AUSTRALASIAN PLANT SOCIETY
NEWSLETTER

PENTACHONDRA

ISSUE 39 DEC 2007



Kangaroo Paws

AUSTRALASIAN PLANT SOCIETY

Newsletter No.39

December 2007

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A new Secretary, and some planned changes to our organisation

Following Nicky Zanen's decision to return to Australia (and we wish her all the best for the future), I'd like to introduce our new Secretary - Jeremy Spon. You will have read about his garden in Kent when he gave a description of it in Pentachondra before our Southern Area meeting last year, and some of you will have met him at that or this year's Southern meetings. I'm sure he will be a great help in developing our Society, and I hope you will support him in this. You can contact him as listed under officials.

Our Newsletter Pentachondra has been the jewel in the crown of our society - with good quality articles of interest and relevance to our members. Sue Hyams, who has been the editor, publisher and distributor from the start of the Society, has reliably produced it on time - something she should be thanked for and congratulated on. After such a long stint she has understandably expressed a wish to step down, and we do have a volunteer to take over the editor role - Judy Clark from Hastings. Some of you will have met her a couple of years ago when she held the Southern meeting, or at the Birmingham meeting last year or Southern meeting this year. We thank her for stepping forward.

But Judy doesn't feel able to take over the role of publishing and distribution, so we would like a volunteer to take over that role. What it involves is taking the output from the Editor and physically producing the copy and posting it out twice a year, and holding some back issues. Sue has the newsletter printed at a local printer, and we would expect it to continue this way - we don't expect you to print it from your computer!

It is critical that we continue the smooth production of Pentachondra, so if you can help please do volunteer - without this role we will wither away (it's bad enough when out plants do that - we mustn't allow it to happen to our newsletter!)

Another change in our organisation which seems desirable is for someone to maintain our membership records for us. Tony Entwistle, our Treasurer, does this at present, but due to limitations of the software he uses it isn't possible for this to be shared with others such as myself for e-mailing and the Newsletter Distributor for printing the names and addresses, so we do have to rekey data. It doesn't need any high tech knowledge or software - I'd suggest keeping the information in a spreadsheet in a structured way would be ideal - just an organised approach and attention to detail. This would take some of the load off Tony's shoulders and would make our operation easier and smoother.

I hope some of you feel able to take on these roles. It is our aim to split up the work as much as possible, so that no one needs to take on more than is really essential for that role, and that we develop a good team to take us forward for the future.

We are considering where we might hold meetings next year. If you have a suggested location, or would like to volunteer to host a meeting, then please contact Jeremy as above. He can advise you based on his own experiences of hosting a meeting before he became secretary.

Thanks to those who have contributed to this issue, and please start writing now for the next issue – we want to give Judy as good a start as possible. Again she can be contacted as under officials.

I hope you managed to survive our seasonal weather – can we call it summer? – and can help to contribute to our society in one way or another.

Keith Larkin

Chairman



See inside back cover for Society Contacts

Please note changes in email addresses

Not getting our occasional e-mails with the latest news?

We may not have your current e-mail address, so please send a message to webmaster@anzplantsoc.org.uk asking to be included.

But please also check that your anti Spam isn't blocking the messages – I know it is outrageous that our innocuous messages can be so interpreted by these unintelligent facilities but it does happen!

Many thanks to all contributors.

- Articles are now required for the May issue.
- Articles can be sent on disk or emailed.
- Typewritten reports are welcome as are short handwritten reports but please print place/botanical names.
- Send contributions to : editor@anzplantscoc.co.uk
- DEADLINE IS MARCH 1ST

Southern Meeting 2007

The APS Southern Meeting was held on Saturday 12th May in Kent. The weather wasn't promising as the south's dry spell had finally broken but we actually managed to spend the whole day with just scudding clouds and sunshine with only a few brief squalls of rain.

Twelve members assembled at the car park of the Hadlow College Plant Centre. We drove the short distance to The Old Walled Garden at Oxon Hoath in convoy; local knowledge was definitely essential as the three acre nursery is well hidden down a country lane. (Should other APS members wish to visit it is essential to telephone first, not only for directions but also to make sure the nursery is open).

The Old Walled Garden are specialists in Callistemon (holding a national collection) and other Australasian plants and exhibit frequently at RHS shows, so it was a great opportunity to meet professional gardeners as passionate about Australian and New Zealand natives as the group. Our hosts Heather and John Angrave passed on tips about propagating and potting on as well as handing out mugs of tea and castigating the pack of somewhat over-friendly dogs when required. As they were preparing to exhibit at Chelsea we were all grateful that they spared some time from their ambitious programme to let us range about.

Importing plants from Western Australia, it seems, is so fraught with difficulties right now that the nursery is finding it difficult to build up some stocks. So Heather, especially, welcomed news about the group's successful propagation of some of her most challenging species.

With the weather holding it gave us an opportunity to wander about the large number of polytunnels and glasshouses seeking out particular plants and just marvelling at the volume of some of our favourite plants. A few plant purchases just as the heavens opened and we had to scuttle for shelter; some to the next venue, but the more intrepid staying longer, keen on obtaining just another plant for the collection.

The second venue was The Great Comp Garden near Borough Green where we convened for a delicious lunch. Then we all had to sneak furtively back out to the car park for the plant swap. (The venerable owner of the garden Mr Cameron, aged 89 and eagle eyed as ever, was manning the ticket sales at the entrance.) As a newcomer I had absolutely nothing to contribute to this valuable exercise. But the main providers, Judy Clark and Jeremy Spon, were very generous and encouraging.

Reflecting later, I thought this swapping of little seedlings and mystery plants with dubiously-

inherited labelling, was even more valuable than a chance to visit an established nursery. You have a very strong attachment to a little plant that you know has been grown from seed and nursed through a challenging climate by friends. It makes you determined to keep it alive and hopefully thrive. And this is just the time of year when you need a bit of encouragement: a common concerned whisper seems to be: 'have any of your APS seeds germinated yet?'

The Great Comp head gardener, William Dyson, was on baby sitting duties (his wife Karen was in charge of the lunches), so he was unable to give us a talk, but Jeremy Spon ably stepped in and gave us a tour. The gardens range over seven acres and and have been developed over the past fifty years on what were originally fields. Our visit coincided perfectly with the flowering magnolias and azaleas (or are they rhododendrons?) that put on an extraordinary show. Jeremy then led us through the maze of plants and cleverly steered us in the direction of good sized Australian and New Zealand native plants. Of particular interest were the established Grevilleas in a quite traditional setting. They were doing very well sheltered by the rock walls (Mr Cameron was a fan of creating fake ruins - some more successful than others) and blended creatively with more traditional European plants.

Just walking around the entire span of the gardens was an exercise in horticultural and physical stamina; we finished the day perching on a beautifully designed rockery, and plotting next year's trip. No decisions were made, but all agreed that the combination of a specialist nursery visit and garden tour was a very successful one.

Lindy Sinclair

The Old Walled Garden, Oxon Hoath, Oxon Hoath Road, Hadlow, Tonbridge, Kent TN11 9SS.
Tel: 01732 810012 www.ep-d.co.uk

Great Comp Garden, Comp Lane, Platt Nr Borough Green, Kent TN15 8QS.
Tel 01732 886154
www.greatcomp.co.uk

When Did You Last Go To Kew?

If the answer to the above question is 'several years ago', then it is definitely time to go again, if only to see the newly-planted Australian area in the Temperate House.

I went in August, when relatively few plants were in flower, but of those that were, some were spectacular, and there were many other fascinating and beautiful things to see. Of course there are always far too many wonderful plants to see at Kew in a day, and further reasons to visit include a new Alpine House, a

renovated rock garden, and even a magnificent exhibition of Henry Moore sculptures dotted around the gardens - but that is another story, and I thought members might be interested in a few of the Australian highlights.

Probably hardest to miss, not least for the sheer number of plants, were the massed ranks of *Anigozanthos flavidus*. They were being used almost like bedding plants, although interestingly all had yellowish-green flowers, and I didn't see a single one with the more exciting red and yellow flowers of a form given me last year by fellow APS member Bob Foulds.

One flower that certainly was red however was *Eucalyptus ficifolia*. - if only this was hardy outside! Also red, with what must be among the largest flowers in the genus, was *Melaleuca hypericifolia*. Also with flowers, although you had to look hard to find them, was *Adenanthos sericeus*. This member of the Proteaceae from W. Australia, known as 'Woollybush', is much more notable for its silver foliage, among which the small dark red flowers hide. It must be one of the most beautiful foliage plants in the whole Temperate House - I wonder if any member grows it? There were several other plants with fine silvery leaves, - I noted particularly *Eucalyptus formanii* and *E. tetragona* (both W. Australians,) *Senna artemisioides, Acacia vestita* (N.S.W.) and *Eremophila nivea* (also W.A.)

