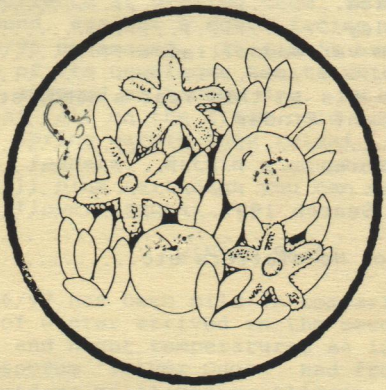
NEWSLETTER OF THE AUSTRALASIAN PLANT SOCIETY

PENTACHONDRA



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AUSTRALASIAN PLANT SOCIETY

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EDITORIAL

The May 1997 issue of Pentachondra carries several daisy articles, as well as several travelogues, and not just Australasian; South Africa and Portugal feature. There is also another winter report from 95/96, just so we don't forget how severe it was!

The number of contributors to this issue is woefully small. Most of the articles have been kindly written by the Society's committee members. My thanks to those who did take time to put pen to paper. Each issue I contact approximately a dozen members in the hope that an article will result. I am lucky if I receive a single reply. If you have anything to contribute, don't wait to be asked - start writing!

Many thanks to Carole Hawes and Nick Andrews for donations to the seedbank.

My thanks to Tim Longville, who, after reading my request for information on the origin of Acnistus (Dunalia) australis in the last issue, wrote to inform me that it was South American.

He, too, has experience at growing them, in Cumbria. In fact, a plant in the open ground, against a south facing wall apparently survived the winter of 95/96 undamaged. It didn't even lose its leaves. Leaf dropping is one of its unwelcome habits which it can do at any time, particularly if allowed to become dry. My two plants in the greenhouse go into leaf fall on the first cold night. As soon as there is a suggestion of spring warmth they releaf. Relatives of the tomato, they are gross feeders. Within a couple of months of putting on foliage, the small blue (although you can get creamy white or lilac) datura-like bell flowers appear.

WINTER 96/97

The winter of 96/97 has been mild in comparison with that of 95/96. The first signs of winter arrived in the second half of November with blizzards, frost and night temperatures as low as -5°C. By the end of the month, Pittosporum 'Silver Queen' had frosted tips, as had the new growth on my outdoor Melaleuca armillaris, despite plastic bottle protection and a bubblewrap shelter. I had hoped to get it through the winter to put more growth on this summer.

After the cold winter of 95/96, I decided to take no chances this time and erected shelters of horticultural fleece over the more tender Australasians in the greenhouse. I'm pleased to say that it served its purpose well. Indigofera australis (which fared badly last winter) is now a mass of pink pea flowers.

The next period of snow arrived at the end of December and covered the garden for a week. The lowest temperature recorded over the Christmas period was -13°C in the Scottish Highlands. Worst hit by snowfalls were Kent, east Anglia, Essex and the east coast from the Wash to Scotland.

Early in the New Year, normal weather patterns were turned upside down, due to a clash between high pressure north of Scotland and low

which dominated southern England. While much of southern, eastern and central England was in the grip of subzero temperatures, the Outer Hebrides basked in 6°C. The Thames was frozen over at Marlow, Buckinghamshire, for the first time since World War Two.

Spring arrived in late March, and in my own garden there doesn't seem to be too many casualties. Mid-April brings the news that this late winter/spring has been the driest for 250 years and once again we are to be faced with hosepipe bans. Oh well, I suppose carrying full watering cans is good arm exercise!

I hope to include a garden report in the next issue.

ANNUAL ACCOUNTS - CAN YOU HELP?

Do we have a willing member interested in taking on the task of auditing the society's annual accounts. Any member willing should contact Tony Entwistle.

INTERNET

Your committee has been discussing putting information about the APS on the Internet in the hope that we can attract more members. Unfortunately none of us has access at present to the Super Highway so we obviously need someone who is willing to have their e-mail address as our contact. If any member is happy to do this, please contact Jeff Irons.

A NEW GARDENING MAGAZINE

The Marketing Manager for a new gardening magazine has approached the APS. The company is willing to donate £2.50 to the APS for each member who takes out a subscription to 'The English Garden'. Members will also receive a 15% discount on the usual subscription price, making a yearly fee of £14.87. In my own opinion, it doesn't look much different to other gardening magazines, but if you are interested, the subscription telephone number is 01858 435308. The English Garden Subs, FREEPOST LE6423, Leicester LE87 4BY.

AGM 1997

This year's AGM is to be held in Scotland. On Saturday June 14th, it is intended that members will meet at the Royal Botanic Garden, Edinburgh, at 2pm, outside the Inverleith Row entrance.

> For those members who have not previously visited the Royal Botanic Garden Edinburgh, you are in for a real treat. There are 28 hectares of botanical treasures including a Rock Garden full of wonderful alpines and heathers, and a Mediterranean plants border which I'm sure will interest many members. Britain's tallest Palm House takes you on a journey through various world climates.
>
> The RBG Edinburgh is off the A902, one mile north of the city centre. Regular bus services to the East Gate, Inverleith Row. On street parking at the West Gate, Arboretum Place.

It is hoped that those members who are able to attend will stay overnight and move on to Glasgow Botanic Garden (holders of National

Collection of Tree Ferns) on the Sunday morning. Members wishing to stay in Edinburgh or thereabouts are asked to make their own arrangements. If you are hoping to attend, it would be helpful if you could let Jeff Irons know.

