Association of Societies for Growing Australian Plants

# GREVILLEA STUDY GROUP

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Newsletter No. 64

## GSG Victoria Chapter

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## VIC Programme 2003

**Sunday March 16**
10.30 am, Montrose and Kalorama
General Meeting, Garden Visits, Bring & Buy and Practical Propagation Workshop.
Meet at the home of Bruce & Jill Schroder, 17 Jubilee Rd Montrose Melway 66B12 (Ph 9728 1342). Proceed from Mt Dandenong Tourist Rd along Liverpool Rd or Sheffield Rd to Glasgow Rd and east to Jubilee Rd.
Approx 12 noon proceed to Karawarra Gardens Kalorama (Melway 120B9) for lunch (BYO everything).

**Queens B'day Weekend June 7-9 to Grampians**
Combined Field Trip with Correa study Group in Grampians led by Neil Marriot. Details available in March GSG Newsletter.

**Sunday August 17 to Drummond & Fryers Range**
Garden visit at the new property of John and Sue Walter & local field trip looking at *Grevillea alpina* & *G. obtecta.*

**Melbourne Cup Weekend Fri Oct 31-Tues Nov 4**
South-East NSW combined Field Trip with NSW chapter.

## GSG Queensland Chapter

Meetings for 2003 Morning Tea 9.30 am. Meetings commence at 10 am For more information, contact Merv. Hodge on (07) 5546 3322

**Sunday April 17**
VENUE: Home of Merv & Olwyn Hodge, 81-89 Loganview Rd., Logan Reserve, 4133
Ph: (07) 5546 3322, Subject: Grevilleas New Hybrids.

**Sunday June 29**
VENUE: Home of Kerry & Annabel Rathie, 5 Salston St., Greenbank 4124
Ph: (07)3200 0268, Subject: Grevilleas A-C inclusive.

**Sunday August 31**
VENUE: Home of Laylee Purchase, 41 Rocklyn St., Toowoomba 4350
Ph: (07) 4630 2211, Subject: Grevilleas D to J inclusive.

**Sunday October 26**
VENUE: Home of Denis Cox & Jan Glazebrook, 87 Daintree Dr., Logan Village 4207
Ph: (07) 5546 8590, Subject: Grevilleas P to R inclusive.

**Sunday November 30**
VENUE: Home of Norm & Win McCarthy., 21 Lindberg St., Toowoomba 4350
Ph: (07) 4634 2894, Subject: Grevilleas S to Z inclusive.

## NSW Programme 2003

**Friday April 4**
Set Up Mt Annan Botanic Garden

**Sat-Sun April 5-6**
Autumn Plant Sale & Expo,Mt Annan Botanic Garden

**Wednesday May 28**
Olde 140 Russell Lane Oakdale 10 am
BBQ for helpers and friends
New Plantings/ Setting up a native garden

**Sunday June 29 Walk on the Northside**
Meeting time 10 am at end of Bulara St, off Mallawa Rd, Duffys Forest. Cowan Track, looking at *Grevillea caleyi, G. linearifolia, G. speciosa* all species endemic to the north side of Sydney Harbour.

**Wednesday July 23**
Meeting time 10 am, Grevillea Park
Subject: Plant labelling ideas.

**Wed August 13**
Meeting Time 9 am, Place Advised next newsletter.
Avon Dam -Belangelo SF *Grevillea oleoides PINK G. mucronulata* (2 forms), *G. patulifolia, G. juniperina, Grevillea raybrownii, G. baueri*

**September**
No meeting

**October Mark Ross**
Details next newsletter, Grafting Workshop

Melbourne Cup weekend November: Field trip south to view *G. epicroca, G. brevifolia ssp brevifolia* (Mt Tingaringy), *G. victoriae ssp. nivalis* (Brown Mountain), *G. johnsonii* and many other exciting localities and plant populations.

**On-line Contact**

1.President's email address
petero@australians.com

2.The email group
grevilleas@yahoogroups.com

3.New URL for GSG website
http://users.bigpond.net.au/macarthuraps/gevillea_study_group.htm

## Inside this issue:

Editorial

## Welcome to all members of the Grevillea Study Group for 2003

Australia continues to experience one of the most severe droughts in living memory across the whole country. Most areas have been subject over the last two to five years to the most severe bushfires known for a generation. Fires continue to burn in the high country of Victoria and New South Wales where Kosciusko National Park was recently burnt out almost completely, even well above the snow line. The understory in which most grevilleas are found on the east coast is dry and crisped and many plants, especially banksias, have died in the areas in which I walk. In Western Australia the bush has shut-down over vast areas, scarcely flowering and not putting on new growth, no seed. Some areas have seen no useful rain for over three years. Tropical areas have scarcely received their annual monsoonal downpours. Anecdotal talk when I holidayed in Cairns last year revealed that only three weeks of rain was received last monsoon. It's a depressing and very difficult time for the Australian flora, in the wild and in the garden. It will be interesting to find out over the next few years the full extent of damage wrought by this unusual, extreme climatic period.

## Autumn Plant Sale 2003

The Grevillea Study Group currently has approximately 300 members Australia-wide and a few international members as well. This shows a very high interest in what is surely one of Australia's leading horticultural genera, or am I a little biased? Almost 100 of these members are from New South Wales. Many members who join indicate that they wish to be active members and we never see them again. An opportunity to make your 'active' contribution, to the NSW chapter at least, presents itself.

The Study Group's sixth Autumn Plant Sale will be conducted at Mt Annan Botanic Garden on April 5 & 6, 2003. Last year we were desperately short of volunteers to assist at the plant checkout or to man the display tables. Gordon Meiklejohn is putting together a roster and looking for volunteers to fill two hour blocks. Please help us out even if this is your only contribution to the group. Gordon's phone number is 4657 1317 or mobile 0407 104464. Give him a call and lend us a hand. There are also sit-down jobs manning the display room and book sales.