(The healthy appearance of many W. Australian shrubs in the Temperate House is a tribute to the success of the soil replacement and re-planting, which some members may have seen being done during the TV series 'A Year At Kew'. It is also an encouragement that it is possible to grow such plants, albeit in a greenhouse, in England. Perhaps we could have some more of them in the seed-list?)

Of course one of the joys of somewhere like Kew is seeing plants that until then you have only read about. The genus Isopogon is not one that has featured very often in 'Pentachondra', but photos in Australian wildflower books suggest it would be well worth growing. *I. dawsonii* has certainly reached flowering size in the Temperate House. The bush had numerous greyish brown cones (reminiscent of the flowers of the South African Leucadendron) which were the remnants of the cream flower-heads. Other species have yellow or orange flowers.

Finally, as further encouragement to those trying to grow Australian plants outside all year round, I should mention that the borders around the Temperate House include a number of mature examples planted in the ground of *Banksia integrifolia*. Obviously they get shelter, and warmth from the heated interior of the House, but those members living in mild areas should perhaps have a go with this species.

Jeremy Spon

Seedlist 2008

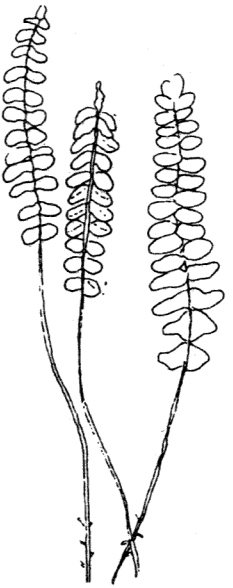
Please note that the 2008 Seedlist will be sent out with the Spring Newsletter. This is an attempt to increase the number of people applying for seed.

Currently only 25% of the Society's membership apply for seeds. We do not know why the uptake is so low.

Each year Richard Christmas compiles the seedlist, sourcing seed which he thinks APS members might be interested in. Are you perhaps looking to grow a plant whose seed is not available on the current list? If so, let Richard know.

Blechnum penna-marina

This is a lovely low-growing fern, useful for planting between those taller species. Provided it receives a reasonable amount of moisture, it will grow well, in sun or semi-shade, making a tight-knit carpet. Young fronds take on a reddish appearance in open situations. It can be found in both New Zealand and Australia.



Blechnum penna-marina

Are you willing to share your garden with other APS members?

Is your garden in the Yellow Book, open for the National Garden Scheme, or open under another charity scheme? Let us know if you'd welcome other members to see your treasures.

The garden of APS member Frank Hytten, Blossoms, Cobblers Hill, Great Missenden, Bucks, is one of those to be found in the Yellow Book, and is also open by appointment. Frank is happy to welcome visits from APS members. The highlights of the garden include a small collection (25+ species) of eucalypts and other Australasian plants.

Photographs to accompany Tony Parry's article



Acacia pataczekii



Epacris petrophila

Melaleuca hypericifolia - see Jeremy Spon's article



Clianthus puniceus - see Peter Kohn's article



Pruning Bottlebrushes and Tea-trees

Bottlebrushes are quite common in gardens around me. All too often they are left unpruned and present a rather displeasing sight, with long arching branches, bearing a succession of seed capsules and the occasional flowers at their ends. When questioned, the owners usually respond that they did not know that the shrub needed pruning, nor how to do it. Neither do they know that pruning improves flowering.

Here's how. After flowering cut off all flowering stems, removing at least a third of the length. If you think that this is insufficient, do not be afraid to cut right back to where the shoot joins its main branch. Many bottlebrushes make 3ft or more of new growth each year and after some years the treatment recommended will obviously have been insufficient. The problem usually arises from plants that bloom on two year old shoots, for they have a year of extension growth before flowering. Most, if not all, of those we grow are fire tolerant; which suggests that they ought to withstand really hard pruning – even cutting back to ground level. This is, in fact, the case and they can be cut back as far as you like. Such pruning will result in masses of new shoots being formed within a few weeks. They can either be left as they are or thinned out selectively by rubbing out while still soft.



Tea-trees behave in a similar way to bottlebrushes and some of mine are even more vigorous, producing up to 6ft of new growth each year. They respond to the same kind of pruning.

All my prunings are shredded and then placed around the plant from which they were taken. If it does nothing else, this ensures that they get fed nutrients in the same proportions that were taken from the soil. Occasionally self sown seedlings are noticed and removed for potting on and subsequent sale.

Jeff Irons

Banksias, Other Proteaceae and Clianthus puniceus

Dear Sue

Slightly hesitantly we are responding to your query about attempts to grow Banksias.

Last September we made a trip to Trevenna Cross Nursery on the Lizard Peninsula who appear to be the national specialists in proteas and returned to the far north-west of Scotland with several plants which we overwintered in our unheated polytunnel (because of the local hills and our northerly latitude [58 degrees, 15 minutes] the tunnel gets no direct sunlight for at least three months).

Meanwhile we prepared a bed in an area of the garden which is effectively the top of a beach and very nutritionally poor - the soil was opened up and the sharp sandy subsoil brought to the top. We also sank in a slotted pipe through the middle of the bed which drains away into the sea loch which borders this part of the garden. We also had a flash fire on the top of the bed using dead heather that had needed removing from the uncultivated areas of the garden.

Planting was undertaken in April and so far there are no problems. As well as *Banksia marginata* and *B. palludosa*, the planting also includes *Protea cyanaroides*, *P.* 'Limelight', *P. grandiceps*, *P. subvestita*, *Leucadendron galpinii*, *L. laureolum*, *L. uliginosum*, *Telopea* 'Burgundy' and *Grevillea* 'Robyn Gordon'. Robyn Gordon was in flower when we planted it out and has had a succession of flowers with more to come and *Leucadendron galpinii* has two flower buds which seem hardly to have moved since planting but almost all the plants are showing new growth.

In May we aquired and sowed seed of *Protea cyanaroides*, *Banksia spinulosa* and *Leucadendron rubrum* all of which germinated well and are developing nicely - we found a local source of Cambrian quartzite sand which seems to suit them very well.



Clianthus puniceus

In a quite separate part of the garden we have created an area for tender shrubs, mostly acquired in southwest Ireland in September 2006. As a

substitute for a south-facing wall we built a curved fence which faces almost due south. The soil here is a light and freely draining - quite minerally (probably glacial in origin) and again we improved the drainage with a slotted pipe a couple of feet down. Amongst the many shrubs was a *Clianthus puniceus* which overwintered beautifully and had a single flowering head this Spring.

Incidentally, our garden is open to the public under Scotland's Gardens Scheme and we would be delighted to welcome members of the Society at any time. Details are on our website (www.kerrachar.co.uk).

Peter and Trish Kohn
Kerrachar Gardens

(The garden is well worth a visit as I discovered last year. Boarding a boat at Kylesku, the half hour journey takes you down the loch with spectacular views on all sides. The garden is on the west coast of Sutherland, and is only really accessible by boat. There are no roads nearer than one and a half miles! If you are lucky you may see seals; I did! On reaching the garden, it is difficult to know where to look first; every viewpoint is so spectacular, and there is some very interesting planting. It is so peaceful listening to the waves of the sea loch lap the shoreline. I can understand why Peter and Trish decided to make Kerrachar their home. Ed.)

Still in North West Scotland

A Nursery To Nudge

Pentachondra rarely mentions nurseries, no doubt for two good and overlapping reasons. First, because most of us prefer the fun of growing our plants from seed. Second, because even if we don't, many of the plants we'd like to experiment with are offered by remarkably few if any British nurseries.

Occasionally, though, almost all of us need to buy a plant, rather than grow it from seed. If your old *Olearia* 'Henry Travers' turns up its toes, for instance, at the beginning of precisely the year when you've given away all the rooted cuttings you'd ever laboriously made of it, there's only one thing to do: buy another. Which was my situation not long ago when for the first time I bought plants (note the plural, though the only one I 'needed' was the daisy bush) by mail order from the nursery I'm about to recommend.

I was particularly pleased to find it since if you garden in the north of England an added difficulty, over and above simply finding a nursery offering the plant you want, is finding one which also operates from a site even further north than you are yourself. (So is likely to be offering plants with a somewhat better chance of being hardy in

your conditions than those grown in some sybaritic Devonian valley.) And there are few nurseries operating further north than Garden Cottage Nursery at Tournaig, Poolewe, Wester Ross, IV22 2LH, 01445 781 777.