TREASURER'S NOTES FOR 1996

This has been another satisfactory year, again mainly because of the low costs of the AGM. It has been possible to put £200 into our building society reserve, which is now over £900. This is nearly what I feel is essential for any society such as ours, namely to have a reserve of at least the value of two year's subscriptions.

Note that on our auditor's advice subscriptions for 1997 which were paid before the end of 1996 have been listed separately and will be included in the 1997 heading. This accounts for the drop in subscriptions compared with 1995.

I have been asked about a husband-and-wife (perhaps nowadays I should say co-habitors!) subscription. We do not have one, but I am in favour of it. The problem is that half the subscription goes in newsletter costs, but if we assume that couples are willing to have just one copy, but have full individual rights otherwise eg. in seed distribution, then I would suggest a joint annual subscription of, say, £9.00, and will put this to the AGM in June. Please let me know if you do not support this.

Tony Entwistle

SOUTHERN HEMISPHERE PLANT CONFERENCE ISLE OF WIGHT

Somehow I managed to forget to include this in the last issue of the newsletter, but hopefully its not too late to book a place.

The conference on Tender and Southern Hemisphere Plants will be held on 3-5 October 1997 at Ventnor Botanic Garden, Isle of Wight. The conference covers the plants' collection, cultivation and management in Britain and Ireland. Approximate cost £120, including all meals, accommodation and entertainment. If you are interested, contact Simon Goodenough, Ventnor Botanic Garden, Undercliff Drive, Ventnor, Isle of Wight, PO38 1UL or fax 01983 856154.

CHELSEA SHOW 1997

At this year's Chelsea Flower Show, visitors will be able to see a piece of Kings Park, Perth. The allocated area of 10m x 6m will depict 2 W.A. habitats and their flora : the Goldfields and a south-western swamp. Persuading W.A. natives to flower in an English spring has not been easy. Some plants, including orchids, have been brought on under glass and subjected to shorter daylight hours and increased watering to make them think spring is imminent. In the northern parts of W.A., some plants will naturally bloom in May, so by choosing an arid scene as one of the habitats, Kings Park are hedging their bets. Dried and fresh cut flowers will also help make up the displays.

SOME DELECTABLE DAISIES

By Jeff Irons

The enthusiasm which British gardeners have for Celmisias overshadows the other Antipodean daisies. They are actually less demanding than Celmisias, especially in southern England. Here I describe a few of them.

The first has to be Bracteantha bracteata. It used to be called Helichrysum bracteatum, and several seed catalogues still use that name. In the 1800's German hybridizers crossed this species with South African Helichrysums, to produce a range of colour forms and sizes. They are marketed as 'Strawflowers'. Sometimes these hybrids have promotional names such as Helichrysum monstrosum "Hot Bikini". All are annuals or short lived perennials. Their large daisy heads appear in summer, ranging from cream to dark red in colour. The 'petals' are actually bracts, and the flowers make excellent everlastings. It is possible to pick at different bud sizes.



Bracteantha bracteata
Seaside form – whole plant is reduced in stature

Several selections of the species are sold under promotional names. None is reliably hardy in Britain, and they have to be over-wintered as rooted cuttings. 'Dargan Hill Monarch' is perhaps the best known. It was collected at Cunningham's Gap in S.E. Queensland. Having silvery woolly leaves and large yellow flowers about 9cm across, it is very attractive. Specimens can be kept over winter in a greenhouse which is kept frost free but is otherwise unheated. Only the dull grey days of December will stop them flowering. Put into the garden in late spring a single plant will spread to as much as 1m high and 2m across, and flower throughout summer.

The seed in the APS seedlist was brought back from Australia by me,

and comes from the New England National Park. Sown in early May 1996, and put out in a sunny spot the plants were in bloom by late July. Widely spaced plants grew to 1.3m x 1.5m. As I write, in early October, one isolated plant has 78 flower heads, each about 6cm across. Closely planted seedlings have given a bed which is a riot of cream and yellow flowers. This strain may survive a mild winter outdoors.

Brachyscome multifida is another of my favourites. I believed it to be a common garden centre pot plant. However the current Plant Finder lists only 4 stockists. Several forms of this species have been selected, and are marketed under promotional names. They are popular pot plants in Australia and the U.S.A. While in Australia early in 1996 I visited a large wholesale nursery and saw several new forms which are to be distributed in the U.S.A. under the Breakoday name by Colegrave. I saw too several multifida hybrids which are sold in the Australian and Californian pot plant trade.

All forms of B. multifida make small bushy plants with mauve, pink, or white flowers, about 2.5cm across, on stems 6-25cm long. Hybrids can be 4 or 5 cm across and include yellow shades. The species has two varieties: multifida which flowers all the year, though mainly from spring to autumn; and the variety dilatata which blooms from spring to autumn. Unlike variety multifida, it suckers.

B. multifida does not set much good seed and cuttings are the usual method of propagation.

Brachyscome rigidula could be described as a high level B. multifida, for it looks very much like it. This species likes a sunny spot and poor well drained soil. It is a good scree plant. The form that I grow has lavender daisies 2.5cm across, on 10cm stems, from early summer to autumn. Wild plants can have stems as much as 60cm long, and their flowers may be mauve, pink or white.

Sub-alpine forms of this species do not have a good shape. Consequently the APS has never offered seed, because it has not been possible to get known high origin seed.

The only nurseries listed in the current Plant Finder as stocking B. rigidula are County Park Nursery and Town Farm Plants.

