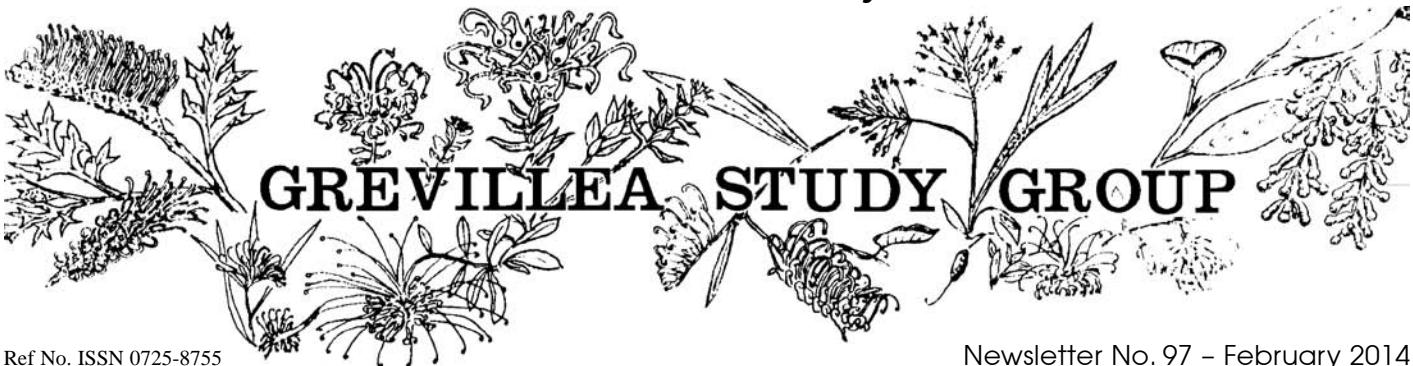


Australian Native Plants Society (Australia) Inc



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Newsletter No. 97 – February 2014

Newsletter No. 97

GSG Vic Programme 2014

Leader: Neil Marriott

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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.

GSG Collection Easter Working Bee Good Friday, 18 April – Monday, 21 April

VENUE: 'Panrock Ridge'
693 Panrock Reservoir Rd, Black Range,
Stawell
TOPIC: Working Bee, garden visits, nursery visits &
Grampians tours (see 'Grevillea Miscellany'
page 5 this newsletter for more details).

GSG NSW Programme 2014

For details contact Peter Olde 02 4659 6598.

Saturday, 15 February

VENUE: Thirroul Community Centre
Excelsior Hall at 352-358
Lawrence Hargrave Drive, Thirroul
TOPIC: APS NSW February gathering and talk
on Grevilleas – more details on page 3.

The Sydney Grevilleas: October long weekend Friday, 3 October – Tuesday, 7 October

Our field trip this year will encompass as many species found in the greater Sydney region as we can possibly see. We intend to hire buses, for which a daily fee will be payable, so it would be useful to have people let us know if they would like to come. Camp and accommodation available at Oakdale and in the wider Camden area. See our 'Silky Oaks' gardens as well. Plants for sale. Some camp-out likely. A tour of the 'Illawarra Grevillea Park', Bulli and Peter & Sue Stewart's cut-flower Grevillea farm at Alpine are also planned.

We may be able to change the date so if you are interested in attending please advise Peter well in advance to determine which date suits most members. This field trip will be limited, **bookings are essential**.

More details to come in future newsletters.

GSG SE Qld Programme 2014

Morning tea at 9.30am, meetings commence at 10.00am. We have a meeting every second month usually on the last Sunday of the month.
For more information contact **Helen Howard** on 0402 555 573.

Sunday, 23 February

VENUE: Home of Bev and Bill Weir
151 Warriewood Street, Chandler
Brisbane 4155
PHONE: 07 3245 4537
TOPIC: Local species that grow well on their own roots

Sunday, 27 April

VENUE: Home of Glen Leiper
30 Tweedvale Street, Beenleigh
PHONE: 07 3245 4537
TOPIC: Local Grevilleas

Sunday, 29 June

VENUE: Home of Jan and Dennis Cox
87 Daintree Drive, Logan Village
Brisbane 4207
PHONE: (07) 5546 8590
TOPIC: Grevilleas discovered from their trip to Cape York and Atherton Tablelands area

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

Inside this issue:

- APS NSW February gathering and talk – "Grevilleas"
- Grevillea key project
- Grevillea miscellany
- *Grevillea rosmarinifolia* – Graytown Form
- The Flame Grevillea, *Grevillea dimorpha* F. Mueller, a rare Grampians endemic
- Grevilleas in a cold climate
- Grafting Grevillea standards – success first time
- A problem with the cultivation of *Grevillea 'Firesprite'*
- Summer flowering Grevilleas

Peter Olde

It will be a sad day if progress continues as it has towards the closure of Native Nurseries. Here in Sydney, many have already closed and the large wholesale grower, John Rose, has retired. In Queensland we note that **Fairhill Nursery**, one of the best, has recently gone into liquidation. The doors are still open and an attempt is being made to trade out. In Victoria, **Vaughan's Nursery** south of Geelong, has also closed. The last two were major suppliers of grafted grevilleas to the public at reasonable prices and maintained a good list of plants to buy. Why are they failing? Are we not supporting them any more?

Members of the Study Group generally may not be aware that **John Knight**, recently retired curator of the Eurobodalla Regional Botanic Gardens, suffered a stroke in winter of 2013. Fortunately he survived, a little chastened by his unexpected brush with mortality, but all functions remain intact. He was fit enough to lead us on one day of our recent field trip. The stroke resulted from a blood clot in his leg breaking loose and lodging in his brain. We wish him a full and speedy recovery.

