday. Visitors are always welcome. For more info 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, 24 February

VENUE: Home of Alan Lee at 21-23 Lucas Road, Tamborine, not far from the Bearded

Dragon Hotel, off Tamborine Mountain Road.

SUBJECT: Grafting

Sunday, 5 May

VENUE: Garden of Chris Nikolic, at 424A Tallegalla Road, Tallegalla (via Minden). Chris

& Martin have developed many Native gardens on a couple of their 50 acres, emerging from 'weedsville'; lantana, asparagus fern, mother of millions, etc &

exotic trees.

SUBJECT: Garden establishment

Sunday, 30 June

VENUE: Pete's Hobby Nursery, 10 Patrick Street, Lowood.

Peter Bevan has a Native plant nursery across the back yard of several properties with several hundred varieties and he has also planted the now-famous 'rail trail'

garden near his Lowood home.

SUBJECT: Pruning

Sunday, 25 August

VENUE: Home of Denis Cox & Jan Glazebrook at 87 Daintree Drive, Logan Village.

Daintree Dr is a circuit & has 2 appearances on Diamantina Dr and Jan & Denis are

on the second corner. Please park on Diamantina.

SUBJECT: Perfumed Grevilleas

A FEW WORDS FROM PETER

Peter Olde, NSW

Welcome again to the newsletter written up by members of our Victorian chapter, co-ordinated by Neil Marriott. They have set a high standard that encourages the rest of us to do better.

In December last year, the New South Wales herbarium, known officially as the National Herbarium of New South Wales, Royal Botanic Gardens & Domain Trust, of which I am an Honorary Research Associate, closed its doors to all visitors. The herbarium is preparing to move its 1.4 million specimens to a new herbarium to be constructed at Mt. Annan Botanic Garden. Prior to the move, commencing in April this year, all the specimens will be digitally scanned and will ultimately be made available to public view. Before this happens, they will all have to be properly mounted. Once scanned the specimens will be placed back in their boxes and put into storage. They will then be unavailable to the botanists until the new herbarium opens hopefully some time in 2021. I am in the process of returning all my interstate and international loans and completing unfinished papers.

As part of the future planning for urbanisation of Sydney, the New South Wales Government is undertaking a survey of declared rare flora and the potential impact on these plants in the planning footprint. There are four areas proposed, obviously one of them being the new airport area around Badgery's Creek, called the 'Airotropilis'. I will be reporting on the impact on Grevillea parviflora, a species that we have ignored to some extent, but one that is proving a most interesting taxon. More on this later.

One of the requirements of the study of Grevillea parviflora in the wild is the survey of its occurrence in the natural bushland around Sydney. I have been walking down trails far removed from current civilisation. What has been a major disappointment is the wholesale degradtion of our beautiful bushland from household dumping. In some cases, whole households of rubbish furniture and garbage can be found scattered all through the urban bushland. This very serious problem has no immediate solutions other than an appeal to decency and respect or perhaps surrounding every patch of bush with reinforced wire. Obviously, this is not going to happen. Apart from cars being dumped, burnt, and stripped, along with general rubbish and furniture, there is the major problem of asbestos dumping to avoid tip fees. During the search of a small reserve near Kemps Creek, I came upon a large area sealed from entry by warning tape. On investigation I found a large dump where asbestos had been dumped, threatening the lives of nearby residents. The plants on which it had been dumped of course were completely killed. This reserve contains numerous rare species but is the likely type locality of Grevillea parviflora. We found

less than 10 extant plants. A walk in the bush can be a depressing experience.

Last week I attended a workshop in Melbourne over a week during which assessments concerning the conservation status of all species in the Proteaceae were made for the IUCN Red list. Obviously, many Grevillea species are critically endangered and it was pleasing that this international organisation will soon list them on their website. During the process I learned that conservation assessments have been made for all Victorian taxa. Unfortunately, they are not yet available to public view. For the work undertaken for IUCN, subspecies were subordinated to the assessment of whole species and did not receive a separate rating. As many of you know, I regard most of the accepted subspecies as species. In treating a taxon as subspecies the taxonomist usually just makes an educated guess. The difference between a subspecies and a closely related species is never explained and rarely entertained. Many rare subspecies are subordinated to common species, giving the false impression that they have no conservation imperative. To this end, I feel the whole genus needs re-assessment. Frankly, I would get rid of most of them. Recognition of a subspecies should be a positive and certain assertion about relationship, backed up by proof. Otherwise morphological differences should be treated equally not graded according to perceived importance. Just me banging on about this. Enjoy this newsletter so caringly compiled. It is much appreciated.

Illawarra Grevillea Park

NEXT OPEN DAYS 2019

May 4, 5, 11, 12

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 grevilleapark.org

GSG VIC CHAPTER Neil Marriott, Vic

The Living Collection

Sadly 2018 again brought well below average rains for the year, however over 75mm in December promoted wonderful flowering and growth in many of the Grevilleas. Rarities such as Grevillea annulifera flowered spectacularly, and have now set more seed than ever before. Please let me know if you would like some, but you will have to pick it up in person.



Despite the dry conditions throughout the year, many grevilleas flowered beautifully, including the very rare, and as of vet, unnamed form of Grevillea nana from near Chiddarcooping Nature Reserve, WA. This plant grows really well under cultivation, but has so far proven to be rather touchy and can be short lived. Peter Olde had a superb large plant, completely prostrate and 1.5-2m wide.

Sadly Peter's plant died and our plant is most likely the only one left in cultivation. As a result I have been providing lots of grafting material to as many members as I can. Grafted plants are incompatible with Grevillea robusta, but thrive when grafted with a suitable interstock. In spring it is truly spectacular, with a solid "wreath" of golden flowers all round the perimeter of the plant.



