Pentachondra - Newsletter of the Australasian Plant Society



Issue 29 December 2002

AUSTRALASIAN PLANT SOCIETY

Newsletter No. 29
December 2002

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EDITORIAL

SUBSCRIPTIONS ARE DUE!

All subscriptions are due on January 1st. Please make cheque payable to Australasian Plant Society and send to Tony Entwistle, 'Ophrys', 113 Station Road, Delamere, Northwich, Cheshire CW8 2HZ _

Single member	£6.00
Household	£9.00
Overseas	£9.00

All members are reminded that unless they pay by Standing Order, subscriptions for 2003 are due on January 1st 2003. Members who do not pay by direct debit are reminded that if payment is not received by the end of March, membership will be deemed to have terminated. No further reminders will be issued.

Minutes of the AGM

Held at Sheffield Botanical Gardens on Saturday June 22nd 2002

The meeting was attended by 22 people. There was an excellent lecture by Marian Gray.

- The minutes of the 2001 AGM were accepted nem. con.
- Matters arising: The newsletter editor's wish to be replaced was re-iterated. One member present offered to help.
- Noted: that application form had not been put onto website. Action to be by D Gallacher and J Layman.
- Since there were no other nominations, the Secretary, Treasurer and Newsletter Editor were re-elected.
- Secretary's Report: It had been a quiet year. Most correspondence was associated with advice requested about Australian plants for British gardens – in order to reduce watering.
- Treasurer's Report. Finances are healthy. The last year produced a surplus.
- Other business:
    - Agreed to investigate possibility of putting colour into Newsletter.
    - Agreed to try to find other ways of improving presentation of Newsletter.
- Ted Richardson presented the society with the complete set of "The Grevillea Book"

STILL ON THE SUBJECT OF THE NEWSLETTER....by Sue Hyams

Although I didn't manage to get to the meeting, it appears that there was a lot of discussion about the newsletter. Some of the points raised included:

- Larger type, even though it was recognised that, as a result, postal costs would increase. I personally like the smaller type.

- There was also a request for some colour pages, particularly of plants in flower grown by members. I don't know how this will affect costs. I don't possess a digital camera, scanner or even a colour printer, and I've no idea how much colour photocopying is. I've always like the format - it resembles those newsletters produced by some of the various study groups in Australia, which haven't yet felt the need to resort to colour.
- There was also a request for a stiffer colour cover.
- Some members requested a quarterly bulletin. There is barely enough material for twice-yearly issues, due to so few members contributing articles, that to publish more often would not be easy without reprinting articles from other publications. What Pentachondra really needs, is more news from you, the members.

Seed Distribution 2002.

Nearly 1200 packets of seed were sent out this year. Unfortunately the distribution was marred by several problems. The principal one was that having taken over printing and distribution of the list, Jeff Irons had recurring problems with both his computer and its software. Then a supplier from whom some high demand species had been requested did not deliver. Finally the demand for dryandras was grossly underestimated, so that the stock ran out very early on. The consequence was that nearly 10% of the packets sent out were substitutes. Even so many people did not get the number of species requested.

The seed list stated that *C. puniceus var maximus* is not recognised as a separate form. Jeff Irons had taken the supplier at his word. Subsequent investigation has shown that it is now a separate species, called *C. maximus*.

Seedlist 2003 - the system for dispatch of seedlists has been changed.

In future seedlists will not be sent out automatically. If you want one, please send a self addressed label and a stamp to Jeff Irons. They should be received by March 31st 2003. Seedlists will be sent out at the beginning of April.

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A.P.S. COMMITTEE

Although several requests have been made for people to help with and eventually take over jobs within the society, there have been no offers. One reason for the lack of volunteers could be that members do not know what is involved. Here we describe what each post entails.



The **Secretary** is the link between the society and the outside world. Since this is a small specialist society the job makes very few demands and actually requires very little work. Most tasks are routine, such as updating information supplied to magazines and other bodies. There is a steady trickle of requests for information about plants and where to get them. The secretary can either supply this directly or get it indirectly through a member of the society's "panel of experts". The secretary also makes arrangements for each year's AGM

The post of **Seed List Manager** requires about 60 hours of work a year. One third of that occurs when seed requests are received, and the rest can be spread out over the remainder of the year. The seed manager has to obtain seeds, package them, prepare the seed list and despatch requests. Most seeds are bought from commercial suppliers, very few are received from members. What has to be done is select species from those available, order and pay for them, and after receipt pack them into small envelopes ready for despatch to members. This task is an ideal time filler for wet days! The seeds and packing materials obviously take up space. A small cabinet, about 18" wide and deep and 22" high is adequate. In addition some refrigerated space is needed. At present about one cubic foot is used. Traditionally the list has been sent out in late spring, because most seeds germinate best when our weather has warmed up. Seed requests arrive at up to 15 a day, and with the present system each member's request can be processed in 10 to 20 minutes. Ideally seeds should be despatched on the same day that the request is received. So far that has nearly always been achieved.
Preparation of the seed list requires no more than the ability to make elementary use of a word processor. The present manager has tried to give members some indication of what each species is by adding a coding. That is an obvious luxury, and can be discontinued.

Treasurer



"The Treasurer's job is not heavy, and apart from making payments about twice a year and checking the amounts in current and reserve it is largely concentrated in the first half of the year when subscriptions and seed monies come in. Reminders have to be sent out to at least 50 members each March and further decisions have to be taken about the final few who do not respond, usually by telephone contact. Subscriptions come either as cheques, postal orders, direct bank payments or cash including euros, which can take some sorting out. But it is not that onerous a task, and does not need a computer, though I do keep the membership list on mine. The Secretary and News Editor have to be regularly informed of address changes, new members, etc, as the Treasurer is often the first to know."

Tony Entwistle

WANTED --- ONE EDITOR

As mentioned in the AGM Minutes, I would like to resign from the post of editor as soon as possible.

When I first started producing this newsletter back in April 1991, I was a 'lady of leisure'. Now I work full-time as a Plant Manager at a local garden centre. Working until 8pm, five months a year, limits the amount of time I can devote to other interests.

WHAT DOES THE POST ENTAIL?

I don't want to deter anyone, but I thought it would be useful to know what the post entails. I tend to devote a month of evenings (2-3 hours an evening) after the deadline to type up those articles received as hard copy. Some articles are obtained on disk or by email, and obviously this makes life a lot easier. Obtaining such articles is not always easy. There is always a glut from a small band of members (for which I have always been very grateful), so it sometimes appears that the newsletter is a compilation of a few people's information. Each year I write to or email several members asking for any news; sometimes I receive replies. At the last AGM, it appeared that members wanted a more interesting newsletter - this can only be

achieved by more members contributing news of the plants they are cultivating. There are approximately 200 APS members, yet many never drop a line to let the rest of us know what they are growing/trying to grow. Please try to make your editor's job a bit easier by putting pen to paper.

Having typed up the articles, I decide which illustrations I need, all of which I personally draw. Maybe the new editor can save time by introducing scanned colour photographs.

When I am happy with the presentation, I print off a master copy. This is taken to Staples, the Office Stationers, on Teesside, and 200+ copies are printed, (collated and stapled, when the machine works! Often, it isn't working, and I have to collate and staple them myself - very time-consuming). Meanwhile the labels are printed and stuck on the envelopes. A couple of hours is spent putting the newsletters in the envelopes, and attaching the relevant stamps (accompanied by several cups of tea to take away the horrible taste of the gum on the stamps!).

Five or six weeks after the deadline, the issue should hopefully land on your doormat.

Beauhill update - revisited

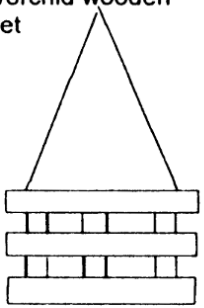
There were a few mistakes in my contribution Beauhill, an update. It was stated that *Clematis petriei* is a selection of *C. forsteri*. That was in the first version. The second version, which should have been sent to Sue stated that the species was re-instated in 2000. I commented too that *Astelia nivicola* 'Red Gem' had not performed very well in my garden. This year it has recovered and is growing well, though the leaves are still a rather dark red. Some garden centres are now selling another selection of this species. Called 'Westland', it has brown leaves.

For Sale

Keith Larkin has a steadily increasing range of books, mainly second hand, but also quality remainders at tempting prices and some interesting books especially imported.

If you are interested, please e-mail Keith.Larkin@Virgin.net, or phone 0116 275 2386 for the list.

Fern/orchid wooden basket



FERNS FOR HANGING CONTAINERS

I have recently potted several hare's foot ferns *Davallia* sp. into wooden hanging baskets, which display their furry rhizomes beautifully. Lined with sphagnum moss and planted in a compost rich in leaf mould, they are thriving. Hung in the greenhouse from the branches of *Grevillea robusta* and *Acacia dealbata*, they are misted at regular intervals. The baskets are easy to make : cut 18 x 15cm lengths of 1cm timber. Use 6 for the base leaving a 1cm gap between each piece; nail together in alternate layers.

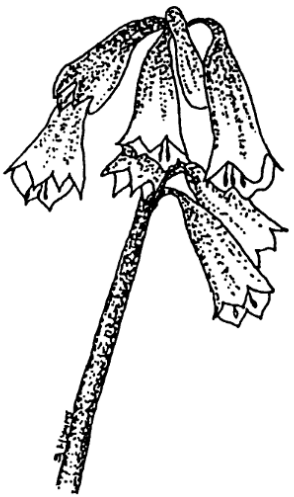
Sue Hyams

UPDATE FROM DENNIS ROWLINSON

(report written early October)

I wrote last year of my pleasure at having *Blandfordia punicea* in flower for the first time. So when it reappeared again this spring and flowered with even more spikes, I was impressed by the 'skill' with which I seem to have placed it in a suitable bed. Very well drained and plenty of leaf mould seems to be making it very happy.

Blandfordia punicea : a perennial with narrow leaves 15-45cm long. Numerous flowers appear on a stout stem up to 1m long. They are bell-shaped and pendulous, brilliant red with the inside of the flower and the reflexed tips bright yellow.



They make ideal pot plants. They need a deep well-drained but moist growing medium.

The genus *Blandfordia* is restricted to the east coast of Australia and Tasmania.

This year has been one of the first flowering for a few plants that I have grown from seed or from cuttings from members. *Melaleuca thymifolia* is in flower at the great height of 10cm and a very welcome sight at this part of the season. *M. blaerifolia* gave enough flowers over the summer to give me hope of a mass next year - though it's random growth style is a bit weird and not exactly neat.

Clematis afoliata, *C.* 'Cartmanii Joe' and *C.* 'Lunar Lass' had their usual mass of flowers but *C. forsterii* and *C. hookeriana* were a bit stingy and only had a flower or two. Obviously they will need feeding again! *C. gentianoides*, *C. petriei* and *C. pubescens* are just growing green - the latter is on an east facing house wall with lots of cover over the roots; hoping it'll make it through the winter. *Kunzea ambigua* was a first timer, but *K. ericoides* has been giving a show for a few years, each one larger as the plant reached around 2.5m this year - why do all the flowers face the sun, from the north its green, from the south white.

All my Correas flowered but none of my potted *Prostanthera* did anything. Both types of *P. cuneata* are still flowering of course. All my *Billardiera longiflora*

are covered in fruit but *B. cymosa* is too small yet - does anyone know if it will be as hardy as *B. longiflora?*

I'm now growing some of Graham Hutchins' seed raised plants - a group of Clematis hybrids, *Bauera rubioides, Dampiera diversifolia* which is still in flower, and *Hibbertia procumbens* which flowered most of the summer and is making a lovely mat.

Melaleuca thymifolia - lace flower native to Qld & NSW. A coastal heathland plant in sandy soils which, from time to time, are quite wet. The fringed flowers are usually mauve-purple, occasionally white. The foliage is aromatic when crushed.

Kunzea ambigua, native to NSW, Vic & Tas, is also known as Tick Bush. White honey-scented flowers are arranged in dense globular heads on arching branchlets with linear leaves, 5-12mm long x 1-2mm wide.

Dampiera diversifolia, a low spreading shrub from W.A. needing a well drained moist soil. Masses of brilliant purple-blue flowers smother the plant.







Billardiera longiflora is a twining shrub with greenish-yellow bell-shaped flowers 1-3cm long. The fruits are purple, occasionally red. Naturally found in damp shaded forest areas in NSW, Vic & Tas.

Hibbertia procumbens is a prostrate plant, found in Vic & Tas, capable of growing 1m across. Numerous buttercup-like yellow flowers cover the dark green leaves.

Bauera rubioides
This small to medium sized spreading shrub makes an ideal container plant. Small, soft leaves are arranged in whorls along slender stems. Pink or white flowers are produced in profusion.

I must try and get to visit his nursery, as he seems to have raised a lot of Australian plants of late, and they always look to be in fine condition.

All my eucalypts seem to be growing away - I'm trying to slow them down by keeping them in pots. I hope it works. The *Arthrotaxis cupressoides* however is only 5mm high after germinating in early spring. Perhaps I should cross it with a few of the eucalypts!