What happens to the money raised? To date we have expended over $20,000 on research into *Grevillea*, some of it ongoing. $10,000 has gone or is promised to the University of Sydney for an extensive research programme being undertaken by Alexandra Freebairn into the development of new hybrids for use as cut flowers and horticulture. The Australian flora foundation has $5000 awaiting drawdown. Over $5000 has been spent funding taxonomic research, mainly expenses incurred in collecting trips to Western Australia and elsewhere. This has resulted in the discovery of over 10 new species in the last two years. Plants and cash exceeding $5000 in total have been donated to the Grevillea Park, Bulli which relies on donations. This vital park has promoted grevilleas by its very presence and is an extraordinary testament to enthusiasm and voluntary tradition.

## Philately

Given the length of time that Australia has been issuing postage stamps, it is surprising that not one of them has featured a grevillea until recently.

The first *Grevillea* species featured was Honey Grevillea, or *Grevillea juncifolia* subsp. *juncifolia*, which now goes down as the first *Grevillea* species to feature on an Australian stamp -think Trivia Quiz, for all you buffs looking for a difficult question. The stamp had a face value of 49c when the common postage rate was 45c which should mean that only a few of these will have been sold, thus enhancing their collectable value. The first *Grevillea* to appear on a stamp was *Grevillea banksii* which appeared on a stamp issued by Cuba in 1965.

Editorial

## Newsletter changes

It has been agreed that the NSW, Qld and Victorian chapters will each produce a newsletter every year. In part this is designed to spread the load a bit as very few people seem willing to send material for publication. I will also enable me to gain a better perspective of the interests and needs of the membership. At present the newsletter is somewhat NSW-centric and I would like to know what interests people in the other states. To this end, I am deeply appreciative of the assistance offered by Max McDowall and Neil Marriott in Victoria and Merv Hodge in Queensland. The next newsletter due in June/July will be edited by Victoria and the October newsletter will be edited by Queensland. Please send copy by email well in advance of the due month because it takes at least a month in production at present.

## Two new species in 2002

The most recent issue (published December 2002) of Nuytsia, Volume 15 (1)85-99, carries the descriptions of two new species of *Grevillea* by Olde & Marriott, *Grevillea kirkalocka* and *Grevillea squiresae*. A full update on these new West Australian species appears in the newsletter. However, a small orthographic error has been found that was missed by all parties including the authors, the referee and the journal editors. The eagle eye of Peter Bailey has advised that the International Code of Botanical Nomenclature requires that specific epithets like squires require an i before the ending and therefore the name is properly *Grevillea squiresiae.* You can't win sometimes.

Mark Ross

Grafted *Grevillea caleyi*

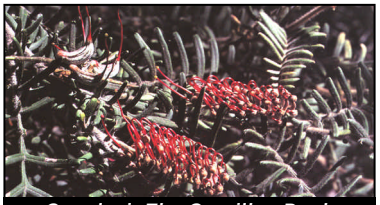
Many people think that Western Australian plants are the only plants, which are better off grafted in NSW gardens. *Grevillea caleyi* is a shrub local to the Sydney area which, on its own roots, tends to be short lived and can die suddenly unless on very good drainage.

Grafting it onto *G. robusta* allows it to be grown on a wide range of soils and live for a lot longer. It grows more vigorously-there is a grafted specimen at Mt Annan Botanic Gardens which must be 6 mtrs across and 3 or so metres high. *G. caleyi* is an attractive shrub with great horticultural potential. Its main features are its foliage with purplish new growth and sprawling lateral habit.

It is actually an easy plant to graft. I have used the top wedge and approach method and have found that either is normally 99% successful.

Grafting times on average are between Nov to Feb but *G. caleyi* can be done between August to mid May, when the rootstock is actively growing (October to May). The graft strikes in approximately 10 to 14 days and active growth starts about 2 weeks later. I have found that even though the scion is quite hairy, misting improves success rate.

This plant may be a little leggy at first when grafted onto *G. robusta*, but if pruned heavily while young, it will become rather dense and very wide, up to 4 metres. It can withstand min temp to minus 5 deg Celsius (4 days in a row June -July 2002) with very little damage, (slight tip damage on a 2 yr old plant). The plant can also handle extreme temperatures and hot, dry winds.



***G. caleyi, The Grevillea Book Vol. 2 (P. Olde)***

# Grevilleas with a 14 day Post Harvest Life


## Abstract

*Grevilleas* are notorious for short, inconsistent post harvest life. Observations made during cut flower production have indicated that; nutrition, pruning, harvest and post harvest factors influence post harvest life. The variety 'Moonlight' is central to these observations. *Grevillea 'Moonlight'* is a large tropical shrub that produces cylindrical, terminal inflorescence on leader and axillary branches. Plants possess three buds per axil with the potential to develop vegetative meristems on damaged cambium. The plants observed are being grown in polythene tunnel houses in situ in south-west Victoria.


Key Words: *Grevillea 'Moonlight'*, post harvest life, pulsing, pruning, nutrition

## Introduction

Learning is a lifelong journey - this is particularly relevant to the production of quality *Grevillea* cut flowers. I began a relationship with *Grevillea 'Moonlight'* in 1998. In my production system *Grevilleas* are grown in situ in poly tunnel houses with controlled irrigation and fertiliser. Like any relationship, the first months involve fact finding and close observation. In order to learn about *Grevillea* production I have conducted (and continue to conduct) experiments. Reliable, consistent shelf life was/is central to each trial. As our relationship has developed I have learnt about *Grevillea 'Moonlight'* (and other cultivars) production. Several points I will discuss here, however two elements should be kept in mind. Firstly, my findings are not conclusive. Many of the points raised have not been fully investigated nor put through scientific rigor. Secondly, my findings may not be transportable. Every environment promotes different responses, even from genetically identical plants. None the less, the ensuing discussion may provide a hint or starting point toward the positive development of your own plant - person relationships.

Discussion: The path toward improving shelf life can be divided into at least two approaches:

1. Improving shelf life through increased plant health.
2. Improving shelf life through better harvest and post harvest handling.

These points are not mutually exclusive and have only been separated to aid writing and reading this discussion.

## Improving shelf life through increased plant health

Of the environmental factors that grevilleas need to grow in the production system I use, I have an element of control over the plant's nutrition, irrigation and canopy juvenility (through pruning).