The Study Group has recently agreed to donate \$5000 of its money towards a phylogenetic study of *Grevillea floribunda* and related species, which will encompass *G. arenaria* and *G. alpina*. The work is being undertaken in Victoria by Juli Atkinson under the supervision of Dr Susan Hoebee, Research Lecturer at La Trobe University. Unlike our last disastrous grant for research into *Grevillea* as a cut-flower focus plant for which we have not even received a single report from the University of Sydney, it is anticipated that this donation will be put to good use and the results forwarded to us. Dr Hoebee has written 'Juli had a good year on the field work side of things in 2013 and is moving along in the lab nicely this year too. So we are all systems go for a next generation sequence pilot study. She has indicated that she lost most (all?) of her Grampian sites with the recent fires so it was a relief to know that the field work was done. Hopefully now the plants come back vigorously and that the weeds stay away'. The terms of this funding are presently being worked out.

Ray Brown has recently undergone the removal of his gall bladder in order to relieve some tummy issues. I am told however that he has fully recovered and still has plenty of gall. We went together last week on a collecting trip to the Yarramundi area in search of *Grevillea arenaria* and *G. cinerea*. We also searched without success for a population of *G. diffusa* on the Colo River,

from a single plant of which Ray collected as specimen in 1985. It was treated as *Grevillea diffusa* 'unassigned' by McGillivray & Makinson (1993). The plant clearly represents a population somewhere upstream or uphill but we could not find it. Ray recently donated his whole herbarium to NSW. It is presently in my workshop undergoing some curation before remittance. It has some very valuable collections of plants in New South Wales that Ray made especially during the 1980s and 1990s at locations not previously recorded by the herbarium.

Please lend your support to Phil Hempel and his goal of creating a Digital Key for *Grevillea* if you have some spare time and would like to be productive with it. His other project of getting nursery labels to indicate rootstocks used for grafted plants is also worth support.

Mike Shaw is looking for seeds of the tropical/subtropical type grevilleas such as *Grevillea miniata*, *Grevillea benthamiana*, *Grevillea cunninghamii*, *Grevillea byrnesii*, *Grevillea erythroclada*, *Grevillea gillivrayi*, *Grevillea leucadendron*, *Grevillea glauca*, *Grevillea agrifolia*, *Grevillea angulata*, *Grevillea aspeniifolia*, *Grevillea bipinnatifida* (glaucous form), *Grevillea brevis*, *Grevillea coriacea*, *Grevillea glabrescens* and *Grevillea heliosperma*.

He is looking to hire a collector to gather these. Is there someone who can provide that service in NT/Queensland/Kimberley? A few of the larger seed suppliers don't have them. If you can help email Mike – shaw726@yahoo.com.

Illawarra Grevillea Park

OPEN DAYS 2014

April 26, 27, May 3, 4

July 5, 6, 12, 13

September 6, 7, 13, 14

Opening hrs are 10am – 4pm

Location

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

Admission

\$5 adults, children with adults are free

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

APS NSW February gathering and talk – “Grevilleas”

Saturday 15 February 2014 from 10am to 4pm

Our next quarterly gathering is in the Illawarra area and features everybody's favourite native plant genus – “**The Grevillea**”. The wide range of species and cultivars, the extraordinary flower shapes and colours and the overall diversity provide continuing interest and fascination.

The gathering will be held at the Thirroul Community Centre Excelsior Hall at 352-358 Lawrence Hargrave Drive, Thirroul.

During the morning the Illawarra Grevillea Park at Grevillea Park Road Bulli will be open for free viewing. www.grevilleapark.org

The Excelsior Hall program will commence with a self-provided lunch at noon. This will be followed by our two speakers, Peter Olde and Peter Weston.

Peter Olde is a well known APS identity and expert on Grevilleas. He is the co-author of the three-volume Grevillea Book and will talk on “**New types of Grevilleas for the garden**”.

Peter Weston is a Senior Principal Research Scientist at the Royal Botanic Gardens Sydney and will talk on “**The relationship between Grevilleas and Hakeas**”. After the presentations and questions, afternoon tea will be provided. The usual plant sales and other attractions will also be available.

The program

10–12pm Illawarra Grevillea Park at Bulli will be open

12–1pm Lunch (self-provided) and plant sales at Excelsior Hall, Thirroul

1–2.30pm Grevillea Talks at Excelsior Hall by Peter Olde and Peter Weston

2.30–4pm Afternoon tea and plant sales at Excelsior Hall

Due to the costs associated with running these events (venue hire, catering etc), a small entrance fee of \$5 per person will be charged for the 2014 gatherings. The quarterly gatherings have been popular and we wish to continue them and preserve their financial viability.

So please note Saturday 15 February and let's all meet in the Illawarra and get the 2014 gatherings off to a friendly and successful start.

Phil Hempel (p.hempel@optusnet.com.au)

Grevillea key project

There are some great plant identification digital keys available and I have always found them very handy, powerful, effective and interesting. The most popular are the Euclid and the Acacia and now a Pea key has been completed and made available free on line. Outside plants, many have been completed on all sorts of subjects from animals, insects, minerals, diseases, archaeological artifacts etc.

Digital keys are far simpler to use than dichotomous keys, as used in The Grevillea Book Volume 1. Digital keys are random access so the

characters of whatever material is available, leaf, flower etc can be used to key out a species. You can start anywhere. A dichotomous key requires you to start at the same starting point each time so if you only have leaves it becomes very difficult to use.

Grevilleas have a large number of species and if hybrids are included the numbers become very large indeed. It is time a digital key for Grevilleas was developed. The idea has been floated and is developing support but the project will require more than moral support.

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Currently I am trying to develop a features list (characters), which may form the basis of finalising what characters are to be used and it is a starting point to advance the project. Many characters may have to be measured from herbarium specimens. A database will then be constructed linking the species to the characters. All the sketches used in the Key to Groups list in The Grevillea Book Volume 1 will need to be scanned in and individually cropped; photos will have to be collected, some may need to be scanned in. The data sheets will need to be formatted and inserted into Lucid Fusion to produce a standard presentable form. All this data needs to be inserted into the data base and tested. Prior to completion a decision on how the product is to be distributed will be made, ie free on line or sold. There is a financial cost involved with the purchase of software, scanning costs

etc. If it is to be commercialised to recover cost then hybrids should be included as this will greatly broaden the market.