I would like to thank the following people for their generous donations of Grevilleas for the living collection: Robert Brown, Bernie Shanahan, Neville Collier, Phillip Vaughan, Dave Binch, Simon Gilliland, Mark Noake, Jonathan Steeds, Marilyn Sprague and Brian Weir. Marilyn gave us a large range of very unusual and several rare WA Grevilleas struck from material sent back from the field by Roger Wileman, while Phil Vaughan donated a grafted plant of a wonderful dwarf form of Grevillea candelabroides he

discovered in WA. Dave Binch donated several plants of the rare, unnamed prostrate subspecies of Grevillea confertifolia found only on the top of Mt William and Major Mitchell Plateau in the Grampians. These came from the plant in Brian Weir's garden, and Brian got his material from Graeme Woods old garden at Gisborne. This shows how it is vital for us to share material of unusual Grevilleas with other members of our study group!

Easter Working Bee April 19th-23rd

This year we will again be holding our popular Living Collection working bee. This will involve a couple of sessions of work in the gardens, pruning, removing dead plants, spreading mulch and potting up seedlings etc. There will also be field trips to the Grampians and to Phil Vaughan's Nursery where you can buy some of his rare grafted Grevilleas!

If you can make it, there are a few beds still available on a first to book first to reserve basis. Otherwise please bring tents, swags or caravans as there is plenty of room for all. BYO food and drinks, as well as gloves, shovels, chainsaws, handsaws, loppers etc. We will have lots of time for socialising with a BBQ and casserole share meals. Wendy and I will also shout all participants out for dinner one night at Stawell pub.

Please contact me on 0458 177989 or at neil@ whitegumsaustralia.com if you can come and help out. Cuttings and seed of Grevillea annulifera will be available for those who would like it.

Goodeniaceae Seminar

As part of the 2018 FJC Rogers Goodeniaceae Seminar in October last year, we had over 250 attendees visit our garden. This included our esteemed study group leader Peter Olde as well as numerous study group members. Visitors, including Peter were most impressed with the gardens, and most are keen to come back again sometime. Peter was most impressed with several large plants we have that are a cross between Grevillea magnifica and Grevillea petrophiloides - white flowered form. These look just like a Grevillea magnifica but with spectacular large pale pink flower racemes.



FURTHER NOTES ON THE RARE AND ENDANGERED GREVILLEA FLORIPENDULA

Neil Marriott, Vic

Grevillea floripendula 'Ben Major Grevillea' has always been a rather rare and localised member of the 'Holly-leaf Grevillea group' from western Victoria. It was first described by Ray Smith in 1981 from material collected from the lower slopes of Mt Ben Major. This mountain is at the northern end of a series of low gravelly hills to the north of Beaufort, western Victoria. Prior to this it was known as *Grevillea* sp 'Ben Major'. As well as the type locality, there are a further number of localised populations between Ben Major and the township of Beaufort.



Sadly, this entire region has suffered dramatically due to climate change, and a number of populations that were burnt out in bushfires several years ago, have entirely failed to regenerate and are now assumed to be locally extinct. Survey work by Wendy and I over the last 18 months has confirmed that once extensive populations are now reduced to populations of between 10 and 50 or so individuals. For example, the Musical Gully population opposite Musical Gully Reservoir has gone from several thousand individuals down to approximately 43 plants, mostly confined to the lower slopes of the valley and roadside where the seedlings have been able to survive with the added water from roadside runoff. Higher up the hillside, where there was once an abundant population, there are now no plants at all. This population was well known for the floral diversity within the population; just about every plant would differ in flower colour, with either red, pink, orange, yellow, tan or any shade in between. Today there are only several colours remaining.

As well as this morphological diversity within the one site, *Grevillea floripendula* has always been known to exhibit minor morphological differences between each population, with some being prostrate, some up to 1m tall, some glossy leaved, some dull and matted, some with simple leaf division, some deeply bipinnate and so on. The type population, being at the northern end of the

species range, was different to all other populations in its more upright and layered habit, with coarsely divided, dull surfaced leaves and uniformly coloured flowers..

Tragically, the population at the Type location Ben Major died out completely in the late 1990's, and for a number of years was assumed to have become locally extinct. Then the track up Ben Major was widened around 2016 and amazingly one seedling came up right on the edge of the road. In 2018 Wendy and I went back to Ben Major in the vain hope that it had survived the continuing roadworks, only to find that the single roadside plant had not only survived and grown, but another plant had sprung up on the opposite side of the road.

Not only that, while on the main Beaufort-Amphitheatre road heading for the Ben Major Track we discovered an entirely new population on the lower slopes of Ben Major growing on an embankment running down to the main road—here we found around a dozen plants of superficially similar appearance to the Ben Major (type form) plants.

Wendy and I went back to Mt Ben Major last week with Dave Binch and Simon Gilliland, and did a more thorough search of the new *Grevillea floripendula* population we found 1 km south of the Ben Major Track. From the site of the small population on the main road, we walked uphill (east) away from the main road and came across yet another population of at least 100 mostly prostrate shrubs up to 2m wide. GPS reading for this new site: N 143.38186 W 37.30604

There was evidence of good recruitment around both this and the smaller population downhill on the road, and it was noted that there has not been a fire through this area for several decades.

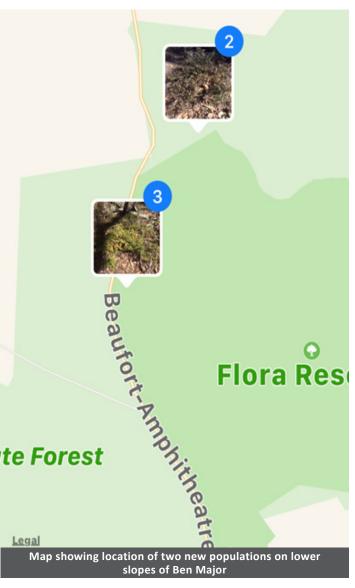


We then headed up Ben Major Track to the site of the sole plant discovered last year at the Type location. This plant has now grown to approx. 0.5 x 1m and covered in developing flower buds —if it remains undisturbed by road maintenance crews there should soon be a good population again developing at this site!! On the ridge opposite this site (north), we discovered another 13 young plants of the Type form of the species, again developing as semi-upright shrubs (cf prostrate 1km away).

