

## GREVILLEA STUDY GROUP

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JULY 1992

## Newsletter N° 32

This month's editorial has been cancelled  
due to Exam commitments!  
Hopefully all will be back to normal  
for next issue.

**Report on Activities in S.E.Qld**

by Norm McCarthy

**28th March**

31 members attended the meeting at the home of the McCarthy's. Jan Glazebrook led a discussion on Grevilleas in Queensland and northern NSW. Members were asked to contribute locations and habitats to a list of species to be compiled by Jan.

**Sunday 31st May**

30 members assembled at the Gatton Agricultural College nursery. There was much to be learned about good nursery practices, ably led by nursery manager, Peter Brauns.

We paid a visit to the tissue culture lab where Peter explained procedures in some detail. Myriads of questions!

We visited the propagation room where controlled environment makes the growth of young plants strike like 'magic'!

Other areas show igloos where struck plants continue to thrive without, importantly, any interruption in the growth pattern. Eventually plants are moved to a holding area and carefully grown on before sale.

A good water supply from an on-site dam of good quality services plants and their continuous needs.

Grafted Grevilleas of many species (mainly on Silky Oak, *Grevillea robusta* rootstock) are a feature of this establishment and one of its recent mainstays for monetary returns. The great success of supplying top quality grafted Grevillea plants for a growing public need is a tribute to the expertise of Peter and his industrious nursery staff.

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**ACTIVITIES****S.E. QUEENSLAND**

Meetings are held on the last Sunday of  
odd months at 10.00 am.

For further information contact Merv Hodge, 81-89 Loganview Road, Logan Reserve 4133 (075) 463322

**26th July** "Problems Growing Grevilleas on large properties (particularly lack of water)" at the property of Dennis Cox and Jan Glazebrook, cnr Diamantina Road and Daintree Drive, Logan Village.

**27th September** Inspection of Grevilleas at the home of Dave Mason, Coraki, near Lismore phone (066) 832583

**29th November** at the home of Merv Hodge, 81-89 Loganview Road Logan Reserve



# IN YOUR GARDEN



## Grevillea banksii?

— it needs a name!

Peter Vaughan

Not many people realise but a plant that probably did most to start the native plant revolution does not have a proper name. This unusual situation has been going on for so long that few people worry these days. I feel however that something should be done about it. The Grevillea Study Group is the best group to do it.

The plant I am talking about is of course the *Grevillea banksii* cultivar that most of us grow. True *G. banksii* is a tree often over 5 metres in height. The flowers come in a wide range of colours from red, through the pinks to white. The natural form has a distinct flowering period in Spring with seed shed in late December. Also interestingly, the plant is quite frost sensitive. The different forms may also be distinguished by the commonly cultivated form having leaves with a blue or grey tinge whilst the natural form has green leaves.

It is true that there are other natural forms of *G. banksii*, the prostrate forms are three examples. They all occur on exposed headlands where natural forces have selected for this growth form. Not all plants in these situations are prostrate, but many are.

Where has the garden form of *G. banksii* come from? In simple terms, no one knows. The garden form of *G. banksii* has never been found in the wild. This has always been a puzzle.

No matter what the origin of the garden form of *G. banksii*, it should not be called straight *G. banksii*. It is different to the species as it was originally described. Therefore it requires an extra name to allow people to understand that it is the garden form that is being referred to. A cultivar name is the best. There is indeed one already in use. Decades ago, *G. banksii* var *Forsteri* was used to refer to the garden form. This name lost favour as most people believed that the garden form was the type of the species. We now know that this is not true. Now we should be looking for a name for this plant and historical precedence has been set. We should continue to use the name that has been in use unless there is a reason not to.

The term 'variety *Forsteri*' is not accurate as it is not a known natural variation. Instead it should be treated as a cultivar name. The correct terminology would be *Grevillea banksii* '*Forsteri*'. This is however not an officially accepted name. I would like to suggest the Grevillea Study Group register this cultivar name. At present there is no fee for study groups registering cultivar names.

What of the white form. Perhaps we should call that '*Forsteri alba*'? It's up to us.

## Grevilleas on Heavy Soil in Sydney

Betty Rymer, Kenthurst

These days my Grevillea collection is somewhat sparse since we have so much shade from large trees. However, a couple of things may be of interest.

*Grevillea johnsonii* grows well in our heavier soils. My 3m x 3m one lived for 8 years and then died. However up came numerous seedlings. I gave some away and kept one. This was planted out in similar heavy soil close to the seepage from a septic tank trench and grew madly. In 2 years another shrub 2.5m x 2m but no flowers!