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In May 1994, Dennis, who lives in Stockport, wrote an article for Issue 12, entitled 'Growing Plants My Way'. In it he described the aspect of his garden and how he overwinters those plants requiring some protection.

"My house is on a third of an acre, lying north/south, with the back garden facing west. We are surrounded by trees at the back and seem to get little snow but plenty of frost when it is due, so I have to keep anything of doubtful hardiness covered by any means possible.

I have a frost free greenhouse for tender species - this is allowed down to 0°C by my fan heater on very cold nights - but as yet does not seem to have killed anything off and I am quite happy with this low level. Hardy seeds in pots and various other plants go into a Rollhouse that is proving very useful, whilst I have two small frames for any other plants needing winter cover.

I have an Alpine Table for hardier plants that require drier conditions than the open garden. This has completely open sides to allow plenty of ventilation.

I have made a few sheltered areas for the *Kunzea* sp and other plants that are too large to go into the greenhouse - these are only small areas and I am hoping to extend these in the future."

When writing a report for Pentachondra, please try to include the following information :

- Garden aspect
- climate
- Average rainfall
- Severity of frost/snow
- Topography
- Soil type

THANK YOU

Thank you to all those members, and especially Jeff, who have sent in articles and snippets of news. Apologies for not contacting you on receipt of your article - lack of time again! Deadline for the April 2003 issue is March 19th. Articles can be sent on disk. Acceptable formats are Microsoft Word, RFT and TXT. Please send to Sue Hyams (address on inside of back cover).

SOME EUCRYPHIA LUCIDA FORMS & CULTIVARS

By Ken Gillanders

The genus *Eucryphia* is confined to the southern hemisphere with 2 species in Chile, *E. glutinosa* and *E. cordifolia* and 5 in Australia, *E. lucida, E. milliganii, E. moorei, E. wilkiei* and *E. jinksii.* Various hybrids have been made between many of these species resulting in some very fine garden plants. The two species I am writing about, *E. lucida* and *E. milliganii*, which occur in Tasmania, are endemic.

The local name for *Eucryphia* is Leatherwood, a name given by bushmen years ago due to the consistency of its wood. Today this timber is only used in small amounts in the craft industry to make souvenirs. However leatherwood honey is quite an important industry in Tasmania with apiarists transporting their bees in summer to all the areas where the trees grow. The honey has a distinctive flavour which is usually described as waxy and is quite delicious.



Eucryphia lucida

Over the past twenty years several naturally occurring variations have been found both in foliage and flower of *E. lucida.* The habitat of *E. lucida* is mainly in the west of Tasmania extending down to the south east. These are very high rainfall areas which this species favours. Lower altitude populations are generally in eucalyptus forests which form an over storey of light shade. With higher altitude, *Eucalyptus* first become much smaller and eventually disappear. Then *Eucryphia*, along with *Atherosperma moschatum, Arthrotaxus selaginoides, Nothofagus cunninghamii* and *Phyllocladus asplenifolius* form a dense, almost impenetrable forest with many other lower growing plants.

Although its habitat is wet, *Eucryphia lucida* grows very well in the garden if regularly watered. All soils in these areas are very acid - in many cases just a thin covering of peaty debris over rock.

I would like to describe several different forms of *E. lucida* we have found in the last 20 years we have been in Tasmania.

The first we did not discover ourselves but were told about a pink flowering tree growing in the north west of the state. We were late in the flowering season on our first trip to find it but with the aid of binoculars we saw one pink flower on top of the tree 30m high with a trunk 60cm in diameter. We obtained cuttings with difficulty as the trunk had no branches for at least 6m. Another problem with trees of this size and age is that they have virtually stopped growing, making very little growth each year, quite unsuitable for cutting material. Pieces we had to take were upto 7 years old. This was obvious with the 1cm growth the tree had produced each year. These old pieces were difficult to strike but we did manage to get roots on some. Of course, once young plants are growing in the nursery and producing growth upto 15cm long, propagation is easy. We named this form *E. lucida* 'Pink Cloud'. It is a soft pink throughout the petals and is very free flowering with age. Unfortunately we have found plants do not flower until 5-6 years old, so patience is required.

The second pink flowered form was also growing in the north west. We found several very large pink flowered trees growing in a group on the very edge of an area being cut for logging. They varied in the shades of pink but mostly were pale. Nearby were several small trees which were obviously seedlings from these. One which had been smashed down but still growing had beautiful pink flowers with crimson bases to the stamens. This form has larger flowers than *E. lucida* 'Pink Cloud' and a deeper pink flush on the upper half of the petals. We named it *E. lucida* 'Ballerina' and unlike *E. lucida* 'Pink Cloud' it starts flowering as a young plant 2-3 years old. Of course *Eucryphia lucida* and all its forms have delightfully scented flowers and the flowering season for this one is very long with us. It starts in early January, in our summer, and after a heavy flowering in February, continues till May.

We have found two plants with a variegated foliage both growing in the south east area. The first discovered as a seedling 20cm high has a gold margin to the leaves and white flowers. This plant we named *E. lucida* 'Gilt Edge'. The other, again discovered as a small seedling, has a broad creamy white margin on the leaves. When the new foliage emerges in spring the young growth is tinted a strong pink, which lasts until the leaves mature. The white flowers are not so noticeable against the light coloured leaves. Unfortunately although a good performer in the garden this form is quite difficult to propagate, whereas the other plants mentioned have presented no difficulties.

We are growing two other pink flowered forms discovered by a beekeeper in the north west forests. One is a very deep rose-pink but has smaller flowers than *E. lucida* 'Ballerina'. The other has a soft pale pink flower with overlapping petals. These have not been named yet but possibly will be in the future.

Two other *Eucryphia* forms have been named. *E. milliganii* 'Pink Whisper' which forms a small tree with small foliage typical of the species. The flowers are flushed a very pale pink. The other is another form of *E. lucida* with variegated foliage. Named *E. lucida* 'Leatherwood Cream', the foliage has a small cream margin. This completes the *E. lucida* cultivars found to date. Considering the vast tracts of forest on the west there must be others that no doubt will be found in the future.

Eucryphias
by Jeff Irons

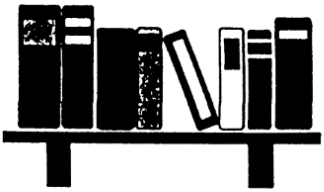
I am always looking out for woody plants that flower in late summer. When eucryphias came into my ken I had to check whether it would be possible for me to grow them. It turned out that they are rainforest plants, and they are found where gaps in the canopy let in a little more light. Because my first purchase, the hybrid 'Rostrevor' took 25 years to flower, I know that some of them are not for the impatient. The Tasmanian *E. milliganii* raced from seedling to flowering size in just 10 years. A seedling of a very compact form of *E. lucida* must be at least 10 years old, and has not flowered yet, and is only about 1m high. 'Rostrevor' has grown at a consistent 30cm per year. Most eucryphias have a brief period of glory, flowering profusely in late summer, but 'Rostrevor' has inherited the long flowering habit of its *E. lucida* parent, and in my garden flowers from late July until stopped by frosts. That is usually in early December. Few plants make such a long contribution. Position is fairly important for all species and hybrids. Being rainforest plants they need shelter yet they need sun to flower well. They also demand moist acid soil.

On the Wirral, both *E. lucida* and *E.* 'Rostrevor' were uninjured by the 1987 winter which was severe enough to cut back the growth of a 100 year old *Pieris formosa* var. *forrestii* at Ness Garden, to just a few main branches, although *E. cordifolia*, *E. glutinosa* and *E.* x *nymansensis* 'Nymansay' were uninjured. Both 'Rostrevor' and *lucida* have been uninjured by -14°C.

A good place to view eucryphias is Seaforde in Northern Ireland where Patrick Forde has planted several Chilean and Australasian species and hybrids, including some plants obtained from Ken Gillanders in 1995.

The only *eucryphia* I grow is *E.* x *intermedia*, a hybrid whose parents are *E. glutinosa* and *E. lucida*, a Chilean-Australian cross. I've only had the plant for a year; its about 45 cm tall, growing in a container of ericaceous compost on the patio where it came through last winter unscathed.

Sue Hyams





Verticordia, E. George. Lists all 144 taxa. Aus$94.95

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Flora of the South West (Bunbury-Augusta-Denmark) 2 vols. Wheeler, Marchant & Lewington. Aus$165.

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Both available from University of WA Press, 35 Stirling Highway, Crawley 6009.

Trigger Plants, Darnowski. Rosenburg Publishing. Aus$22.50.

*****

Everlasting Daisies of Australia, Jerram & Richardson. Aust. Daisy Study Group. Aus$49.95.

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Both available from APS Victoria Bookshop, 13 Conoc Road, Donvale

CD **Eucalypts of S.E. Australia** (324 spp). Aus$130 from CSIRO Publishing, PO Box 1139, Collingwood, Victoria 3066.

The Protea Book, L. Matthews (softback). All cultivated Proteads of the southern hemisphere. £25.

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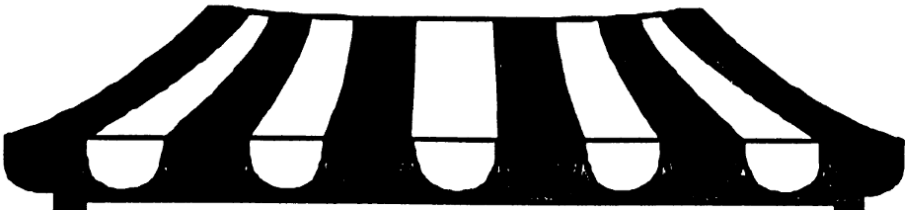
Vireyas, Kenyon & Walker (softback). £15.

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Both available from Timber Press, 2 Station Road, Swavesey, Cambridge CB4 5QJ.

From Seeds to Leaves
Doug Stewart & Robin Stewart. A complete guide to growing Australian shrubs and trees covering seed collection, storage, germination, planting out, fertilising, pruning etc. AU$17.95 from www.publish.csiro.au

Back to the subject of the newsletter - to introduce colour into Pentachondra would probably add about 50p to the cost of an issue. Also, to produce colour, your editor would require from its members, colour photographs, to be scanned, when submitting an article. Let us know your views. As mentioned earlier in this issue, I don't believe colour to be that important. What is though, is reading your news. This issue features articles from just a handful of members. Please make a New Year Resolution to see your name in print next year.



NOTES FROM THE SHOWS

By Tony Entwistle

RHS TATTON PARK SHOW July

As big and successful as ever. Some names such as Ausfern were absent this year. The Hebe Society had a bigger display this year, mostly for foliage. Trevena Cross Nursery were also there, selling mostly South African plants. New for this year was a large marquee for foliage only.
The APS Society is hoping to be there again in 2003.

THE FLORIADE, AMSTERDAM May - October

As this is only held every ten years, I thought I should go and used my airmiles for a day trip in August. It is a huge site (140 acres) and one gets footsore seeing everything even briefly in one day. It is very well laid out, with many exhibits on ecology, conservation, forestry, wetlands etc. Many nations were represented but not Australia & New Zealand - nor even the UK which seems very remiss. The only Australian plant I noted was *Pimelea ferruginea* used for bedding in the Mediterranean Garden. The display obviously varies throughout the season; on my visit it was gladioli in the huge indoor section and hybrid lilies (the perfume terrific) outdoors. There were huge bedding schemes, Dahlias just coming to their best. In one place a pinewood had been densely under-planted with Impatiens with startling effect. I liked the American "quilt" garden of dwarf plants. Fascinating also was the large automated glasshouse, with large plants, eg. 3m high peppers laden with fruit, growing in minuscule growbags and fed hydroponically, sections moving around and up and down automatically.

FOUR OAKS TRADE SHOW, Holmes Chapel, September

This seems to get bigger each year. As usual, there were many European firms, especially Dutch exhibiting. Nearly all the Dutch exhibits showed many colourful foliage varieties of *Coprosma*, and *Pimelea ferruginea* in the dwarf form "Joanne".
Scarlett's Conservatory Plants no longer import from Australia (Aus-Pacific) but they did tell me that they are hoping to market a minimal-phosphate compost.
Just Must Perennials of Evesham showed *Restio tetraphyllus* (Vic & Tas), claimed to be the 'only hardy Restio'.

Agresco from Israel were showing many Australians, including new Scaevolas (a pure white one (White Star) and Grevilleas - Ned Kelly, Ivanhoe, Clearview David, Thelmanniana grey form, Johnsonii. They told me that although there is a good demand for these in mainland Europe, there is virtually none from the UK, though there may be some re-importing from Holland.