## Nutrition

Accumulated seasonal plant tissue tests (using the youngest mature leaf (YML)) reveal nutritional needs throughout the vegetative and flowering cycle. When compared to Reuter & Robinson's (1997) *Grevillea sp*. tissue analysis guide and previous tissue tests, the following nutritional practices can be applied:

- Low doses of Calcium nitrate are important throughout a young *Grevillea* plants establishment. Applications of calcium nitrate thicken stems and encourage strong upright plants in a humid environment that would otherwise facilitate weak vegetative growth. A calcium - calmodulin complex is known to activate enzymes in cell membranes which de/activate cell elongation and stimulate the production of strengthening fibres such as collenchyrna (Stem 2000). Calcium is not easily moved around a plant and should be applied in low doses regularly (via a fertigation system), to cater for the fast growing new vegetative growth on the *Grevilleas*.
- An application of potassium nitrate brings flower development forward by 7 - 10 days when compared to unaided flower development. Potassium nitrate should be applied 2-3 months after pruning to assist flower production in the newly developing leaders.

- Magnesium uptake is low in overcast weather and is best applied in spring and late summer, two or three weeks after pruning. Conversely, Iron uptake is rapid in warm weather.

Further to these.points, I believe maintenance of a healthy soil provides a smorgasbord of nutrients to soil bome flora and fauna alike. This enables the soil's living fraction to pick and choose its requirements as seasonal and life cycle stages demand. Apart from regular mulching, low strength doses of soil conditioners (eg. Seasolo) are applied in spring and when deemed necessary.

## Canopy juvenility (Pruning)

*G. 'Moonlight'* plants are typically single trunked, with 8- 10 alternating branches. From the base of the plant toward the apical meristem, each branch decreases in maturity and length but increases in ability to produce an inflorescence. In young (8 month old) plants the terminal leader flowers first, followed by side branches and so on. If stems bearing mature inflorescence were removed at the junction with the central leader, it would reshoot at each axil with 4-7 shoots, each producing a small inflorescence (within the next 5-7 months). Vegetative growth and reproduction occur concurrently once begun. Flowers tend to become smaller on weaker stems if plants are left untended. These inflorescences have a decreased shelf life when compared to the leader and its secondary inflorescence.

Pruning to maintain canopy juvenility increases the number of blooms per plant and their shelf life. By pruning leaders to 60cm and secondary branches to 15cm at the end of each flowering flush, consistent shelf life can be aided. Pruning stimulates phytohormone production, which informs the plant body of major changes, hence altering the role of some cells and stimulating the growth of others (Larcher 1995).

Mature plants can produce up to 8 leaders each producing 4 - 8 quality flowers. Heavily pruned plants flower approx. seven months after pruning. The pruning technique also allows a higher planting density (one plant per square metre). However the technique creates huge nutritional demands as the plant re-establishes its canopy. Typically an abundance of vegetative growth with little flowering potential is produced post pruning. This growth should be maintained as it provides a photosynthate source for the abundant meristems that have been stimulated. Thinning a third of the unproductive meristems reduces the photosynthate demand but also decreases the photosynthetic area. Pruning is about achieving a balance between the source and sink (meristematic) material.

In the cool, poly tunnel protected environment of south west Victoria, it appears that *Grevillea 'Moonlight'* can flower all year around. Early findings from a floral initiation trial indicate that floral initiation is a result of stem age rather than daylength or temperature. Pruning can be manipulated to ensure flower production year around but is best conducted in late autumn or mid summer. A further observation (which is supported by Beal & Joyce (1999)) is that flowers produced in the hotter months have less shelf life when compared to those produced in the cool winter months. This phenomenon needs further investigation.

## Improving shelf life through better harvest and post harvest handling

Each flowering stem produces an inflorescence on the end of each branch. Disbudding once the lead inflorescence is visible improves inflorescence elongation and shelf life. (Disbudding too early can promote unwanted vegetative growth). Flowers are a 'sink' of energy for a plant, hence there must be adequate 'source' (photosynthetic tissue) to generate the energy to support flower production. Assimilates are directed to the reproductive area, hence the remaining inflorescence is pumped full of assimilates thus improving the shelf life of the inflorescence. I have found the removal of between 5- 7 inflorescence immediately below the leader cost effective. Once disbudded each leader can produce between 4-8 marketable blooms.

My observations are concurrent with those of Peter Beal and Daryl Joyce (1999) in relation to the ideal stage of harvest for achieving adequate shelf life. It is important to note that the ideal harvest period is dependent upon the *Grevillea* variety. Apart from the points raised in their research, I have noticed that an increase in ambient temperature during harvest will severely decrease the longevity of the *Grevillea*. For example *Grevillea* harvested at 12 degrees centigrade are more likely to have a longer shelf life when compared to those harvested at 20 degrees centigrade, (assuming all other factors are consistent). Cut flowers dehydrate rapidly even when cooled (to 4'Q. I assume this is related to the active transpiration rate of the Grevillea plants and/or the latent heat of the harvested material.

## Pulsing

The technique of adding solutes to water is an accepted one. I have trialed a range of products including:

- Agral@
- Envy@
- Citric acid
- Bleach
- Chrysal&
- STS
- Sugar

Each produced a range of responses, most not worthy of further investigation. Sugar is by far the most important addition. Beal & Joyce (1999) suggest a 2% solution as being ideal. My observations indicate that the concentration is not critical to shelf life, but higher concentrations produce greater quantities of nectar. The addition of 0.5 - Iml of Agral@ to IOL of water is beneficial to inflorescences that have developed during the summer months. Cut *Grevilleas* maintained in the pulsing solution show no adverse effects. Sugar added to the solution seems beneficial through out the shelf life of the *Grevillea*. As yet I have been unable to examine the effect of I-MCP (Ethyl bloc), although Macnish et. al (2000) have indicated that it is a beneficial anti-ethylene preservative for cut *Grevillea*.

Retailers should be instructed to store flowers in a cool room or out of direct sun in a cool location.