In January this year, the wind blew it partially over — it was so heavy with rain and the ground was wet. In went a large metal stake and the shrub was severely pruned and hauled back and tied to the stake. It now flourishes — 1.5m x 1m and blooming well. Who says it isn't tough!

My original *G. beadleana* was planted in a sandier part of the garden, but it didn't like it — too dry I think. So it was moved to well drained heavier soil and flourished for four years and died overnight. However, a seedling came up and is now doing well as is also a cutting grown plant.

One plant I have growing extremely well is *G. hilliana*. It has been in for 2 years and is 2 metres high.

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## Companion Planting (Bio-Dynamic Gardening)

J. Mathews

Taken from "Better Gardening" in New South Wales (the official organ of the Royal Horticultural Society of NSW) Vol 29 N°3 July 1987. Submitted by Dick Dietsch

...In most cases, the allemones bio-chemical needs more research; the allemones are known to aid the plant producing it, however, giving protection to a neighbour, as in the case of the leek and carrot, they aid each other, whilst the onion and the leek repel each other.

Some *Grevilleas* indicate another (different) type of allemones — the inhibitor. Around the parent plant no seedlings appear; however after bushfire or death of the plant the seedlings appear.

In the leaves of these *Grevillea* is an inhibitor that won't allow the seeds to germinate; remove the leaves and plants grow to replace the parent.

These inhibitors are known as kairomones. The maple family do likewise.



# IN THE WILD



## Grevilleas in Queensland and Northern N.S.W.

mostly south of the Tropic of Capricorn and east of 144°E (approx Longreach)

Grevillea	Location	Habitat
<i>acanthifolia</i> ssp <i>stenomera</i>	northern tablelands of NSW in New England and Gibraltar Range N.P.s	
<i>acerata</i>	Gibraltar N.P.	
<i>arenaria</i> ssp <i>arenaria</i>	Helidon Hills Murphy's Creek	small shrub to 1m, light canopy, sandy soil
<i>banksii</i>	widespread in Maryborough — Bundaberg prostrate forms on headlands	
<i>beadleana</i>	Guy Fawkes N.P. Tenterfield? Dorrigo	
<i>cyranostigma</i>	Carnarvon Ranges, Salvator Rosa N.P. base of Spy Glass Mountain Moolyember Dip, Carnarvon Road	small shrub to 0.5m, light canopy, sandy soil sandstone ridges
<i>floribunda</i>	Crows Nest, Kogan, Moonie, Carnarvon N.P., Rolleston, Yuleba & Chinchilla widespread and variable	sandy or gravelly soils
<i>goodii</i> ssp <i>decora</i>	The Three Sisters, Salvator Rosa N.P., Duaringa, Expedition Range, Aramac, Barcaldine, Clermont, Torrens Creek & Georgetown	sandy soil, well drained
<i>helmsiae</i>	Bahr's scrub Beenleigh, Ormeau, Childers, Eidsvold, Port Curtis, Callide & Yaamba	in light rainforest
<i>hilliana</i>	Ormeau, Burleigh Heads to Eungella, Bowen & Atherton Tableland	rainforest tree
<i>juniperina</i>	Girraween?, between Guyra and Blackwater NSW, Bald Rock & Boonoo Boonoo NSW	granite country
<i>leiophylla</i>	coastal species from Redcliffe to Tin Can Bay including Glass House Mountains	
<i>linearifolia</i>	Girraween N.P., in the granite belt	decomposed granite soils
<i>linsmithii</i>	Mt Grevillea Mt Maroon?	shrub to 1.5m, understorey in eucalypt forest, gravelly soil
<i>longistyla</i>	Salvator Rosa N.P., Gurulmundi, Mitchell, Carnarvon Range, Monto, Blackdown Tableland	sandy soils
<i>pteridifolia</i>	Bowen northwards	
<i>robusta</i>	S.E. Queensland & northern NSW in rainforest — north to Maryborough and west to Bunya Mountains	rainforest and creek line rainforest tree
<i>scortechenii</i>	Poziers Road, Dalveen, Mt Norman, Girraween N.P., Cotton Vale	shrub — ground cover amongst low vegetation in sandy soil, granite country
<i>scortechenii</i> ssp <i>sarmentosa</i>	Blackwater — Paddys Gully Road S.E. of Glen Innes	
<i>sessilis</i>	Blackdown Tableland, Jericho	
<i>singuliflora</i>	Helidon Hills, Miles, Blackdown Tableland	low spreading shrub
<i>striata</i>	Biggenden, Bunya Mountains, Miles, Moonie Hwy	
<i>aff victoriae</i>		