Close examination of the foliar morphology of both the Type population and the new populations 1km south revealed that the type form has openly hairy upper surfaces to the leaves (on both young and old plants), giving them a dull appearance, while the leaves of the new populations are markedly glossy and sub-glabrous, giving them a greener appearance! This is evident in the less than ideal habit shots of the plants taken on my phone. It is interesting how there is clear genetic variation between populations even when so close to each other!! This is why every population of this species is so important, and why the VicRoads proposed bypass of Beaufort is such a threat to the populations in its path!



From the evidence obtained on extensive population loss following fires, from our regular observations of the populations closer to Beaufort, it is imperative that these Ben Major populations are protected from fires in the future. However with ever increasing wildfires due to climate change, the long term future for *Grevillea floripendula* is dire. Due to this, I have been advised that the species conservation status will soon be revised to Critically Endangered.



GREVILLEA SQUIRESIAE – A CRITICALLY ENDANGERED SPECIES BEING DESTROYED BY LOCAL GOVERNMENT

Neil Marriott, Vic

Grevillea squiresiae is a most beautiful, but sadly Critically Endangered (Priority 1. species in WA) species named by Peter Olde and myself in honour of Mary Squires, farmer and conservationist, who discovered this plant at the then only known location in Mukinbudin, WA. Mary found the plant growing ONLY on the roadside of Stockton Rd, a beautiful little backroad adjoining a nature

reserve; strangely, no plants have ever been found in the reserve itself, only on the roadside. For a number of years, Department of Environment field officers carried out extensive systematic searches of nearby roadsides and reserves in a vain attempt to discover new populations. Sadly all searches were in vain!



Grevillea squiresiae close up of flowers and foliage
- Photo Werner Kutsche

Then in September 2005, study group member Werner Kutsche from SA discovered a new population of *Grevillea squiresiae* on Hunter Road, approximately 1km south of Hunter West Road intersection with Farina Rd in the Shire of Westonia: <u>Lat S 30 deg</u>, 50min, 45.4 sec. <u>Long E 118 deg</u>, 41min, 35.1sec. At this site Werner recorded around 40 plants along both sides of the road, growing in an area approximately 200-300m east of the intersection with Farina Rd.

Werners records: 'Plants were growing in yellow sand on both sides of a sand pit located on the northern side of the road on a corner as the road turns towards the north, south of the Hunter West road intersection. Other grevilleas growing on this site were *G. paradoxa*, *G. teretifolia and G. didymobotrya ssp didymobotrya* (?)". This new site is approximately 60kms ENE of Mukinbudin, so is a quite remarkable discovery!



Local Government – the Biggest Threat to the Roadside Environment in WA

In August last year, Study Group members Barry and Elva Teague visited the original, Type location site on Stockton Rd, Mukinbudin, and were shocked to discover that the shire grader had recently gone along and graded out much of the native vegetation along the road, including MOST of the *Grevillea squiresiae* plants. Departmental markers for rare and endangered plants had been placed at both ends of this site, warning grader drivers not to grade that section of the road as it contained Priority Flora. Barry found the markers graded up in the piles of dead Grevilleas ready to be burnt!!

The next day Barry went back to take photos of the site and could only find ONE plant left alive. Barry was furious so went to the Mukinbudin Shire Office to report the offence, and has sent the Shire his photos showing the offence. The reply from the shire was to tell Barry that next time he visited he would find the warning markers reinstated!! No mention of the destruction of the Priority flora or their reinstatement!



Type locality for *Grevillea squiresiae* Stockton Rd, Mukinbudin
- note graded out Environment marker and dead Grevilleas – Elva Teague

Then, in September last year Werner Kutsche went back to the new site he had discovered on Hunter Road near Chiddarcooping Nature Reserve. On arrival he was shocked to discover that this site had also been graded —this time by the Shire of Westonia. Werner stated in an email to me "The news is not very good unfortunately. I counted about ca 10-12 plants on the northern side of the road just to the east of the corner....and about 2 plants on the southern side. Some of the plants were coming into flower. There was evidence that the graders had been driving over the plants and causing some damage." Some damage turned out to be destroying around two thirds of the entire population!



If a private individual did this he would be up for thousands of dollars in fines! This is one of the state's rarest and most beautiful Grevilleas. It is about time the Department of Environment began to prosecute these rogue shires who are destroying WA's priceless roadside flora all over the state!

IN YOUR GARDEN

GREAT GREVILLEA GARDENS, PART 2

Neil Marriott — Last year I wrote about the wonderful garden and extensive Grevillea collection of Robert and Norma Brown at Nicholson in East Gippsland. This year we come a lot closer to Melbourne to the amazing garden of Brian and Lorraine Weir at Wallan, just north of Melbourne.

Brian became interested in Grevilleas around 2000; he had always loved native plants, but until 1998 he didn't have either the time or space to devote to them. With their new home on a large block at Wallan they could now create their dream garden. Then in 2010 he met Graeme Woods who gave them free run of his magnificent Gisborne garden to take any cuttings they wanted. So began Brian's wonderful collection of Grevillea! Lorraine loved a cottage garden but it was getting extremely hard to care for with long hot summers and health issues, so she made the switch to natives too.

When I first visited Brian and Lorraine's garden a few years ago, there were numbers of grafted Grevillea standards dotted around the garden, a few of Lorraine's Correas and a mix of other native and exotic plants. However both Brian and Lorraine seemed to "get the native bug" real bad, and every time we revisited, there were more and more natives and less and less exotics. Today, Brian has an extensive and spectacular collection of around 70 standard Grevilleas and approximately 250 other Grevilleas, while Lorraine has a beautiful collection of around 140 Correas.

Brian and Lorraine Weir, Wallan, Vic

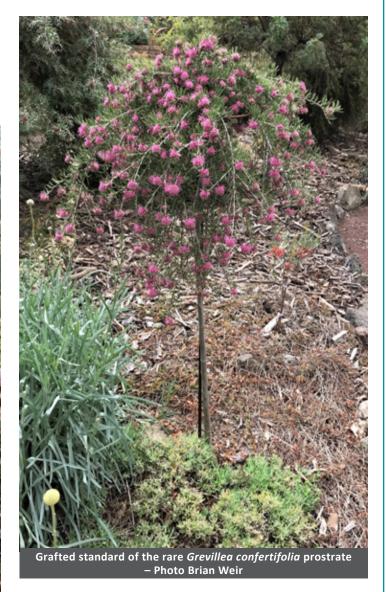


Brian grafts all his own plants, and his Richard Tomkin inspired side saddle grafts are quite superb! He specialises in grafting standards, either 1m high mini-standard or 2m high typical standard. He has even grown numbers of "super standards" around nine foot tall, but finds that these are more effort than they are worth!