The project can only be completed if it is supported by members getting involved and providing assistance. Someone has to manage the project, collate the sketches, photos, data sheets (including editing), report on what data is outstanding, visit the herbarium, provide photos, scanning assistance, database inputting, trialing and commenting. Currently a number of people have offered support so if you have a particular skill that can be used or if you are just willing to assist where possible, email your details to me and we will build a Grevillea Key Project team to get this task to completion. Remember, it will be a great way to learn more about Grevilleas.

Neil Marriott

Grevillea lavandulacea – 'Victor Harbour White'

In Newsletter 94 I reported the discovery of a white-flowered *Grevillea lavandulacea* in the garden of Brian Freeman, Inman Valley, S.A. which he had found locally. Brian is a great collector and has an amazing number of different plants in his garden. Cuttings of this beautiful pure white flowered-form have struck very well and young plants are now growing on strongly. Members who hold *Grevillea* collections in the study group will be contacted to distribute plants to ensure the establishment of this lovely plant in our gardens.

Grevillea Study Group census of species grown by members

With climate change affecting large areas of Australia, it is now almost impossible for the Study Group Collection to be sited in only one or two locations. At 'Panrock Ridge' we used to have over 300 species and over 50 subspecies. Today we can no longer keep a very large number of the temperate species alive over our long dry summers; members close to the coast will have greater success with these. John Edmonds-Wilson is duplicating our study group collection, concentrating on hard to grow inland and South Australian species, while Graeme

Woods and Robert Brown both have extensive collections here in Victoria. However we do not know what other members around Australia are growing.

As a result, we need to find out just who is growing what species and subspecies so we can ensure that species do not disappear from cultivation. By developing lists of who is growing what, we can share material to ensure rare species are conserved under cultivation. Tony Cavanagh has worked hard to develop a complete Excel list of Grevilleas and this is now available to members who would like to become involved in determining just what our study group is growing and by whom. I would really appreciate members contacting me at neil@whitegumsaustralia.com. I will then send you Tony's list on which I have already listed all those species we have here in the Grevillea study Group collection. If members can fill in a column on the list for their own collection and return it to me, then we will soon have a complete list of all species and subspecies being grown. When our *Grevillea* hybrids and cultivars book is completed, Peter will also be able to supply a list of all *Grevillea* hybrids and cultivars so we can do the same with them.

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Easter working bee, Panrock Ridge

Following the requests of several of our members, Wendy and I will be organising a working bee at Panrock Ridge this coming Easter. Members are invited to come along and help out in the Grevillea gardens as well as several tours to local native gardens, nurseries and the Grampians. We will be starting work on Good Friday, so if members would like to arrive on either Thursday night or Friday morning we will help you set up camp. We still have a couple of beds spare, although our cottage is already booked out. We have been growing a number of the rarer Grevilleas from seed and plants of these include *G. annulifera*, *G. eriobotrya*, *G. huegelii*, etc will be available for members with collections and suitable conditions. Cuttings are available from the gardens for all members, and there are numerous root suckers of *G. aspera* – Gawler Range and *G. anethifolia* – NSW form that can be dug up and grown on.

Grevillea heliosperma flowering in Victoria

At Panrock Ridge we used to grow an extensive collection of grafted “tropical” Grevillea species, largely courtesy of Queensland members Merv Hodge and Jan Glazebrook and Dennis Cox. Sadly most of these were lost in the 2006 fires, however several survived and now *Grevillea heliosperma* is flowering for the first time. The plant is now around 5 metres tall x 2 m wide. I would suspect that this is the first time this northern species from the Kimberley and Top End has flowered in Victoria. Do any members know of any others growing or flowering in Victoria? The plant is grafted onto *G. robusta* and is planted against a large granite boulder. The site rarely gets any frosts and faces north-east in a sheltered site on the top of our hill. This shows that tropical species such as this **can** be grown in Victoria when grafted and planted into a suitable micro-climate. If any members know where I can access grafted tropical species of Grevillea these days I would be most grateful as most of them grew superbly down here so it is worth trying again!



Grevillea heliosperma flowering at Panrock Ridge – Photo Neil Marriott

Call for labelling of Grevillea Rootstocks

In a recent article in the Victorian APS newsletter (hopefully to be republished in the GSG newsletter shortly) Phil Hempel called for better labelling for grafted plants being sold in nurseries. Phil argued that it was essential for the rootstock to be identified so the buyer could decide whether it was suitable for their climate and soils. With climate change and regular weather extremes becoming so much more frequent, Phil's argument becomes even more compelling. At Panrock Ridge, we have discovered over the last 2 years that many grafted species in our collection will not tolerate the hot dry summers we are currently enduring. Even though some plants have succeeded for several years, they have succumbed this year, despite our watering them deeply at least once or twice every week. For us it seems that plants on *Grevillea ‘Carrington Cross’* (*G. acanthifolia* x *rivularis*), *G. ‘Poorinda Anticipation’* and *G. ‘Bronze Rambler’* are intolerant of extended dry conditions, especially in a low-rainfall plantation setting, and we must rely on grafted plants with *Grevillea robusta* or *G. ‘Moonlight’* as the rootstock. I have had numerous members contact me over the loss of grafted plants so I am not the only one in this situation. Placing root-stock information on the label would create problems for label manufacturers but the information could be conveyed with a sign at the point of sale. If there is no sign, I recommend that you always ask the nurseryman before you purchase.

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Keith Pitman

Another exciting Grevillea discovery

In late September 2012 a group of Victorian APS members went on a Grevillea crawl. Tagging along with them was a South Australian member, Werner Kutsche, and somewhere near Pinnaroo they made an exciting discovery – a white form of *Grevillea lavandulacea*.

During the following week I received a phone call from a very excited Werner with the news. He asked if I would try to propagate some material he had collected, saying 'You are one of the most likely propagators to succeed'. I replied that I would do my best but could not guarantee success. The material was by now a week old and not ideal material for propagating.

Following our telephone conversation Werner brought the material to the plant sale on that weekend. On Monday I grafted three grafts and set ten cuttings. Two days later I gave the remaining material to my son Paul, who grafted several and also set some cuttings. As expected, we have had some losses.