## Conclusions

A 14 day shelf life in cut flower *Grevillea* is achievable, however those who expect to alter one aspect of their production system to achieve it will be disappointed. Healthy plants produce healthy flowers which when treated appropriately will give (at least) 14 days of cut life pleasure.

The unanswered questions (particularly assimilate movement through the plant) surrounding *Grevillea* production make it a challenging (albeit somewhat frustrating) crop to produce. The points discussed here are based on observations and in most cases barely skim the surface. Many aspects regarding production are yet to be investigated. Ask me about *Grevillea* production in 20 years time and then I may have a few answers.

### Literature cited

Joyce, D.C. & Beal, P.R. (1999) Cutflower characteristics of terminal flowering tropical Grevillea: a brief review. Australian Journal of Experimental Agriculture. 39, 781-94.

Larcher, W. (1995) Physiological Plant Ecology (3d Ed) Springer: Germany

Macnish, A., Joyce, D., Faragher, J., Simons, D. (2000) I-MCP: A new anti-ethylene preservative. Australian Horticulture. April

Stem, K (2000) Introductory Plant Biology. (81h Ed) McGraw Hill: USA.

Raven, P.H., Evert, R.F. & Eichhom, S.E. (1986) Biology of Plants (4 th Ed) Worth Pub Inc.: New York

Reuter, D.J. & Robinson, J.B. (1997) Plant Analysis: An interpretation manual. CSIRO: Collingwood, Victoria.

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# Travels in Western Australia 2001

In 2001 the Grevillea Study Group provided funds for fuel in order to permit collection of specimens pertinent to my Grevillea research in Western Australia. I had previously identified three areas that I wished to explore because existing specimens at PERTH had revealed the occurrence there of what appeared to be new and undescribed taxa. I chose Neil Marriott as my travel companion because of his excellent overall knowledge of the WA flora and his experience in this precise field of research.

We arrived in WA on 27 August and went directly to Widgiemooltha in order to determine whether *Grevillea arida*, a name of synonymised under *G. acuaria* by Don McGillivray in 1993, deserved reinstatement. I was convinced that a mistake had been made. We found the species growing abundantly on the gravelly hills in the area. Indeed we even camped beside a small population. But alas, the mistake was all mine and it must be conceded that on present knowledge *G. arida* does not deserve reinstatement. These plants are not the same as those found on the Parker Range which may prove to be different after further study.

In the area between Norseman and Widgiemooltha we collected species under study including *G. acuaria, G. anethifolia, G. huegelii* and *G. sarissa*, before arriving in Perth for a few days work in the herbarium. This completed we headed north to inspect an unusual population of *G. florida* and then further north to collect specimens of a new population of *G. drummondii*. This population is a long way further north of the occurrence of *G. drummondii* at Hay Flat south of New Norcia. The new population can be found at Yandin Lookout, 5 km east of the Brand Highway. It was difficult to locate even though it was in flower, albeit inconspicuously, and at first glance did not appear to be substantially different from the New Norcia populations. We headed further north towards Cataby to collect what is clearly a new subspecies of *G. uncinulata*. I have prepared a detailed study of this species and have decided that the new taxon deserves recognition at subspecific rank.

The main focus of the study continues to be the white-flowered group (Group 1 sensu Olde & Marriott). In the Badgingarra area we collected specimens and examined populations of *G. acrobotrya*. We spent the night of August 30 adjacent to a National Park adjacent to Boothendarra Rd. Early the next morning we headed off along the Marchagee Track and not far from rejoining the Brand Highway we were induced to stop by some plants belonging to the white-flowered group. The first plants examined had hairs over the perianth and we wondered whether we had stumbled upon a new population of *Grevillea metamorpha* which had just been described by Bob Makinson.

***G. acuaria, The Grevillea Book Vol. 2 (P. Olde)***

We collected specimens and wandered across the road to another group of plants that looked similar in foliage but when examined had glabrous flowers. Neither population keyed out to a known species. We have determined the taxa to comprise two new species because we later examined and collected all known populations of *Grevillea metamorpha* which occurs west of the Brand Highway and satisfied ourselves of the distinctness of this species. Further north we again examined unassigned plants in a population east of Eneabba. Here *G. biternata* and *G. vestita* grow together and have produced a swarm of hybrids, each plant with different foliar morphology. McGillivray treated plants from this population as Unassigned. The real task of our northward journey was to travel through the Cooloomia wilderness north of Kalbarri and to find what appears to be a new species related to *G. vestita* collected at Sharks Bay in 1954. The locality was so vague we knew it was like looking for a needle in a haystack and so it proved to be, despite several days searching. The Cooloomia wilderness which occurs north of the emu fence on the western side of the Great Northern Hway was badly affected by drought and there was very little in flower.

continued

Somewhat disappointed we headed south west from Ajana towards our second goal, a new species identified near Mt Magnet. We approached the owners for access permission and began a search of the sand heaths that appeared at some distance from the homestead. The new *Grevillea* species, subsequently named *G. kirkalocka*, was not difficult to find and appeared to be relatively abundant on the sand heath. We also had information that there might be a new *Banksia* species here also but we searched for one and a half days and remained unable to locate it. Finally, as we were about to leave one of our party (Keith Alcock) decided on a lunchtime stroll into the bush. Before long, shouts of 'Hallelujah" came wafting on the wind, and we went running. Indeed he had located the *Banksia* and indeed it appeared to be new. Specimens and fruits were collected but unfortunately the plants were not in fresh flower. Drought had been affecting this whole area for two years. Nonetheless, the infructescences gave sufficient material for a description and to enable us to compare with related species. We named this species *B. rosserae*, after Celia Rosser, the brilliant botanical artist who has spent a lifetime painting all the banksias in exquisite detail. I sampled many of the different taxa in the area among which are likely to be several species new to science in genera with which we are unfamiliar. Other *Grevillea* species present on the sand heath were a very narrow-leaved form of *G. apiciloba* which had very long leaves, representing a northerly extension of range for this species, *G. juncifolia* subsp. *juncifolia, G. pterosperma*, a fine-leaved form of *G. biformis* subsp. *biformis* (in bud only) with tiny fruits, *G. acacioides*. On the breakaway country and heavy clay flats we found *G. obliquistigma subsp. obliquistigma, G. pityophylla, G. nematophylla* subsp. *supraplana*. We came away from this area well satisfied with what we had found and excited by the prospect of introducing the Banksia especially to general knowledge.