# IN THE WILD



## *Grevillea* sp. nov. (Tumut)

Geoff Butler,  
Australian Network for Plant Conservation  
from Australian Network for Plant Conservation  
Newsletter Summer 1991

Around 10 years ago, a field naturalist/bushwalker, Mr Tom Wilkinson, found a species of *Grevillea* in a valley near Tumut, NSW. The specimen was sent away for identification, but he knew that name provided was not correct. It remained unknown until May 1991 when a small amount of material was brought to the Australian National Botanic Gardens in Canberra, where it was recognised as being something new. A search was initiated immediately and some 17 plants were found, some of which had been damaged or destroyed by power line easement clearing and others were under immediate threat from roadworks being carried out in the vicinity. The land was under the control of a number of management agencies, thus complicating the threats to the species and making protection of the site more difficult.

A meeting was held between NSW NPWS, Tumut Council and staff from ANBG and it was decided that a fence around the population was of prime importance and it was decided that the NPWS and Tumut Council would work together to fence the plants. Subsequent searches have located another small but vigorous population further downstream which has increased the known numbers to 80 plants, but as they are still in the flood zone and accessible to foraging stock and fire, the species is still highly endangered.

Further discussions have been held with the NPWS, Tumut Council, local landholders, a local nurseryman and Tumut Ecology reserve Trust and the Society of growing Australian Plants (Canberra Region). All these people and organisations have expressed their interest in being involved in a species recovery plan. The plan is being prepared at present by the ANBG.

As an interesting aside to the *Grevillea* story, while searches were being made for further populations of the *Grevillea*, at least two other new species (*Prostanthera* and *Pomaderris*) have been confirmed in the same area, with the possibility of a third (*Westringia*) which requires further study. More will be presented on these species in later newsletters.

## *Grevillea* Hunting in Northern NSW

### *Grevillea scortechenii* ssp *sarmentosa*

by Dave Mason

After being given location details of this rare *Grevillea*, I decided to try to locate and obtain suitable cuttings for grafting. I set off one Saturday morning late in November, taking a large detour through Glen Innes on the way to a study group meeting which was to be held in Toowoomba the next day.

Peter had given three locations. At the first one on the side of the road, due to large scale roadworks, only one plant remained. It had been damaged by a road grader but had two flowers with no fruit.

The second location revealed fifteen plants, several flowering but no fruits. About a dozen suitable cuttings were taken. Unfortunately, time did not permit a check of the third location.

Later that day I obtained some cuttings of *G. scortechenii* ssp *scortechenii* from Poziers Road Stanthorpe with fruit and flowers. This enabled the study group members at the Toowoomba meeting to compare the two sisters. Several members are now growing ssp *sarmentosa*.

Late in April I decided to try to locate and investigate the third site and was pleased to find over 200 plants growing on a granite mountain. There was a full range from some which were obviously very new plants with only four leaves through to one old plant over four metres across. No flowers or fruit on any plants.

## PROPAGATION

Judy Smith, our seed bank officer, was delighted with the number of members wanting seeds, but has been disappointed in the number of people donating seeds. Donations of fresh seed are always welcome and mean that we are able to offer free seed to our members.

Judy would like to thank Ian Orell from Queensland for his donation of seed including *G. venusta*, *G. glos-sadenia*, *G. pungens* and *G. longistyla*

### Gatton College Plant Mix

(1 cubic metre = 1000 litres)	
composted sawdust	40%
composted pinebark	40%
coarse sand	20%
osmocote + 3-4 months	
osmocote + 8-9 months	

Actual breakdown of osmocote should be	
3kg 8-9 months	
2.25 kg 3-4 months	
+500 grams coated iron	
+2 kg Azolon 38N slow release nitrogen	

A NEW SPECIES OF GREVILLEA  
(PROTEACEAE: GREVILLEOIDEAE)  
FROM SOUTH-WEST WESTERN AUSTRALIA

By P.M. OLDE, 138 Fowler Road, Illawong, N.S.W. 2234.

ABSTRACT

*Grevillea marriottii* P.M. Olde. A new species of *Grevillea* from south-west Western Australia is described and illustrated, with notes on distribution and habitat.