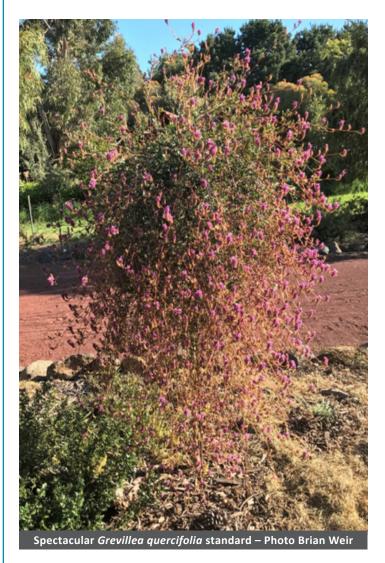
Dramatic standard *Grevillea plurijuga* beside *Grevillea thyrsoides* - Photo Brian Weir

One of the really great things about Brian is that he is keen to share his grafting knowledge freely with all who are interested. Over the years he has taken Dave Binch and Simon Gilliland from South Gippsland under his wing and taught them to be skilful grafters themselves. Today he is training up Mark Manchester from Tallarook, a bit further north of Melbourne, who has been bitten by the Grevillea bug and is establishing an ever-expanding collection of Grevilleas in his own garden!



Wallan has a typical Mediterranean type climate, with cool to cold wet, frosty winters and mild to hot, dry summers. Rainfall is these days quite unreliable, and around 500?? mm per year. The soil in Brian and Lorraine's garden is deep and rich volcanic loam, of acid pH. Brian grafts onto *Grevillea robusta* and these, along with Lorraine's Correas thrive in their volcanic soils. Already the gardens have the appearance of being established for many years, with most plants filling out beautifully. Luckily Brian is not averse to heavy pruning, and this keeps their plants looking healthy, compact and flowering freely.

Brian has some of the most spectacular grafted standards I have ever seen, including probably the very best plant of *Grevillea quercifolia* either in cultivation or in the wild!



Brian is always looking for new Grevilleas to test as standards, and as a result their garden is full of amazing surprises and free flowering plants. Brian's research into grafting has led to him and Nev White working together to make a comprehensive list of all Grevillea species and subspecies and their compatibility with various rootstocks. If you have dabbled into the world of grafting, Brian would LOVE to hear from you on just what rootstocks you have had successes with. I have included his email address below so you can contact him!! As Brian says "We are all getting a bit long in the tooth and I would like to be able to leave something to help future grafters so they don't have to keep re-inventing the wheel when they begin grafting. One day I would like to add interstocks but had better start with little steps".



Brian rapidly runs out of the grafted plants he produces, but any excess is sold to those lucky enough to get hold of them at his little 'Weiryi Nursery'. I suggest you give him and Lorraine a call and spend a couple of hours wandering around their beautiful garden of Grevilleas and Correas! Brian and Lorraine can be contacted on (03) 5783 2912 or email on; lorraine_brian@bigpond.com. Their address is 7 Pretty Sally Drive, Wallan Vic.



FURTHER OBSERVATIONS OF ROOT SUCKERING IN GREVILLEAS

Neil Marriott, Vic

When Peter Olde and I undertook the many years of research into the genus Grevillea for the writing of the Grevillea books, we travelled all over the country, attempting to collect and observe every species we could in the wild. At the site of every wild species, we noted as much as we could about the natural conditions and the biology of each species. This included studying features such as the natural soils, drainage, aspect, associated vegetation, size of plants, and methods of reproduction. This included thorough observations of their potential to reproduce by the development of new plants from epicormic buds on adventitious roots, otherwise known as root suckering.

There are a number of Grevilleas well known for their ability to reproduce by root suckering. Occasionally this is a reproductive technique of the entire species such as Grevillea anethifolia, Grevillea renwickiana, Grevillea parallelinervis, Grevillea infecunda, Grevillea leiophylla, Grevillea micrantha, Grevillea patulifolia, Grevillea rhizomotosa and Grevillea spinosissima. For other species, discreet populations have evolved with this reproductive mode, such as Grevillea alpina, Grevillea aquifolium, Grevillea aspera, Grevillea lavandulacea, Grevillea leptobotrys, Grevillea linearifolia and Grevillea lanigera. It is most probable that most of these discreet populations will ultimately become recognised subspecies when investigated by morphological analysis as well as DNA testing.

There are already recognised subspecies of Grevillea that have evolved with root suckering as their form of reproduction. Generally, this is a major morphological character that can be used to separate the subspecies from the type species. Root suckering subspecies known include *Grevillea curviloba* subsp. *curviloba*, *Grevillea ramosissima ssp hypargyrea*, *Grevillea vestita ssp vestita* and a new species discovered by Peter Olde and myself south of Woodenilling, WA with the manuscript name of *Grevillea imbricans*. This is a lovely small species to 1 m while another closely related species 'Arthur River' grows to 3 m and reproduces exclusively by seed.



One of the great benefits of having a living collection of Grevillea, is that the species can be observed often over many decades. This is now the case for the Grevillea Study Group Living Collection here at Panrock Ridge in the Black Range, western Victoria, where the oldest plants are now around 16 years old. One of the amazing observations I have been able to make have been the incidence of root suckering, both in those species, subspecies and forms already known to root sucker, as well as the discovery of this reproductive mode in species never previously recorded as doing so! Of course this is ONLY possible if the plants are being grown on their own roots!