This is a nursery which doesn't at the moment offer anything outstandingly unusual. What it does offer is a range of good reliable plants for mild coastal gardens, many of them from New Zealand and Tasmania. For example, its list includes fairly obvious species and varieties of (deep breath) astelia, dianella, myosotidium, libertia, phormium and, among trees and shrubs, acacias, brachyglottis, coprosma, cordyline, corokia, correa, derwentia, eucalyptus, griselinia, leptospermum, ozothamnus, pittosporum and solanum. The only genus from which it offers a seriously large number of species and cultivars is olearia, in the form of some two dozen or more species and cultivars, from *O. albida* to *O. virgata*. (As I write that, I can almost feel Jeff and no doubt a good many other members grimacing as they read it – but a few of us, at least, are pig-headed enough actually to admire the daisy bushes. Well, *one* of us is...)

I'm not recommending this nursery as at the moment one full of otherwise impossible to find rarities. I'm recommending it first because, hurrah, it's in the far north. Second, because it is a serious nursery with a serious interest in Southern Hemisphere plants. Third, because that is an interest which I'm sure it would be delighted to develop in terms of adding further such plants to its list, if only sufficient customers bought its existing stock and so encouraged it to do so.

No doubt many members have already detoured to take it in when visiting Inverewe just a couple of miles away - but for those who haven't a few background details follow. It is owned by Ron Rushbrooke, head gardener on the adjacent estate, who founded it almost 30 years ago. But 'during the season' it is largely run nowadays by his son, Ben. During the winter, Ron deals with the paperwork involved in their mail order season (which runs from September to March), while Ben, whenever he can afford to, beetles off to the aforementioned New Zealand and Tasmania. The nursery website, at www.gcnursery.co.uk, is a testament to his enthusiasm in general and for the plants of that part of the world in particular. Apart from a simple plant list it also includes a section recommending a wide range of specialised books on the plants of Australia and New Zealand. Another section is devoted to a thorough account of the whole history of Gondwana. A third deals with good plants for British coastal gardens. There is

even, for those of you troubled with the critters, a section listing plants which are supposed to be rabbit-proof!

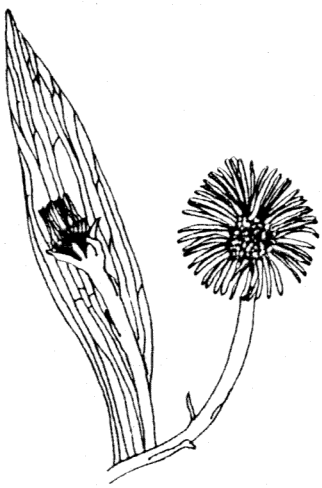
Two final comments-cum-additional-recommendations. First, Garden Cottage's prices are by and large extremely sensible. Even the more unusual shrubs tend to be only around £6.00-£7.00. And in my experience the plants offered are of a good size, are sturdy and well-grown, and establish well.

Indeed, all that is needed to make this a real addition to that select body, the nurseries in the UK which specialise in Australasian plants, is for people like us to nudge young Ben. (He wouldn't, I suspect, take much nudging.) Nudge him, that is, to further explorations among the less well-trodden aspects of the flora Down Under. So: elbows – and mouse-fingers – at the ready...

Tim Longville

Celmisia semi-cordata

Celmisia semi-cordata is a spectacular NZ mountain daisy with silvery-green spear-shaped leaves upto 60cm long. The large flowerheads, upto 10cm in diameter have a central yellow disc surrounded by fine white rays. Not the easiest *Celmisia* to cultivate; it has a habit of suddenly collapsing and dying, particularly in a hot spell, but if you can provide the ideal conditions - deep, rich soil, moist but well drained, with some shade, its well worth a go.



Celmisia semi-cordata

If you don't want such a challenge, try *Celmisia spectabilis*; this species is happy in moist, well drained soil, in sun or semi-shade.



Celmisia spectabilis



Eight Species of Australian plants from Paxton's Magazine of Botany and Registry of Flowering Plants Volume 7, 1840 [8]

The eight beautiful illustrations that adorn this issue are copied from the hand painted plates from one of my most prized possessions, namely Paxton's 1840 'Magazine of Botany and Registry of Flowering Plants'. When Pentachondra started to use coloured illustrations in their publication I knew the paintings of the eight Australian species in Paxton's book, would provide the background for an interesting article.

Joseph Paxton 1803-1865[14]

Joseph Paxton was born on August 3rd 1803 in the small rural village of Milton Bryan of south Bedfordshire. He was the 7th child of a family of very modest means, but sadly his father, William Paxton, died when Joseph was still a young boy. He apparently always loved working with plants and was employed as a 'garden boy' at Battlesden Park when he was about 15 years old. By the time he was 20 years old he was working at Chiswick, the gardens of the Horticultural Society. The Chiswick Gardens adjoin those of Chiswick House (one of the residences of the Duke of Devonshire). Apparently the Duke got to know Paxton on his visits to the Horticultural Societies gardens and in 1826 he offered Paxton the job of head gardener at Chatsworth. Shortly after he arrived at Chatsworth, Paxton organized and supervised the renovation of the gardens and in 1829 he was made head forester of the Chatsworth Estate and designed and supervised the complete renovation of the woodlands, which had been neglected for a long time. In addition to his work at Chatsworth, Paxton also designed and landscaped a number of public parks, and designed and supervised the construction of numerous houses. He is, however, probably best remembered for his design and construction of the famous Crystal Palace. But throughout his life and his many projects he was known and admired for his love of plants and his attention to the details of cultivation practices.

Paxton produced 15 of his Botany and Registry books between 1834 and 1849 [14]. Each of the publications contains sumptuously hand painted plates of selected plant species. My copy of the 1840 issue contains 48 hand painted plates including eight of species from Australia. In addition to the Australian

species, other favourites of mine from the book (but not from Australia) include, *Wisteria chinensis*, *Thunbergia grandiflora* and *Rigidelia flamea* (from Mexico) as well as 12 Orchid species. Paxton's publications were called 'magazines' in 1840, however, the books are actually elegant, hard covered publications with gold page edges. Each of the books contains a section for every month of the year. The 1840 book includes timely advice on horticultural practices as well as many plants, (in addition to the illustrated species). For instance, the 1840 issue includes articles on raising Pelargoniums and Fuchsias, neither of which are illustrated, as well as articles on soils analysis and heating the greenhouse. I find it mind boggling to realize that each of the beautiful plates (for each book) was hand painted. There is, however, no mention of the artist who prepared the original drawings or of those who painted the plates. But one can envisage a row of individuals busily painting away all day long. Imagine how long it must have taken to paint enough plates for each edition and much such a publication would cost today? And how exciting it is to discover that some of plants we enjoy today were admired so much by Paxton over 160 years ago that he included them in his books.

Table #1. Species, introduction dates and distributions as described by Paxton [8] as well as the more modern plant and place names.[15]

1. p151.	*Acacia oxycedrus*	1824	New Holland (the old name for Australia)
2. p219.	*Blandfordia grandiflora*	1824	New Holland (the old name for Australia)
3. p269.	*Brunonia australis*	1834	various parts of Australia
4. p79.	*Correaea Harrisii*	1840	*C. pulchella x C. speciosa (syn. Correa mannii)*
5. p195.	*Correaea longiflora*	1839	hybrid
6. p28.	*Diffwynia speciosa*	1839	New South Wales
7. p103.	*Hibiscus multifidus*	1837	Swan River Colony (syn. *Alyogyne hakeifolia*)
8. p29.	*Thysanotus proliferus*	1837	New Holland (syn *Thysanotus multiflorus*)

Table #2 General Information on the Genera that include the above 8 species:[13]

Genus	Family	sp. in genus	Distribution
Acacia:	Fabiaceae	750-800	Pan-tropical and sub trop. Mostly trees
Blandfordia	Liliaceae	5 species	Eastern Australia and Tasmania
Brunonia	Brunoniaceae	1 species	Australia and Tasmania
Correa	Rutaceae	11 species	Australia
Hibiscus (Alyogyne)	Malvaceae	?	?
Thysanotus	Liliaceae	25 species	20 Aust.; Siam, S. China, Philippines, New Guinea.

Brief notes on each of the eight Australian plant species in Paxton's publication of 1840.[8]

In order to convey Paxton's feelings about plants, his writing style and his attention to the details of his cultivation methods **all** of the following notes are based entirely on the text of Paxton's book Magazine of Botany and Registry of Flowering Plants. Volume 7 1840[8]. Therefore, some of the notes are direct quotes, which are indicated in the traditional manner with quotation marks, while others are paraphrased from the text.