WINTER REPORT 1995/96 FROM CO. DOWN

By Gary Dunlop

Christmas 1995 was a rare event in Ulster, the first white Christmas in several decades. I cannot really remember the last one. It was completely unexpected as the snow only started to fall about midnight on Christmas Eve and was followed by a light frost before sunrise. The clear blue skies with crisp dry air without wind lasted for several days. The pleasant surprise of a sparkling snowcover of about 50mm was marred on Boxing Day night and the following night when the temperatures plunged. Eight km (five miles) away on the coast the seaside town of Bangor recorded -13°C with a thin film of ice forming in the marina. The first time in living memory that the sea had frozen there.

I had not heard the weather forecast on Boxing Day but I did hear that evening from a friend in England that severe frost was expected. It was much too late to do anything and I did not really think the frost would be that severe here. Seven mild winters in a row creates a rather blasé attitude, confidence before catastrophe. My last garden which was lower lying but in a frost pocket, I regularly took cuttings of doubtfully hardy plants which were often frosted. The last time I had not bothered to take cuttings, confidently expecting a mild winter was in 1980-81 when I recorded temperatures of -18°C and suffered grievous losses. Hebes, Dianella, all but one large clump of Phormium tenax which was reduced in size by more than 50% and many other plants which I would not have expected to succumb, including a particularly vigorous small white flowered climbing rose. This latter loss I considered a blessing, as when established this semi-wild plant could send up shoots about 5m long in a season.

The east coast of Ulster often escapes the worst excesses of frost in winter, but there are always unwelcome exceptions. I did not actually record how low the temperature fell to but being 8km inland from Bangor and about 100m above sea level I think the temperatures recorded there would be representative of those I experienced. The only saving grace in the situation was the unusually low humidity and still air. There are always surprises in any such adverse circumstances as to what survives and what does not. Few plants were killed outright immediately but a number which had just about survived the severe shock were finished off in the cold wet conditions in February and March.

Myosotidium and an anonymous Eucalyptus were killed outright, though about 30 other eucalypts survived including Eucalyptus globulus, though the winter winds always take their toll and leave it looking rather ragged and minus a few branches. A few of the other eucalypts looked a little sorry for themselves by spring but surprisingly many weathered the winter unscathed with their leaves looking remarkably fresh.

One clump of Dianella tasmanica was frosted to the ground but an adjacent clump about 2m away and less than a metre higher in elevation was unscathed. It flowered well and I have never seen it produce berries in such profusion, as it did this autumn. A few tufts of the variegated form of D. tasmanica were apparently unaffected as was D. intermedia, though a good variegated form of this plant was lost.

The Celmisias overall fared well. One form of Celmisia semicordata died and a few others were marginally frosted as were a few other species. C. morgani, a thin green leafed species gave cause for concern but made a remarkable recovery. Two adjacent plants of C. sericophylla, the broad furry leafed Australian species, demonstrated that they were very different clones. One was unaffected whereas the other was almost totally annihilated, only one growth point survived and still almost a year later seems to be suffering a slow lingering death.

Whereas most of the Hebe x franciscana 'Variegata' in the country were instantly exterminated, a row of 7 different forms were only badly wounded but were finished off in the following few months. A few rootbound cuttings sitting out in 1 litre pots were unaffected as was

a medium sized Agave americana in a plastic pot, which I forgot to bring in for the winter, as normal. It is now planted out in the garden. Several other variegated Hebes had apparently miraculous escapes. Both white and yellow variegated forms of H. andersonii, a notoriously half hardy species were partially denuded and no more. H. 'Lopen' a good variegated plant which is not well known proved fully hardy and flowered better than ever.

I have over 30 forms of Phormium and all survived. Fortunately most were at the front which is south facing with a gentle slope to aid the departure of frost. In this location only P. 'Dazzler' was badly frosted, whereas the others escaped without a blemish. The bulk of the main garden is in a slight hollow in the hillside, which would only allow frost to collect to a depth of less than 2 metres over an area of a couple of acres. Here, divisions of P. 'Sundowner' were decimated whereas P. 'Maori Sunset', a slower and less robust plant proved to be hardier. The main clump of P. 'Sundowner' was damaged around the perimeter but at over 1200mm in diameter and about 25mm high it was substantial enough to survive most things including the unwanted attention of a chieftain tank should such an unlikely event occur. Small divisions of P. 'Yellow Wave' proved quite hardy, even a few that were sitting outside in 2lt pots. The two old variegated cultivars of P. tenax, 'Variegatum' and 'Veitchianum' displayed a similar difference in tolerance, 'Variegatum' the more common plant with a narrow white variegation was indifferent to the winter whereas 'Veitchianum' with an almost 50% yellow variegation was cut to the ground and is only now (late 1996) regaining its composure.

Most Olearias were robust enough to survive except of course O. 'Henry Travers'. It was clearly a little unhappy with its initial frosting but survived, as it had before when it had been twice dug up in its youth by a vexacious rabbit. It was never a good shape after this traumatic experience. In early March, I foolishly bought another one of much better shape which I came across in a local garen centre and even more foolishly planted it out immediately. Despite being located in a sheltered spot adjacent to O. chathamica, one of its parents which is supposedly more tender, neither it nor its misshapen elder sibling survived to see in Easter. Fortunately, O. chathamica did, but its equally straggly form encouraged by more vigorous surrounding shrubs, no doubt saved its life. No doubt they will do their best to strangle the weakened remains in the near future if I do not come to its defence.