INTRODUCTION

This species was first collected in May 1987 by Neil Marriott in the vicinity of Mt. Holland, W.A. It was not at first recognised as a *Grevillea*, being at the time of collection without flowers and fruit. Cutting material was sent to W.R. Elliot, nurseryman of Melbourne for propagation, which eventually flowered in cultivation in August 1988. Only then was the true identity of the material realised. The type specimen was collected on a second trip in October 1988 by N. Marriott and P.M. Olde. Terminology and presentation closely follows that used by D.J. McGillivray in his revision of *Grevillea* (in press).

TAXONOMY

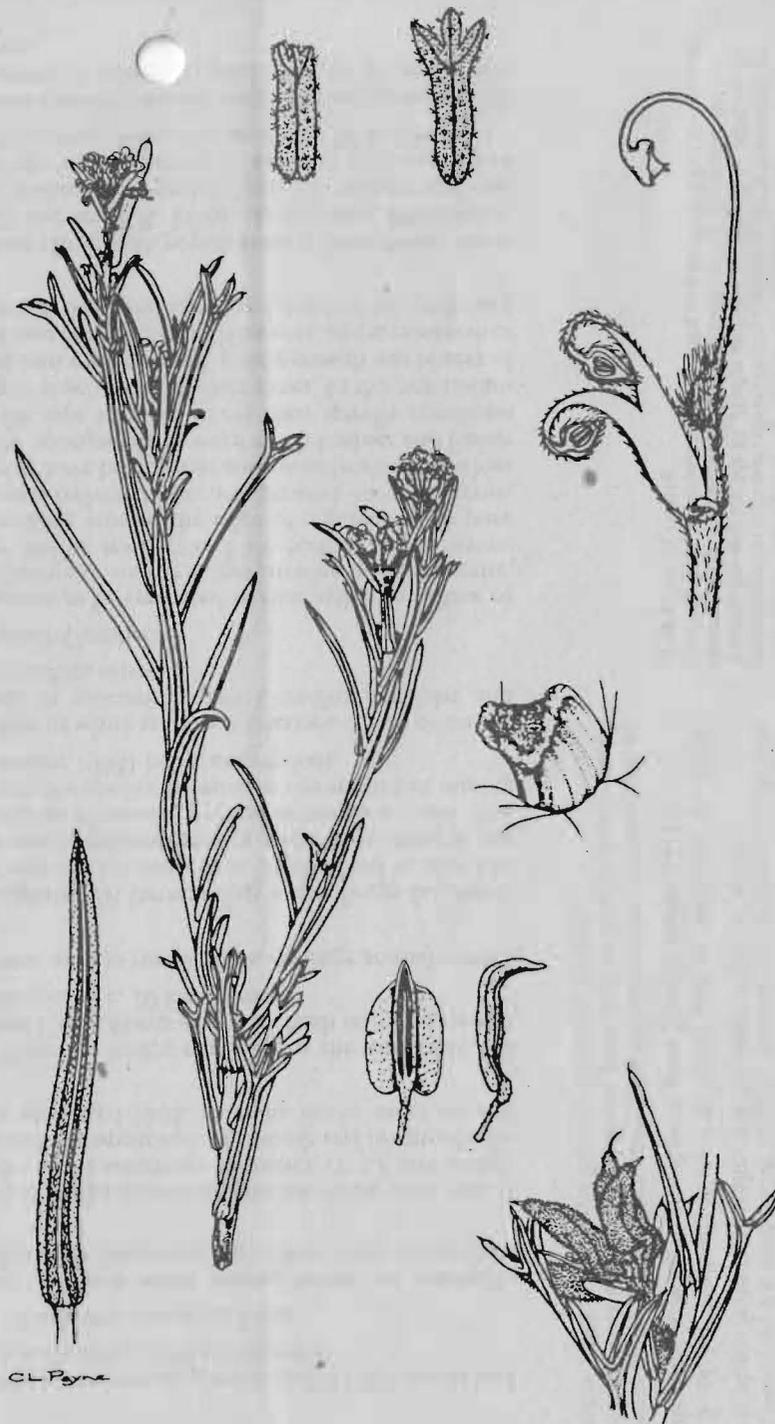
*Grevillea marriottii* P. Olde, sp. nov.