Ausfern were showing mostly smaller Australian ferns. I had a long talk with Neil Pike, the Managing Director. He told me that they import from Melbourne, and seemed very happy to help us in that if we wanted any particular plant they could include these in their shipment. The plants would then undergo fumigation and quarantine at their Essex nursery before being released - this would add about 20% to the cost. He told me that the Melbourne plant market is the best in Australia for natives and most plants, rarities excepted, are obtainable.
So I think this offer is worth members' consideration. I suggest that if you are interested you let me know your desiderata and if we can amass a sufficient quantity- say 50 or so - I can then send this to Ausfern and see if they can get them next summer. The collection would have to be sent to one address? eg. me, and plants would then have to be sent out to individuals so the total cost would not be known. Also because of some inevitable fatalities it would seem prudent to order at least two plants of each.

Other (non A&NZ) cultivars that caught my eye at the show were : *Sambucus* 'Black Lace', *Rudbeckia* 'Razzmatazz', new Angelonias, and a weeping Bamboo which makes an extraordinary hanging basket, the new Phloxes with coloured bracts instead of flowers, *Heuchera* 'Swirling Fantasy', *Hosta* 'Revolution' and 'Red October', *Brunnera* 'Jack Frost', *Cimicifuga* 'Pink Spire', *Tanacetum haradjanii* 'Laureen' (pink), *Hemerocallis* 'Candy' and 'Siloam' series, *Tiarella wherryi* 'Heronswood Mist' and *Saxifraga fortunei* 'Crystal Pink'.

OBITUARY
H.A. FAIR
F.C.A.

Henry Fair (Ormskirk) died earlier this year. He had kindly audited the Society's accounts for several years.

MUNDULLA YELLOWS

This is a disease of Eucalypts first noted in South Australia 25 years ago, but now spreading to other states.

Symptoms are yellowing of the leaves and slow death. It was at first thought it might be due to chemicals such as simazine, but recent research would appear to prove it is a virus disease - it has been transmitted to a healthy tree by grafting and diseased trees have been shown to have abnormal nucleic acids. 30 spp of Eucalypts in WA have been infected. There is definitely no connection with Phytophthera. There are suspicions that other plants may be infected - *Banksia, Allocasuarina, Callistemon* and *Acacia.*

It seems most unlikely that it will spread to the UK.

Ref : Landscope Winter 2002 issue.

THE NEW ZEALAND GARDEN
VENTNOR BOTANIC GARDEN

By Peter Thompson

In May, Peter sent me the following letter and article regarding the Botanic Garden at Ventnor.



Dear Sue,

I enclose a description of the New Zealand Garden, made during a recent visit to the 'Botanic' Garden at Ventnor, and would be glad if you would consider publishing it in Pentachondra.

I thought that my impressions might interest other members of the Australasian Plant Society - and perhaps even save them the trouble of paying a visit to a garden of some renown, that has regrettably slipped into such a state of neglect that it is not worth the cost of a visit. Not a small cost, given the price of ferries to the Isle of Wight!

My reactions might seem a trifle harsh, but, given that this particular garden received an enormous grant from the lottery fund not so long ago to build an imposing new visitor centre, I feel that there is little excuse for the state of this garden; and even less for the deplorable state of the Australian and South African Terraces - once models of their kind. Now so derelict and neglected that they appear to be beyond redemption.

Yours sincerely

Peter Thompson

It was just after eight on a beautiful fresh morning with the dew still heavy on the grass as I parked the car and went into the 'Botanic' garden at Ventnor. The situation of this garden in a narrow valley beside the sea - formed long ago by a gigantic landslip - means it remains virtually frost free during most winters, and I had hoped that it would have some of the qualities - though obviously not to the same degree - as Tresco, or at least some of the major Cornish gardens. The reality was very different.

This is a municipal garden, the invention of Ventnor Council, who in a moment of rash ambition decided to create a Botanic Garden here after buying the site from the National Chest Hospital. The enterprise was supported by Sir Harold Hillier, who recognised its potential as a home for trees and shrubs insufficiently hardy to grow in

his new arboretum near Romsey, but even Harold Hillier had reservations about its claim to be a botanic garden, describing the title as 'pretentious in the extreme'. I was sorry to find little to make me think that he would be likely to change that opinion if he were able to return now.

I had come here to see the New Zealand garden, reputed to be one of the best - if not the best - collection of these plants in Britain, and, as I found my way there on a June morning when every prospect seemed bound to please I was looking forward to the experience. But even on this idyllic morning with the birds singing, the sun shining brightly on a recently awakened world, and with baby rabbits hopping around on the grass, the garden lacked freshness; its attractions were muted, and the impressions it created uninspiring.

I walked down the lawn, flanked by broad borders on either side and looked around. The borders were stuffed full of plants - and stuffed is a carefully chosen word in this context. The general affect might, charitably, be said to reproduce the appearance of the most intractably impenetrable examples of secondary growth during regeneration of the New Zealand bush. As a garden feature, or for anyone hoping to learn more about the New Zealand flora it was an unmitigated disaster.

The almost complete absence of labels made it frustratingly impossible to identify what I was seeing; and the lack of definition from one plant to another so effectively concealed their forms that very little idea could be obtained of their garden potential. I felt that the garden would do little or nothing to excite interest in those who were unfamiliar with this flora, but would merely confirm impressions of dullness and lack of variety that are so often the initial reactions of those who encounter the plants of New Zealand.

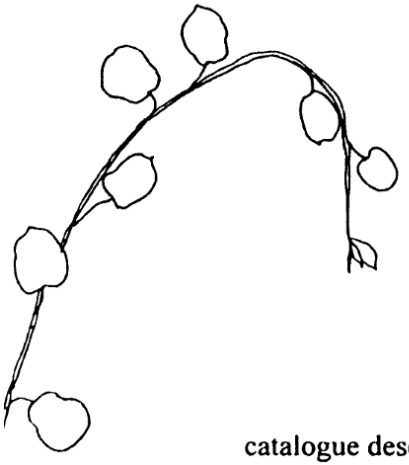
This is a garden which ignored the most elementary use of landscaping devices to create structure and excite interest, and fails even to satisfy those who have come only for the plants. Despite neglect and losses not made good, there is still an interesting collection of plants here - including numerous astelias with bronze and silver filigree foliage, small leaved olearias, coprosmas and hebes, and broad leaved pseudopanax and other trees and large shrubs.

I came away with the feeling that this outstanding, probably unique collection within the British Isles, deserves much better. As a large and interesting town garden - or public park - in an enviously opportunity-filled, if sometimes challenging, situation this could rate highly, and be an exemplary model of its kind. As a botanic garden, it slips into one of the junior leagues, and appears to be struggling with imminent threat of relegation.

Has anyone else made a disappointing visit to a garden? Or, maybe you have found a garden with more to see that you expected. Write and let us know.

Horror Plants

By Jeff Irons



Like most of us, I have from time to time put plants in the garden, and found them to have features so undesirable that the plant had to be removed and banished. This little piece will, I hope, prevent you from making the mistake of trying some of them.

Several years ago I mentioned to Brian Halliwell that I was considering *Geranium sessiliflorum nigrescens* as a garden plant. His comment, based on experience at Kew, was that it should never be allowed into any garden. Curiously attracted by the catalogue description, I chose to ignore his advice, and bought one plant. Its leaves were a nondescript colour rather like that of milk chocolate. They had virtually no impact. The white flowers proved to be almost insignificantly small. However this seemingly innocuous plant turned out to have major defects. The seed heads are explosive and their contents are extremely fertile. It took a year or two to eliminate this geranium.

Haloragis erecta is another dismal plant with brown leaves. Metcalf does not consider it worth a mention, but Cave and Paddison describe it as "a useful filler and revegetation species. That is a coded message. What it means is "On no account grow this dreadful thing." One year Ness Gardens tried this species, in its cultivar 'Wellington Bronze', as a gap filler. The parent plant died over winter. Next spring its seedlings were so prolific, and so widespread, that the species was immediately classed as a pernicious weed. Unless you have a penchance for dirty brown things you are better off without this one.

The late Dewi Price once gave me some rooted cuttings of *Muehlenbeckia axillaris*. At first they appeared to be innocuous. Then they took off, and spread at an alarming rate. One had been planted in bed made from a foot of grit. It was easy to kill. A dose of systemic weed killer did the trick. The others were in soil, and had spread through and into precious things. Their roots

Muehlen-beckia sp

had penetrated the other plants' rootballs. The *Muehlenbeckia* was eliminated only after several years of painstakingly painting weedkiller onto its tiny leaves. This appalling plant is not even a prominent flowerer. Even worse, since it is self-incompatible, fruits are never seen.

Visit Graham Hutchins at his nursery and the chances are that he will show you a perfectly grown specimen of a tiny carpeting plant, in a pot, and say that it will make an excellent alpine lawn. Be warned! Although they make very good pot plants for exhibition, these little things are useless in open ground. They get infested with pearlwort and popweeds (*Cardamine spp.)* Those that I have tried and rejected are: all *Colobanthus* species, *Mazus pumilio, Neopaxia australasica, Pratia pedunculata, Scaevola hookeri.*

Finally there is a different kind of horror plant. One evening, during the coffee provided after a lecture, I overheard a retired professional horticultualist say "Whatever you try, it never makes any impact". He was talking about *Cyathodes colensoi* . That has been my experience. Not once in 20 years has it made any significant contribution to the garden. Yet it has been tried in three places, with widely different conditions. It remains a very small open greyish shrub, with insignificantly tiny white flowers in spring, and because it is self incompatible no fruits. In its present position this *Cyathodes* is virtually invisible against the top dressing of dolerite chips.

Neopaxia australasica is a semi-succulent, creeping plant from New Zealand forming mats upto 20cm across. Star-shaped flowers consist of five white or pale-pink petals.

Mazus pumilio is a prostrate creeper, also from New Zealand, with dull green leaves and small whitish flowers. It can be an invasive carpeter.

Pratia pedunculata, found in Australia and New Zealand, is another prostrate, mat-forming plant with small green oval leaves. Masses of dainty star-like white or pale blue flowers appear in spring and summer. It can be invasive.

That's all. Perhaps you have a personal horror story. If so, please write about it and let others know.

OSMOCOTE FOR AUSTRALIAN NATIVES

This product is made in Holland but not marketed here.
Our Dutch member, Mrs. L. Uijtewaal can obtain it in 25kg bags.
I have written to Scotts Europe.bv., the manufacturers, to see if they can supply direct to anyone interested and in what quantity. However 25kg is a large bag and it will be expensive - I find a 500g bag of the ordinary one lasts for ages! If any member is interested let me know.

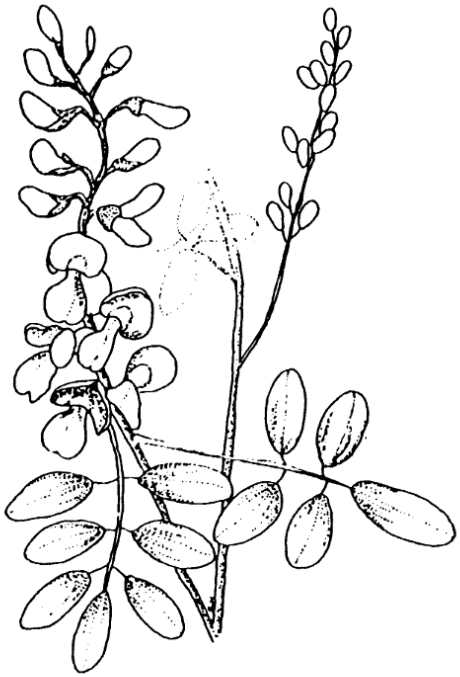
Tony Entwistle

GARDEN REPORT 2002

North Yorkshire
By Sue Hyams

Although Knayton experienced several freezing spells and periods of snow, winter 2001/02 was not particularly cold or prolonged. The weekend before Christmas saw the garden covered in 20cm of snow, but it didn't last long as a thaw set in on Christmas Eve when milder weather arrived. Snow returned on the 30th accompanied by freezing temperatures. On the way to work, at 8.30am, on 31st December, the temperature was -8.5°C, rising just a few degrees during the day. That night it again dropped to -8°C, followed by -12°C the night of January 1st. Although the snow cover had just about gone by Friday 4th January, the days weren't any warmer due to the appearance of the Vale of York freezing fog.

January 2002 started dry and cold, becoming very mild and changeable with severe gales and heavy rain in western and northern areas of England towards the end of the month. Although stormy, the temperatures were mild, reaching 15C at times. Believed to be the mildest January since 1993, it was also the dullest since 1996.



Indigofera australis

Plants in the garden don't seem to have suffered because of the low temperatures, except for *Eucalyptus eximia nana* (which Jeff Irons suggests I call *Eucalyptus* "Nana" as there is apparently no such plant by the name I have been using since buying the seed in 1991). I usually overwinter this eucalypt in the greenhouse but lack of space meant that it had to take its chance outside. Positioned against the house wall, it was looking fine until the turn of the year, but by mid-January it looked a sorry sight with browned foliage; I suspected that it was dead but was prepared to give it a chance to reshoot during the summer. By June, there was a cluster of new growth sprouting from the base of the trunk, so it appears that I will have to find space for it in the greenhouse this winter!