Following the disastrous bushfire that destroyed much of the collection in 2006, valuable observations were possible into the ability of around 200 species and subspecies to recover from fire. In summary, most species were killed outright, while around 15% recovered from epicormic buds in basal lignotubers. However a number of species, or forms of species recovered by way of root suckers. The first of these was *Grevillea asparagoides*, with approximately 6 lovely young plants re-shooting from subsurface roots up to 2 metres from the original plant. This is the first record I can find of this species ever reproducing by this mode.

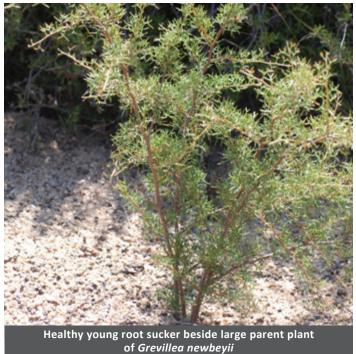
Then came an amazing recovery of a very large flowered form of *Grevillea nudiflora* that I originally collected approx. 16 kms east of Ravensthorpe in 1981. This almost certainly warrants recognition as a new taxon. The original single plant rapidly re-shot from both a basal lignotuber as well as from extensive root suckers.

It now covers a large area (approx. 10m x 6m) of the garden and interestingly, continues to spread by this mode. The same occurred for several plants of the as of yet, unnamed subspecies of *Grevillea aspera* from the Gawler Range, SA. One single plant of this subspecies resprouted from root suckers after the fire and would now be over a thousand plants!



Plants of *Grevillea curviloba ssp curviloba* have been observed root suckering in the wild just north of Bullsbrook. Plants of this subspecies are now beginning to reproduce by root suckers under cultivation. On the other hand, I have never seen *Grevillea curviloba* subsp. *curviloba* (the commonly grown subspecies, originally incorrectly grown as *Grevillea biternata*) root suckering either in the wild, or under cultivation.

Recently we have noted several more Grevillea species beginning to root sucker in the garden. The first was *Grevillea newbeyii*, which occasionally reproduces by this mode in the wild. This rare species is seldom cultivated, and when it is, it is normally propagated by grafting, which will negate its root suckering habit. Our original plant is now 15 years old, but has taken all this time to begin suckering.



The next species observed root suckering was *Grevillea* acropogon, another critically endangered species from only one known locality in the lower SW of Western Australia. When Peter Olde and I rediscovered this species we observed no indication of root suckering in the wild population, and to my knowledge this is the first record of any species in the Thelemanniana Group reproducing by root suckers.



It is not sure what the trigger was for these two species to root sucker, although it may have been root disturbance while re-mulching the gardens, or is it possibly age related or stress related?

This is a fascinating feature of a number of our Grevilleas, so keep an eye out for young plants popping up in your garden from its parent's roots, and then let us know what you discover!

GREVILLEA CHRYSOPHAEA

Grevillea chrysophaea is a Victorian endemic species occurring in The Brisbane Ranges west of Port Philip Bay, in the Holey Plains State Park south-west of Rosedale, and from Heyfield along the Licola Road over Burgoyne Saddle, through Licola and along the slopes alongside Tamboritha Road over the Wellington River bridge. It also occurs south of Rosedale near Gormondale and Woodside, and at Sperm Whale Head on Lake Victoria. It hybridises with G. steiglitziana and G. rosmarinifolia in the Brisbane Ranges and with G. lanigera in Gippsland.

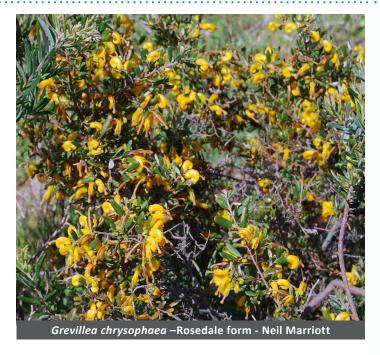
Accounts of GSG field trips to these regions can be found on the Internet in issues of the GSG Newsletter via the general index on the Study Group website.

Description:

Plants resemble *Grevillea alpina* in foliage, form and habit and have similar soil and cultivation requirements - well drained sunny or part-shade situations, tolerance of dry conditions but with a regular supply of moisture in the subsoil.



Flowers have a yellow-golden perianth and a brown style and can be quite prolific at peak flowering time in September and October. Flower buds continue to form along the growing branchlets all through summer with sporadic flowering. These colours are relatively rare in the genus, making *G. chrysophaea* a most desirable plant in the garden. The Brisbane Ranges form is the most hardy in cultivation, but the Holey Plains form has been rather unsuccessful. Further details can be found in The Grevillea Book Volume 2.



I have had the Brisbane Ranges form in the past, living from 3-4 years in part shade on a raised well-drained sandy-loamy soil bed. Recently we potted on a tubestock plant of the Brisbane Ranges form from the indigenous La Trobe Wildlife Sanctuary Nursery at our Yarra Yarra Group Plant Expo and planted it in full sun in a raised well-drained bed beside our polyhouse where it is now an upright plant 1.2 x 1.2 m and thriving well in our hot dry summer. It evidently gets continuous moisture in the subsoil and some nutrients from the watering of the polyhouse.

G. chrysophaea used to be readily available and more widely grown, but has proved relatively short-lived in cultivation, due perhaps to unsuitable soil conditions. Both the Brisbane Ranges and the Holey Plains forms have been successfully grown, grafted on *G. robusta* stocks and make reliable, showy small plants.

Grevillea chrysophaea is most closely related to Grevillea celata 'Nowa Nowa Grevillea' which is a rare, suckering shrub to 1m with a scattered distribution through the Nowa Nowa State Forest, east of Lakes Entrance in east Gippsland. For many years, this species was known as Grevillea sp nov aff chrysophaea 'Nowa Nowa'. Grevillea chrysophaea is also very closely related to Grevillea alpina and Grevillea floribunda.

George Pentland Botanic Garden is about 7.5 hectares (half of it being garden beds, the other half being lawns). They are open every day from 7am to 9 pm in summer, and from 7am to 6 pm in winter. The total amount of taxa is estimated to be around 500 (about 25 of them being part of the genus *Grevillea*). The staff is composed of a full-time head-horticulturist Mathieu Lacostes, a part-time apprentice, and a group of about 5 to 10 committed and enthusiastic volunteers (2 hours a week). As well as Mat, two volunteers Lee Denis and Charles Saffroy (who are also members of the APS Vic) came up to the living collection to help with the grevillea project. Mat describes Lee and Charles as "truly passionate, knowledgeable, and an invaluable asset to our Botanic Garden".