From here we headed south to Bullsbrook where a new distribution of *G. althoferorum* has been found. Unlike the more northerly type population, this form grows in *banksia* woodland. Morphological variation confirms it as clearly a new subspecies which we are in process of writing up. Fortunately this taxon which is rare occurs in a nature reserve around which there has been extensive clearing. Heading further south we aimed to confirm the population basis of *G. amplexans* subsp. *semivestita* which had previously been known from scattered, isolated plants. Happily we were able to confirm this taxon as having an extensive and valid population base on Marchagee Track, well east of our new species discovered earlier.

Further south near Coomberdale we looked at the population of *G. biternata* with simple leaves . This plant has the most delicious perfume. To be continued.,

## Grevillea Park Bulli
## OPEN DAYS 2003

Saturday - Sunday April 26-27
Saturday - Sunday May 3-4
Saturday - Sunday July 26-27
Saturday - Sunday September 20-21
Saturday - Sunday September 27-28

Each year it is the last full weekend in April, first weekend of May, last two full weekends in July, last two full weekends in September.

http://www.speedlink.com.au/users/ziebell/grevillea/

## Grevilleas and Philately

Bruce Higgs

In 2002, Australia Post issued the first Australian stamp to feature a *Grevillea*. The stamp was issued on 3 September 2002 with a 49c value. The stamp is one of a set of 5 stamps with the theme Bush Tucker and designed by Janet Boschen, Australia Post Design Studio. The stamps feature five Australian plants traditionally eaten by Aboriginal people. The plant foods are shown against a background of a woven basket or wooden coolamon. These containers, from the collections of the Museum of Victoria, are appropriate to particular regions where the foods are found.

Honey grevillea (*Grevillea juncifolia*) grows on sand plains and dunes in Central Australia. It is characterised by large orange flower clusters with abundant nectar. The sweet honey is highly sought after and can be sucked directly from the flower or extracted by steeping the flower in water to a sweet drink. The wooden coolamon in the background was made by Tjuliata of Ernabella, Central Australia. The burnt poker work designs represent women dancing. This flower was used by Aborigines in at least two ways. The most common technique was to savour the sugary nectar directly by placing the raceme in their mouth and drawing the nectar by sucking the flowers either all together or individually. The second method involved placing the flowers in a bowl or pool of water where the nectar would mix with water. This was then drunk as a sweetened refreshment or allowed to ferment over a few days into an alcoholic beverage.

The featured plants are found in a range of climates and locations throughout Australia.


## Grevilleas in Yackandandah

Martin Rigg & Diana Leggat

We have a new garden project here in the north east of Victoria of some 16 acres. Our initial boundary plantings are now 2 ½ years old and putting out their first significant flowering.

Landscape
Open grass pasture, dams, swamp, some remnant trees, forest along the roadside and adjacent, rolling foothill terrain, 350m ASL.

Climate
Cool temperate, some heavy frost, 35" rainfall, high sunshine levels, and occasional summer high humidity.

Soil
Devonian granite, deeply weathered, gravelly loam, good drainage and moisture retention, low pH and low nutrition.

We have an initial display garden, 60 x 40m with beds developed by excavation, bob cat and hard work. Major building works are in progress slowly i.e. residence. A propagation facility is to be erected soon as plants are required. We will expand into many new genus and species. We have joined a few more study groups this year - Hakea, Melaleuca, Verticordia, Garden Design and Grevillea.

Our first grafted *Grevilleas* (by our own hands) are beginning to flower. Spring brings growth which is amazing to watch. The flowers are a bonus and surprise as we wander the garden corners. *G. flexuosa* has grown continuously and is now 1.5m high with lots of flowers. They hang like small lanterns glowing in the dull evenings. The perfume has a nice complex aroma to add pleasure.

# Autumn Plant Sale & Expo
## 2003
## Mt Annan Botanic Garden

Mt Annan Drive, Mt Annan.

*The entrance is well signposted off Narellan Rd and the South-western Freeway between Campbelltown and Camden.

Entry Fee is $4.40 per person.

**Saturday 5 April 10 am to 4 pm**
**Sunday 6 April 10 am to 4 pm**

Come hear & meet **Don Burke** 12 noon Sat April 5

* **Native plants for sale. Tumblers** from **$4**. Huge range. Unusual species. Rare plants. Old favourites and new-release hybrids. Grafted grevilleas and other genera. Landscape plants. Cold Climate Plants. Rainforest plants. Ferns. Native grasses. Ground cover and rockery plants. Local and Indigenous plants. **Interstate & Local Specialist Nurseries** from ACT, Queensland, Victoria and Western Australia.

* **Cut Flowers.**
  Buy a bunch for Mum all day every day.
  Bid at the frantic Auction of Arrangements on Sunday at 1PM.

* **Garden Clinic.**
  How to grow waratahs, flannel flowers.
  Setting up a native garden.

* **OUTDOOR Garden display.**
  Picnic in the grounds of Australia's largest botanic garden devoted entirely to Australian Native plants.

* **INDOOR Static & Interactive Displays, Floral Display.**

* **Guided Walks around Mt Annan Botanic Garden.**
  See the collections, propagation areas behind the scenes.

* **Workshops** and **slide-illustrated talks**.
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# Notes from Dave Mason

I write to pass on some information concerning *Grevillea scortechinii* and *G. acerata*.

On November 23 1991, I went to Backwater and obtained several cuttings of *G. scortechinii* ssp *sarmentosa*, which I took to the study group meeting at Toowoomba the next day, some members interested in grafting obtained cuttings, and as a result at least five Brisbane members now have this species growing. In location 5.4 to 5.9 km Paddys Gully Road, one plant only was growing,as a result of new roadworks,and this plant had been damaged. Location 4.8km,same road, were approx 12-15 plants,most flowering,and it was from these plants that cuttings were taken. Time did not permit me to check the Pheasant Mountain location.