1. *Acacia oxycedrus*. "The best habit of any of the Acacias with which we are acquainted and ought to be proportionately valued." " First brought to England in 1824." Its pretty yellow flowers are produced in abundance in February and March. "A plant of simple culture, in potting soil of sandy loam and a little heath-soil."

2. *Hibiscus multifidus (syn. Alyogyne hakiefolia*[15]). "No one can question that the explorers of the Swan River Colony have contributed more to supply our gardens with new plants than has been done since extensive importations of seeds were made from New Holland." "And though the number of novel species now in a seedling state amounts to several hundreds, we have not hitherto witnessed one in flower which promises to be more ornamental than the handsome Hibiscus of which a figure is annexed." "Divested of consideration concerning the expansion of its inflorescence, its outline and leaves are eminently pleasing.....". Paxton described the colour of the flowers as a delicate azure with a lively crimson centre and stated that he expected the species would contribute to valuable hybrids. He emphasized that very large pots should be avoided and the plants should be potted in loam with the addition of silver sand.

3. *Blandfordia grandiflora* is the most dramatically beautiful species illustrated in Paxton's book. He emphasizes that the plant is a tuberous rooted species, not a bulb, and an evergreen, so its leaves remain green all winter and that consequently the plant needs to be watered throughout the winter season and its potting soil should contain a little more leaf mould than is usual for bulbs. "For the winter it needs a light and airy greenhouse, with a dry atmosphere, but not too dry at the roots". "It flowers profusely in moderate sized pots."

4. *Brunonia australis*. "A genus with only one species that is closely related to the Scabious Tribe." "Extreme neatness and prettiness of habit, the simple beauty as well as vivid blue colour of its blossoms, their liberal production and ease with which the species is grown, all present claims on the culturist's

attention". It was in flower in July when Paxton saw the specimen painted for the illustration. "The agreeable fragrance makes a valuable feature in the greenhouse, but is recommended as an outdoor potted plant for the summer." "Pot in a light, sandy loam mixed with heath-soil with a little extra sand". "Water freely in the summer and more scantily during winter." "Propagation is by root division in the spring."

5. *Corraea harrisii (syn Correa manii*[15]). "This extremely handsome hybrid so far excels all the authenticated species of Corraea." "This hybrid by Mr. D. Beaton, gardener to Sq. T. Kingsbury, was named for the person in whose collection it flowered." "In *Corraea harrissii* there is a boldness of habit, a luxuriance of stems and branches, a size and liveliness of foliage and showiness of the inflorescence, which may be sought in vain in the most carefully cultivated specimens of either parent specimens." "Mr. Beaton grew his Corraeas in a more loamy soil than most cultivators and found this practice advantageous."

6. *Corraea longifolia* is a hybrid raised by Mr. Milner, "who's other beautiful hybrid Corraeas have been described in previous issues of the Plant Register." "C. longiflora is less luxuriantly robust than most other Corraeas, but is far more prolific of flowers." Paxton pointed out that while C. harrissii can be rooted easily from cuttings, other Corraeas are propagated by grafting.

7. *Dillwynia speciosa.* "Originally found in NSW and first flowered at the Rollison Nursery in Tooting in 1839. D. speciosa is a robust plant that can be managed very similarly to heaths." "Only needing a little loam with heath-soil in the potting soil in which it is planted." "Its winter cultivation must be conducted with great care." "It will not endure much moisture." "....placed on a dry shelf of the greenhouse near the glass it may be kept in good health for the season." "It should be set on a lower shelf in the summer, when it must be profusely watered."

8. *Thysanotus proliferus* (syn. *T. multiflorous*[15]). *Thysanotus proliferus* was sent from Australia in 1837. Dr. Lindley said of this species "...that it is much to be regretted that the many beautiful species of this genus found in New Holland should be unknown in our gardens.....". Paxton stated that "The plant should be grown in a pot of moderate size (never, however, with too much pot room), and in a soil of which loam is the major constituent." "Water freely in the summer and keep on the dry side during the winter." "Propagate by division in the spring, or seed, which should be sown as soon as it is ripe."

Table #3. Eight Australian species in Paxton's 1840 (column 8) compared to modern publications (remaining columns) + = yes o=none. see reference list for related numbers.

Species	1	2	3	4	5	6	7	8	9	10	11	12.
Acacia oxycedrus.	+	o	+	o	+	o	o	+	o	+	+	o
Alyogyne hakiefolia (syn Hibiscus)	o	o	o	+	o	+	o	+	o	+	o	+
Blandfordia grandiflora	+	o	+	+	o	o	o	+	o	o	+	+
Brunonia australis	o	o	o	+	o	o	+	+	o	+	+	+
Correaea harrisii (syn Correa manii).	o	+	+	o	o	o	o	+	+	+	o	o
Correaea longiflora	o	o	o	o	o	o	o	+	o	+	o	o
Dillwynia speciosa	o	o	o	o	o	o	o	+	o	o	o	o
Thysanotus multiflorus (syn proliferus)	o	+	o	o	+	o	o	+	o	o	+	+

Reference numbers correlate with column numbers ie. Column #1 = reference book #1

1. Alan Seal's Garden Book of Native Plants. 1985. Treasure Press. 77p.
2. Australian Plants. A Guide to Their Cultivation in Europe. 1997. Thomas Ross, Jeffrey Irons. Private Publication. 307p.
3. Australian Plants for Canberra Gardens and Other Cool Climate Areas. 1973, Society for Growing Australian Plants Canberra Region. 60p.
4. Australian Native Plant Gardeners Almanac. 1995. John Blay. Wildlife Presentations. 144p.
5. Aussie Info-Pack 20003. Compiled by Tony Entwistle. 81p.
6. A Field Guide to Native Australian Shrubs. 1989. Ivan Holliday and Geoffrey Wilson. Landsdown Press. 240p.
7. A Guide to Flowers and Plants of Tasmania.1944. Launceston Field Naturalist Club 1994. 120p.
8. Paxton's Magazine of Botany and Registry of Flowering Plants. Volume 7, 1840 J. Paxton.
9. Plant Finder 1997
10. Key Guide to Australian Wildflowers. 1995. Leonard Cronin. Reed Books. 224p.
11. Pentachondra's Decennial Index of Australian Plants, 1988-98.
12. Pentachondra's Five Year Index of Australian Plants autumn 1998-2003
13. Flowering Plants and Ferns. 1966. J.C. Willis. Revised by H. K. Shaw. Cambridge University Press. 1214p.
14. Joseph Paxton. Pub. Date unknown, John Anthony. Shire Publications. 48p.
15. R. Christmas. 2007. Personal communication.

Photographs to accompany Helen's Article

Hibiscus multifidus



Thysanotus proliferus



Some photographs to accompany Helen Beau

Brunonia Australis





Corraea Harrisii

ort-Murphy's article *'Letters from America # 6'*

Corraea longiflora



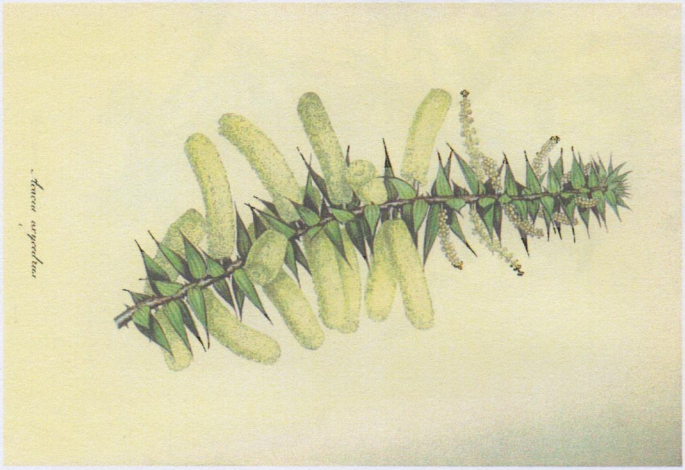


Dillwynia speciosa

irrors that of the plates

Photographs to accompany Helen's Article

Acacia oxycedrus

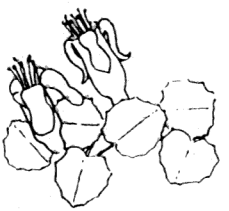


Blandfordia grandiflora



P.S. It is of interest to note that Paxton often recommended the inclusion of 'heath-soil' in potting mixes, although he did not explain why he used it. Today, however, it is well known that many plants need micro fungi in order to grow well and fortunately there are a number of excellent micro fungal products on the market, so that one does not have to live near or go to a heath area to gather a suitable soil sample (thank goodness, because there are no heath-land type areas in this part of North Carolina). I have certainly had much better results with transplanting many of my seedlings and mature potted plants, as well as Heather plants in the garden, since I started to incorporate the Diehard micro fungi products in my potting soil and garden beds. So far I have not tried it in the seed sowing mix but I plan to try it this year, to see if it will improve seedling survival and hopefully I will have some good results to report in a future issue of Pentachondra.