*G. lissopleurae* McGillivray affinis, sed indumento ramulorum et foliorum aperte villosa, foliis maturis latioribus et scabris, plerumque ad apicem aut bifidis aut trifidis aut tripartitis, ovario villosa, fructibus in capitulis fasciculatis et in stipitibus valde incurvatis portatis differ.

**Typus:** c. 2 km south of Mt. Holland, Western Australia, 119° 44 E, 32° 12 S on the eastern side of the Mt. Holland-Hatter Hill Road, beside a mining transect. Uncommon. 50-80 plants were found on a rise in yellow sand with laterite outcropping, in association with *Melaleuca scabra*, *Adenanthos* spp., *Dryandra cirsiifolia*, *Grevillea apiculoba* scattered in mallee Eucalypt woodland. 4 October 1988. P.M. Olde et N. Marriott. (fls, fruit). *Holotypus:* NSW 222167.

The specific epithet is named for Neil Marriott (1951- ), nurseryman, Deep Lead, western Victoria, on whose small property most Australian species of *Grevillea* are cultivated and whose life-long interest in the genus *Grevillea* led to his discovery of the species.

An open, multi-stemmed and lignotuberous shrub 0.8-1.2 m high, 0.5-1 m wide; much-branched, and dense when young, becoming open and spindly with age. Branchlets angular and ridged, occasionally rounded, tomentose to villous, or loosely so, the hairs two-armed, white, relatively long (1-1.5 mm), soon falling but persisting in the leaf axils. Leaves sessile, dull green, ascending to spreading, simple and linear or obovoid, very often apically bifid, trifid or tripartite; apex of leaves or lobes obtuse-mucronate or occasionally acute and pungent; leaf base truncate to subamplexicaul. Mature leaves (0.5-) 1-5.3 cm long, 1.5-3.5 mm wide, sometimes slightly downcurved; upper surface markedly scabrous, glabrous or sprinkled with erect, white two-armed hairs, only the midvein visible as an impressed groove; margin smoothly revolute, sometimes obscuring the undersurface except for the midvein; lower surface villous or loosely so, often obscured, midvein prominent; texture coriaceous. Juvenile leaves 0.8-3 cm long, 2.5-



*Grevillea marriottii* Habit x 1.15, fruit x 2 flower x 10 mature leaf x 2 juvenile leaf x 1 nectary x 50.

12 mm wide, white villous or loosely so, sometimes with mixed reddish and ferruginous hairs, oblong to obovate, usually broader than adult leaves with flat or shortly recurved margins and conspicuous lateral venation mainly on the undersurface; texture chartaceous. *Inflorescence*  $\pm$  1.5 cm long, 1 cm wide, erect, terminal, simple, subsessile or very shortly pedunculate, obovoid to dome-shaped, dense, often subtended by one or two axillary fluorescent branchlets; peduncles 1-3 mm long, villous; floral rachis 3-5 mm long, densely villous, wider than the peduncle; bracts 1-1.5 mm long, 0.4-1 mm wide, conspicuous and spreading in bud, ovate with acute apex, densely villous outside, with mixed white and ferruginous hairs, glabrous at the base inside, densely villous above, some bracts persistent after anthesis; pedicels 3-4 mm long, appressed-villous, hairs fawnish and white. *Torus* 0.7-0.8 mm across (dorsal to ventral), oblique at 30-40° to line of stipe. *Nectary* prominent, oblong with lipped apex (apparent on dried specimens), erect and appressed to the stipe, 0.5 mm high, extending 0.4 mm above the toral rim, 0.1 mm thick at the level of the rim. *Perianth*  $\pm$  3 mm long, 0.7 mm wide, white, oblong, undilated at the base, often persistent to fruiting, appressed-villous outside, glabrous inside in the basal 1.5-2 mm, papillose in the upper half almost to the limb; dorsal tepals 6.5 mm long, 0.5 mm wide; limb revolute, ovoid, apiculate to subpyramidal. *Pistil* 10.5-11.7 mm long; stipe 1.5-2.2 mm long, broader than the style, densely villous on the dorsal side, glabrous on the ventral side; ovary 0.6-0.9 mm long, obliquely ovoid, densely white villous; ovules 2; style white, villous at the base with ascending hairs for up to 2 mm from the ovary, otherwise strongly but minutely papillose (or bearing short, erect, inconspicuous papilloid hairs) to within 2 mm of the apex, strongly curved especially in the upper 3 mm, dilating suddenly at the flanged style-end; pollen-presenter oblique at c. 45°, 0.8-1.00 mm long, 0.7-0.8 mm wide, c. 0.2 mm high,  $\pm$  square, broadly convex with prominent, central stigma. *Fruits* 10-14 mm long, 4-5 mm wide, often clustered in heads, oblique on strongly incurved stipes, oblong to oblong-ellipsoidal, slightly dorsally concave in side view with a prominent apical attenuation; before dehiscence, faintly ribbed, surface pubescent with mixed two-armed and glandular hairs; after dehiscence, conspicuously 3-ribbed, the surface glabrous, rugose, cracking with age, the follicle halves remaining joined but becoming  $\pm$  flat in side-view with upturned apex and base; style fragile; pericarp  $\pm$  0.8 mm thick with membranaceous inner surface; *Seeds* not seen.