At Stanthorpe the same day I obtained cuttings from sveral plants growing in a table drain in Poziers Rd; there were about a dozen plants which were new plants about 1-2 years old,all flowering, with a few setting seed, cuttings were distributed to any interested member, and a flower comparison of the two subspecies of flowers taken in the wild on the same day. In my opinion the style is shorter,approx 10-15m. Wrigley mentions some leaves with secondary lobes, I did not see any.

As a result of the 'Sarmentosa' discovery',I was somewhat unhappy with the small number of plants I found, and particularly that both sites are extremely endangered due to their close proximity to the edges of a dirt road and to tabledrains, so last Saturday Calder Chaffey and I went and discovered, still only one plant in 5.4-5.9km location, fifteen plants in 4.8km location, with some (5 or 6) small plants, probably this year's regrowth.

With extra time available and the specific nature of our trip,we located approx 200 plants growing on Pheasant Mountain, some as big as 2 metres across, and one which we would estimate at 4.5m diam, with many, probably 50, which were about 30cm high, but had not yet sent out side growth, so these were probably 6-8 months old. Also there were a considerable amount that were even smaller,with only four leaves, and about 5-6cm. high. No flowers or fruit were found on any plant. The majority of these plants are growing in granite outcrop, and down onto the surrounding flats,on decomposed granite 'sand'.

Most plants are growing in scrubland, and as a result semi-shade, however some new plants are growing on the flats in full sun. The Pheasant Mountain site, even though apparently on private land, I would not consider endangered.

*G. scortechinii* ssp *scortechinii*; 1 re-checked the Poziers Rd site, and found over 25 plants,some flowering,with several re-generating plants, but all plants were in a tabledrain, and live in a very precarious position.

Regards,
Dave Mason
May 5 1992

***G. scortechinii, The Grevillea Book Vol. 3 (M. Hodge)***

## Leaf Yellowing & Soil Fungicides

**Q.** I have been a member of the Grevillea Study Group for about ten years. Located in California, involved with the University of California at Santa Cruz Arboretum, where many grevilleas are grown and introduced into the nursery trade here. I have visited Oz six times, the last visit going up to see Neil Marriot at his wonderful refuge. I grow 62 different grevilleas, most of them species.

It has been unseasonably cold through our spring here on central California coast. Some of the grevilleas are showing yellow leaves. There has never been a problem with this before. Does the cold have any effect on the coloring?

bill grant
grant@ebold.com

**A.** Bill, I'm leaping into the breach here, but I haven't had that experience myself. One would imagine that if they are the so called "tropical hybrids" it could be just a bit of cold induced chlorosis, but I reckon knowing you that they probably are quite a varied lot.
All the same, if it really has been cold, it could just be a "shut down" mechanism on the part of the plants .Citrus does a similar thing here, and nothing will bring the colour back to their cheeks until the weather warms up!

Margaret.
Margaret and Peter Moir

Our grevilleas are not growing in sandstone derived soils. Our soil is granite based with plenty of rocks & low fertility. When we pot on our struck cuttings into individual native tubes they are watered with Sea Sol (20 ml to a watering can) & 500 ml of liquid from our worm farm diluted with 10 litres of water. The plants are usually treated two or three times before planting in the garden. The grevilleas are planted when they are about 15 cm tall. Before planting a handful of Dynamic Lifter is placed in the hole. If the foliage begins to yellow we were watering the plants with Thrive or Aquasol. We are now using lawn food which has high nitrogen, low phosphorus & all the micronutrients. The usual treatment for yellowing foliage is iron chelates but in our garden this tends to kill more plants than it cures. Hope this helps,

Warren & Gloria

**Q.** In the propagating section of The Grevillea Book, one of the soilfungicides recommended was Fongarid which I bought. The accompanying leaflet gives a warning: 'Fongarid has caused injury to some species of Banksia, Grevillea...'
Can anyone tell me what this is about? I have lots of different grevillea seeds to plant and wanted to treat the punnets.

Jan

Des & Jan Howard, Lue Pottery,
LUE NSW 2850
http://www.luepottery.hwy.com.au

**A.** I explored this with the Company. The evidence for banksias and grevilleas was anecdotal. No trials were ever done. We used Fongarid at the recommended strengths on our motherstock with no ill effect. We didn't find it to be greatly useful because it needed to be done every fortnight. Again it is fungistatic.

John Sparrow

For fungal control Fongarid is just one fungicide that can be used in the control program. ALL fungicides should be changed weekly or fortnightly to ensure that no resistance builds up. Fongarid should not be overused as it CAN cause problems with and grevilleas if used too much or at too high a rate. Keith Alcock, expert in fungus control and ex leader of the Dryandra Study Group is in the process of writing an article for the Grevillea Study Group N/L. Keep an eye out for it.

Neil Marriott

Jan, Perhaps you could try other methods of fungal control rather than the use of poisonous chemicals. We can understand commercial growers having to use chemical control but perhaps not hobby growers. When necessary we sterlise our seed & cutting mixes using a microwave. We fill a 4 litre container with mix, make sure it is moist and zap the mixture on high power for 15 minutes.This cleans up all disease & fungal problems.