Fuchsia procumbens *- a prostrate species. Small green round leaves; upward-facing orange-yellow flowers with blue stamens.*



An Australian Garden in Switzerland

Having been a member of the Australasian Plant Society for many years, I've decided that it's high time I contributed something to Pentachondra. In this article I describe my experiences growing Australian native plants outdoors in Northern Switzerland.

Prior to moving to Switzerland at the end of 2003, I lived in southwest England (East Cornwall and West Devon) where I grew Australian plants for a number of years. I quickly realised though that the growing conditions in Switzerland are about as different to SW England as they could be: much colder winters (the lowest I've recorded is -12C), hotter (35C+) and drier summers and alkaline soil instead of acid. About the only plus point is that the garden here is on a steep slope (west-facing) and hence well-drained. The hot summers are a mixed blessing, as many of the plants able to survive the winters here find summers too warm for their liking!

Würenlingen, where I live, is a large village in the broad valley cut through the Jura mountains by the Aare river. The Jura are limestone but we are actually on the side of a moraine which makes the soil a little less alkaline but still enough to cause difficulties for many Australian plants. This was a major problem,

with many plant losses, up until this year when I tried treating the ground with anti-chlorosis 'Plant Tonic' from the local garden centre. This resulted in a dramatic improvement in all the lime-sensitive plants and so I'm now confident that as long as I treat the soil regularly there will be few, if any, problems growing lime-sensitive plants in the future. (See the photo of *Acacia pataczekii* for a graphic example of the transformations that have occurred.)

Because the garden slopes very steeply I have been creating terraces with natural stone walls and then covering the ground in a layer of pebbles, a technique which I found very effective in Devon. One of the ideas behind this is to provide a little more protection to the plant roots in winter. The only problem with this is that the landscaping is extremely time-consuming!

Anyway, what am I successfully growing outdoors? I'll cover this by describing the plants in the ground now (October) along with indications of how many winters they have been outdoors and other notes. One general note first though; last winter was exceptionally mild here with only one week at the end of January having nights more than a degree or so below freezing and even then the lowest I recorded was only -6.5C. As a result of this balmy weather I lost no plants at all because of frost, though I did have three blow over in a gale, two of which didn't survive.

Acacias:

Acacia pataczekii (2 winters). Small plant cut to the ground in the first winter but resprouted. This plant is very lime sensitive which may explain why it was less hardy than I expected the first winter. I'm hoping that now the plant is more mature and no longer suffering from chlorosis it will prove to be much more cold tolerant.

Acacia mucronata (1). Also fairly lime sensitive. This is from a bleak provenance in SW Tasmania (~1,000m) and I'm hopeful that it will prove to be hardy.

This year I have also planted out *Acacia verticillata* subsp. *verticillata*, from the same provenance as *A. mucronata*, *Acacia barringtonensis* (APS seed), *Acacia dealbata subalpina* (also APS seed) and *Acacia baileyana* 'Purpurea' which will be wrapped up very well for the winter as I think it will be only borderline hardy here.

Eucalyptus:

Eucalyptus pauciflora subsp. *acerina* (4). This is yet another plant that doesn't like lime and so, although it has never been troubled by the winter cold, it always languished. Now, with treatment, it is looking very healthy. This was one of the three plants blown over in the gale last winter, and the only one to survive.

Eucalyptus mitchelliana (2). This is a lovely tree with nice grey/mauve winter colouring, and a little less susceptible to alkalinity. I had one in the ground for three years that was killed the winter before last, not because of the cold but because 30cm of snowfall one day bent it horizontal and snapped the stem off most of the roots! It was replaced last year with another seedling.

Grevillea:

Grevillea alpivaga (3). A nice little plant, more upright than the superficially similar *Grevillea australis*. The white flowers, although not showy, are sweetly scented. Unfortunately I managed to kill it when I moved it this summer. (Remember, remember, Grevilleas don't like being moved!) Replacement cuttings have now been obtained from Liesbeth's plant.

Grevillea juniperina "Sulphurea" (4). This is the form that has been grown in the UK for nearly 200 years and it's indestructible, tolerating even the alkaline soil with impunity.

Grevillea "Big Red" (3). This has proven to be unexpectedly cold tolerant, though given that its parents are *G. juniperina* and *G. victoriae leptoneura* perhaps this is not so surprising. Has refused to flower so far though, which is a bit disappointing.

This year I have also planted out *Grevillea australis, Grevillea miqueliana* (Mount Wellington form), *Grevillea monslacana* (formerly *G. victoriae* 'Lake Mountain' form) and *Grevillea juniperina* 'Molonglo'.

Leptospermum:

Leptospermum micromyrtus (1). A bit lime sensitive.

Leptospermum nitidum (1). Not at all lime sensitive!

Leptospermum rupestre (3). Very slightly lime sensitive. This is a completely prostrate carpeting form.

Melaleuca:

Melaleuca gibbosa. Tasmanian provenance - seed from Wildseed Tasmania (www.wildseedtasmania.com.au) who specialise in harvesting seed from the coldest, bleakest locations possible. A sibling plant has survived a number of years outdoors a thousand feet up on the edge of Dartmoor so I'm hopeful...

Melaleuca squamea. Jeff Irons' Mt Read form. Just don't let it dry out 'cos it will drop dead instantly!

Olearia:

Olearia phlogopappa subsp. *flavescens* (3). Very cold hardy and, like all the Olearias and Ozothamnus I've tried, very lime tolerant.

Unfortunately this was one of the plants that blew over in the winter gale and although it struggled on through the spring it never really recovered and finally succumbed in the summer. This flowered well each spring and then last year amazed me by coming into flower again in the autumn, continuing well into December. Unfortunately my attempts to get some somewhat elderly seed to germinate have so far failed. I miss this plant particularly, as it really was very good value.

Olearia myrsinoides (3). Seed from an alpine plant. This like the other Olearia has proved to be very good value with dark green leaves and a spectacular display of flowers in the Spring. Unfortunately I was in Australia this year when it was at its best.

Ozothamnus:

Ozothamnus ledifolius (3). UK source. Slow growing, attractive and as tough as they come - no wonder Jeff likes it so much.

Ozothamnus alpinus (1). Looks like a slightly larger, more open form of *Ozothamnus ledifolius*. Hasn't flowered for me yet.

Ozothamnus hookeri (3). Very sadly the second casualty as a result of the winter gale. Once again otherwise indestructible (the only plant not to be bent over by the 30cm of snow) and, in fact, it used to look happier in the middle of winter than in the summer when I think it was a bit too hot and dry for its liking. A rooted cutting is waiting in the wings to be planted out next year.

Ozothamnus thyrsoideus (1). I do like Ozothamnus! This is another attractive (especially in flower), cold hardy and lime-tolerant plant.

Prostanthera:

Prostanthera lasianthos (1). This is from Thredbo, and like all the alpine provenance plants I've seen has pale mauve rather than white flowers.

Prostanthera lasianthos x phylicifolia (3). This is a wonderful plant. I originally had it from a Victorian nurseryman who had collected it from the Thredbo area, along with the normal *Prostanthera lasianthos* above. He didn't know whether it was a natural hybrid, a very strange form of *P. lasianthos* or a new species. Because it shows strong affinities to *Prostanthera lasianthos x phylicifolia* 'Poorinda Ballerina' I favour the natural hybrid theory. This plant differs from 'Poorinda Ballerina' though in having slightly broader leaves which are noticeably scented and mauve flowers. Like 'Poorinda Ballerina' though, it is very free flowering. It has also proved to be very cold hardy (no frost damage at all so far) and like all the Prostantheras I'm growing, lime-tolerant.

Prostanthera lasianthos 'Bogong High Plains' (1). I had this from Kris Schaffer in Ferntree, Tasmania. To me it looks much more like a cross between *Prostanthera cuneata* and *P. lasianthos*, though it doesn't look much like 'Badja Peak' which is reputedly the same cross.

Prostanthera monticola. New this year, though it's in with a good chance as it's endemic to the summit of Mt Buffalo.

The Others:

Baeckea gunniana (4). Nursery plant from Tasmania and so of unknown provenance; extremely hardy though (and slow growing).

Callistemon pityoides (4). Indestructible but only flowers when there's a really cold winter.

Correa lawrenciana cordifolia. New outside this year. Has dull red flowers.