Plants in the greenhouse have fared less well. In early January there were the first flower buds on *Templetonia retusa* and *Indigofera australis*. But

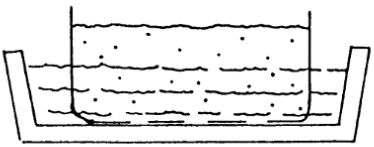
This 8 page section covers many aspects of propagating and cultivating Australasian plants. Most of the articles have been previously printed in past issues of Pentachondra, but I find that I often refer to them myself, so though it worthwhile to include all the information in one pullout booklet.

How To Get The Best From Your Seeds

In early 1999 Dennis Rowlinson asked members for details on their methods of propagation and as a result received a lot of interesting information. We all appear to 'do things' our own way and 'get results'. So, just like the answers on 'Gardeners' Question Time', there is always more than one method!

COMPOSTS

The range of compost mixes used by members appears to be very variable, but it seems that the main aim is to use a material and method that gives them good drainage and has enough water retention to keep the seedlings alive. The range includes various mixtures of loam-based John Innes, peat based composts, perlite, vermiculite, composted bark, etc, to which varying amounts of grit/coarse sand or silver sand are added depending on how much drainage is required.



BOG METHOD OF SEED GERMINATION

This method is used very successfully with plants in the Myrtaceae family, eg *Callistemon, Melaleuca, Leptospermum, Eucalyptus*, etc. After sowing seeds onto the chosen compost, place the seedling container in another container without drainage holes. Add water to this outer container until it is halfway up the level of the compost in the inner container. Maintain this level of water as necessary. Following germination, remove the inner container from the water bath, and water the seedlings in the normal way.

SOWING SEED

The members who replied to Dennis' questionnaire, all seem to sow their seed on the surface of the compost, although some cover half of the seed with fine grit, compost or vermiculite, just in case light is not required for germination. Sowing seeds in springtime shouldn't require the need for bottom heat.

Another method that is used, is the 'bog method', sowing fine seed onto dried sphagnum moss.

SPECIAL TECHNIQUES - SMOKE GERMINATION

In Australia and South Africa it has been discovered that seed germination is improved greatly by exposure to smoke particles, as the smoke is said to remove some of the inhibitors. This has inspired some of our members to experiment. It is possible to purchase 'smoke water' or do as Dennis did: create smoke in the greenhouse using debris from Australian plants.

To carry out 'smoke treatment' - Dennis' method

In the greenhouse, close to pots/pans of seed, position a metal tray or baking tin. Place on it some leaf litter from Australian plants, eg. eucalypt leaves, bottlebrush prunings, etc. A mixture of green and dead material will produce more smoke than just dead litter. Set fire to it and leave the greenhouse, watching the resulting smoke drift across the pots.

When the fire goes out, sprinkle the resulting ash over the top of the seed pots. Any waterings will draw the smoky debris down into the compost.

A **'Wildflower Seed Starter'** can be obtained from WA Wildflower Seed Company Pty Ltd, PO Box 804, Canning Bridge, Western Australia 6153. For costs, etc, you will have to contact the company. The Starter Pack is a granular material containing smoke and chemicals from the burning of bush materials. It is designed to be sprinkled on top of the soil or potting mix after sowing the seeds. The first watering will release the smoke chemicals to wash around the seeds.

A similar product, called **'Kirstenbosch Seed Primer'** is available from The Botanical Society of South Africa, PO Box 53445, Kenilworth 7745, C.P., S. Africa. Current price is R15.50 per pack (5 papers) and R20 p&p (1£ = about 11 rand). They accept credit cards.

HOT WATER, CHITTING AND STRATIFICATION are also used by members. Most of these treatments have been/are suggested in Pentachondra and other literature. Eg. Acacia seed is best subjected to boiling water poured over them and then being left overnight. Any seed that is still floating the next day, should be discarded as it is not viable. Some banksia seed needs stratification for six weeks before sowing.

DAMPING OFF

Most members reported problems with damping off and use fungicides to counteract the problem as well as ventilation and reduced watering.

Propagating & Cultivating My Way

By Sue Hyams

I don't pretend to have found the 'magic formula' for successful propagation, but the following methods work a lot of the time.

For the majority of seed, I use the following medium : 25% volume peat-based multipurpose compost, 25% volume John Innes Seed Compost and 50% volume vermiculite. I sow in 9cm pots. If the seedlings require extremely good drainage, I fill

half the pot with grit before topping up with compost. A thin layer of vermiculite tops the seed. The pots are placed in my propagating frame : a coldframe inside the greenhouse into which a soil cable has been fitted . I try to keep the temperature at a minimum of 20°C but it still drops below this on frosty nights. I start sowing seeds as early as January (mainly because this is when I have the time). If I have a lot of seed of a particular plant I will make two sowings, at different times incase different conditions have an effect on the germination.

I try to sow seed as thinly as possible, not just to deter damping off disease but, if I am short of time after germination has taken place, the seedlings have space to grow. Once seed has germinated I spray with Cheshunt Compound. So far I have not suffered too much from this fungal disease.

ALPINES

Fill a 9cm pot half full of horticultural grit then top up with sowing compost. Sow seed and cover with vermiculite. If the seed needs a spell of exposure to winter weather, grit replaces the vermiculite. These pots are then placed outside.

ERICACEOUS PLANTS

Replace the peat-based multipurpose compost with an ericaceous peat-based compost.

POTTING ON

Most seedlings are potted on when they appear to be growing strongly. I'm not too bothered about pricking out when the first true leaves appear; I prefer to have a strong seedling which I know will transplant easily as opposed to a weak one which will probably die of shock. My 'Potting On Mix' has the same ingredients as the sowing medium but in different proportions : 40% volume multipurpose or ericaceous compost; 40% volume John Innes No. 1; 20% volume vermiculite. Tricky alpines, eg *Celmisia* have added grit.

SUCCESSES AND FAILURES

MELALEUCA NESOPHILA

In Spring 1994 I pruned my specimen of this species growing in the greenhouse border. The prunings, many upto 45cm long, were placed in a vase and put on a south-facing windowsill, to be enjoyed as a foliage arrangement. The water was periodically topped up. The foliage remained looking good for several months. It was only when I decided to completely change the water after many weeks that I discovered extensive root systems on all the prunings. I successfully managed to transfer these rooted prunings into pots of compost. Unfortunately I lost all these plants during winter 99/00.

GREVILLEA 'CANBERRA GEM'

I have had about 50% success with cuttings of this plant, the rooted cuttings flowering when only 20cm high.

HEBES & PARAHEBES

Successful cuttings of several species including *H.* 'Youngii', *pinguifolia* 'Pagei', 'Gt. Orme', 'Autumn Glory', 'Midsummer Beauty', 'Purple Pixie'. but I have never managed to root a cutting of *Hebe* 'Purple Tips?/*speciosa*?' Why not? Why can't I root cuttings of *Derwentia perfoliata* (previously *Parahebe perfoliata*)?

PROSTANTHERA ROTUNDIFOLIA

I used to be able to root cuttings easily of this mint bush in 50% volume multipurpose compost and 50% volume vermiculite, but after several years of success came several years of failure with the result that I now have no plants of this short-lived species.

PROPAGATING USING ROCK WOOL

In Issue 21, Tim Longville wrote about the use of rock wool as the propagating medium for rooting cuttings. It appears that nurseryman Paul Allanson was achieving a good success rate with this material. The rock wool is available as 'plugs', several sizes for either seed sowing of popping a cutting into. The plugs provide perfect drainage and have the added advantage that cuttings rooted in them can be potted on without disturbing the roots: the roots simply grow out through the plug into the medium used for potting on.

Rock wool cubes can be obtained from:
Two Wests & Elliott Ltd. Tel:01246 451077; Fax 01246 260115.

MAINTAINING POT GROWN PLANTS

By Jeff Irons
(Previously printed in Issue 20)

Instructions about pot plant maintenance usually tell how a plant should be transferred from one pot to a larger one. On the rare occasion when one is told what has to be done to keep a plant in the same size of pot the methods given are time consuming and messy. Usually they involve scraping away the outer roots, or perhaps the upper part of the root ball; or the lower part. There ought to be a quick and simple method. I think that I've found it.

Three years ago an Australian friend suggested that I try slicing off half the root ball, with a vertical cut close to the main stem. The method leaves half the root ball with untouched roots, and new roots grow into the fresh compost placed in the 'empty' side of the pot. By removing alternate sides in alternate years the plant is encouraged to produce new rots continuously. It occurred to me that the method would leave a slice of old woody roots the width of the trunk, so in year 3, I made the cut at 90° to the original direction. This year (the 4th) I'll take off the opposite half, and next year will move round 90° again. That way no root will ever be more than 4 years old. So far I've used this method on *Correa* and *Prostanthera*. This year I intend to try it on some other genera.

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HOW TO FEED AUSTRALIAN PLANTS

In Issue 12, Nick Andrews of Powys sent in the following:

I am a keen plantsman, but alas have a poor knowledge of the cultural requirements of specific species and genera of Australian plants.

Plants raised from APS seed in 1992 were fed on phostrogen, along with my other plants. Many species such as *Dietes, Diplarrena, Patersonia* and a number of acacias seemed happy on this. However other species of acacia, *Eremaea* and *Hovea* became yellow, stunted and eventually died.

When it came to 1993 I was uncertain what to do as regards feeding. In my uncertainty I decided to feed all my Australian seedlings and plants with Chempak Phosphate Free fertiliser and at the end of the season, I was pleased with all my plants.

Now my understanding is that certain Australian plants resent the presence of phosphates, however my limited success begs the question as to whether Australian plants actually need phosphates.

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Jeff Irons provided the following information - the plants of Australia have evolved to cope with the old, heavily leached soils. Some such as acacias and allocasuarinas live in association with nigrogen-fixing bacteria. Some species, eg Proteaceae, develop special roots to help them absorb phosphates. Others live in an association with mycorrhizal fungi which help them to collect nutrients, particularly phosphates. Sometimes this association does not develop if the plant is grown in rich soil.

Because European soils are generally fertile, supplementary feeding is not needed if plants are grown in the open ground. Pot culture is obviously different. Proteaceae should certainly receive a low phosphate fertiliser, say N:P:K 10:4:7. Little and often is a good rule for feeding. It makes it possible to flush out any excess nutrient with water. Signs of deficiency can be rectified by an extra feed. Some growers prefer to use a slow release fertiliser.

GROWING IN PIPES

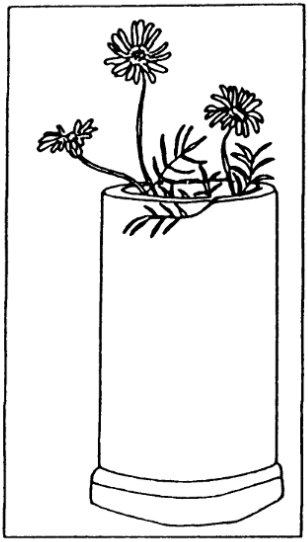
By Dennis Rowlinson

(the following article is gleaned from two articles previously printed in Issues 14 and 19)

(Written May 1995)

Clay drainage pipes are very useful for growing plants with large and spreading root systems, especially those plants requiring some cover over winter. I have always used these pipes for this type of plant and had good results, so have now decided to try to see if *Coprosma* spp would grow just as well, and am in the middle of tests to see how they accept the regime. The

two advantages to me are, (a) they can be plunged over the summer in the gravel surround of the lawn, thus saving watering, and, (b) they can be lifted onto the Alpine Table or go into a frame over winter. The compost intended for use for the coprosmas will be equal parts peat, grit and John Innes Potting Mix. The first three seedlings are *Coprosma petriei*, germinated from the 1991 AGS seed distribution.



(Written December 1997)
The first was planted in a well drained scree, the second was planted in a double wall filled to about 30cm of it's depth with sharp gravel, and the last into a clay drainage pipe 30cm long and 10cm in diameter. The compost used in the pipe was equal parts peat, gravel and J. I. Potting Mix.

After the first season the one in the pipe had to be lifted up in it's compost, as it had settled down to a third of the depth. Gravel was added to make up the height. The others were slowly growing on. None had any extra feed.

A month ago (September 1997) I realised that the one in the pipe was looking sad and I brought it out of the pipe to check it. The reason for the problem was clear, as the roots, obviously liking the regime, had filled the bottom third of the pipe and were trying to get furthest down. As I had no pipes longer than that one, I had to re-pot into a 2 litre deep pot and spread out the roots as best I could. When measured they were just under a metre long.

Since planting, the pipe had been plunged in deep gravel without watering, and it never 'turned a leaf' even during the long Spring droughts that this part of Cheshire seems prone to.

The results were that the plant in the scree had grown to 15cm in diameter, the one in the wall had grown to 25cm in diameter whilst the one in the pipe gave a bun of 20cm in its new pot. So it looks as though keeping deep rooting plants in pipes will work for a few years, but it seems, really, as though it would be best to pot on every other year to renew the compost.

The winner in all this was the plant in the wall, as not only was it a larger bun, but the form was tighter and the leaves smaller. I feel that would be closer to its natural growing pattern. Perhaps I should build more 'double walls' if I'm going to grow deep rooted plants.