Warren & Gloria Sheather

# Two New Species of *Grevillea* from WA

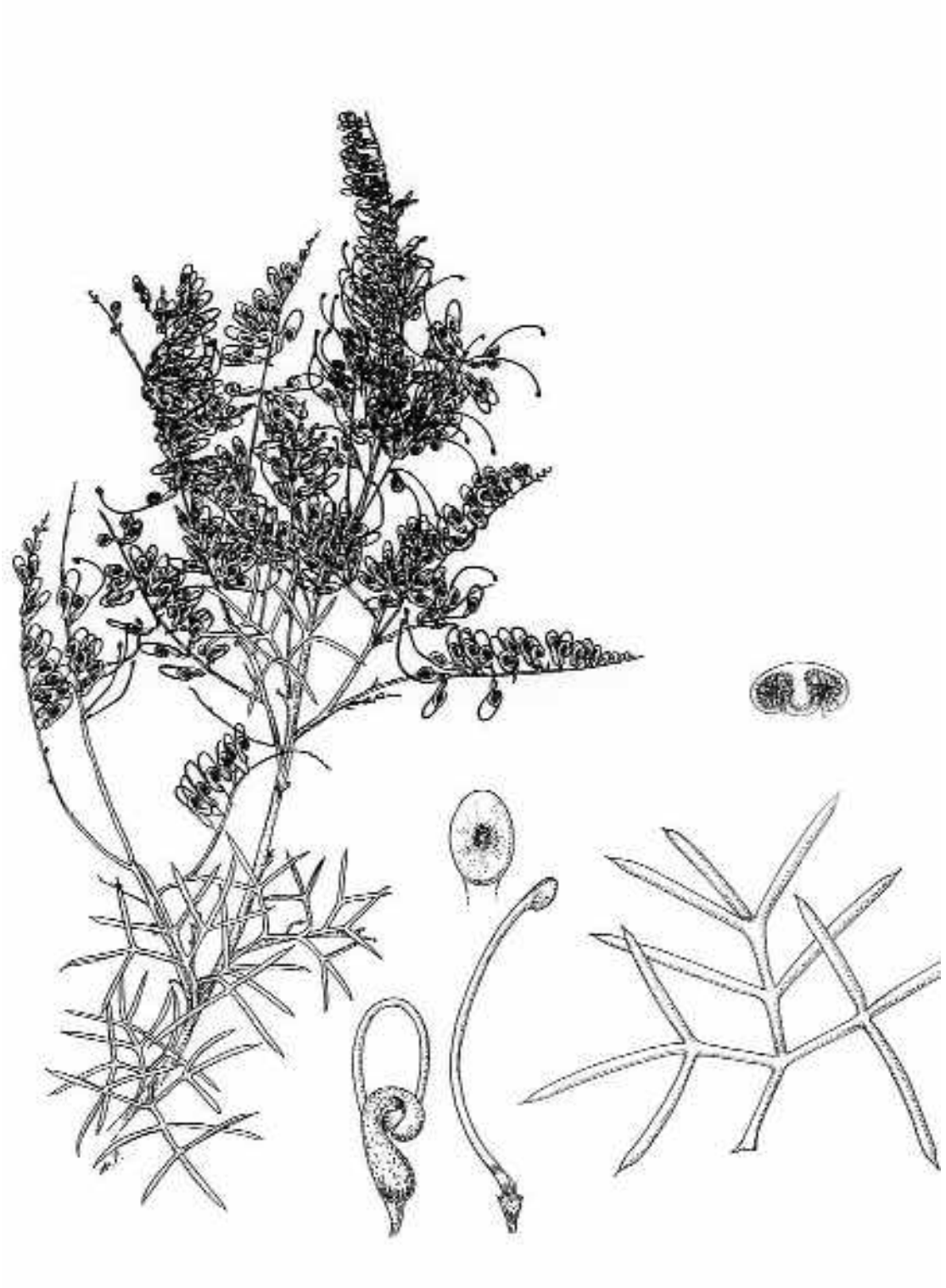
In December 2002, two new species of *Grevillea, G. kirkalocka* and *G. squiresiae* were described in Nuytsia (Vol 15 (1) 88-99). In a paper entitled one new *Banksia* and two new *Grevillea* species (Proteaceae: Grevilleoideae) from Western Australia, the authors P. Olde and N. Marriott, give full descriptive details of the new taxa. Both species are closely related to each other and to *G. nana* and *G. aneura.*

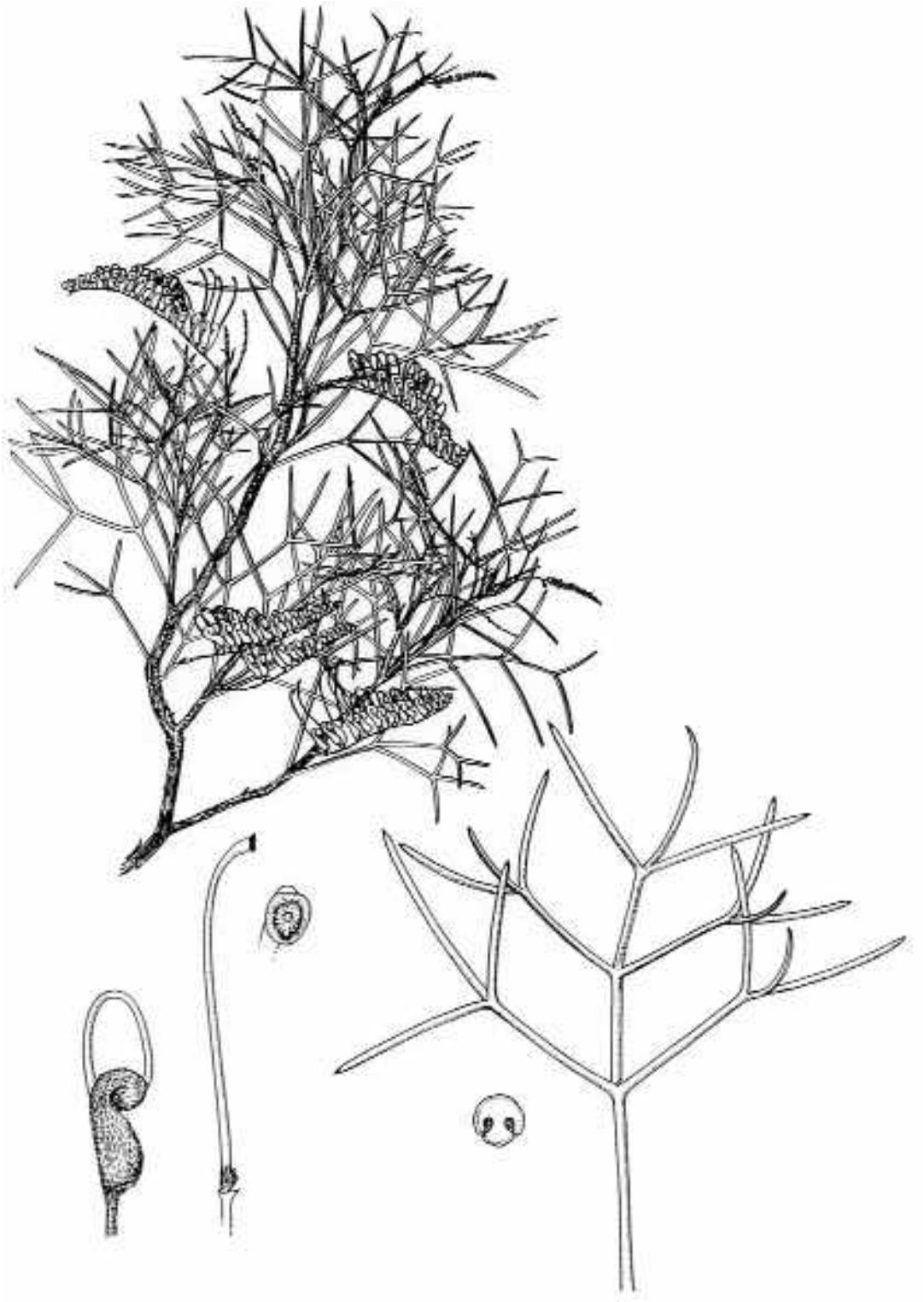
*Grevillea kirkalocka* was first recognised by me as a new species while I was researching in PERTH, the WA herbarium. A subsequent field trip to the area south of Mt Magnet enabled us to easily find the species but unfortunately it was not in flower due to drought. The species has red flowers according to the Type sheet which was collected as part of a plant survey in August 1995. It is closely related to *Grevillea nana*, especially subsp. *abbreviata* which has leaf lobes of similar length leaf but differs in the order of division, primary only in the case of *G. nana* and secondary in *G. kirkalocka*. There may also be seed differences but these could not be compared through lack of material. Other differences include smaller fruits, an obscure nectary, an appressed-villous ovary and an almost glabrous perianth limb (densely silky in *G. nana*).