Crowea exalata (1). Another wonderful plant which is never out of flower for at least half the year. This form hails from the Victorian alps and is a slow growing, spreading plant with beautiful deep pink flowers - every garden should have one!

Epacris petrophila (3). Like the Baeckia a Tasmanian plant of unknown provenance, very cold hardy, slow growing and flowers each year. Surprisingly, it is also completely lime-tolerant here.

Goodenia hederacea. A very pretty trailing plant from the Australian alps - deep green crenulate leaves and a succession of yellow flowers.

Hakea microcarpa. Another plant from the Victorian alps which should be cold hardy.

Kunzea ericoides. New in the ground this year, but Liesbeth Uijtewaal has had a sibling plant outdoors for the last two years which is thriving. The parent is from ~1400m which quite surprised me when I first saw it as I'd only ever come across it before at much lower altitudes.

Leionema montanum (1). Another 'Plants of Tasmania' plant. Looking good so far.

Lomatia myricoides. New this year, European source.

Podocarpus lawrencei (2). The only way to kill this is to let it get too hot and dry, otherwise indestructible.

Wittsteinia vacciniacea (1). Still small but looking good.

I also have several hundred other Australian plants in pots (no, I'm not exaggerating!) many of which are destined to be planted out over the next few years as the garden is developed further.

Tony Parry

Experience with seeds from the APS seed distribution scheme

Is it me or is it the seeds? This is the first question I usually ask myself when my attempts at propagation fail. The problem is that the answer is frequently rather difficult to determine. First, while information regarding propagation at the generic level is quite widely available – I use the APS guide *Propagation of Australian and New Zealand Plants* and Murray Ralph's book *Growing Australian Plants from Seed* (1997) - I have found less information about specific conditions required for particular species. The APS guide does provide information about light and temperature requirements for around 70 species, and various Pentachondra articles provide useful tips, but often I don't know if I'm doing exactly the right thing, especially important for fussy species. Second, I'm often in the dark as to the age of the seed I'm sowing. For some genera fresh seed is recommended but I only know the age of the seed if a collection date is provided or I've collected it myself and very little of the seed I've obtained (from quite a number of sources) even has a 'plant by' date on the packet.

Like Helen Beaufort-Murphy (Pentachondra 38) I try to keep records of my attempts at seed propagation, though records for recent years are more complete. The table records most of my attempts with APS seeds between 2003 and 2007. Out of 29 species sown I managed to get 14 to germinate (just under 50%), and 12 to survive. I'm sure some of the earlier failures are down to me not providing the right conditions or not sowing seeds immediately, though my experience successfully germinating *Stylidium graminifolium* from another source suggests that the APS seed I tried in 2003 might have been too old. But I was a bit disappointed, given that I now have more experience, when I realised my success rate remains about the same for APS seeds obtained and sown in 2007; only 7 out of 15 have germinated, so far. For comparison, in 2006 and 2007 my success with seed of Australasian species from all sources was about 60%, although the majority were easy species (those which Ralph advises give good results). But then the APS seeds I planted in 2007 are not supposed to be difficult.

So is it me? All seeds are sown in pots in an unheated greenhouse. For the past two years I have used a mixture of

sieved multipurpose peat-free compost, horticultural sand and perlite, and placed the pots in trays with a cover (bog method excepted) out of direct sunlight. I don't always manage to sow as soon as I get the seeds because I'm not very good at disciplining myself to obtain only what I know I will have room and time to sow. But I have never had a *Melaleuca* (from any source) fail to germinate until this year. Two possibilities for my two 2007 failures occur to me. One is that they did not experience high enough temperatures to germinate. (The APS guide indicates some *Melaleucas* require quite high temperatures.) The other is that these two require light for germination but didn't get it. Ralph states that some *Melaleucas* require light to germinate but doesn't indicate which ones. So what I do is sprinkle the fine seed on the surface and water it with a fine rose, working on the theory that this way some will get covered and some won't, so I've satisfied either condition. But maybe this year I was a bit heavy handed as evidenced by *M. calycina* ssp. *dempta* which while it did germinate, the germination rate wasn't good.

Or is it the seeds? That only one out of three *Hakeas* that were tried in 2007 germinated may well be down to the seed, as Ralph advises using fresh seed which should usually germinate in 3 to 6 weeks, and I have germinated *Hakea* seed obtained from other sources. (Keeping *Hakeas* is another matter!).

The remaining species are more of a puzzle. I have failed before with *Viola hederacea* from another source, but on the other hand I've had success with *Pelargonium australe* (not APS seed, but planted at a similar time of year it germinated after 39 days) so why not *Pelargonium littorale*? I've grown various *Veronicas* from seed, so why not *Derwentia derwentiana* (even if it is usually propagated by cuttings)? And maybe *Myosotis australis* will appear in spring? It might be the seeds, but it could well be me.

Judy Clark, Hastings

PS The only species I've tried in common with Helen Beaufort-Murphy is *Acacia acinacea*. I collected seeds from my sister's garden in Melbourne in 2001, but didn't sow them until this year. The seeds were soaked for 2 days in just boiled water, dried before sowing (to prevent rotting), and watered sparingly. Thus far, five plants survive.

Experience with APS seeds

Species	Obt.[1]	Sown	Time[2]	No.[3]	Surv.[4]	Comments
Derwentia derwentiana	2007	08.08.07				not covered
Myosotis australis	2007	08.08.07				not covered
Hakea bucculenta	2007	22.07.07	15d	6	nyt	
Viola betonicifolia	2007	22.07.07	61d	2	nyt	pot uncovered and moved to bench after approx. 40 days
Viola hederacea	2007	22.07.07				pot uncovered and moved to bench after approx. 40 days seed collected at the Tasmanian Arboretum in Jan 2006 and sown on 24.07.06 also failed to germinate.
Melaleuca nodosa	2007	22.07.07	15d	10	nyt	bog method
Melaleuca scabra var. *tuberculata*	2007	22.07.07				bog method
Calothamnus rupestris	2007	22.07.07	15d	9	nyt	bog method
Calothamnus homalophylus	2007	22.07.07	15d	4	nyt	
Hakea epiglottis	2007	17.07.07				
Hakea lissosperma	2007	17.07.07				
Melaleuca subfalcata	2007	17.07.07	20d	10	nyt	bog method
Melaleuca calycina ssp. *dempta*	2007	17.07.07	12d	2	nyt	bog method
Melaleuca coccinea	2007	17.07.07				bog method
Pelargonium littorale	2007	17.07.07				
Banksia canei	2004	11.08.06	~ 7m	2	0	both seedlings died sometime after transplanting – why?
Callistemon sieberi	2003	22.02.04 06.03.06	37d	nr	0	bog method
Olearia stellulata cult.	2004	03.04.04				seed collected 2000
Pimelea nivea	2004	21.03.04				pre-treatment not recorded; possibly threw pot out too soon

Isopogon anethifolius	2004	21.03.04				collected 2000
Richea pandanifolia cult.	2003	22.02.04				collected 2002; probably unsuitable seed mix
Richea dracophylla	2003	22.02.04				probably unsuitable seed mix
Leptospermum grandifolium	2003	22.02.04	29d	nr	6*	good germination
Leptospermum myrtifolium	2003	22.02.04	32d	nr	6*	good germination
Prostanthera lasianthos	2002	21.03.04				cult. seed collected 2001 seed collected in Feb 2007 from my brother's property in the Otways (Vic) and sown on 10.04.07 failed to germinate
Stylidium graminifolium	2002	26.04.03				seed collected 1998 seed obtained in Jan 2006 (Seeds from Tasmania) and sown on 11.08.06 germinated after 39 days; 4 plants currently survive
Allocasaurina pusilla	2002	26.04.03	34d	nr	5	
Melaleuca ericifolia	2002	27.04.03	17d	nr	3	
Leptospermum nitidum	2002	27.04.03	15d	nr	6*	good germination

Notes: (1) Date when I obtained seed. (2) Number of days before first germination; no entry in this column means no germination (yet); d=days, m=months. (3) Number of seedlings obtained; nr = not recorded. (4) Number of plants obtained; nyt = seedlings not yet transplanted; * = fewer seedlings transplanted than germinated.
PS. *Hakea epiglottis* produced a seedling on 7th October.

Australian Succulent Plants

Attila Kapitany, a Succulent Plant Nurseryman based in Australia, has produced a very informative book on the subject. Knowledge of their cultivation is almost unknown, and this book doesn't have the answers. Like so many native Australian plants their cultivation is in many cases quite difficult, and this book aims to encourage experimentation and the collation of successful techniques. The book is organised by growth type – ground, ephiphytes (including rock dwellers), shrubs and trees, and is extremely well illustrated with many colour photos. Some plants are quite striking in their appearance – if only we could reproduce them in cultivation! Attila should be congratulated on producing such a well researched and produced book on what has been a neglected group of plants.