HELPING YOUR PLANTS SURVIVE THE WINTER

Originally printed in Issue 25

Overwintering tender or half hardy plants outside is always a gamble. But there are ways which we can help them get through the worst of the weather.

Cold is the most obvious cause of death, but wet and disease also take their toll. Damaging cold temperatures result from radiation frosts or cold winds. These frosts occur when surfaces radiate heat to space and so become colder through winter

nights. On still nights the air at ground level can be very much colder than at higher levels. Cold winds coupled with these frosts can produce some extremely low temperatures. Placing a screen between the ground and the sky can prevent loss of heat by radiation. Windbreaks, to reduce wind speeds, also limit the loss of heat to winds. In icy winds evergreens rapidly lose water that cannot be replaced, especially if the soil is frozen. We can reduce evaporation from leaves by erecting screens. The average temperature in the deeper soil layers is several degrees higher than the winter mean air temperature. This soil heat, provided by the sunshine, can be preserved by mulching. Apply a mulch, 5-10cm deep, in the autumn before cooling starts. After severe winters, many people have experienced apparently stone-dead 'tender' plants, eg *Olearia* x *scilloniensis*, in March, to be rapidly growing by June. Tender climbers can be given extra protection by tucking straw or bracken between the lower stems and holding it in place with netting. Vulnerable evergreens are best protected by erecting a frame of bamboo canes around them and packing straw around the lower branches. In extremely cold weather cover the wigwam with polythene. Cordylines should have their leaves tied up to prevent water settling in the growing point and freezing.

The cold hardiness of plants varies. Roots generally cannot withstand the same degree of cold as aerial parts, and this can affect plants in containers. Young or newly planted plants tend to be more susceptible to cold. Cold also damages soft tissue which has yet to acclimatize to winter conditions; this usually happens to soft growth in autumn and during spring frost. Later unseasonal frosts are often the most damaging especially when they are after a prolonged period of mild winter weather.

Other damage or loss is due to disease. Plants stressed in winter become more susceptible to mainly fungal diseases, and more prevalent in still damp conditions.

The best known method of protecting half-hardy shrubs is to use the shelter of southfacing walls which get the most heat from the winter sun. Sunshine warms the wall and the ground immediately in front of it, trapping the heat and releasing it over several hours to keep the plants a few degrees warmer than those planted further away from the wall. Other advantages of house walls are that they gain warmth from the house and the soil close to the wall is well drained. Although south facing walls are the most useful, east and west walls also gain some heat. Even north walls are better than open aspects. Shelter from cold winds blowing along the wall is vital. Walls provide little protection when winds blow along them, so windbreaks are needed. The most effective windbreaks are permeable. Evergreen hedges are a good example. Create temporary shelter by using evergreen prunings. Newly planted trees and shrubs are the most vulnerable - erect screens of netting or hessian. The intensity of frost is reduced under a canopy of evergreen trees and shrubs, providing useful shelter for smaller plants. In severe winters plants grown on walls can be cut to the ground but as the bottom of a wall is the warmest spot, there is a good chance that tender plants will break again from soil level.

Greenhouses, frames and cloches all obviously protect from cold winds and keep plants warmer than in the open garden even when unheated. The bigger the greenhouse, frame or cloche, the better it is. A small cloche encloses a small volume of air which warms up faster than a larger one in sunshine, but cools faster at night.

One specialised method of protection from cold involves the use of water. Commercial orchards spray water over trees at night to prevent frost damage to blossom. As the water freezes, heat is released. The amateur can use this method but ice should not be allowed to build up on the plants and damage them by its sheer weight.

Many alpines cannot tolerate winter wet and need the protection of a piece of glass or transparent plastic supported above the plant. Many silver leaved plants are similarly sensitive.

Factors affecting hardiness

1. Root environment
2. Microclimate
3. Provenance of seed
4. Nutrition of plants, especially with regard to potash
5. Efficient ripening of wood

References : RHS The Garden October 1989 & The Garden November 1995

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THE PROBLEM OF WINTER LOSSES

In Issue 16 Tony Entwistle wrote about the problems of overwintering plants under glass.

'All plants grow well until about mid-November, and from then until the end of February they succumb - whether from sudden collapse or lingering death - to what I am sure are fungal diseases; whether you call them damping-off, stem-rot, root rot, botrytis, matters not; I'm sure I have got them!

This susceptibility to fungal infection is connected with four factors: low temperature, poor ventilation, high humidity and poor light. The problem is that these are incompatible for most of us; we seal our greenhouses with bubble-glaze and shut the windows to save our heating bills. Extra light is at least possible - I give seedlings 10 hours a day under fluorescent tubes, which are cheap to buy; I also keep a small 20 watt fan running. I have not got an expensive dehumidifier. Anti-fungal treatment is obviously desirable, used regularly, at least every 2 weeks.

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All members should have received a copy of **'Propagation Notes'** on joining the Society. Occasionally, I have run out of copies, and the odd member has missed out. The last time I mentioned this, four or five people wrote and asked for a copy from the next print-run. If you have missed out, an updated 'Propagation Notes' should be available in the New Year. If you require one, snail-mail or email me. I'm sure that we all have methods that work for us - if so, can you jot them down and snail mail/email me, so that they can be added to the Propagation Notes.

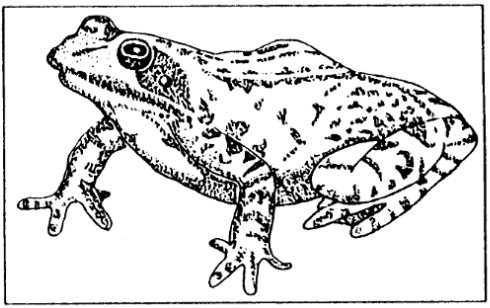
by 11th February some of these buds had shrivelled and dropped off. I don't know if this was a delayed reaction to the earlier freezing nights when my greenhouse heater couldn't keep the temperature above 0°C or whether there was another reason. Both these plants have long flowering seasons; *Templetonia retusa* until well into April whereas *Indigofera australis* continued until the middle of June, when I could prune back some of the older growths. Pink to lilac pea-shaped flowers arranged in long racemes about 5-8cm long, contrast well with the larger red pea-type blooms of *Templetonia retusa.*

February was very mild, wet and windy especially in the north west. As a contrast it was sunnier than normal in the southeast. Despite this localised sun, like January, February has also been dull, dullest since 1997; and the wettest February since 1990. A respite occurred in the middle of the month when an anticyclone brought dry, sunny weather accompanied by overnight frosts. This was followed by another wet and windy spell which turned into a wintry interlude by the 23rd in the north reaching down as far south as East Anglia. In Knayton, this late February cold spell brought 20cm of snow cover accompanied by several nights of low temperatures (-5°C). This cold spell was followed by a milder one which woke up the resident frog population.

March was mostly mild and mainly dry. March 4th saw the first clump of frog spawn in the newest of my three ponds. Less than a year old, it was a privilege to see it being used as a maternity ward for the frogs which usually inhabit the largest pond. Being shallow, it warms up quickly. By 27th March the first tadpoles were exploring.

Two greenhouse plants which were dead by spring were *Kunzea baxteri* and *Acradenia frankliniae.* The first specimen, I had nurtured for the past 14 years, having sown and germinated the seed in 1988. This was the Scarlet Kunzea, native to Western Australia. It formed an open spreading shrub with crowded foliage on drooping branches which I found to be brittle and easily snapped. The crimson-scarlet flower spikes were spectacular; I'd never had any trouble getting the plant to bloom. Since the turn of the year, the foliage had, bit by bit, taken on an unhealthy appearance. At the time of writing for the last issue, just one small branch looked well. I had no idea why it has decided to go into decline but I didn't expect it to live much longer. And, it didn't!

The other plant that died was *Acradenia frankliniae*, bought in 1994. This shrub had been struggling for the past few years. Scale insects had gradually weakened it and this winter it finally went to 'Plant Heaven'. Recently, Jeff Irons has supplied my with another young plant.



I have several New Zealand daisy bushes: *Olearia* x *scilloniensis, O. macrodonta, O. nummularifolia, O.* x *haastii* and *Olearia semidentata* 'Henry Travers'. The first two have been planted against the southfacing house wall since 1993; *O. nummularifolia* and *O. haastii*

have been in the front garden for a similar length of time, and *O.* 'Henry Travers' is a new acquisition this March and is currently in a pot on the patio. By March this year, *Olearia* x *scilloniensis* was covered in hundreds of buds, which started opening in April. The daisies are so white and dazzling, that sunglasses are often needed to look at them especially on a sunny day. By May there were flower buds forming on *Olearia macrodonta*. The large corymbs of white daisies, which began opening in June, although not produced in the abundance that clothe *O.* x *scilloniensis*, are nevertheless attractive. I find the holly-like foliage, glossy above, felted below, attractive. It always looks fresh and clean. *O. nummularifolia* and *O.* x *haastii* are the slowest growing of my daisy bushes. The leaves of the former are tiny, just 1cm long and the flowerheads are 2cm across, produced near the shoot tips in midsummer. *Olearia* x *haastii* has leaves upto 2.5cm long with dense corymbs of white daisies, again in midsummer. I haven't yet experienced blooms on *O.* 'Henry Travers'.

I only grow two grevilleas : *Grevillea* 'Canberra Gem', which is planted in a half barrel by the garage wall (I also have a smaller rooted cutting in the greenhouse), and *Grevillea robusta* which was planted in the greenhouse border in 1993. 'Canberra Gem' produced the occasional flower during December, before opening a larger number of spidery blooms in March and continuing through to May. *G. robusta* is grown for its foliage (large pinnately-divided leaves; young leaves are attractive bronze colour with silky hairs); I have to keep lopping the top growths to prevent the greenhouse roof being lifted off.

By the end of the month *Viola betonicifolia*, sown in 2001 (AGS seed) and currently planted in an alpine trough (to be overwintered under glass) was blooming.

Late March saw several new purchases: from the Cleveland Alpine Show - *Clematis petriei*, *C. marmoraria* and *Blechnum penna-marina*. I hope to write an article for the next issue on the smaller plants I grow, so I won't dwell on the alpine plants this time.

The end of the month saw new leaves emerging on *Gunnera manicata* (another half barrel resident), and the blooming of the first flower of the year of *Clematis armandii*, planted against a northfacing wall two years ago (I've run out of south and southwest facing aspects).

Like March, April was a favourable month being warm and mostly dry overall, becoming unsettled towards the end of the month.

The warm, mild weather of April enabled garden birds to nest early. Robins built a nest in the hollow trunk of my old plum tree, while blackbirds chose *Muehlenbeckia complexa*, a climber/scrambler covering part of the southfacing house wall. This is one of Jeff Irons' no-no plants, but I like it. I have it 'trained' up a piece of trellis and every few weeks I just run the hedge clippers up and down it, keeping it trimmed to about 15cm in depth.

Mid-April saw my two Pittosporums in bloom, *Pittosporum tenuifolium* and *P.* 'Silver Queen'. Toffee, my tortoiseshell cat, who celebrated her 12th birthday on 16 April, loves these shrubs, especially on an evening when the highly scented ruby-coloured flowered are magnets for the early springtime moths, which she tries to catch.

In April I made a few more acquisitions: *Libertia ixioides* bought at Gateshead Flower Show (which is planted in a ceramic pot along with *Ophiopogon planiscapus nigrescens*), and from

the Harrogate Spring Flower Show - *Celmisia ramulosa, Acacia verticillata* Riverina Form, *Pseudopanax lessonii* 'Trident' and *Hardenbergia violacea.* I've tried growing *Celmisia ramulosa* before, in a scree bed, which was fine until the recent wet winters. This specimen has been planted into a trough which can be moved under cover in inclement weather. *Acacia verticillata*, otherwise known as Prickly Moses, is a variable evergreen small tree or large shrub from Australia. According to the label, the Riverine Form has yellow catkin-like flowers in spring (it was in bloom at the time of buying) and is capable of reaching 3-4 metres in height. Since my plant is only about 30cm tall, it has a long way to go. *Pseudopanax lessonii* Trident is an evergreen wind-resistant upright shrub with green, glossy leaves, supposedly hardy down to -10°C, but like many of my plants it will stay in a container and be brought under cover during the coldest spells. *Hardenbergia violacea*, also known as the purple coral pea, is a strong growing climber with violet pea-like flowers, 1cm across borne in pendent racemes 10-13cm long.



Solanum laciniatum

In the greenhouse, I have one large containerised specimen of the Kangaroo Apple (*Solanum laciniatum*) which began blooming in April : dark blue-purple flowers, 5cm across, to be followed by ovoid green fruit gradually turning orange. More flowers are produced as the days get warmer. This spring, I decided to replant two half barrels, situated in the front garden against the westfacing house wall, with two largish specimens of *Solanum laciniatum*, having removed the alpines and dwarf conifers which had been there for the past eight years. Whether they make it through the winter, remains to be seen. Since young plants seen to germinate easily in pots positioned below the original specimen (AGS seed 2000) in the greenhouse, it would appear that I'll have no shortage of replacements.