*Grevillea kirkalocka* grows in deep yellow sand, an uncommon soil type in the Eremean zone, although scattered isolated sand heaths are not unknown elsewhere. They frequently yield new species and the sand heath near Mt Magnet also yielded a new *Banksia* species which was named in the same paper. Celia Rosser, the magnificent botanical artist, was the inspiration for the name of this *Banksia* about which more will be written in another article. The propery on which the *Grevillea* was found was the source of the *Grevillea* epithet which acknowledges the conservation values and effort being made by the owners, especially Ann Pilkington who recognised the *Banksia* as 'probably' new. We had initially proposed the name 'Grevillea xerophila' for this species but a late change was made for reasons not explored here. We would not normally reveal this name change except for the fact that several plants were sold under this name at the Plant Sale last year and also the name was appended as a manuscript name label attached to the type sheet at PERTH from which it was used in the publication The West Australian Flora: A Descriptive Catalogue by Graznia Paczkowska & Alec Chapman.

*Grevillea squiresiae* acknowledges the conservation work and discovery of this species by Mary Squires of Mukinbudin. It is very closely related to *G. aneura* but differs in having a subsessile ovary and fruits with glandular hairs (silky in *G. aneura*). There are several other morphological features also cited in the paper, including longer, 5-lobed leaves, linguiform nectary and persistent floral bracts. It also has a less oblique pollen-presenter than *G. aneura*.

It is an extremely rare species and when described was known only from a single roadside population east of Mukinbudin, a locality far removed from *G. aneura*. Subsequent searches of G. nana collections at PERTH have revealed a mis-identified specimen of *G. squiresiae* from a nearby area. Much of the area in which this species is distributed is yellow sand which has nevertheless been cleared for agriculture and indeed, recently a road maintenance operation did some damage to the roadside plants. It has red flowers and narrow prickly leaf lobes despite which it is a very attractive species.





## Seed Bank

Please note new phone number for Judy Smith (Seed Bank) 9579 1136

**Please include a stamped self addressed envelope.**

**$1.50 + s.a.e.**

| | |
|---|---|
| candelabroides | plurijuga upright |
| crithmifolis | polybotrya |
| decora | pterosperma SA |
| Dryandri ssp | pterosperma WA |
| endlicheriana | pteridifolia |
| eriobotrya | pulchella |
| glauca | pyramidalis |
| goodii | quercifolia |
| huegelii | refracta |
| leucopteris | robusta |
| moniticola | stenobotrya |
| petrophiloides | teretifolia |
| pilulifera | |

**Free + s.a.e.**

| | |
|---|---|
| G. banksii tree | longistyla |
| banksii grey leaf | petrophiloides |
| barklyana | phanerophlebia |
| caleyi | rivularis |
| Caloundra Gem | robusta |
| Copper Rocket | scortechinii |
| endlicheriana | Sid Reynolds |
| Excellence | stenobotrya |
| johnsonii | Superba |
| juncifolia | thelemanniana |
| leucopteris | triloba |
| linearfolia white | trifida |
| longifolia | venusta |
| | White Wings |

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Please send to the Treasurer, Christine Guthrie, PO Box 275, Penshurst 2222.
Please make all cheques payable to the Grevillea Study Group.

2002 ☐ 2003 ☐

## Financial Report - February 2003

### Income

| | |
|---|---|
| Subcriptions | $110.00 |
| Seeds | 10.00 |
| Interest | 226.87 |
| Donations | 15.00 |
| | $361.87 |

### Expenditure

| | |
|---|---|
| Newsletter Publishing | $540.00 |
| Postage | 149.00 |
| Stationery | 20.45 |
| Bank Charges | 2.50 |
| | $689.90 |

$10,441.89 in Interest Bearing Deposit till January 14 2003.

$9,021.22 in Business Cheque Account from Autumn Plant Sale.

Balance in Current Account as at 18/2/03 is $3,889.28

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