Elsewhere in the garden an adjacent trio of O. scilloniensis or O. phlogopappa in white, blue and pink all fared differently. The white flowered plant and a couple of other very similar plants elsewhere acquired under different names were unaffected. 'Comber's Blue' and 'Comber's Pink' I thought were both lost, but the blue resurrected itself budding from apparently dead wood, but unfortunately its pink neighbour refused to follow this commendable example.

The Diplarrhenas proved to be dependable and the New Zealand Libertias gave as good an account of themselves as their white flowered South American cousins, though their blue cousins Libertia caerulea and L. sessiliflora were frosted to the ground. Both still managed to produce a defiant flower spike. The illegitimate progeny of an illicit tryst which I encouraged a few years ago, between L. caerulea and L.

grandiflora also proved to be a survivor. It flowered for the first time, but with the former plant as mother it was not a floral triumph.

Anopteris glandulosa had decorated itself for Christmas with attractive flowerbuds like an impatient Pieris, which promised a fine display early in the new year. Its plans were ruined after one night of frost and the decorations were wrecked. With grim determination it set about its task of flowering again and gave an excellent display a few months later than normal. I should have rewarded such fortitude with a photograph but the good intention was not fulfilled.

WESTERN AUSTRALIA - THE SOUTH EAST

By Tony Entwistle

Heading east past the Barrens towards the mining town of Esperance one is aware that the climate is becoming drier; indeed, not much further east is the start of the Nullabor desert and the huge sweep of the Great Australian Bight stretching some 800 miles towards Adelaide.

Beyond Esperance is a rocky promontory, the National Park of Cape LeGrand which in the spring has a dazzling display of flowers. The beaches here are the finest I have seen - curves of white sand, turquoise sea and foaming surf.

The hills are a mass of Conospermum and Isopogon; few trees except some 'Warted Yate' (Eucalyptus megacornuta).

There were pink Boronias (Boronia inornata) and Banksia pulchella. Near the coast was the fleshy-leaved Hakea clavata and some nice red Grevilleas, G. hookerana and G. tripartita.

There were many dwarfish Acacias, and the curious red pea Templetonia retusa with spiky flowers.

But it was on the sand dunes that the most spectacular display presented. As far as the eye could see, a solid mass of pink and white - Pimelea ferruginea and Ricinocarpus trichophorus. Almost on the seaedge was a tangle of the prostrate Banksia, Banksia repens, half buried in the sand - of no beauty, but enlivened with mats of bright red Lechenaultia formosa.

THE OLDEST PLANT

The world's oldest plant, 43,000 years old, may be endemic to a small area of Tasmania. Lomatia tasmanica, a member of the Proteaceae, is a slow grower, spreading vegetatively by underground rhizomes. It had been observed that the plant had failed to set seed. After analysing 78 samples from the restricted range of 1.2 sq km, it was discovered that all the samples were genetically identical, derived from a triploid clone. Having one-and-a-half times the number of genes normally found in the cell nucleus, they are rare in nature because they are usually sterile. A fossil found 8.5km away which was identical morphologically to the present plant, radiocarbondated to 43,600 years old.

CELMISIAS IN THE PEAK DISTRICT

By Anne Fox

Eye-catching, never untidy and always handsome, Celmisias are plants with many virtues.



Our first plant, given to us by a friend about ten years ago, was a silver rosette of 20cm long spear shaped leaves: Celmisia semicordata. The upper surface of the leaves is pale green, ribbed and covered with a shining silvery film, the underside is felted in pure white. Neatly rolled edges join one surface to the other and add to the elegance of the appearance.

You can picture already the charm of these plants and imagine our delight when they thrived with no special attention in the open ground of our moorland garden. (It has peaty, fairly gritty, acid soil.) In time one rosette became two, one plant became several plants and every May we had showy white flowers. "Daisy-like" is misleading; these were bold white heads with golden centres carried on sturdy 30cm stems coated with white down.

With a record like this the genus Celmisia was proving irresistible!. We looked out for celmisias on alpine plant stalls and in time Celmisia allanii, C. brevifolia, C. hectori and C. incana joined our collection. Plants of a smaller stature, only 5-8cm high and with delicate silver foliage, these species seemed to require showcase treatment; they were planted in a raised bed of gritty soil and they seem very happy there.

A less easy to please plant was C. gracilenta. It did not die in the raised bed; it just looked dead for a whole year. However, since being moved into a pot in our porch it has lost its dull brown colour and started a new life as a bright and beautiful plant.

Apart from this, the raised bed has proved very much to the liking of our celmisias. Growing there are C. ramulosa, C. longifolia, C. asteliaefolia, C. dallii, C. walkeri and C. hookeri. There are also two species which are odd ones out in a mainly silver-leaved family : C. bellidioides is a low creeping plant with small dark green leaves and C. traversii has an intriguingly unusual appearance with brownish-orange indumentum on its velvet-textured mid-green leaves.

It seems that celmisias like an open position in a gritty soil, with plenty of water but good drainage. I am also told that they like acid soil. Some of the more delicate looking ones have had a piece of glass propped over them as winter protection but I suspect that this is not really necessary.

The rosette forming celmisias can be propagated by division - easy, but it needs patience as they are slow growing. Celmisia ramulosa forms twiggy stems; it takes from layering or cuttings and C. hectori looks as if it will do the same. The rest I am finding out about.