Keith Larkin

Hakea clavata

I have mentioned *Hakea clavata* in previous articles. It is a small shrub from the south east of Western Australia; found from Esperance to Israelite Bay, it is also called the Coastal Hakea. Its leaves are extremely succulent, being about 4 cm long, rather like a flattened cylinder about 4 x 7 mm in cross section, and with a very hard, sharp point. It has somewhat dusky-pink flowers which are scented, and, like all hakeas, a woody nut as a fruit.

A number of plants were raised from seeds obtained in 1988 from Vaughan's Wildflower Seeds, WA (apparently no longer trading). These grew well, and several small plants have been given away.

I have kept a couple of plants, one about 1.2 metres tall, the other only 40 cm or so. These reside in a frost-free (1 - 2°C) greenhouse in winter, and are usually put outside from late spring to mid-autumn. They have always flowered well, often 2 or even 3 times a year.

For many years I transferred pollen from each plant to the other, but fertilisation never took place. I always assumed that the seeds must have been from the same original plant, and a single clone was involved, with self-fertilisation being impossible. In March, however, 3 fruits appeared on the taller plant. There was a single fruit on the smaller plant. This fruit was more advanced, as the plant had remained in the greenhouse. In early July, the single fruit split to reveal the two seeds inside, enclosed in a thin membrane.

The seed has been removed and placed in my usual WA seed mix (1 part ericaceous JI to 3 - 4 parts sand). It will be interesting to see if it germinates, and if the plant that grows is any hardier than its parents.

P.S. The Hakea clavata has germinated. Not only that, but seeds from my second plant germinated in under 5 weeks. And that was without smoke or any other treatment.

I seem to have a lot more success with Proteaceae seeds than any other family. I wonder if that is typical - some people have more success with certain families or genera than others? I am hopeless with Thysanotus, for instance.

Jeff Layman



Bulbinella hookeri *- Maori onion. Ideal for the rock garden. Racemes of bright yellow flowers. Easily grown, tolerating a range of soils. But grows best where there is plenty of moisture. Several clumps thrive at Inverewe in N.W. Scotland.*

Photographs to accompany Jeff Layman's article

Fruits on Hakea clavata



Seed capsule on Hakea clavata



Photographs to accompany Jeff Irons' article



Pseudowintera colorata



Pseudowintera colorata flowers

Two Peppers

Jeff Irons

Our culinary pepper comes from India. Australia and New Zealand have some unrelated plants that are known locally as peppers, because their leaves have a hot peppery taste. They are the pseudowinteras and tasmannias. Like the South American *Drimys*, New Zealand's *Pseudowintera* and Australia's *Tasmannia* belong to a very ancient plant family called the *Winteraceae* which first appeared about 60 million years ago. Primitive plants like these differ from more modern ones in several ways. Their stems do not have the water conducting cells found in more evolved species, instead they are similar to those of conifers. The flowers do not have a fixed number of floral parts, but variable ones and instead of being arranged in concentric circles – sepals, petals, stamens and ovaries, they are arranged in a spiral. The stomata in their leaves are slow to respond to high temperatures by closing – this is why the thin leaved deciduous magnolias wilt so easily in hot weather.

The *Pseudowintera* seen most often in British gardens is *P. colorata*, a shrub with red blotches on the leaves and a silvery spotted underside. While it can be grown from seed, commercial plants are preferable because they have been propagated vegetatively from selected well coloured forms. Usually grown in full sun, it will also grow in shade. In such a situation the shrub will be inconspicuous in summer, but stand out in winter. Usefully it can be grown in both wet and dry, acid or alkaline soil. The flowers are usually borne directly on the branches, not in leaf axils. Since they set seed only when pollinated by another genetically different plant the black fruits are uncommon on cultivated specimens. Very old wild plants can be as much as 10m but in cultivation they rarely exceed 1.5-2m. Being so slow growing they are very suitable for small gardens

The only *Tasmannia* in British nurseries appears to be *T. lanceolata*, sometimes being sold as *Drimys aromatica*. It has male and female flowers on different plants and the male clone in cultivation is less hardy the the female, being liable to injury by frosts below about –8°C. This is unfortunate because the male is the showier of the two. Both have attractive red young stems and will grow slowly to about 2m high. Blooming is in late winter. The flowers appear to be borne directly from the stems, but new leaves appear after flowering immediately underneath the flower stalks. Where the two sexes are grown together red berries form in August and change to black by October. Seedlings reach 1m within 7 years, when they begin flowering, and continue growing up to about 2.5m Dwarf forms are known and I have one seedling that has grown to be about 7cm across and 3cm high in 7 years. This species too

will grow in both dry and wet soils and in sun or shade.

Being both uncommon and a link with the distant past these plants can be recommended as a talking point for your garden.

A Tiny Triumph

The Grey Mulga, *Acacia brachybotrya*, shouldn't be hardy in the ground in the UK. At least, certainly not in the north. But here on the Cumbrian side of the Solway Firth a seedling given to me 3 years ago by Denis Rowlinson has spent two winters in the ground quite unharmed. They were mild winters, admittedly. The minimum temperature probably never fell below -3C and even that will have been reached only very briefly. Now that I have written this note, no doubt the coming winter will bring double figure frosts and a certain all-too-predictable death, along with inaudible cries from above of 'That'll larn'im'.

What's more, and this was the spur to the writing of this note, from late August to late September 2007, Grey Mulga, bless it, has flowered for the first time, and with considerable profuseness and modest splendour. (In other words, lots of the expected little yellow furry buttons. There is some dispute hereabouts as to whether they're scented or not. I think they are, slightly, sweetly, but I'm in the minority.)

I can't claim much praise for this tiny triumph since it was, like most of my distinctly pseudo-triumphs, born of the classic combination of ignorance and desperation.

When Denis gave me the plant I had no idea of its hardiness or lack of it but, equally, I had no space for a potted specimen either in the house or in an overcrowded and rotting small greenhouse. (Now RIP and not replaced. 'Treat'em tough' has become my Idle Gardener's Motto with regard to marginal plants.)

I had no idea of its ultimate size, either. For all I knew it might have been one of those acacias which rockets up to 60 feet almost before you can say ***. In fact, Jeff tells me - and the plant shows every sign of believing him - that it will only make a modestly sized bush. At the moment, for example, it is no more than a narrow 5ft tall.

So how did I decide where to put it? How do you think? I put it where there was a space, of course.

OK, I didn't entirely ignore other considerations. I did look for a gap against a wall. The wall on which I found that gap (not easily, I might add...) is in fact east-facing but, given that our salt-laden gales mostly come from the south or south-west, it's actually about the most sheltered the garden has to offer. (Paradoxically,

about the most difficult area to deal with in the whole garden is the top south-facing eastern corner, which is the corner the worst of the gales hit hardest when they do succeed - and they do succeed - in smashing their way in.)

The moral of the story? Well, if there is one it is perhaps that ignorance, desperation, a soupçon of common sense, and a bit of luck with a run of mild winters, can sometimes produce surprising successes. So: be encouraged: experiment!

I'll add one irrelevant because not Australasian but perhaps interesting reinforcement of that idea. Last autumn APS member Ron Davies gave me a plant of *Echium canariense*. It isn't listed in *The Plant Finder* so I assumed that meant it was unlikely to be hardy anywhere in the British Isles. On the other hand, the overcrowded conditions here were as described above but worse, since two years later the garden is suffering the effects of two further years of my lust for plants plus plants' unfortunate habit of growing if they don't die. So, into the ground it went. However, the 'soupcon of commonsense' in this case meant that it went into a gravel-covered path at the base of a low south-facing drystone wall and into soil that was itself around 80% gravel.

The result - given the mild winter described above - has been a remarkable and completely unexpected success. The plant has not only survived, it has now completely filled that path. One year on, it has become a multi-stemmed shrub around 3 feet high, 5 feet from side to side, and 4 feet from front to back. It has attained that hefty bulk even after much cutting back. That was undertaken partly in a failed attempt to save the path for people, partly in a successful attempt to produce rooted cuttings as insurance. It hasn't flowered yet, but the pink-purple-flushed whitely-furry stems and sizeable soft light-green leaves already make it a seriously attractive (if sadly misplaced) specimen. If by any chance we get a *third* mild winter, next year might even see it flower.

Tim Longville

Nearly the Last Word!

Subscription fees are due on January 1st. Please fill in the enclosed Sub. Form and return to Tony Entwistle.

I'd like to welcome Jeremy and Judy to their new roles and wish them all the best. They can both be contacted by email (see Contacts on inside of Back Cover).