Also in April, the South African *Sutherlandii montana* sported a few red pea-like blooms.

With an outdoor temperature of 20°C, and occasional showers, the growing conditions in April were ideal. *Corokia* x *virgata* was covered in buds, the best I've ever seen. Bought in 1993 and just 30cm tall, this New Zealand shrub is now 1.3m tall x 1m spread. The small spoon-shaped leaves, glossy and dark green above, and white beneath, are covered with small fragrant yellow star-like flowers in May, to be followed by ovoid orange fruit in late summer.

May was chilly at first with overnight frost, becoming unsettled later. A short heatwave arrived mid-month thanks to an anticyclone over Europe - Jersey experienced a temperature of 28.5C on the 16th. The end of the month was wet and windy.

At the beginning of May, the young robins left the nest in the plum tree hollow; at the same time the first clutch of blackbirds left their nest in *Muehlenbeckia complexa*. Young goldfinches arrived to bathe and drink from the pond.

On 12th May I planted into the front garden a specimen of *Hebe speciosum?* Or is it 'Purple Tips'? It was purchased un-named, and has spent several years containerised, being overwintered under glass. However it hasn't looked too happy the last couple of years. It is now growing, hopefully more contently, in front of *Hebe* 'Great Orme'.

In an alpine trough *Ourisia* 'Snowflake' lived upto its name - green foliage covered with snowy white flowers. This New Zealand member of the Scrophulariaceae family, forms a robust, mat-forming evergreen with spoon-shaped, glossy, dark green leaves, upto 1cm long. Clusters of tubular white flowers, 1-2cm across are produced from May onwards. I originally bought one plant in spring 2000. This has now been split into two pieces; one planted in the large scree, one in an alpine trough.

Overall June had an unsettled first half with thundery showers at time, followed by a mainly dry second half.

On 4th June, Cobweb, my other cat celebrated her 16th birthday. Gone are the days when she would chase all the butterflies - this year she would have been very disappointed; there were so few of them. Instead it has been a year for the birds to produce as many young as possible. By the beginning of the month there was another clutch of blackbirds in *Muehlenbeckia complexa*. I had to delay clipping this New Zealand twining climber until the young moved out of the nest.

While looking around my screes and rockery taking note of what was flowering, a confused hare dashed through the back garden having found a gap in the hawthorn hedge. One noteworthy plant was *Leptospermum humifusum (*syn *L. rupestre),* a prostrate spreading shrub on the larger scree bed sporting white five-petalled flowers.

Alyogyne huegelii 'Santa Cruz', an Australian member of the Malvaceae, began blooming in early June. Sown in 2000 (AGS seed), this erect shrub, kept permanently in the greenhouse, seemed to struggle last year but having being repotted earlier this year has obviously suited it. The mauve-purple satiny flowers are freely produced, as are the white flowers of *Clematis gentianoides*, again, another greenhouse resident. I don't have the confidence to experiment with some of my plants outdoors, unless I have a glut of seedlings.

Jeff Irons kindly sent me a young plant of *Pelargonium rodneyanum* earlier this year, a replacement for the previous one he sent me that I managed to kill. I have had no trouble at all with *P. australe* which I've grown for several years and which seeds itself freely throughout the greenhouse border, but for some reason I am not managing to bulk up this magenta storkbill as quickly. At the time of writing (October 16th) there are still a dozen or so magenta flowers on it, but at one point I was left with just one leaf, and I thought I had killed yet another one of Jeff's plants! From experience, it appears that it requires less water than I had been giving *P. australe.* The 'easier to cultivate' (at least for me) austral storksbill produces clusters of pale pink flowers with rose veins. A couple of plants of this latter plant were successfully overwintered in a hanging basket against the garage wall, and have been blooming all summer.

Another plant that I think I have probably killed this year is *Ozothamnus rosmarinifolius*. In early June a good display of terracotta-coloured buds had formed, which in turn opened to white flowerheads. Because the shrub had become very woody, I decided to prune it after flowering, but obviously cut back too far. No regrowth occurred, and the few green shoots remaining at the time of pruning have since died. So I'm left with *Ozothamnus* 'Silver Jubilee', the foliage of which I prefer but I don't think the flower buds or flowers are as noteworthy.

I have previously mentioned that unless I have several specimens of a plant, I am reluctant to experiment by planting them in the garden. Having several plants of *Solanum laciniatum, Acnistus australis* (South American), and *Nicandra physalodes* (commonly known as Apple of Peru - yes I know I'll have a garden full of them next year, but I do like blue flowers), I planted a couple of each in the front garden next to one of the bird tables. The same bird table where two grey squirrels fought over who had the right to access the squirrel feeder! One squirrel sat on birdtable and stamped its feet (reminiscent of Thumper the Rabbit in Disney's Bambi) at the same time as shaking its tail, before chasing the other squirrel away.

Just like the gardening television programmes are telling us to use the hedge clippers to prune the roses, I decided to use them to trim my pittosporums, *Bursaria spinosa* (trying to avoid flowering shoots) and *Olearia* x *scilloniensis*. Although the ends of the branches looked a bit rough at the time, within weeks they didn't look any different to the usual slower way of pruning them. All plants had grown far too big for the area allocated - bordering the drive, making it about 45cm narrower than it used to be, causing wing mirrors to catch on foliage daily and a husband to comment that the driveway was now '3ft narrower than it was when we bought the house' - (men do like to exaggerate!).

In 1994 I purchased a packet of seed of *Phormium tenax* from Chiltern Seeds. Three of the resulting seedlings were planted in the front garden which has a south/southwest facing aspect. This June, the first flower panicles developed, on two of the specimens. With the aid of a stool, several close-up photographs of the developing buds and dull red flowers were taken. As mentioned in previous issues, I have several phormium hybrids and cultivars in the open ground but *P. tenax* appears to be the strongest and the only one so far to flower..

June is the time for the bottlebrushes. An unnamed callistemon in the greenhouse always begins unfurling its scarlet stamens this month.. This year it was accompanied by *Melaleuca hypericifolia* with its scarlet brushes. This honey myrtle, also known as the hillock bush, is a dense shrub capable of growing upto 3m high x 2.5m across. My specimen is smaller as I keep it regularly clipped to 1m high x 0.5m across to fit the allocated greenhouse space. The oval foliage really lives upto its name of resembling that of hypericums. The branches are slightly weeping, and the orange-red bottlebrush-like flowers are abundant. They are produced on old wood and are often hidden amongst the foliage. Flowering continued well into August.

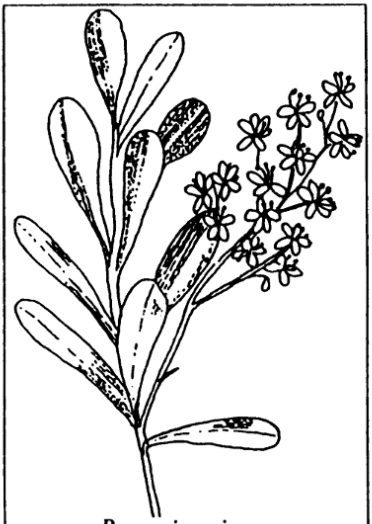
On 23rd June I paid my annual trip to the BBC Gardeners World Live show at the NEC (I need my Alan Titchmarsh Fix!) and bought *Pseudopanax lessonii* 'Gold Splash' and *Lophomyrtus* x *ralphii* 'Pixie'. The genus *Lophomyrtus* contains two species occurring in New Zealand, *L. bullata* and *L. obcordata*. *L.* x *ralphii* (*L. bullata* x *L. obcordata*) eventually makes a small tree or large shrub with small ovate leaves. *L.* x *ralphii* 'Pixie' has small bronze-green leaves with chocolate-purple new foliage. It grows to a height of 30cms

with a spread of 40-50cm, making it an ideal rockery or container plant. *Pseudopanax lessonii* 'Gold Splash' has yellow-marked leaves and like *P.* 'Trident' (bought in April), makes a good exotic-looking patio plant.

July started unsettled and chilly, followed by a warm dry spell. This was followed by more changeable weather - hot and thundery spells with abundant local flooding, making this the wettest July since 1988. Between the thunderstorms, temperatures in south east England reached 33C.

The flowering eucalypts in my garden all seem to 'do their thing' in June and July, starting with *Eucalyptus niphophila* in early June, followed by *E. pauciflora* a week or so later. *E. debeuzevillei* began blooming in early July. *E. coccifera* seems to have missed a year while the, still struggling, Spinning Gum (*Eucalyptus perriniana*) displayed a few flowers. This latter eucalypt has never been a strong grower, increasing its growth by just a few centimetres each year. The other eucalypts all have to be lopped several times a year to contain their size. I usually wait until flowering is over. This July several heavy boughs as well as the more usual flexible whippy growths were removed.

By the middle of the month, *Bursaria spinosa*, the native blackberry, was in bloom. Creamy-white scented flowers, 6-12mm across with five rounded lobes and five yellow-tipped protruding stamens are arranged in dense terminal panicles upto 25cm long. This densely branched evergreen shrub is extremely prickly and would deter many a burglar. It appears to be perfectly hardy, having grown outside since 1993, and flowering every year without fail.



Bursaria spinosa

July 18th, and my first visit to the RHS Tatton Park Show. Although I didn't buy anything unusual, it was an enjoyable day. *Pratia* 'County Park' was one acquisition; a plant I know I can obtain from many nurseries, but I had an idea for such a plant.

August carried on where July left off; warm and thundery overall - the last week being mainly dry. Locally, Leeming had 91mm of rain in 24 hours on August 1st, making it their wettest day since 1971. Twice in one week, the north of Northallerton, the town where I work, was cut off from the south because of flooding, the water rising to one metre in places. Frequent thunderstorms and flash floods occurred throughout much of the country. This has been the dullest August since 1987.

On 6th August, I first noticed developing flower racemes on *Acacia dealbata*. This Silver Wattle has been growing in a container in the greenhouse since germination in 1991. As you are probably aware, acacias can grow quickly under glass and my specimen has been regularly

pruned over previous years, leaving me believing that I would probably never see wattle blossom on it!

August 12th was the start of a week's holiday, giving me time to assess what was happening in the garden. This was when I noticed that *Derwentia perfoliata* had not survived. I had 2 plants in different spots in the front garden, their home for several years. They had not produced any new growth this year, and previous growth had turned brown.

Having a glut of young kangaroo apples, I planted two of them in the area where *Ozothamnus rosmarinifolius* grew (although I haven't removed the dead-looking remains.)

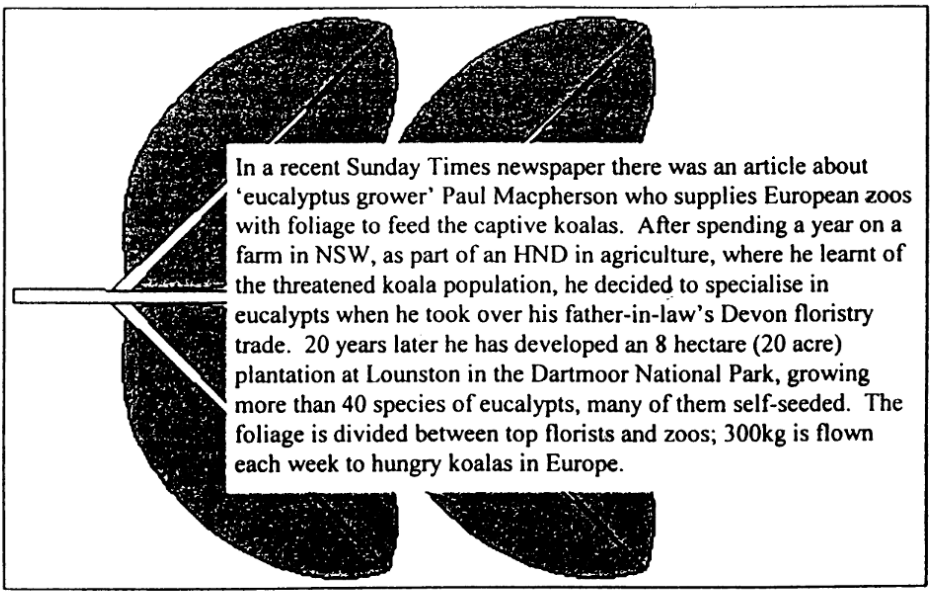
Earlier this year, when I sowed a few packets of seed in the greenhouse, I must have touched a branch of one of my bottlebrushes which still had old seed capsules on them, with the result that many of my seed pans had callistemon seedlings in them. Some of these have now been planted in the southfacing front garden border. A specimen of *Linum monogynum* was also planted in the small scree.

In contrast to all the rain deposited in August, September was dry across virtually the whole of the UK. Mean temperatures and sunshine were above average in most places.