Currently, I have one large grafted plant and one young grafted plant. Paul has three grafted plants and also struck several cuttings. However these died after potting on. Nevertheless, this find is an exciting new addition to Australian native plants and is suitable for many smaller gardens. *Grevillea lavandulacea* 'Moonglow' seems a fitting name for this magnificent Grevillea.



Photo by Keith Pitman



Photo by Keith Pitman

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

Grevillea rosmarinifolia - Graytown form

I had read Geoff Roche's article on the *Grevillea rosmarinifolia* that grows in the Graytown State Forest, between Heathcote and Nagambie, that he wrote about in the 2009 Grevillea Newsletter No. 82. I visited the area twice in the past few years and never found a single plant. The plants that I have were grown from cuttings from a plant Max McDowell gave me. The original plant grew up on a single trunk about 4cm diameters and the plant was a narrow vase shape, 1.5m tall and 60cm wide at the top. It was dark green that had burnt orange/red flowers. Every time I went looking for this plant I was looking for a plant of this description, scanning for a dark green plant. I searched all along Darrochs Road and Four Mile Road and many other tracks in the area, only spotting a few *G. alpina*.

This year I decided to concentrate my efforts along Four Mile Road, as this is where Geoff last saw the plants. There were no plants where the Iron Bark gums grew and I came across an area dominated by Grey Box gums on the north side, 430m south of the intersection of Duroochs Road. I noticed a group of plants 100m north that fitted the colour and shape of what I was expecting to find. However these turned out to be *Acacia montana* but then I saw a small *G. rosmarinifolia* next to these Acacias. It was a single-stemmed plant only 30cm tall. Not what I

was expecting, wandering around I found many more, 40–50, all very small plants 20–30cm tall and not a single mature one. My guess is they would be only two years old, some had the leader eaten and were producing side shoots. One plant had light green leaves while all the others were dark green. This area is in the Heathcote-Graytown National Park. The original plant I had in my garden grew so top heavy that it started to fall over and eventually died at about 5 years of age. Is this their life span?

I searched for more in similar environments and 100m east along Duroochs Road, on the north side, from the intersection of Four Mile Road, I found a few more small plants and only a single mature one, 1m tall, spindly and growing on the road edge. In the same area there were about 100 very small *G. alpina*, all under 10cm tall, none flowering, and no mature plants. This area is in the State Forest. These populations are vulnerable and Geoff's comment on fencing off the area is a good one. The National Park is long and narrow, in the shape of a C, at some points the park is only 1km wide. There are many Kangaroos living there that are maintained by the adjacent pasture. They would move through the park and during hard times rely on plants in the park to support their large numbers.



Grevillea rosmarinifolia - Graytown form



Dark green and light green leaf form

The Flame Grevillea, *Grevillea dimorpha* F. Mueller, a rare Grampians endemic

Grevillea dimorpha is a variable species ranging from upright (1.5–3m high x 0.3–4m wide) to bushy (1–2m high x 1–2m wide), decumbent or prostrate (0.1– 0.4m high x 1 m wide). Branchlets distinctly angular, ribbed and silky. Leaves 50–150mm long x 1.5–40mm wide, simple, entire, narrowly linear to broadly elliptic or obovate. Conflorescence sessile to shortly pedunculate, axillary or caudine. Flowers spring to summer (or late autumn). Flower colour: perianth and style bright red. Pistils 21–26mm long.

G. dimorpha keys out in Group 21 (The Grevillea Book 1: 207), or in the Speciosa subgroup (Flora of Australia 17A: 205) of the Linearifolia group (17A: 196) and is closely related to **G. oleoides**, **G. speciosa** and **G. victoriae**. The taxonomy of **G. dimorpha** will be discussed in a future article by Peter Olde.

The **Flame Grevillea** is confined south from Halls Gap to the central and far southern Serra Range and the Mt William Range of the Grampians Mountains, Victoria on the upper slopes of foothills and ridges on shallow sand or stony loam in open eucalypt woodland, heathy-woodland or in eucalypt forest, often among large boulders. The range of the species has been claimed by Mueller to include the Victoria Range, but none of the 31 herbarium collections listed on the Australian Virtual Herbarium website, including those of Mueller himself, are located there, although three anonymous specimens are said to have been collected 4km WSW of Mirrinatwa. Discussions with Grampians National Park Rangers and Neville Walsh at Melbourne Herbarium put doubt to these or any Victoria Range collections! This will be an interesting topic to follow up for our study group.

Variants and forms from several localities are in cultivation and many of the typical populations can be seen in a full day tour starting from Halls Gap or Dunkeld, as follows:

Robust Variant: Follow the Boronia Peak Trail for about 300 metres starting just east of Fyans Creek Bridge on the Halls Gap-Stawell Road. Very large shrubs 3–4m high with broad grey-green leaves can be seen on the slopes above the track growing in sandy/stony loam. This form is not only the largest, but is also the most northerly population known.

Proceed south from Halls Gap about 26km along for The Grampians Tourist Road to the Serra Road turnoff .

Low Shrubby Forms: Along Serra Road to Teddy Bear Gap, numerous plants can be seen on the steep slopes above and occasionally below the road. These are generally growing to around 0.6 – 1m x 1m with medium width leaves, under Eucalypt forest on shallow stony sandy clays and clay-loams.

Tall Variant 'Tall Teddy': Continue over Teddy Bear Gap on the Serra Range. Almost immediately, on the left hand side of the road (south side) **Grevillea dimorpha 'Tall Teddy'** can be found, growing in stony sands and loam in open woodland on the steep upper slopes of the range. This most unusual, tall and narrow form continues to where the descending road begins to level out at the intersection of the 4WD track which runs parallel to the Henham Track 200 m further on. Walk about 200 m north along the 4WD track to find another group of these upright open shrubs to 2.5 m high with very large broad leaves on the upper branches. Other populations may also be accessible from along these tracks. In spring, also look about here for the Blue Tinsel-lily, **Calectasia intermedia** in flower.