Seeds have been more of a challenge. Potful after potful has failed to germinate. Never has a single seed grown! Mindful of the advice to sow it fresh, I have now obtained from New Zealand some newly harvested seed of C. hookeri. The amazing has happened. They have just (end of January) germinated within two weeks of sowing and in my imagination I am already counting my vast supplies of flourishing mature plants.

SMOKE

APS Germination Notes

Many Australian and South African plants whose germination had defied all efforts are now known to give some, or good, germination after their seeds have been exposed to smoke. Heat is not needed. A simple method for smoke exposure is to light a fire in a metal container, place it in a greenhouse, with the seeds, add some green leaves, and close the greenhouse door for an hour or so. Alternatively 'smoke papers' can be bought. At 1997 prices they cost over £1 each.

NOW SMOKE YOUR PARSNIPS!

By Tony Entwistle

It is not surprising, in view of the success of the South African Kirstenbosch 'Instant Smoke Plus', that Western Australia now has an agency there. Nor is it surprising that the Australians are making their own - a firm in W.A. is selling 'smoky water'. What is perhaps surprising is that this is being promulgated not for Australian natives but for general horticultural and agricultural use, especially vegetables.

I suppose this is logical - even if many seeds do not need it, it can do no harm, and certainly some vegetable seeds such as the Umbellifers (parsnips, carrots, celery) do have relatively poor and irregular germination.

Have any members experience of the use of gibberellic acid (GA3) with Australian seeds, either with or without smoke? Recent correspondence in the AGS Bulletin would suggest it is essential for some S. American seeds eg. rosulate Violas.

Cytozyme U.K. produce an 'Organic seed booster' (via Marshall's Seeds) but I do not know what this contains - a letter to them has been unanswered. Presumably this is akin to the claims that seaweed extracts (eg. Maxicrop) also stimulate germination - perhaps from

natural gibberellins.

Gibberellic acid is in fact licensed in this country for the germination of celery. Does anyone know what triacontanol is? - it is mentioned as a growth stimulator in some organic plant feeds.

According to Shauna Roche of Kings Park, Perth, the following genera have now been shown to respond readily to smoke treatment: Verticordia, Eriostemon, Conospermum, Lechenaultia, Pimelea, Stirlingia, Geleznowia and most Epacrids. Grevillea also respond well, though some species only do so after remaining one year in the soil.

CAPE SPRING

By Tony Entwistle

An article on South Africa may seem out of place here, but there is so much botanical similarity between South Africa and Australia. It is generally said that the spring flower display in South Africa and Western Australia is the finest in the world.

After my first visit to Cape Province (Port Elizabeth to Cape Town along the coast, with trips over the Outeniqua Mountains to the Little Karoo), I can certainly say that they are both splendid, and I would not like to say which wins the prize!

First impressions of South Africa were that I was in Western Australia - the same vastness of the landscape (plantations of Eucalypts added to the confusion), the long roads between the isolated townships, the huge farmsteads. The mountains were more dramatic than in Australia and very like Scotland.

What was different were the ostrich farms, road signs 'Beware Elephants', and tortoises - only a British driver would stop and wait for a tortoise to cross the road - it takes a long, long time!

In general the coastal area at least seemed much more watered that Australia, with plenty of lakes along the 'garden route', though the Little Karoo was quite dry. The spring 'mass display' of annuals is mainly of the Daisy family in both countries - in South Africa, the Western Australia 'everlastings' (Helichrysum, Helipterum, Waitzia etc) are replaced by Arctotis, Ursinia, Dimorphotheca etc, though Nemesias also play a part. But there are extras peculiar to South Africa from perennial low-growing plants - huge areas of Pelargonium, mostly pink and in the dry areas Mesembryanthemums (mostly Lampranthus). The sand-dunes across from Table Mountain were for miles a vivid mass of pink Pelargonium capitatum and yellow Didelta carnosa.

It was perhaps in the fynbos (= sandheaths in Australia) that the botanical similarities emerge. You simply replace the Banksias, Hakeas and Grevilleas by Proteas, Leucospermums and Leucodendrons, the Epacrids by Ericas in a bewildering variety of shapes and colours.

At ground level there are sundews (Drosera) with red leaves exactly the same in appearance as in Western Australia. There is no equivalent to the masses of shrubby Acacias in South Africa (the African Acacias are mostly trees). I suppose you could say that they and the

massed display in Western Australia of Melaleuca and Eremaea are replaced by Berzelias (very dominant in places) and masses of pink Podalyria.

South Africa is, unlike Australia, very rich in 'bulbs' and it was nice to see dainty Gladioli and Romuleas emerging. All the damp ditches were massed with Zantedeschia aethiopica and the yellow Wachendorfia thyrsifolia.

The fynbos also had lots of blue Aristea and huge drifts of pink Watsonia. Terrestrial orchids were nothing like as common as in Western Australia but there was Disa uniflora along the mountain streams and Bonatea speciosa in woods near the coast. On rocky slopes near the sea were delightful Agathosma and Adenandra (Rutaceae), and Coloenema (Myrtaceae) all very 'Australian' in appearance. Whereas Australia is tree-wise dominantly Eucalypt, there are a tremendous variety of evergreen trees in South Africa and the native forests and damp valleys are a solid jungle of vegetation. The yellow-wood (Podocarpus latifolia) was one of the largest conifers.