#### **Flower colour:**

**Pedicels:** pinkish-brown.

**Perianth:** before anthesis, tepals green becoming cream to white; limb grey-green becoming white; after anthesis, tepals turning rapidly fawn with pinkish tinges to black. Perianth hairs white, a few on limb with reddish cell contents.

**Stipe and ovary:** light green beneath white indumentum.

**Nectary:** white.

**Style:** greenish white ageing cream to white, then black.

**Style-end:** cream to white, some flushed pink.

**Pollen-presenter:** cream to white.

**Fruit:** green with attached style red at the base when young, becoming black.

**VARIATION:** A stable and uniform species. Juvenile plants have broader, thinner leaves with conspicuous lateral venation.

#### **Identifying features:**

1. Leaves 1.5-3.5 mm wide, conspicuously granulate, EITHER simple and entire, OR, more often apically bifid, trifid or tripartite.
2. Ovary densely white villous with spreading hairs.
3. Fruits often clustered in heads when young, borne on markedly incurved stipes; after dehiscence, becoming flat in side view, the surface conspicuously 3-ribbed.

**Affinities:** *G. lissopleura* has similar flowers and occurs in the same area. It can be distinguished by its leaves which are narrower (1-1.2 mm wide), always simple and linear, with the upper surface smooth and longitudinally ribbed, its ovary bearing appressed hairs, its fruits borne erect on the stipes.

**Distribution:** Western Australia, where confined to the area near Mt. Holland, south of Southern Cross. Plants were seen both north and south of Mt. Holland over a distance of c. 20 km by road.

**Climate:** Hot, dry summers; mild to cool winters. Average annual rainfall 250-280 mm.

**Conservation status:** Suggested 2R (terminology as per Briggs & Leigh). Initial searches indicate that *G. marriottii* may be confined to the Mt. Holland area, although most investigations were undertaken close to the road or along mining transects. However, more searches are needed. The status of the land on which the species is found is uncertain but mining surveys are currently (October 1988) being undertaken.

**Habitat:** It occurs in yellow or white sand over laterite on rises or on the tops of lateritic cappings in association with *Grevillea apiculoba* and sometimes *Grevillea pilosa* subsp. *dissecta*.

**Flowering period:** (?August)-October.

**Ecology:** The species appears to be restricted to rises either in yellow or white sand underlain by laterite or on the ridges growing in pure laterite. While exploring another mining transect c. 1 km further south, young plants were found regenerating around the edge of a gravel pit in pure laterite. A small seedling was collected here and pressed. Most flowering was finished but appeared to have been dense and considerable quantities of seed were being set. The younger plants were much bushier and lusher than those collected at the type locality, where their spindly condition reflected both their age and much harsher, drier times. In the population from which the Type specimen was collected, young growth was observed to be arising from near the base of some plants. However, an examination of these plants for lignotuberosity was overlooked and needs to be confirmed by further field work.

Propagating material was sent from both populations to Peter Abell, Royal Botanic Gardens, Sydney and to W.R. Elliot, nurseryman, Melbourne. Peter Abell successfully grafted the species onto *G. robusta* and the taxonomic description of developing bracts is based on observations of these plants in June 1989. Cuttings were also struck by W.R. Elliot.

No insects or birds were seen attending the few inflorescences present at the time of collection. However, a relatively sizeable drop of nectar was observed in mature flowers.