Thanks to a handful of far sighted locals, a large section of the old Frankston Golf Course was set aside in the 1980's as a botanic garden. The gardens are not far from the centre of the city, and are sited on beautiful grey sandy soils that formerly supported rich heathy woodland –ideal for growing a large range of Australian plants, which George Pentland Botanic Gardens specialise in.

I have visited the gardens several times, and they have some lovely native plants, well established. However I noted that there was a serious shortage of Grevilleas. As a boy I grew up in Frankston, so I was well aware that the sandy soils, despite being ideal for Banksias, Boronias, Correas, Dryandra and a host of other genera, were not at all good for the genus Grevillea. The fact is that Grevillea as a genus just don't like deep sandy soils, and as a result there are only a small number that grow naturally in such soils right across Australia.

I recently received an email from Mathieu Lascostes, head of the botanic gardens, part of which reads as follows:

"My name is Mathieu Lascostes. I am the horticulturist looking after George Pentland Botanic Garden, Frankston City Council. We met twice in the past (once at a conference in Geelong in 2016, and more recently at the flower show in Pomonal). You might remember a French gardener with a noticeable accent and a strong appreciation of the Australian flora...

Our dedicated volunteers and I collected last autumn a whole bunch of young self-seeded *Grevillea robusta* that were abundantly scattered throughout the garden, and subsequently potted them all up. They are currently doing very well and about 70 of them will be ready to be grafted at the end of this winter.

The project that I wish to carry out with our volunteers' help has multiple aims. One of them is for us to participate to the conservation effort (of wild species or garden cultivars), and assist with any urgent matter regarding the genus (is there a conservation network for *Grevillea*?). Another purpose of this project would be to display species or cultivars that wouldn't perform well in our deep acidic sands (pH of about 4.5) without being grafted, or taxa that are difficult to propagate from seed or cutting. Lastly, this project should ideally include unusual and particularly ornamental taxa, thus introducing diversity and beauty to the garden, and triggering our visitors' curiosity. Would you be happy to help me work on a list of about 30 taxa that would meet the requirements listed above?

I would also need some advice from you with regards to the supply of the scions to be grafted. Who should I contact, and what is the most convenient way to obtain them? Would we have to collect them on site ourselves, or can scions of *Grevillea* be sent by mail without any problem?"



I replied to Mathieu (Mat) and organised for him and his volunteers to come up to the living collection at the same time as enthusiastic members Dave Binch and Simon Gilliland were up for the weekend getting Grevillea material for their collections. Dave and Simon agreed to help teach Mat and his team how to graft their own plants for the gardens. After a couple of hours and a few practice grafts, we then headed off around the gardens collecting grafting material, seed and cuttings of all the plants that I had shortlisted for them. These were chosen for a number of the aims listed by Mat in his letter above. These were species:

- 1. listed as rare or endangered
- 2. hard to propagate by seed or cuttings and
- 3. horticulturaly attractive for display in the gardens, thereby encouraging visitors to want to grow them in their own gardens.



It will be exciting to watch the development of the Grevillea collection at George Pentland Botanic Gardens over the coming years. I have put Mat in touch with Brian Weir at Wallan, as I know that Brian will be of great help in honing their grafting skills and increasing their collection of Grevillea species and showy cultivars. If you are ever on the Mornington Peninsula I suggest you drop in to George Pentland Botanic Gardens and hopefully catch up with Mat. The address of the gardens is Williams St North, Frankston.



GREVILLEAS IN LANDSCAPING

Merele Webb, Croydon North, Vic

The lack of knowledge and even curiosity about Australian Plants is a marked feature in this Euro-centric nation. "Belonging to country" is a foreign concept along with a lack of recognition of First Nations. This attitude has led to the plants of Oz being considered strange, unknown and invisible in many big public parks and around the suburbs, and being dismissably referred as "natives" of unspecified habitat and provenance. There is insufficient recognition that Australian plants occur in a great diversity of habitats, topography, climate, rainfall and soil types.

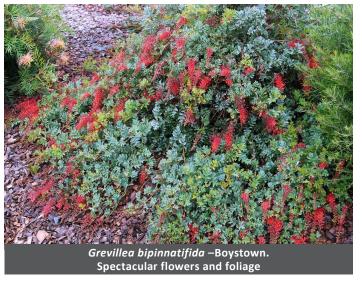
In times of drought and 'the Big Dry', attention is now being turned to what can survive in our gardens. Here is an opportunity for us to consider the use of grevilleas, particularly of spectacular Western Australian species, as well as eremophilas (the dry specialists) and dwarf floriferous eucalyptus species. At this point, availability of desirable plants in nurseries and public gardens becomes a vital issue for people to be able to see and select suitable plants wisely.



As a landscaper since the 1960s, I have found this lack of knowledge not only among the general public but also among many wholesale and retail nurseries and landscapers.

Therefore the selection and successful cultivation of a particular Aussie plant in a particular garden situation requires not only the knowledge and understanding of the preferred requirements of that plant but also an understanding of the suitability of the chosen planting sites for each of those plants, in relation to the other plants chosen or already established nearby. Coordination of flowering times and contrasting flower colours and foliage colours among a group of plants all contribute to the aesthetic appearance of the resulting garden bed. To give clients some choice, I find it helpful to describe a a range of similar plants which all perform the same function of screening or ground cover but add a different visual look and quality alongside its neighbours. I have found that clients often welcomed the chance to nurture a rare plant in their garden. By involving the client in the selection of choices he/she will feel a greater sense of attachment to the plantings. Being a member of the Grevillea Study Group since the 1990s and of the Vic APS Maroondah Group since the 1960s has greatly expanded my knowledge. I have also found the book 'Gum' by Ashley Hay to be most stimulating and thought provoking.