A group of *Grevillea dimorpha 'Tall Teddy'* –Photo Max McDowell

Narrow-leaved Variant: Floriferous decumbent shrubs with leaves to 150 mm long and only 2–3mm wide. These occur in heathy woodland on sandy/stony loams from Yarram Gap via Yarram Gap Road (where occasional amongst broader leaved forms of the species) to Mt Abrupt and The Picanniny in the southern Serra Range. Some plants can be seen along the track to Dunkeld Reservoir near The Picanniny. A unique yellow-flowered plant was discovered by members Brian and Betty Lacy on the lower part of the track to Mt Abrupt. Grafted plants of this clone may soon be available in cultivation.

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Returning north about 6 km north of The Picanninny, turn up Cassidy Gap Track where broad-leaved forms, the narrow-leaved variant and intermediates grow sympatrically. Care must be taken on this track as it is 4WD and can be quite rough at the western end.

Decumbent Forms: 7km north of Wannon and the Yarram Gap Road intersection, turn right along Jimmy Creek Road where prostrate to decumbent plants to 1m wide with small to medium elliptic leaves are found on the roadside. These are most prevalent approx. 3km east of the main road where the soil becomes more loamy and stony. Returning to Halls Gap via Pomonal, turn right on Emmett Road, and continue NW along Mafeking Road, left along Picnic Ground Road, right on Mitchell Road, briefly right down Redman Road left on Long Gully Road and Waterhole Road to Pomonal.



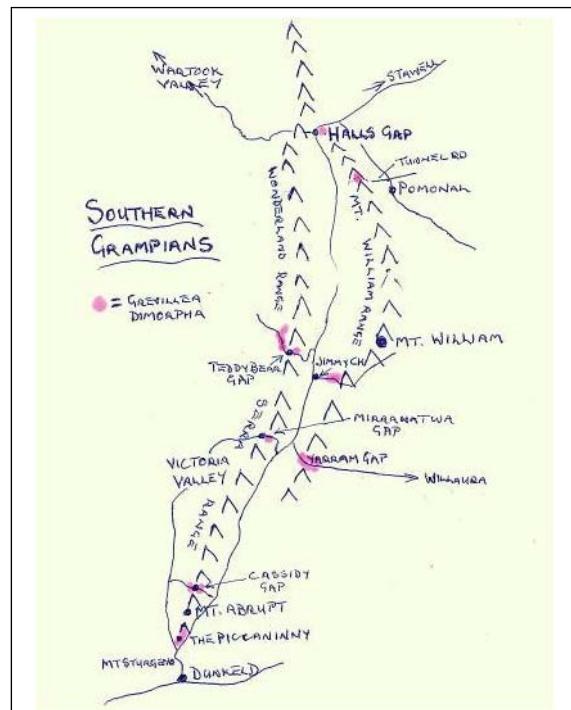
Decumbent form, Jimmy Ck Road – Photo Neil Marriott

Large Bushy Variant ‘Bridle Track form’: In the northern Mt William Range at Pomonal, drive up Tunnel Road to the car park and walk along the Bridle Track. As you approach the top of the ridge you will find a good population of medium dense bushy shrubs that grow around 2m high x 2m wide, in stony loams. Several good cultivated specimens 2m x 2m can be seen at the entrance to Phil Williams's Pomonal Wildflower Nursery, Wildflower Drive, and Phil normally has this and several other forms for sale.

Discussion: *Grevillea dimorpha* is a much localized species within the Grampians Ranges (although there is an early, unconfirmed and doubtful record for the Mt Cole Range approx 50 km east of the Grampians). The known locations for the species are shown in the map below, however it is almost certain that there will be other populations up on the Serra and Mt William Ranges in particular that have not been recorded, as all known sites are on tracks or walking trails. If any members discover or know of any other populations please contact either author or the study group leader with the details.

Morphologically, the species is highly variable in leaf shape and size (and in one case foliage colour), as well as habit from decumbent to large spreading or erect shrubs. However there do not appear to be any significant differences in floral structure and as a result all populations are treated as forms without any future grounds for treatment as subspecies.

All forms are quite spectacular as garden plants and are very hardy and adaptable under cultivation, surviving cold wet winters and hot dry summers, but resenting excessive summer humidity. They prefer a position in the garden that is well drained and with dappled shade, with plants grown in open full sun sites struggling during times of extreme heat and drought.



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- Division of Survey and Mapping Victoria (1989) Map of Southern Grampians 1:50000.
- Makinson RO (2000) *Grevillea*. Flora of Australia 17A.
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- Olde PM & Marriott NR (1994) *The Grevillea Book*. Volume 1. (Kangaroo Press: Kenthurst, New South Wales).
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- Parks Victoria (1993 or later) Map of The Grampians, 1:125000.

Grevilleas in a cold climate

When Ros & I moved into our property in Gisborne 12 years ago we noticed several things which would influence our ability to grow "Grevilleas". The site of our 3.5 acre garden is fairly flat with 1 metre of deep loam that tends to repel water, this can be both good and bad. Being 50km NW of Melbourne at an elevation of 430 metres we are 4° cooler than in Melbourne and during winter we have many days of cloudy damp conditions and top temperatures around 8-9°.

I am an avid collector and my aim is to grow all the Grevilleas that can survive in our conditions – about 300 of the around 370 species. Our rainfall of around 650 mm is adequate and we don't receive too many hot days. Being an optimist I have continued to try growing tropical Grevilleas and have failed completely – my losses include *G. decora*, *G. coriacea*, *G. pteridifolia*, *G. gordoniiana* etc. I have succeeded with *G. hodgei* in a frost protected area at the front of the house facing north; it never stops flowering.

We grow most of the SE Australian species on their own roots – but almost all the rest are grafted plants. As soon as we have a rare Grevillea established in our garden we send cutting to various friends for propagation (usually grafting) to ensure their survival as we are firm believers in "Preservation through Propagation." We have had great support in our endeavour to spread these rare plants from Neil Marriott , Robert

Brown, Brian Weir and Maja Zweck (Kuranga Nursery), all like-minded people desperate to save our wonderful rare Grevilleas.