**Specimens seen:** 2 km S. of Mt. Holland, W.A. P.M. Old and N. Marriott, 4.x.1988 HOLOTYPE NSW, ISOTYPE PERTH.  
3 km S. of Mt. Holland, W.A. around gravel pit in pure laterite. P.M. Old and N. Marriott, 4.x.1988, NSW 222281. Several non-holotype duplicates of adult plants from this locality K/WPA, MEL, CBC, CANB.  
3 km S. of Mt. Holland, W.A. P.M. Old and N. Marriott, 4.x.1988. Juvenile plant growing in gravel pit in pure laterite. NSW 222282.  
Two living plants grafted from scion material collected at the same site as the holotype were also examined. These potted plants flowered in August/September 1989 at the Royal Botanic Gardens, Sydney.

I wish to thank Mr Robert Makinson for comments on the draft description, for boiling up specimens, checking measurements and providing notes on flower colour of cultivated plants. Mr N. Marriott for locating the species. Mr M. Hodge and Mr and Mrs Peter Althofer for assistance with field work. Ms Christine Payne for the illustration. Mr Peter Abell for work in propagation by grafting and Mr W.R. Elliot for work in propagation by cutting.

#### **ACKNOWLEDGEMENTS**

# PROPAGATION

## Grafting Grevilleas

Julie Lake

Reprinted in part from *Australian Horticulture*, October 1991

A grafting project to create new forms of grevilleas with exciting ornamental, cut flower and landscaping potential is underway at the University of Queensland Gatton College.

The grevillea research is being undertaken as a study project by Bachelor of Applied Science undergrad student, Des Boorman, winner of this year's Rod Tallis Memorial Youth Award, under the supervision of lecturer in horticulture Ian Gordon.

Boorman, who has been interested in working with Proteaceae since 1986, started the grevillea project in 1989. The work involves grafting scions from a range of grevillea species on to rootstock of *Grevillea robusta*, aiming at bringing into cultivation new species with interesting forms and other attributes which will make them commercially attractive.

The emphasis is on finally producing high value plants for collectors, landscapers and those prepared to pay for interesting and not too common species.

Only pure native species are used in the program. *G. robusta* was chosen as the rootstock because of its adaptability to a wide range of soils and climatic conditions; generally it is less fussy than most grevillea species, many of which are still not commonly cultivated and/or are susceptible to *Phytophthora cinnamomi*.

All rootstock plants are raised from seed in the Gatton nursery to ensure quality control.

Growing medium is of general nursery type containing a slow-release fertiliser.

The grafted scion parents are maintained under a high nutritional regime to ensure vigorous new growth with desirable grafting characteristics. Combinations of standard plants and drip irrigation ensures that leaf pathogens are kept to a minimum.

In order to make the project as comprehensive as possible, and to fulfill his ambition to experimentally graft all 273 grevillea species, Boorman is busy collecting specimens from all over Australia.

This includes obtaining plants from botanic gardens, private collectors such as members of the SGAP, and from trips into the bush. Boorman is interested in hearing from anyone who may have a rare species which could be used for grafting.

To date he has collected about 51 species and has successfully grafted 44 of them. Creating interesting new forms by this method is not in itself difficult but discovering the factors which make them commercially viable requires considerable research.

Attributes required include good overall shape, quality of bloom and length of flowering time, quality of foliage, range of growing area, adaptability, reliability and predictability, hardiness and plant vigour.

### Governing factors

In order to achieve these, more needs to be understood about the governing factors such as nutritional balance, time of year for flowering, disease problems, rootstock/scion determination influences and much else.

These factors are studied as part of the program while the grafting continues. Boorman says the success rate has been variable.

On good clean material he gets about 80% success, depending on the species. With some species he has achieved 100% success. The species which tend to do best are those which in any case grow well on their own rootstock; for example *G. formosa* and *G. pectinata*. He uses the whipgraft method because it is fast, readily successful and gives good utilisation of scion material.

Scions at the semi-hardwood or slightly softer stage of growth are selected. Leaves are removed so that a small basal segment of each leaf petiole covers an axillary bud which has started a growth flush.

Scions are surface sterilised in 100mg/L chlorine to remove fungal pathogens.

Stainless steel scalpels are used for grafting in preference to the traditional grafting knife. These can be easily surface sterilised with chlorine and the regular blade changing ensures a keen edge at all times which is crucial in order to achieve a high level of success.

Narrow scalpel blades are used as the scions are often only two to three millimetres in diameter at the ideal grafting stage.

Grafts are then wrapped with Parafilm Mr or a similar laboratory film with two layers over the graft union and a single layer completely covering the scion to prevent desiccation and inhibit pathogen entry.

Grafted plants are given foliar fertiliser and placed into a fog propagation facility for several weeks where humidity is a minimum of 80%, to ensure minimum stress is placed on rootstock and scion.