The Botanic Garden at Kirstenbosch must be scenically the finest in the world, set on the wooded slopes of Table Mountain. But perhaps my finest botanical memory of my visit is Chinese! - in an old Dutch estate near Somerset West was an avenue of ancient camphor trees (Cinnamonum camphora) with the most magnificent branched sinuous trunks, giving an atmosphere of Tolkienesque magic.

I suppose if I were asked to pick out the most memorable plants I saw I would have to list (1) Protea cynaroides (the King Protea), (2) Erica mammosa (the 'Nine-pin heath'), (3) Nymania capensis (the 'Klapperbok') in the desert areas, a 'Chinese Lantern tree', (4) Liparia splendens, the 'Mountain Dahlia' (a leguminous shrub with orange dense heads of flowers) and (5) Oldenbergia grandis, the 'Cushion Bush' (splendid foliage and large white 'thistles').

A DAY IN THE OTIRA VALLEY

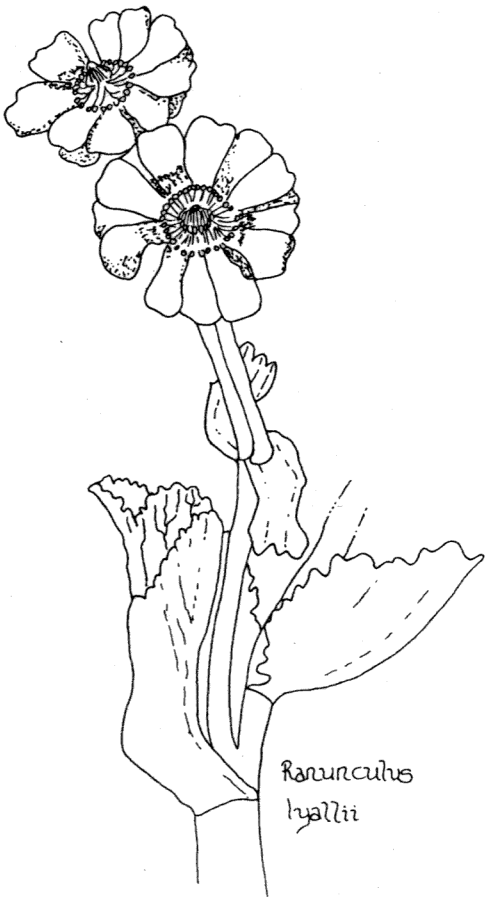
By Jeff Irons

Southern Alpines '96 included two day excursions. One was to Mnt. Hutt, a "dry" mountain. The other was to the Otira Valley, on the western side of Arthur's Pass. It is a 'wet' area with a rainfall of about 10,700mm a year. The trip was a once in a lifetime experience, because our guides were Dr. David Given, the Celmisia botanist; Laurie Metcalf V.M.H., New Zealand's most important writer of books about its native plants; and Steve Newall of N.Z. Alpine Seeds. The day was sunny, and although lingering snow could be seen on the opposite side of the valley, it was pleasantly warm. There is a large car park just past the signed entrance to the Otira Valley, and an easily graded track runs up the valley. The less energetic can potter around on its lower portion, sure of plenty to see. More active plant lovers can walk on to Temple Basin, or beyond it on to the fellfields, seeing an ever changing palette of plants.

The first impression was one of dense vegetation. There was none of the short grass familiar to me from North Wales and Lakeland. Instead many species grew cheek by jowl, giving the ground a thick blanket of

vegetation. In such a high rainfall area erosion would be a serious problem without the ground cover, and we were told not to stray from the path.

Excitement began almost at the track's start. There, on the first bend was an old contorted Halocarpus bidwillii, about 2m high, its trunk bleached grey by the sun. All around were large plants of Dracophyllum longifolium about 1-2m high, with their wispy, narrow leaves and white flowers. The large bright green leaves of Pseudopanax colensoi gleamed in the sun, while Leucogenes grandiceps flowered at the pathside. I was very taken by Gingida montana (Apiaceae), with prominent flower heads, on compact plants. Pentachondra pumila displayed its bright red berries at the path side, but it took eyes more attuned than mine to spot the yellow green flowers of Praseophyllum colensoi. My books call this a robust orchid 10-25cm tall. These plants were anything but robust, and more like 8cm tall.



The first Celmisia was Celmisia spectabilis, eminently photographable, in large tufts with beautifully symmetrical white flowers. The last, up near Temple Basin, was C. verbascifolia. The two Snow Marguerites, Dolichoglottis lyallii (yellow flowers) and D. scorzoneroides (white flowers) stood out from the general green. Their flowers are gorgeous, but in the garden the growth habit is unattractive unless hidden, as it is in the wild. Ourisia macrophylla was too far away for us to recognise which variety it was. Helichrysum bellidioides made small patches in bare areas.

I had been looking for Ranunculus lyallii and at one spot, way down near the bottom of a talus slope, there was something shiny that might have been its leaves. Laurie Metcalf, Barry Unwin (Logan B.G.) and I went down the slope and across the creek, to be rewarded by a large flowering plant of R. lyallii - but not the one we had seen from the path. That was not in flower. After taking photographs we went up and rejoined the main party. It had gone ahead and stopped for lunch about 5m from R. lyallii! Still Barry and I had an adventure, and our slides had been earned. So ended an enjoyable day out.