Since Oz plants grow in such dense communities, root space and shadiness requirements need consideration. The association of companion plants such as acacias and other legumes nearby in the garden bed may be beneficial to the vigour and survival of chosen plants in cultivation. Knowledge of such associations in the wild could be very helpful in enhancing the vigour and survival of sensitive plants in the garden.



The varied habitats around the continent have produced adaptive change in the plants, so we could almost say that there is a grevillea for every situation in a garden landscape. But this is not quite so. None can function as a small tree with overhead shade and thin tall trunks as well as the mallee eucalypts.

Grevilleas make marvellous garden plants, adding a third and fourth dimension of visual, textural and fragrance delights. Also, small tree grevilleas such as *Grevillea* 'Moonlight' or *G.* 'Flamingo' make a great statement beside front or back steps.

Knowing the provenance of a grevillea, the local climate and soil can be helpful in selecting a happy spot in the garden. Sclerophyll forests have wide range of habitats, with the lower slopes having more moisture than the upper slopes. Microclimates vary with the extent of tree cover, rain and wind, soil types and the angle of the sun. Australia has a huge range of habitats with a myriad of species, including more than 380 species of grevillea. Grevilleas from the south-west of Western Australia are among the most spectacular, and our intrepid collectors and propagators including Philip Vaughan, Neil Marriott, Alex George and Mervyn Hodge have made many species available, and have produced an increasing range of hybrids to suit conditions of eastern state.

Micro habitats can be purposely created around the garden with raised mounds, soaks and ponds, shady areas and windbreaks producing optimal habitats for a wide range of species.

Grevilleas provide shades of green and grey foliage which contribute to the visual and textural interests of gardens. Variations in leaf colours extend the sense of size of the garden and grevilleas are particularly useful for this purpose. Stark white stems eg in *Grevillea eriostachya*, *Eucalyptus depauperata* and *E. caesia* are very dramatic.

Smaller grevilleas can provide a whole range of plant shapes and leaf and flower colours which can add visual excitement and variety.



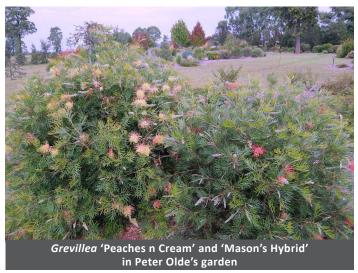
Three reference books are invaluable to enable growers to expand the range of grevilleas suitable and available for cultivation — "The Grevillea Book", Volumes 2 and 3, by Olde and Marriott (1995), and "Grow What Where" 2002 edition. Publication of Volume 4 of The Grevillea Book — on the hybrids is eagerly awaited by Australian plant growers. Information about particular species can also be found from Google searches of the Internet. Some commercial nurseries specialising in Australian Plants publish lists of

plant species available at the time, and include some descriptive details and recommended cultivation conditions.

Lists of species for various habitats

Shady:

- G. alpina x rosmarinifolia hybrids
- G. rhyolytica and hybrid 'Lady O' 1-2 m, red flowers most of year, part to dense shade
- G. chrysophaea
- G. polybractea
- G. australis 1-2 m, scented
- G. aquifolium toothbrush flowers, many forms
- *G. curviloba* ground cover with lacy white flowers, hardy under trees
- *G. rosmarinifolia* Lara Dwarf greyish foliage, pink flowers, showy in winter
- G. rosmarinifolia aurea 1x1 m, showy in winter
- G. wilkinsonii 1.5 m holly foliage, mauve flowers
- G. speciosa -erect, much-branched shrub
- G. occidentalis 1-1.5 m. showy woolly grey-pink flowers
- G. flexuosa 2-3 m, leans through other shrubs



Open sunny areas:

G. sericea - 1.5x2 m. pink flowers

G. banksii hybrid cultivars - many flower all year but may need extra moisture in summer, including:

'Superb' - orangey red

'Katies Sister' - red flowers, silver foliage

'Strawberries and Cream' - 2x2 m

'Caloundra Gem' - pink

'Peaches and Cream' - very hardy

'Flamingo' - dense bush to 3 m, drooping with clusters of pink flowers

<u>Showy W.A. grevilleas</u>: which can be grown on their own roots in deep well-drained raised beds but in moister climates are best grown as grafted plants on hardy rootstocks.

- G. oligomera
- G. petrophiloides
- G. magnifica
- G. treueriana South Australia
- G. 'Tirari Blaze'
- G. bipinnatifida red or orange (showy)
- G. candicans -fence screen or in shrubbery
- G. candelabroides fence screen or in shrubbery
- G. wilsonii very prickly but showy red flowers in springsummer
- *G. nivea* 'Scarlet King', grey foliage on horizontal branches with red brushes
- G. eriostachya
- G. juncifolia
- *G. spinosa x eriostachya* (P. Vaughan) striking bright yellow flowers
- G. formosa and hybrids green mounds in open areas

Ground Covers: - tolerate dry and shady sites

- G. nudiflora prostrate, 0.3x1-3 m
- G. tenuiloba low mound 0.7m
- G. nana 0.3x2 m
- G. 'New Blood' red, long flowering, 0.2-0.3x1.5 m
- G. thyrsoides low mounding shrub 0.3x2 m
- G. 'Wendy Sunshine' 0.6x1 m



- G. confertifolia forms and hybrids, reddish-mauve flowers
- G. aquifolium forms, holly-leaved with toothbrush flowers
- G. diminuta forms
- G. juniperina x -'Pink Lady' bright pink, prickly foliage, pet deterrent

G. 'Forest Rambler' - 0.5x4 m, scrambles and climbs, making shadowy patterns

<u>Background Plants against fences or buildings or sheds – for screening :</u>

- G. albiflora 3 m, large bright white flowers
- G. annulifera 3 m, large white, turning pink, fringed flowers, stinky
- G. eriobotrya 3x3-4 m, woolly white large flowers
- G. globosa 1.5x1.5 m, green and black, dense
- G. eriostachya and hybrids waving stems against the sky
- G. flexuosa 3x3 m but lanky, branches extend through neighbouring plants
- G. banksii tree form to 8 m, striking red flower heads
- G. pterosperma 2x4 m, large white flowers on tops of bush
- G. buxifolia 1.5x2 m, dense screen
- G. gordoniana 5 m, yellow, orange or red flower forms (P. Vaughan)