Boorman found that scions often grow away within a week to 10 days, the buds breaking easily through the single layer of film. Once the scion starts growing the tape will split off, reducing the need for untying to a minimum.

### New characteristics

The successfully grafted plants tend to show improved flowering, vigour and an increase in scion plant size.

Certainly some fascinating new-look plants have been created. One of the most spectacular is *G. formosa* with its big yellow flowerheads and mass of foliage seeming to flare out from the tall robusta rootstock.

Another is *G. dielsiana*; here the scion's 'pine tree' shape stands tall on the rootstock, which means the prickly branches are no longer on ground level and so are easier to keep tidy – also the bright scarlet flowers seem to make a finer show on the grafted plant. Equally interesting is the effect of the exquisitely textured foliage tumbling from the rootstock of the *G. juniperina* or 'Molongolo'.

Boorman says there is potential in his program to create many grevillea forms, some with great novelty value and all with potential to widen landscaping possibilities.

Once a genetic base has been built up and it is established which of the grafted species are most commercially viable as ornamentals or in floriculture, there are plans to initiate a breeding program for the selected species. Once sufficient grafted stock is available and in flower Boorman will look at flowering times, colour, quality and other relevant factors, store pollen if necessary, then cross these with selected species – specifications for which will vary according to the type of plant desired. The result will be new varieties when the scion/*G. robusta* combination is crossed with other species – Boorman says this should produce some interesting effects with the rare species used as parents, creating varieties which will hopefully be eligible for registration.

Besides the obvious landscaping advantages, the project offers potential for improved grevillea flowers for the cut flower trade.

Boorman says once the breeding program is underway he will be looking to isolate influential genes such as those responsible for long stems, big flowerheads and good foliage to complement the flower. ... ..

# NEWS IN BRIEF

Dave Gordon reports that Myall Park Botanic Garden Ltd has received from the Commonwealth Government a grant of \$40,000 to erect a Gallery in the Myall Park garden to house Dorothy's paintings.

Also, the Meandarra Arts Council has made a grant of \$20,000 for the same purpose — \$60,000 in all. The building will also be used as a reception centre. It will be built about a quarter of a mile to the west of the garden near the old sawmill which will be set up as a place for visitors and tourists to have meals.

There are a number of gnarled Angophoras nearby and a waterfall (natural) 15' high by 45' wide

Needless to say, our numerous supporters are very pleased with this outcome.

\* \* \* \* \*

Freda and Laurie Baglin noted remarks made in our last newsletter by Colleen McRae regarding native plantings at Galore Reserve near Lockhart. They agree that it is well worth a visit for anyone at all interested in native plants. It is always interesting to observe our flora growing under different conditions and Galore Reserve provides a fairly harsh environment for many of the plants grown.

\* \* \* \* \*

David Randall from Cobram, Vic reports having just grafted 250 Grevilleas including about 160 *G. alpina* for Neil Marriott, David Shiells and himself. He will report on successes later. David has already had *G. alpina* "Goldfields apricot" and *G. alpina* "Dandenong Ranges" grafted and in the ground for one year and they both look good so far.

\* \* \* \* \*

One of our newest members, Vaun Wende, has a nursery in Israel. It is a medium sized outfit situated on the coastal plain. In the last few years, they have pushed Grevilleas heavily and of late, there is much demand.

Wende's Nursery grow *G. brachystachya*, *G. oleoides* and *G. "Robyn Gordon"* in very large numbers in addition to another 15 varieties.

They look for hardy plants that will survive on little water (250 - 500 mm) and neutral to alkaline conditions.

\* \* \* \* \*

Colin Tyndall from Medowie, NSW is currently busy in his new 1.5 acre garden, having just planted out 1300 plants. Most of this plant material came from Ray Brown's collecting days and Col is not sure what most of it is — a surprise in store. Col has promised to keep us informed of the progress of these plants.

## FINANCIAL REPORT

### JULY 1992

Income		Expenditure	
Subscriptions	\$485.75	Newsletter Expenses	200.00
Donations	47.00	Postage	125.85
Newsletter Backcopies	25.00		
Interest	\$6.89		
	\$300.20		\$325.85
		Balance on Hand 1.7.92	\$828.03

## OFFICE BEARERS

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**Cuttings Exchange:** Hessell Saunders, Box 31, P.O. Bulli 2516.

\* \* \* \* \*

If a cross appears in the box, your subscription of \$5.00 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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