Many thanks for all articles and photos sent in for this issue - without them, there wouldn't be a newsletter.

Thoughts on Germination

We have, at least in theory, control over many factors in germination - such as light, temperature, soil, water and special treatments eg smoke, gibberellic acid, stratification, or just patient waiting for years.

But we cannot influence the viability of the seeds we sow, and it is difficult or impossible to know this, especially with fine or very hard seeds. It may be possible to cut open some seeds such as Banksia to see if they appear viable, but if you only have a few seeds in your packet this is hardly practicable. Home-saved seeds may well be okay, but if imported there is often no indication of their age, and if you sow two identical packets together and one germinates well and the other not at all there seems no other logical explanation except viability.

Some Australian seeds are difficult enough even for the Australians, and my experience has shown that some genera have persistently failed completely with me. They are Conospermum, Glischrocarion, Epacris, Hybanthus, Verticordia.

Genera which have given only very occasional and poor germination include Conostylis, Ptilotus, Pimelea, Lechenaultia and Thysanotus.

It would be interesting to hear of other members successes with these.

Successful germination is of course only part of our problems - we still have to cope with the neonatal period and the frequent "cot deaths", and the subsequent care towards adulthood!

Tony Entwistle

<u>Germination Times</u>
<u>As recorded by SGAP Victoria</u>

BW = boiling water treatment
HW = hot water treatment
No of days for germination

Acacia BW 14-24
Anigozanthos 25-35
Bellendena 56
Banksia 21-60
Burtonia BW 21
Brachysema 5-14
Boronia 35
Callistemon 21
Casuarina 21
Chorizema HW 21
Dillwynia HW 60
Dryandra 21-35
Epacris 48
Eremophila 20-58 poor
Eucalyptus 10-14
Eucryphia 42-56
Grevillea (unpeeled) 90-480
Grevillea (peeled) 21-95
Gompholobium HW 42
Hakea 14-28
Hardenbergia HW 12-18
Helichrysum 10
Isopogon 21-42
Kennedya HW 14-21
Melaleuca 21
Pimelea 21-60
Ptilotus 5-35 poor
Swainsona formosa 3
Telopea 21
Thysanotus 14-21
Xanthorrhoea 21

Chelsea Flower Show

The offer of tickets being arranged for us was too good to refuse, so I joined the FSA Social Club on their excursion to the Chelsea Flower Show this year. Our ticketed time was 3.30 pm. The weather was mild, overcast but not raining. It was not as crowded as I remembered from previous visits.

I felt the WOW factor on entering the main hall. In Melbourne we were told this was critical, and it certainly featured at Chelsea. There is so much to see that I spent a little time looking at the programme to prioritise and see where to go.

My targeted list : City of Durban,Wollemi Pine, Old Walled Garden, Linnean Society of London, British Mycological Society, Kirstenbosch, Australian Garden.

Kirstenbosch had a very impressive display with proteaceae seeds and flowers, and a Strelitizia made of beads. I passed a display titled 'Time and Tide' – the display of Grenada which was just spectacular and I was sorry that the Aussie display wasn't of this class. I was also impressed by Green Garden Herbs and the Carnivorous Plants Society which included plants from South Africa, Europe, Australia and North and South America.

I learned something about carnivorous plants : three little hairs need to be touched before they clamp up. One held the skeletal remains of a spider. Another plant, with a fly in it, didn't move, as the fly didn't move either. This protects the plant against 'eating' litter.

Oaktree Nursery had a huge display with several Aussie plants including *Dianella caerula* and *revoluta* and *Lomandra longifolia* and *tanika* (NZ).

There was a display for Durban which included several animals made of beads – just brilliant. An elephant, zebra, tiger and monkey. Durban Ethekwini Municipality. Centre piece was a rickshaw covered in flowers.

Nearby was the Wollemi Pine display which won a silver medal. A very good display by Kernock Park Plants which looked almost like a miniature forest. I've got a photo of the Wollemi Pine's new tip growth – *Wollemi nobilis*. I was interested to see that there seem to be two spellings for Wollemi/Woollemi.

Hillier Nurseries had an enormous display which included an enormous *Pittosporum eugenoides, Acacia baileyana* and *Callistemon citrinus* 'Splendens'. They also effectively used upward lighting.

Then, virtually on a little island, was the Old Walled Garden and Heather Angraves. She had a sizeable collection of Callistemons flowering

in a variety of colours. A small but distinctive display.

The Linnean Society had a display with a lovely sculpture of Linnaeus and a butterfly, which sparked his interest in nomenclature.

The Royal College of Pathologists had a display on plants which cause allergies. Not only peanuts but also wheat and carrots and celery. Peanuts pollinate above ground and then send their seeds via tendrils underground. Fancy, I never realised that. *Arachis hypogaea* – Leguminosae.

The British Mycological Society displayed some exquisite Fungi although the taller ones were sculptures. Very well done.

Outside there was a lot to see also. I found the bandstand and sat down and listened to the last couple of tunes by the Chelsea band. They finished their set with 'God Save the Queen'. Saw some of my colleagues in the picnic area enjoying miniature bottles of wine.

I walked past the miniature designed gardens but it was crowded enough not to hang around. Then past the shopping areas outside the main pavilion. Some interesting products including the Ronaash Root trainers. Corrugated pots x 32 with its own glasshouse. £6. 4 pots joined in a row. They come from Scotland. It would be too expensive to send to Australia but they don't have an agent there.

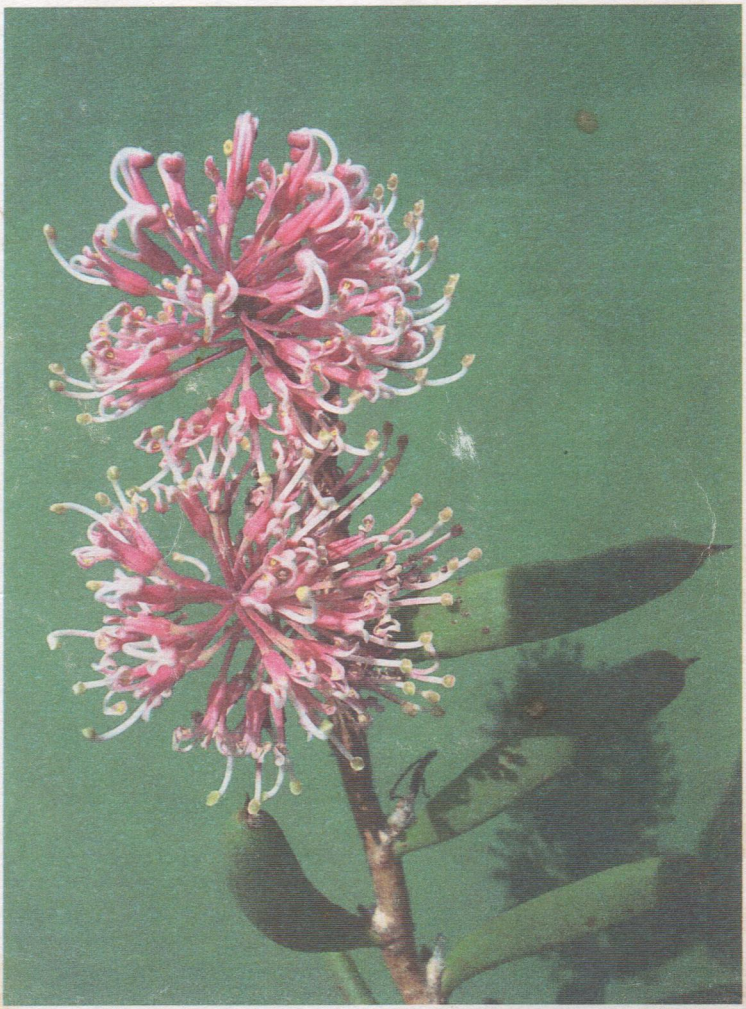
The lowlight of my visit to Kew – was finally coming upon the Australian Garden. Set up by Flemings and sponsored by Trailfinders. The quality of the kangaroo paws – these were dismal, washed out, well past their best. They do have problems in that they cannot import their plants so they need to be locally sourced. But I can't imagine that they couldn't get better plants somewhere. It was a structural display – granite and in lines, with a narrow fish tank with fish therein. It was not possible to walk into the display which I found a shame. A passerby played his didgeridoo – his teacher had given it to him. This put a nice touch to an otherwise most un-Australian display.

Nicky Zanen

Illustration acknowledgements
Front cover - Nicky Zanen
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Back Cover - Hakea clavata - Jeff Layman
B&W drawings - Sue Hyams

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Hakea clavata