We are currently growing about 245 different species and some of the favourites are: *G. albiflora*, *G. banyabba*, *G. cirsifolia*, *G. deflexa*, *G. erectiloba*, *G. granulosa*, *G. hislopii*, *G. inconspicua*, *G. maxwellii*, *G. maccutcheonii*, *G. plurijuga*, *G. prostrata*, *G. subterlineata*, *G. superba*, *G. tenuiflora*, *G. variifolia* and *G. wilkinsonii*. Notable failures have been *G. secunda*, *G. scapigera* and *G. asteriscosa*.

After 12 years of trying I have finally come to terms with the fact that certain plants will not survive the " Gisborne Cold". If anyone sees me trying to buy *G. refracta*, *G. heliosperma*, *G. parallela* or similar tropical please sit me down and give me a good talking to !!!!



Part of the Woods Garden featuring numerous Grevilleas – Photo Ros Woods

Phil Hempel

Grafting Grevillea standards – success first time

If you have grown only one Grevillea rootstock tall enough to make a standard, then you need to be sure your graft is successful on the first attempt, otherwise you may have to try again while the weather holds or wait till the next year for the right weather to return to try again and if it fails again –on and on it goes until you give up. This method achieves a high success rate but requires a bit more work.

Firstly get a *Grevillea robusta*, grow a few from seed, dig up a seedling from a friends yard or buy a tube stock and let it grow, ensure it is repotted and fertilized as it gets larger ending up in at least a 200-300mm pot. Ensure the side shoots

that develop are pinched out but do not remove the leaves. It will take at least 18 months to get the height required, this depends on what is to be grafted onto the top and whether the graft, when fully grown including flowers, will touch or lie on the ground or be clear of the ground. In the spring when it is at the correct height, let two heads develop. This is done by allowing the side shoot nearest the top leader to develop. After a few weeks these two, now terminal shoots, will be thick and firm enough to graft onto. Having two points to graft onto doubles the potential success rate. But it doesn't end there.

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The normal grafting method is to use a top wedge and since the rootstock of standard Grevilleas generally have a larger diameter than the scion, the scion is inserted off to one side. This lines up the cambium layer on one side of the rootstock. This procedure changes that by offsetting the cut into the rootstock stem to one side, a cord through the circular stem, so that the width of the cut matches the diameter of the scion. This doubles the success rate as it now has both sides of the scion wedge to match both sides of the cambium layer on the rootstock, where as the central method only lines up with one half of the cambium. Not only does the scion line up with both sides of the cambium, but since the slice is on a cord, sliced at an angle through the cambium, makes the width of the cambium greater than if a cut was made centrally. See Figure 1. But to redouble the success rate, another cut is made into the rootstock stem on the other side again to match the diameter of the scion. Take care to ensure the cut does not slice off the side of the stem. Each of the two terminals on the rootstock now has two scions attached, making four scions in total matching the maximum cambium layer instead of matching only one side in the standard method. This is not a suitable method for professional, skilled grafters but is ideal for the amateur who only does this a few times and wants immediate success.

I select scions that have buds in the leaf axil that are formed but have not started to shoot. Ensure there are two buds on the piece and cut off all leaves without damaging the buds (some grafters leave two leaves on, each cut in half). Once the scion has the wedge cut, insert it immediately into the cut in the rootstock. Do the same to its twin and tape the union firmly together, wrapping the grafting film around at least eight times and covering the gap between the two scions on the top of the rootstock. Give the scion a spray of clean water, it should not be allowed to dry out. Rootstock on standards is stronger than low graft rootstock and will prematurely force open the union if not held securely. I also, with a separate piece of grafting film, wrap the scion once loosely (mummy method) without damaging the buds.

Protection of the graft is essential, since it's a standard it can't be put in a plastic box and if a glasshouse is not available then a soft wire frame

in the shape of a halo, secured on the rootstock can be made. A zip lock bag is placed over the graft and zipped up as far as possible; with this method the mummy wrap is not required. The grafted standard plant should be kept in a warm spot, out of full sun. The buds will shoot and push through the mummy wrap (if used). When the graft has developed some leaves, remove the plastic zip lock bag but keep the plant out of the sun for a few days, then move the standard into the open and watch it grow. Don't move it immediately into the sun if the temperature is going to be above 30 degrees. Once the graft is growing well any leaves and buds on the rootstock can be removed. The leaves are left on now as these are keeping the rootstock and the graft alive until the graft can support itself and the rootstock.

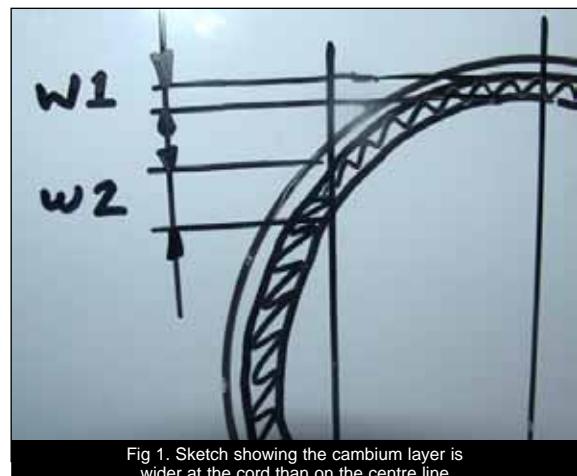


Fig 1. Sketch showing the cambium layer is wider at the cord than on the centre line



Successful double graft

A problem with the cultivation of *Grevillea 'Firesprite'*

I first grew this shrub about 7 years ago in a well-drained site in part shade with some afternoon sun. The single apical stem of the plant grew to about 1.2 metres, and flowered but then died, while the lateral stems close to the base continued vigorous vegetative growth. As the shrub failed to develop any more upright growth, even after some cropping of the lateral stems, I removed it. Others including Neil Marriott and Craig Dodgson have reported similar experiences with faltering apical dominance. Plants I saw in Gordon Meiklejohn's garden in Sydney were growing to about 3 x 4m in partial sun.