For the past few years I have had a plant of *Coprosma* 'Beatson's Gold' growing in a pot on the patio, but lately it was becoming obvious that it had outgrown it and so, in mid October it was transplanted into the front garden. The bright green leaves of this compact shrub, 60cm x 60cm, have yellow-splashed centres.

Having reached 'October', I've come to the end of this report. I look forward to seeing the wattle blossom on *Acacia dealbata*, and discovering how my new purchases fare the winter.

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In a recent Sunday Times newspaper there was an article about 'eucalyptus grower' Paul Macpherson who supplies European zoos with foliage to feed the captive koalas. After spending a year on a farm in NSW, as part of an HND in agriculture, where he learnt of the threatened koala population, he decided to specialise in eucalypts when he took over his father-in-law's Devon floristry trade. 20 years later he has developed an 8 hectare (20 acre) plantation at Lounston in the Dartmoor National Park, growing more than 40 species of eucalypts, many of them self-seeded. The foliage is divided between top florists and zoos; 300kg is flown each week to hungry koalas in Europe.

TEA TREES IN MY GARDEN

By Jeff Irons

Without trying to do so I have amassed a small collection of tea trees. Some of them have now been in the garden long enough for their potential to be assessed and evaluated. My main conclusion is that most of them become much too big for small gardens. The best way to grow them in a typical British garden will be to give them the same kind of treatment that is meted out to *Paulownia tomentosa* ruthless pruning. Even though I live in a lowish rainfall area (24-28"/year) most of those that I have make between 3 and 5 feet of growth a year.

About 15 years ago Dewi Price gave me 3 seedlings, all un-named. They have now reached maturity. Two of them turned out to be *Leptospermum lanigerum.* Now somewhere around 20 to 25 feet tall they flower profusely every year. I am not too sure about the colour though. The buds are pink, which is fine close up, but because of their small size does not show up too well from a distance. Neither is the white of the open flowers sufficiently brilliant to make a substantial impact when seen from a window about 60ft. away. Their leaves are a greyish green. The plants are dense, clothed to the ground, and make a good screen. My other *L. lanigerum* was grown from seed collected in 1985 on Tasmania's Mount Wellington by Graham Hutchins. He called it "arching form". It is disappointing. There are only a few main branches on a low shrub, a bit over 2ft high, but stretching out to around 5 feet. It did not bloom until 2000 and the flowers are sparse. The chief attribute is the greyish foliage. It would be interesting to know what other people's seedlings from Graham's collection are like. Mine does not contribute anything to the garden, and really ought to be removed. Only my inertia keeps it there. Another of Dewi's seedlings is, I have decided, *L. flavescens* hort. It has bright green leaves, and is kept to around 7-8 feet by annual pruning. The profuse pure white flowers appear in mid-summer, and there is only a slight overlap with *L. lanigerum.*

L. grandifolium was given to me by Spinner's Nursery, as *L. grandiflorum.* At that time their parent plant was 21ft tall. Rather crammed in, my specimen blooms after *L. lanigerum* and *L. "flavescens".* The foliage is dark green, the large flowers are a good white, and it is a useful addition to the summer garden. It is now around 7ft. high. In the wild this species grows to be between 1 and 7m high. In British cultivation it could well be taller. *L. obovatum* came from Marwood Hill. Visitors to my garden often comment that it a lovely shrub. The white, early to mid summer flowers are borne on arching branches. Even though

my specimen is in a dry spot – far too dry for the adjacent *Hydrangea aspera ssp. sargentiana*- it flowers profusely, without supplementary watering. The deciduous fruits ripen in the February after flowering. Another Marwood Hill plant is *L. arachnoides,* obtained under the invalid name of *L. cunninghamii.* It had been collected at Kanangra Walls by Dr. Smart. Pruning after flowering keeps it down to around 7-8 feet high and across. The young growth is an attractive grey with a purplish tinge. As an aside, if visiting New South Wales you should try to visit Kanangra Walls. About 50km beyond Jenolan Caves the Kanangra-Boyd National Park has views even more spectacular than the Blue Mountains' Grose Valley. There are easy walks in the vicinity of the Walls themselves. The nearest accommodation is at Jenolan, or in Oberon.

Thompson gives the height of *L. grandiflorum* as 1.5 to more than 5m. Mine is obviously going to be in the latter category. This species is valuable for its late summer flowering. The pure white flowers are nearly an inch across.

L. riparium, sown in 1983 should now be over 25ft high, but a couple of years ago it was cut back to 16ft by removing the leader and using a branch on the windward side as the new leader. A second plant from the same location died a few years ago. Even though sheltered, it leans away from the wind though, unlike many *Eucalyptus,* only at a slight angle. Facing north-east, it blooms a little after *L. lanigerum.* The Flora of Tasmania gives the height of this species as 4m. The size of mine provides a good illustration of the fact that many Australian plants are either shorter or taller here than they are in the wild. A more recent collection of this species, from the Arthur River, looks as though it will be just as tall. Each year the plants increase their height by about a foot.

Leptospermum Nichollsii var Nanum was grown from the original stock at Ness Gardens. This small plant will take 10 to 20 years to become a foot high and 18 inches across. Young stems are red and the leaves are dark. Decorated with red flowers in early summer, it has red young growth and provides useful colour contrast on my rock garden. In 1996, when visiting a garden comprised entirely of Tasmanian native plants, I saw a pink flowered specimen of *L. scoparium.* A seedling from it has very large (2cm across) white flowers with red stamens. It is a very striking plant. Its parent was 7ft high, and this is also is going to be tall. Being under a house window it will need heavy pruning. Three other *L. scoparium* were grown from seed collected on Tasmania's Central Plateau. They vary in height from 2 to 5 feet. They illustrate beautifully why var. *eximium* was merged with the main species, because although all came from the same parent one of them has leaves that fit the description of var. *eximium.*

Naturally a small plant, less than 1m high, *L. blakelyi* produces its small white flowers just as the other species reach the end of their season. One of my seedlings is almost prostrate, the other has made a small open shrub. Even though the wild habitat is in a couple of locations where the soil is virtually pure sand, and winters are dry, this species stands up to Wirral's wet winters and appears to be frost tolerant. I like it.

An advocate of low input gardening, I value my Tea Trees. They provide colour at a time when there are few other shrubs in bloom, and are evergreen. Their foliage goes down to ground level, and few weeds grow underneath them. Maintenance work takes place after flowering, not in winter – a time of year I prefer to spend indoors. They withstand soil that is wet, even waterlogged, in winter yet do not need watering in summer. The taller species provide good shade. Some would make good hedging plants, *L. grandifolium* and *L. grandiflorum* being very suitable for hedges that receive a once a year clip.

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Not Just Another Mallee.....
By Tim Longville

Gum trees are a snare and a delusion for most of us. At least, for those of us with average-sized English gardens. So easy to germinate, so quick to grow.... Who could resist them? Yet how soon the first flush of pride ('Look, it's mine; I did it') turns into the final flush of embarrassment (And now what do I do with it?).

Never was there a truer phrase than being 'Up a gum tree', where the emphasis definitely falls on the preposition. I vividly remember the mixture of grief and relief when *Eucalyptus cordata* here was killed in that cold winter in the mid-90s, just before its beanstalk ability to grow 10ft in a season, and its tendency to be at least tilted if not actually upended by our coastal gales, began to cause serious problems. 'Never again,' I swore, and kept my vow for at least, oh, a couple of years....

Since I was trying hard to be realistic, what I then fell for was a mallee which I had seen recommended as being small even when mature, relatively slow growing, and able to tolerate considerable amounts of wet and cold. I signed a little over

the lost glamour of something like *E. cordata* but tried to console myself that this presumably rather dowdy little creature would at least cope with my conditions and could be coped with by me.

Certainly *E. kybeanensis* has lived up to all that advance publicity about its 'negative virtues.' (I don't know what it's level of cold tolerance will eventually prove to be but certainly a week in the winter of 2000/2001 which was cold enough to kill several unprotected *Dicksonia antarctica* left it completely unmoved.) It has even demonstrated an additional un-publicised virtue (at least, un-publicised in the books I happen to read), since it has proved to be completely impervious to our seaside gales. It grows with military uprightness, showing no sign of root-rock however violent the storm, and salt-laden winds have absolutely no effect at all on its foliage.

So much for its practical advantages. However, to my surprise and pleasure it has also proved to have considerable aesthetic ones.

It is in fact an extremely attractive tree, and one which has the advantage of flowering profusely at an early age. My specimen, four years old from seed, is now about 13ft tall. It has made a slender cone, whose longer branches adopt a gentle droop. That may well be because for the past two seasons, and during this one in particular, they have been overloaded with an amazing profusion of fuzzy white flower clusters. More by chance than design, the plant was positioned so that it is most often seen against the white bark and bright green foliage of a *Betula utilis* var. *jacquemontii*. The contrasts between blue leaves and white bark, blue leaves and green leaves, pure-white blossom and off-white bark, and the essential similarity between but the totally different effect of the graceful droop of each tree's branches, have combined to provide one of the garden's purest late Spring pleasures.

No, definitely not just another mallee.

If you can't resist the lure of a gum tree or two but don't want to find yourself within a few years faced with a 60 or 100ft giant leaning at a perilous and steadily increasing angle, dominating the garden and threatening to destroy both it and the neighbours, then my recommendation is, Remember *E. kybeanensis*.

❀❀❀❀❀

BUSH TUCKER

By Sue Hyams

On September 2nd, 2002, a series of five stamps were issued by Australia Post. The set, known as the 'Bush Tucker Issue' feature five Australian plants traditionally eaten by aborigines :

Lilly-pilly
(*Acmena smithii* - fruit);
• • •
Honey Grevillea
(*Grevillea juncifolia* - seed);
• • •
Quandong
(*Santalum acuminatum* - fruit);
• • •
Acacia seeds
(*Acacia coriacea*);
• • •
Murnong
(*Microseris lanceolata* - tubers).
• • •

Microseris lanceolata is commonly known as Murnong, yam daisy and native dandelion. This latter name gives the reader some idea of its appearance - yellow dandelion-like inflorescence upto 3cm in diameter atop a stalk which has gradually straightened itself from its drooping habitat at 'flower-bud stage'. As the flowers fade, clusters of fluffy white achenes form.

Murnong is a suitable plant for the rockery. It also makes a good container plant. Coping with full sun/part shade, various soil types, it is also lime and drought tolerant.

You may be lucky enough to grow some edible tubers which, like sweet potatoes, can be roasted or baked. This species was once a staple part of the Aborigine's diet but grazing animals gradually decimated the plants allowing introduced plants such as dandelion (*Taraxacum officinale*) and Flatweed (*Hypochoeris radiata*) to colonise.

Acacia coriacea, commonly known as desert oak and wirewood, is one of the taller acacias capable of reaching upto 10m in height. The hairy phyllodes are 12-35cm in length x 1-6mm wide; the bark grey and fibrous.

Aborigines have prepared acacia seeds by several methods in order to eat them. The mature seeds were roasted and ground to a flour, then mixed with water to create 'damper'. The hardened seeds can also be soaked and mashed with water to make a milky drink. Another method was to roast or steam the whole green pods.

Having eaten the main course, its time to move onto the dessert.



Santalum acuminatum

Santalum acuminatum or Quandong is also known as the Native Pear. It is capable to growing to a height of 2-8m. This small tree/tall shrub has attractive lanceolate foliage, each leaf upto 15cm long and 4-12mm wide. The creamy white tubular flowers later form green globular fruits which in time turn red. When loaded with fruit the Quandong tree is a beautiful sight with its red-hued drooping branches.

These edible fruits are 15-25mm in diameter with a light brown stone housing an edible seed. The oily kernels were eaten by Aborigines, although sometimes some were distasteful, having a 'bitter almonds' flavour. Aborigines have also been known to crush the kernel and mix it with saliva and water to use as an ointment to treat sores. The 'nut' contains Santalbic Acid, reputed to be a strong natural antibiotic. These round knobbly seeds of the Quandong were used by early settlers for making jewellery as well as for entertainment in the form of Chinese Checkers.

The glossy fruits have dry, but sweet, flesh. Best eaten as a stewed dessert or made into pies, jams, etc. with sugar added. Early settlers used the Quandong fruit in these ways. They also dried the fruit for later use. Tea can also be made from the Quandong leaves and drunk as a purgative. To help rheumatism, Aborigines used to make an infusion from the roots.