HELICHRYSUM ADENOPHORUM VAR WADDELLIAE

By Sue Hyams

This highland form of Helichrysum adenophorum was first recognised, on Mnt Speculation, by Miss Winifred Waddell, founder and for many years honorary secretary of the Native Plants Preservation Society of Victoria. She urged Dr J.H. Willis to collect it, which he did in 1945, from a point 1500-1600m above sea level. He wrote "At first I mistook it for a tall narrow leaved condition of the ubiquitous H. leucopsideum, which grew sparingly in the vicinity, but close examination revealed much stronger affinities with H. adenophorum - a desert plant." He named this alpine form in honour of Miss Waddell.

This everlasting needs very good drainage and plenty of sunshine. Narrow-leaved, the foliage has a covering of white, cottony hairs on the undersurface. The Waddell Everlasting is a tall, erect plant that branches in the upper one-third of its stem, each leafy branch bearing a single large, pearly pink flower head up to 4cm across.

The alpine variety differs in the following ways:

1. The leaves are narrow right to the point of attachment to the stem, whereas H. adenophorum has half-clasping bases.

2. The leaves have dense white cottony hairs beneath, in contrast to H. adenophorum which usually has glandular hairs on both sides.

3. The variety waddelliae is described as a perennial with a creeping rhizome while H. adenophorum is held to be an annual.

In pot cultivation in Melbourne plants usually died in their second year. When the dead looking stems were left alone until the new growth was well advanced, the plants survived and flowered, though not very well.

In August 1996, Jeff Irons sent me several young seedlings of the alpine variety. They were potted up, several to a pot in a well drained compost and overwintered in the greenhouse. They were kept fairly dry and only watered when they showed signs of wilting. In early April 1997, at an approximate height of 20cm, they were potted into various large pots and terracotta troughs and placed outside in the sun. One clump was also planted in a southfacing scree. It appears that the growth is rhizomatous, indicating that the roots search out new soil. Since most of my plants are pot grown, they will need regular feeding to bring about a good show of flowers. I will report on their success in the next issue.

The APS seed was collected in the Newnes area of NSW at around 1100m. This is radiata pine forest with native vegetation on the roadsides. The soil is a sandy loam.

NAME CHANGE

Wittsteinea vaccineacea is now Alseuosmia vaccineacea.

NOTES ON SOME OF THE PLANTS IN THIS YEAR'S SEEDLIST

RANUNCULUS LYALLII

This is the largest of the N.Z. ranunculi. Above large saucer-shaped and leathery leaves of a deep shining green, are carried large panicles of pure white (rarely cream) flowers, each with 10-25 overlapping petals. It is best grown in cooler conditions where it can reach 1m in height. Choose a deep, well-drained, humus-rich soil.

RANUNCULUS INSIGNIS

This yellow-flowered ranunculus requires similar growing needs to R. lyallii. It is 60-90cm tall, with thick leathery leaves which are heart shaped or kidney shaped, and hairy all over. The branched flower-stem bears numerous golden yellow flowers upto 5cm across.

PROPAGATION NOTES: Stratify seed and keep at least two winters. If a late summer sowing is wanted from seed received in spring, mix seed with moist sand or peat and place in a container, then in a refrigerator at 2-4°C. Check occasionally to ensure the seed doesn't dry out. Remove any germinated seed and sow. Transplant seedlings when 12-24 months old. Most alpine ranunculi prefer a moist gritty soil enriched with humus. In warm summers powdery mildew may be a problem.



Pultenaea villosa

ACTINOTUS HELIANTHI

Commonly known as the flannel flower, this upright annual, upto 1m in height, is naturally found in open forests, heaths and sand dunes in Queensland and NSW. The whole plant is covered in woolly hairs. The flowerheads are reminiscent of those of eryngiums - a globular cluster of many tiny white (sometimes green-tinged) florets, surrounded by a ring of 10-18 white, petal-like bracts, densely covered in soft hair. PROPAGATION NOTE : Wild Actinotus seed often takes 80-100 days before germination.

GENTIANA SAXOSA

This New Zealand gentian is a real gem for the rock garden or alpine house. It can be easily grown in sun or semi-shade in well drained soil; in full sun it should be given adequate moisture. It has a spreading habit and can measure upto 20cm across x 6cm in height. The flowers, upto 2cm in diameter, are goblet shaped, white with green throats. PROPAGATION NOTE : gives a mixture of immediate and delayed germination.

PULTENAEA VILLOSA

The hairy bush pea of Queensland and New South Wales makes a shrub upto 3m in height. The leaves are narrow and oblong in shape with curved back margins, 3-10mm long x 1-2mm wide. The undersurface is hairy. The pea flowers are yellow with red markings 5-12mm long.

PANDOREA JASMINOIDES

Also known as the Bower Climber, and naturally found in Qld, NSW and Victoria. Sprays of pale pink trumpet flowers with dark red throats are produced from late

spring well into the autumn. This species likes a rich moist soil and a lightly shaded position, although it will grow in full sun.

CROTALARIA CUNNINGHAMII

Commonly known as the Green Bird Flower, this shrub, upto 3m in height, originates from inland Qld, NSW, SA, WA and NT. The pea-shaped flowers are yellow-green streaked with fine purple lines; 3-6cm long with an ovate pointed standard petal and long twisted keel, arranged in terminal racemes upto 25cm long.

TRACHYMENE CAERULEA

The Rottnest Daisy, or Blue Lace Flower, is an onnual, occasionally biennial, member of the Umbelliferae. Naturally found in limestone sites in southwestern WA, it can reach a height of 60cm. It has coarse hairy stems with deeply dissected leaves. The flowers are blue to white with 5 lobes and 5 stamens, arranged in dense globular heads 3-5cm across.