My second shrub planted in a more open situation in full morning sun grew several upright stems to 1.4 m which flowered but then slowed in growth in favour of the lateral stems. I pruned the lateral stems back to about 50% and the shrub continues to thrive at about 2 x 1.5m.

I have had some correspondence with Merv Hodge who introduced this hybrid shrub (*G. longistyla* x *G. venusta* (yellow)) from his garden into cultivation. The problem I described was unknown to him or to others in Queensland.

Note from Neil Marriott:

I feel [this] is entirely due to *Grevillea 'Firesprite'* becoming susceptible to botrytis in the flowers which are terminal. As the tip becomes infected with fungus the growth is instead forced into the side shoots to compensate for the lack of a lead shoot. I have had this happen here with *Grevillea 'Firesprite'* as well as several other terminal flowered "tropical" hybrids that are growing out of their comfort zone. In fact I have now lost my last three *Grevillea 'Firesprite'* due to this exact problem.

Accordingly I am suggesting that this condition may be treatable in bud with a suitable systemic fungicide such as FoliaR Fos (phosphorous acid H₃PO₃) or one of its generic brands, and intend to try it out next spring.

As well, the plant should be grown in full sun to control the spread of the fungus before it can be treated.

Neil Marriott

Summer flowering Grevilleas

With the realisation that climate change has arrived and is here to stay, we have had to seriously re-think our species selection and cultivation techniques here in western Victoria. Where we used to be confident of receiving 600-650mm of rain each year, we now are lucky if we get 350-400mm!! Our climate is now akin to the mallee and desert regions of NW Victoria, and has been now for the last 17 years. This is due to the tropopause at the southern edge of the Hadley Cell which has shifted several hundred kilometres south over the last 20 years, and now permanently blocks the rain-bearing cool changes that used to push well inland into northern Victoria and south-western NSW.

As a result we can now grow Western Australian dryland and outback Australian Grevilleas and other genera more readily than we can our local and eastern Australian species. A feature of many of these dryland species is their habit of flowering during the summer months of the year.

By concentrating on these species we are now developing wonderful floral displays throughout the dry summer months. Amazingly, we now find we have to graft "easy to grow" eastern species onto hardy, drought tolerant rootstocks such as *Grevillea robusta* and *Grevillea 'Moonlight'* to ensure they succeed in our gardens!! Most of these eastern species are winter-spring flowering plants so we now have extensive flowering throughout winter-spring and also throughout summer.

In this article I will concentrate only on Grevillea **species** and **natural hybrids**; there are many, if not most tropical garden hybrid Grevilleas that flower throughout the summer months, however without reliable rainfall or artificial watering, the vast majority of these are sadly now not even worth considering in climate-change affected gardens like ours. In fact, I fear that in not too

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many years to come, even gardens in areas like Sydney and Brisbane will struggle to maintain many of the tropical hybrids as weather extremes become more and more frequent. Both Sydney and Brisbane have just experienced their hottest and driest year on record!! I fear the worst, but let's hope I am wrong!

Early Summer Flowering

As spring draws to a close with the first of the hot summer days, *Grevillea juncifolia*, *Grevillea eriostachya*, *Grevillea* 'Canning Classic', *Grevillea* 'Canning Gold' and *Grevillea* 'Desert Gold' all begin to create a spectacle with their brilliant yellow to bright orange flowers. *Grevillea excelsior*, which started flowering during spring, now reaches its peak with massed fiery orange flowers.



The spectacular natural hybrid *Grevillea* 'Canning Classic' – Neil Marriott



Typical crooked old *Grevillea excelsior* leaning on *Grevillea magnifica* subsp *remota* at 'Panrock Ridge' – Neil Marriott

One of the first of the 'summer flowering' grevilleas is *Grevillea polybotrya* 'Caramel Grevillea' which begins in early December and is a mass of spectacular white or occasionally pink caramel perfumed flowers up till around Christmas time. As it begins to fade *Grevillea annulifera* comes into a fabulous mass of pure white large flowers that turn a delightful rose-pink as they age –our plants which are now several metres tall are literally covered in flowers from tip to toe.

Flowering at the same time, but continuing well into summer is *Grevillea leucoptera* the White Plume Grevillea or Smelly Socks. Interestingly, for us this superb species never smells offensive, in fact by daylight it has a lovely sweet and spicy perfume that attract lots of native insects; by night it merely gets a bit musty, thereby attracting a myriad of moths and beetles. In the West both *Grevillea annulifera* and *Grevillea leucoptera* flower during the spring months, so I am not sure why they are summer flowering for us? Does this conform to other members experiences?



Grevillea annulifera – Neil Marriott

Two closely related species that flower for us in early summer are the very rare *Grevillea eriobotrya* with its massed cream woolly flower spikes and *Grevillea pterosperma* with very similar white non-woolly flowers. Both fill the garden with soft sweet perfume that attracts numerous bees, beetles, butterflies and wasps in the early weeks of summer. Growing nearby in our garden we have *Grevillea erectiloba* with its attractive divided blue-green foliage with contrasting bright green new growth; the large flowers are superb, beginning bottle-green before turning orange and finally bright pinky-red, and flowering from late spring well in to summer.

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Grevillea eriobotrya attracts numerous native insects – Neil Marriott

In the red spectrum there is the gem from north of Coolgardie *Grevillea oligomera* with its vivid plum-red bottlebrushes arching down from the beautiful blue-grey foliage. I have used this species to breed a number of drought hardy small garden hybrids, and I will discuss these and other drought hardy garden hybrids in another future article. *Grevillea beardiana*, both in red and orange flowered forms continues flowering well into summer, as does the truly spectacular *Grevillea georgeana* with its big bold red and white spikes of flowers above prickly divided grey-green leaves.



The spectacular shrub *Grevillea oligomera* – Neil Marriott

High Summer

Summer is the season for insects and insects aren't attracted to bright colours, relying on perfume as a lure. This is why many of our summer flowering grevilleas are white flowered and fill the garden with their sweet or spicy perfume. One of the boldest is *Grevillea candelabroides* with its spectacular erect spikes of showy cream flowers above silver-grey foliage. Then there is *Grevillea nematophylla* with several subspecies that all flower beautifully at the height of summer.