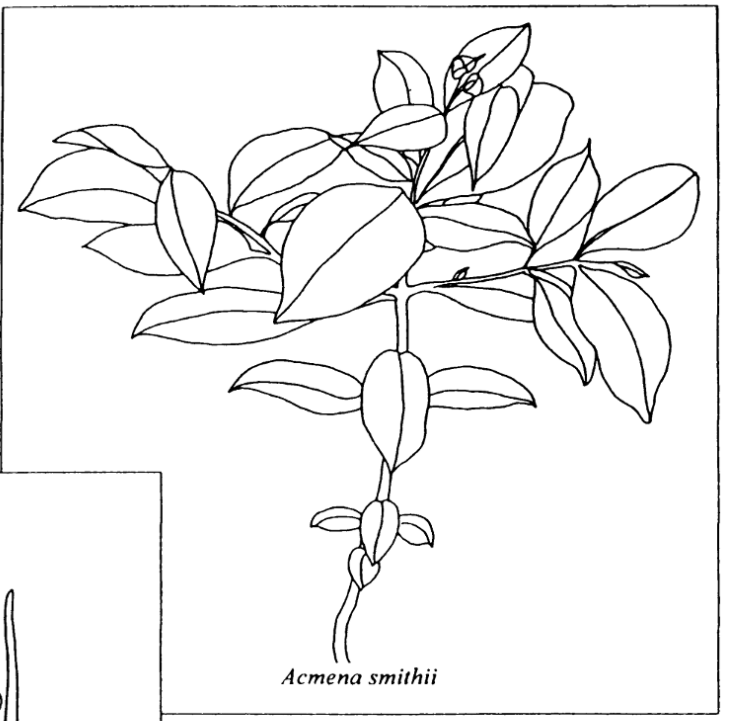
Quandongs provide consumers with a valuable source of vitamin C, twice as high as the content of oranges. It is believed that the explorers Charles Sturt and John Stuart would probably have died of scurvy had they not eaten many of the wild fruits on their overland travels, including the Quandong.

Nowadays the Desert Quandong is becoming more and more rare, especially in the Northern Territory, due to the grazing of the many camels inhabiting the area of growth.

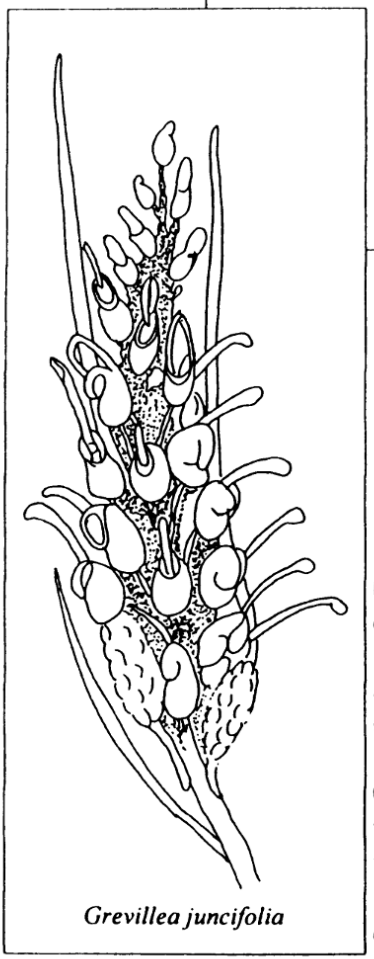
It is hoped to make the Quandong a commercially viable crop but as it is a root parasite, needing a host plant on which to grow, it is posing a few problems. CSIRO scientists are currently experimenting with a crop of grafted plants growing near

Adelaide. The problem of 'distasteful' kernels also needs addressing to make the crop a commercial success.

Another dessert plant is *Acmena smithii*. Lilly-pilly grows best in the moist soil of mountain gullies from Victoria to northern Queensland. Like the Quandong fruit, lilly-pilly, round white or pink, fruits can be used in fruit salads, juices, jellies or jams.



Acmena smithii



Grevillea juncifolia

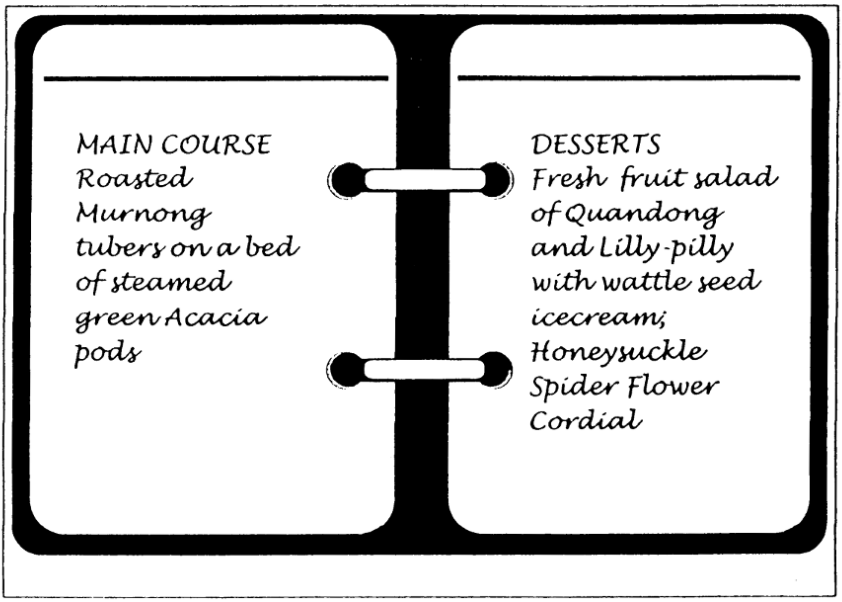
Acmena smithii is the only one of the five featured plants that I have experience of cultivating. Sown in 1988 and currently growing in my greenhouse border, it is a 1m tall specimen, kept to this height by regular pruning. The border soil is just my ordinary sandy garden soil to which nothing else has been added. The adult leaves are ovate, shiny and green; the juvenile ones being bronze. It was seven years before I saw the first flowers (July 1995); small, creamy and fluffy, to be followed by October by white berries. Flowering does not take place every spring; it depends how low the temperature has dropped the previous winter. Frost/cold can damage the tips of the branches, despite protection by horticultural fleece; the same parts of the plant which produce the flowers.

Grevillea juncifolia, also known as the honeysuckle spider flower, is a widespread spectacular flowering species found growing on sand plains and dunes in Central Australia. As the name suggests, the foliage is similar to the genus *Juncus*, ie long and linear, simple or finely divided, upto 30cm in length. The large yellow-orange spidery flowers are held upright until the weight of the copious quantities of nectar weighs them down.

This sweet honey is very attractive to many birds and insects. Aborigines are known to have sucked the nectar directly from the flower. A sweet drink can be produced by steeping the grevillea flower in water.

* * * * *

Native food restaurants are gaining increasing interest in Australia so its now possible for everyone to sample bush tucker.



Wattle seed is available in supermarkets in the UK, so try making some wattle seed ice cream!

Kunzea sp. 'Badja Carpet'

By Jeff Irons

Kunzea sp. 'Badja Carpet' is a prostrate shrub with small leaves, red young stems and white flowers in early summer. It is an excellent ground cover. I first read about this recently discovered plant in 1980. Believed to be possibly a new species, it had been given a registered name, so that it could be identified and sold in the nursery trade. Over 20 years later the plant is still undescribed. When the South Australian botanist who is revising *Kunzea* publishes the results of his studies the trade name 'Badja Carpet' may lapse in favour of a species name

This cultivar is related to *K. capitata*, but differs greatly in habit. It is prostrate, with small obovate leaves, 2-4mm long by 2-3mm wide, arranged alternately on the branchlets. Fluffy white flowers appear in early summer, in small clusters at the branch ends. Plenty of sun is essential, both for good growth and good flowering. Given a well, drained sunny spot *Kunzea* 'Badja Carpet' grows and spreads well, and can mound up to be as much as 30cm high.

I brought it back from Australia in 1992 (along with *Prostanthera* "Badja Peak" {see Pentachondra no.24, p12}), and the plant has been in outdoors in my garden since 1993. Both can be bought from Aberconwy Nursery. *Kunzea* 'Badja Carpet' can also be obtained from APS member Simon Mules at Lower Kenneggy Nurseries.

TRIP TO IRAN

Jeff Irons proposes to run another non-profit making trip to Iran. The 16 day tour will take place in May 2003. His intention is to visit the Kerman and Alborz mountains. Iranian botanists will act as specialist guides. If you would like details, drop him a line.

Cost yet to be fixed.

HORMONE ROOTER

Most hormone rooting powders or gels contain only naphtyl-acetic acid, whereas indole-acetic acid, or a mixture of the two, is much more effective. The only preparations I have found for this are Synergol (Hortichem, 1 Mills Way, Boscombe Down Business Park, Amesbury, SP4 7RX) which comes in 1-litre bottles and costs around £40, and Clonex gel (Growth Technology, Taunton Trading Estate, North Fitzwarren, Taunton TA2 6HX) in 50 ml at around £4. Do members know of others?

Tony Entwistle

The Waratah

How we got the Waratah

reprinted from 'State of the Waratah'

Long ago there lived a beautiful aboriginal maiden named Krubi. She made herself a cloak of the red skin of the wallaby, and ornamented it with the even redder crests of the Gang-Gang Cockatoo. It was said to be the only cloak of its kind in the world. Krubi knew a young man who was far enough removed in his blood to be encouraged in his love for her. She always chose a cleft between two great sandstone rocks on the top of a ridge to await the return of her man from the hunt. The red figure was the first object to strike the eyes of the returning hunters and the red cloak was the only object looked for by the young man. One night Krubi's heart was saddened. She learnt that men from another tribe had been seen in the valley and there was to be great corroboree, during which her man would be taught to do in war.



Telopea speciosissima

The day of the battle Krubi stood in the sandstone cleft and watched for the return of the warriors. She heard the yells of war. In the afternoon she saw the scattered tribe of men return, but no lithe young figure stepped out from the others to greet her. Krubi stayed for seven days waiting, and her tears formed a little rivulet. Then she went back to the camp but it was deserted and the ashes were cold. Krubi returned to the ridge, and willed herself to die. She passed into the little cleft of weathered sandstone, and up came the most beautiful plant. The stalk was firm and straight, without a blemish, just like the man Krubi died for. The leaves were serrated and had points like a spear. And the flower was red, redder and more glowing than any other. It was the first waratah.

In Issue 24, Jeff Irons wrote an article about Waratahs. Parts of this article are reproduced below.

Waratahs could be said to be the proteaceous equivalent of the bright red rhododendrons. Like them they are shrubs which have prominent heads of

flower in spring and early summer. There are four species of waratah, all found only in Australia; *Telopea mongaensis, T. oreades, T. speciosissima* and *T. truncata.*

All the species can be easily grown from seed. All you have to do is sow the seed shallowly in warmth, say 20-25°C during the day. As soon as you see either the radicle or the seed leaves, transplant with one seed to a 15cm pot. The compost is the usual acid, moisture retentive low fertility mix. If germination has not occurred within a month the seed was probably non-viable. You want to encourage the plant to make roots, so remember that the large seeds have plenty of food in them and be miserly with fertiliser. Cautious feeding with a low phosphorous product (say N:P:K 10:2:7) will result in healthy growth. Do though keep an eye out for iron deficiency. *Telopea truncata* MUST be kept cool and airy, especially in late summer, which is the danger time for death from infection. Transplanting should not be necessary until the 3rd year, and is best carried out just as the plants are beginning to get pot-bound.

POTTING MIX FOR AUSTRALIAN PLANTS

For most container plants, an open, slightly acid compost will be suitable, consisting of 1 or 2 parts of coarse sand or perlite to one part of peat or peat substitute. The addition of some loam is beneficial to those plants which like a heavier soil. Sharper drainage can be obtained by a higher proportion of coarse sand/perlite or by adding baked clay pebbles for hydroponics. Most commercial brands of compost are unsuitable. They usually contain lime, and are often insufficiently open. Ericaceous composts will usually suffice, though even here addition of extra grit is desirable. One part by volume of grit to two of the compost is recommended.

Ref: **Australian Plants**
by Thomas Ross & Jeffrey Irons.

If there is any doubt about pot management it can be made easier by using a compost containing upto 10% soil. The clay in the soil will adsorb phosphorous and make it unavailable to the plants. Although I have not tried them I don't see why the clay granules sold for use in hydroponics cannot be used both to open up a compost an adsorb phosphorous. The other danger is sun. Avoid getting sun on a plastic pot. It does not matter with clay pots because clay is porous. Sun shining on a clay pot will make it act like an old-fashioned milk cooler. As water evaporates through the clay it will keep the compost cool. Hot sun shining on a plastic pot results in the roots being given what is, in effect, a steam bath. They do not like it; the leaves turn black and death follows within days. Brown leaves are usually an indication of phosphorous poisoning. If this happens you can either try washing it out, or better, dunk the whole plant in water, wash off all the compost then repot in a phosphate-free mix.

CONTACTS

Honorary Secretary and Seed Officer	Jeff Irons 'Stonecourt' 74 Brimstage Road Heswall Wirral CH60 1XG Tel : 0151 342 1703
Treasurer	Dr. A.J. Entwistle 'Ophrys' 113 Station Road Delamere Cheshire CW8 2HZ Tel : 01606 882306 Email : Tonyentwistle@doctors.org.uk
Newsletter Editor and Producer	Sue Hyams 'Applegarth' Knayton Thirsk N. Yorkshire YO7 4AS Tel : 01845 537407 Mobile : 07720 404677 Email : sue.hyams@ic24.net
Webmaster	David Gallacher Pear Tree Farm Guildford Road Cranleigh Surrey GU6 8LT

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