Plants with potential, but little known

Holding flower heads above foliage:

- G. makinsonii multiple inflorescences on stalks above foliage
- *G. cirsiifolia* rare groundcover with lovely yellow perfumed flowers



The beautiful flowers on Grevillea circiifolia – Photo Brian Weir

IN YOUR GARDEN

- G. rudis 0.3-0.7 m, tends to spread with age, interesting on border, blackish tinge
- G. didymobotrya 1 m with masses of yellow candle flowers on stalks
- G. scapigera very dainty
- G. prominens 0.5x1.2 m, white flowers, loamy soils
- G. pilulifera erect and much branched to 1 m
- G. tenuiloba prostrate groundcover over rocks
- *G. acropogon* ground cover, prickly but dainty, extends through other shrubs for 4 m
- *G. umbellulata* ssp *acerosa* 30-50 cm, pearly-pink flowers on slender fine stems, excellent for massed planting along borders
- G. trachytheca 1-1.5 m, massed white flowers

- *G. diminuta* forms 'Emma Charlotte' 40-60 cm, hardy on borders
- *G. juncifolia x bipinnatafida* hybrid 'Goldilocks' 2x2 m, grey foliage with large bright yellow racemes
- *G.* 'Knockout' (*baueri x rosmarinifolia*) 1x1 m, dense bush covered for months with very bright red flowers

There are many more grevilleas and their cultivars which can be much enjoyed in public and private gardens. Making suggestions to local nurseries, and buying from specialist growers will increase demand and encourage growers and plant nurseries and retailers. Bunnings is increasing its range and welcomes input from customers.

A grevillea book along the likes of 'Grow What Where would be helpful for us all.

GREVILLEA NEWS

NEW MEMBERS

Christine Guthrie, NSW

We love to find out about our members, so feel free to send a few sentences about yourself or your activities by way of introduction.

Matt Leach, Vic

I'm an APS Geelong member and I would like to know if there are differences between the original Lara grevillea and some of those being sold as Lara's Dwarf grevillea. I work on the Kevin Hoffman Walk in Lara.

Reply -

Dear Matt

In a soon to be published paper on the Grevillea rosmarinifolia complex, Grevillea lara will be recognised as a distinct species. This plant is now extinct in the wild but has been maintained in cultivation at the Geelong Botanic Gardens where I mistakenly identified their plants as 'hybrids'. Grevillea 'Lara's Dwarf' is just a commercialised nursery name for this species. It is regrettable that in the 1993 revision of Grevillea Don McGillivray would not admit of any diversity around this 'species', from which I have delimited an additional 10 species, some of which are extremely rare. One was discovered by Bill Molyneux beside the railway line at Avenel. I also propose to reinstate Grevillea latrobei from Victoria, a widespread but never common root-suckering shrub. Grevillea rosmarinifolia will be restricted to populations at the far north of the current species range in New South Wales where it is known from a single extant population.

Peter Olde

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

Grevillea aurea Grevillea baileyana

Grevillea banksii alba prostrate

Grevillea biternata Grevillea candelabroides Grevillea crithmifolia Grevillea decora

Grevillea decurrens Grevillea eriobotrya Grevillea eriostachya

Grevillea excelsior Grevillea floribunda ex

Coonabarabran Grevillea glauca

Grevillea johnsonii (ltd) Grevillea juncifolia Grevillea leucopteris

Grevillea longistyla

Grevillea magnifica

Grevillea magnifica ssp magnifica

Grevillea manglesii ssp manglesii (ltd)

Grevillea monticola Grevillea nana ssp abbreviata

Grevillea newbeyi Grevillea nudiflora Grevillea occidentalis

Grevillea paniculata Grevillea paradoxa (Itd)

Grevillea pilulifera Grevillea polybotrya

Grevillea preissii Grevillea pteridifolia Grevillea pulchella Grevillea refracta

Grevillea ramosissima

Grevillea ramosissima ssp

ramosissima

Grevillea stenobotrya Grevillea striata (ltd) Grevillea superba Grevillea synapheae Grevillea teretifolia Grevillea tetragonoloba

Grevillea triloba Grevillea triternata Grevillea vestita Grevillea wickamii

ssp aprica

Grevillea wilsonii

Free + s.a.e

Grevillea banksii prostrate white Grevillea banksii prostrate red Grevillea banksii prostrate red

ex 1770

Grevillea bracteosa Grevillea glauca Grevillea juncifolia Grevillea johnsonii red flowers

Grevillea longistyla

Grevillea leucopteris

Grevillea magnifica Grevillea 'Moonlight' Grevillea petrophiloides

Grevillea plurijuga Grevillea ramosissima Grevillea robusta

Grevillea robusta
Grevillea stenobotrya

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.

FINANCIAL REPORT FEBRUARY 2019

Income

Donations 100.00

Interest 0.56

Total income \$100.56

Expenditure

Newsletter publishing \$255.00

Total expenditure \$255.00

Bank account details



The term deposit was terminated on 28/6/2018 and the balance of 18,955.99 was deposited in the current account.



Balance in current account 14/02/2019

\$4,586.05

OFFICE BEARERS

LEADER

Peter Olde

140 Russell Lane, Oakdale NSW 2570



(04) 3211 0463

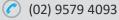


peter.olde@exemail.com.au

TREASURER AND NEWSLETTER EDITOR

Christine Guthrie

32 Blanche Street, Oatley NSW 2223



bruce.moffatt@tpg.com.au

CURATOR OF LIVING COLLECTION

Neil Marriott

PO Box 107, Stawell Vic 3380



(03) 5356 2404 or 0458 177 989



neil@whitegumsaustralia.com

CURATOR OF ILLAWARRA GREVILLEA PARK, BULLI

Ray Brown

29 Gwythir Avenue, Bulli NSW 2516



(02) 4284 9216

CURATOR OF SEED BANK

Matt Hurst

37 Heydon Ave, Wagga Wagga 2650 NSW



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

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