Three more white flowered species that we have flowering during the summer months are *Grevillea biformis* subsp *cymbiformis*, *Grevillea eremophila* and *Grevillea stenobotrya*. These put on a spectacular display for many weeks over summer, attracting large numbers of native beetles, butterflies and bees to the garden.



Grevillea candelabroides attracts numerous Scarab Beetles – Neil Marriott

Grevillea variifolia is a species that flowers in winter in its natural habitat at Cape Range in NW WA. However, here in western Victoria it flowers prolifically with its massed red flowers right throughout the summer months when grafted onto *G. robusta*. What are the experiences of other growers of this beautiful species? Another grevillea that flowers well out of season here is *Grevillea newbeyii* which flowers during winter-spring in the West, yet here it flowers from late spring throughout summer.

Winter, Spring AND Summer

Then there are those species that flower for the majority of the year, continuing well into summer so long as there is some moisture left in the soil. One of the showiest of these is *Grevillea*

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magnifica subsp *remota* that often flowers right through summer for us, attracting a myriad of nectar-eating birds. At the other extreme of showiness is the very rare *Grevillea subterlineata* from near the Gascoyne Junction; this species flowers continuously with masses of pale creamy-pink spider flowers, and what it misses out on with showiness it more than makes up in the way it attracts masses of native bees, butterflies and wasps to the garden.

Species such as *Grevillea insignis* subsp *insignis* seem to keep flowering from winter right through to autumn as does the beautiful *Grevillea treueriana* from the Great Victoria Desert in South Australia.

Another species that has surprised me with its long flowering is *Grevillea wittwerii* with its unusual burgundy toothbrush flowers. Also surprising is the yellow flowered form of *Grevillea hookeriana* which seems to be always in flower while its black flowered forms only flower during winter-spring!!

This list is far from exhaustive, but clearly indicates the wonderful range of showy Grevilleas that flower throughout the summer months, bringing a whole new dimension to the garden, as well as providing drought resistance as we head into uncertain times. I would love to hear from other members just what species are flowering in your gardens over the summer months.

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>	ssp <i>abbreviata</i>
<i>Grevillea baileyanus</i>	<i>Grevillea newbeyi</i>
<i>Grevillea banksii alba</i> prostrate	<i>Grevillea nudiflora</i> <i>Grevillea occidentalis</i>
<i>Grevillea biternata</i>	<i>Grevillea paniculata</i>
<i>Grevillea 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> ex Coonabarabran	<i>Grevillea ramosissima</i> <i>Grevillea ramosissima</i> ssp <i>ramosissima</i>
<i>Grevillea glauca</i>	<i>Grevillea stenobotrya</i>
<i>Grevillea johnsonii</i> (ltd)	<i>Grevillea striata</i> (ltd)
<i>Grevillea juncifolia</i>	<i>Grevillea superba</i>
<i>Grevillea leucoptera</i>	<i>Grevillea synapheae</i>
<i>Grevillea longistyla</i>	<i>Grevillea teretifolia</i>
<i>Grevillea magnifica</i>	<i>Grevillea tetragonoloba</i>
<i>Grevillea magnifica</i> ssp <i>magnifica</i>	<i>Grevillea triloba</i>
<i>Grevillea manglesii</i>	<i>Grevillea tricornata</i>
ssp <i>manglesii</i> (ltd)	<i>Grevillea vestita</i>
<i>Grevillea monticola</i>	<i>Grevillea wickamii</i>
<i>Grevillea nana</i>	ssp <i>apraca</i>
	<i>Grevillea wilsonii</i>

Free + s.a.e.

<i>Grevillea nana</i> ssp <i>abbreviata</i>	<i>Grevillea leucoptera</i>
<i>Grevillea banksii alba</i>	<i>Grevillea longistyla</i>
<i>Grevillea banksii</i> – grey leaf form	<i>Grevillea mimosoides</i>
<i>Grevillea banksii</i> – red tree form	<i>Grevillea 'Moonlight'</i>
<i>Grevillea banksii</i> – red prostrate	<i>Grevillea 'Moonlight x Ivanhoe'?</i>
<i>Grevillea Bon Accord</i>	<i>Grevillea occidentalis</i>
<i>Grevillea caleyi</i>	<i>Grevillea plurijuga</i>
<i>Grevillea crithmifolia</i>	<i>Grevillea pteridifolia</i>
<i>Grevillea decora</i>	<i>Grevillea robusta</i>
<i>Grevillea didymobotrya</i>	<i>Grevillea 'Sandra Gordon'</i>
<i>Grevillea diversifolia</i>	<i>Grevillea stenobotrya</i>
ssp <i>subtersericata</i>	<i>Grevillea superba</i>
<i>Grevillea eriostachya</i>	<i>Grevillea synapheae</i>
<i>Grevillea floribunda</i>	<i>Grevillea tripartita</i> ssp <i>macrostylis</i>
<i>Grevillea goodii</i>	<i>Grevillea vestita</i>
<i>Grevillea johnsonii</i>	<i>Grevillea wilkinsonii</i>
<i>Grevillea johnsonii</i> 'Orange'	
<i>Grevillea juniperina</i> 'Little Red'	

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

Donations by Bernie Shanahan and Ian Cartwright

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 2014

Income

Subscriptions	\$90.00
Interest	2.29
Transfer from Term Deposit	5,500.00
	\$5,592.29

Expenditure

Newsletter publishing	\$240.00
Printing	95.45
Postage	49.20
Reimbursement for WA research trip expenses	5,474.41
	\$5,859.06

Amount in interest bearing deposit till 18/5/2014

\$22,648.66

Balance in current account 8/2/2014

\$1,539.55

Balance in business cheque account 8/2/2014

\$719.68

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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

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List owner: grevilleas-owner@yahoo.com

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

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<http://asgap.org.au/grevSG/index.html>

Deadline for articles for the next newsletter is 31 May 2014, 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.

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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.