IF YOU ARE LOOKING FOR A GOOD POT PLANT, try Alseuosmia macrophylla, Pomaderris elliptica and P. kumeraho. They will flower when small and within 3 years of sowing. Cool greenhouse conditions are needed.

GOOD THINGS FROM THE PLANT FINDER

By Jeff Irons

How do you decide which of the 65,000 names in the Plant Finder you want to grow? I've opened the current Plant Finder at random and selected a few plants which are relatively unknown, even though they are good.

Acradenia frankliniae is a small understorey tree from the rainforests of Western Tasmania. Fairly small trifoliate leaves render it attractive all the year round. In early summer it has dense terminal clusters of white flowers, each about 1.5cm in diameter. My experience with it is limited to the part of N.W. England where I live. The air is always moist, even though the rainfall is low. Under these conditions it grows and survives under the shade of a large spreading hawthorn. After something like 15 years my plant is still only about a metre high and through.

Clematis marmoraria is all the rage now, and C. petriei is overlooked. County Park Nursery offers two selections from it, both grown from seed collected on Mount Princess. The female is called Princess. It is nice, but the male is something special. Graham Hutchins has given it the misleading name "Limelight". The flower colour is lime green, not that of limelight. The plant is not a strong grower, and its few slender stems need tying in, for this clematis will not cling to the uprights of my fence. Growing to no more than a metre or so this plant is ideal for pots, or a special place.

Epacris petrophila came to me from Barry Starling. He had two genotypes. One of them, from Mount Baw Baw in Victoria, is listed by Highgates Nursery. The more upright of the two, it is a small shrub, no more than 50cm high, and usually less, with small green leaves and white bell flowers in midsummer. I grow it in a half sunny bed in the

company of Olearia frostii, Orites revoluta and Trochocarpa thymifolia. None Australians in the bed include Disporum smithii and Tsusiophyllum tanakae.

The following plant came to me as Hebe buchananii "Minor", a horticultural name signifying that this is a compact form. Only 2.5-5cm high it makes a small mat of glaucous dark grey-green leaves. The technically minded may like to know that they are 3-7mm long, broadly ovate and without a sinus. Small white flower heads are a bonus in summer. This is a good plant for a trough, scree or tufa block.

Though the largest among the Australian pelargoniums, Pelargonium rodneyanum is still a small plant. In my garden it is hardy. The bright magenta flowers appear from late July onwards, atop 10cm stems. Over the years self sown plants have turned the original two seedlings into a clump. Sometimes I am able to collect seed which gets into the APS list. If you buy from Diana Hull, you may get something which came from my stock.

Known as Fan Flowers, Scaevolas have petals which spread out like the blades of a fan, or the fingers of a hand. Only one of them, S. hookeri, stands any chance of being hardy in Britain. The others are pot plants for the frost free greenhouse, or they can be bedded out in the summer. The unusual flowers always attract comment, and the plants have a long flowering season. Good light is needed.

Neither new nor rare in cultivation, Alseuosmia (Wittsteinia) vacciniacea gained in such a class in 1996. The winning plant had been grown under glass. In actuality this is an easy plant which grows when just plonked in the ground. In moist leafy soil it spreads gently. The Baw Baw berry can be 20cm high in the wild, but the clone we have in Britain is only about 3cm high. Its mid-green elliptical leaves make a dense weed proof mat. The greenish-yellow flowers are followed by pinkish or greenish berries. Paul Allanson may have a few to offer, but the best source is probably Crûg (pronounce Creeg) Farm Plants.

OZOTHAMNUS

By Jeff Irons

O-zo-tham-nus; Greek Ozos - smell, thamnus - shrub.
The name of this genus has had a somewhat chequered history, because a botanist called Burbidge got rid of it in 1958 and put all the species into Helichrysum. Many British nurseries and books never caught up with the change. Luckily for them botanists all over the world agreed that these evergreen shrubs dod not fit properly into Helichrysum, and in 1991 Anderberg re-instated Ozothamnus.

Although there are quite a lot of Ozothamnus only a few are grown in Britain. Not all can be bought from nurseries, and of those which can some are collectors' gems, while others are mediocre. That makes my task easier, because I don't need to bother describing the nondescript ones.

Roy Lancaster has described O. ledifolius as one of the most neglected and under-estimated shrubs. I share his view and would include it in

my top 10 plants. My only reservations are that I do not know how it would fare in the dry climate of mid-Anglia, and that I do not know whether it will tolerate alkaline soil. The thing that makes this shrub stand out is its leaves. Everything else about it is a bonus. Firstly though, it is ideal for small gardens, and takes years to outgrow its allotted space. My specimen has been in the garden since 1976 and is still only about 1m high and through. The shrub is one of several with the common name of kerosene bush, given because of the way it ignites in a bush fire. After such fires it regrows, so ought to stand up to cutting back in the garden. In late March or early April the flower buds begin to turn terra-cotta, and eventually the whole shrub glows with the hue. So much so in fact that I am disappointed when the creamy white flowers open. They are in dense terminal corymbs, packed tightly across the shrub, and each is so small that only the keen eyed would recognise them as daisies. The leaves are tiny and rolled under at the edges like those of a Ledum (hence the name ledifolius, and the growing tips of the plant are bi-coloured in yellow and green. The effect is much better than that of the similarly coloured Cassinia leptophylla var fulvida. Even people who dislike variegated plants find it attractive. The shrub is hardier than the Cassinia too, and Hillier's Manual notes that it was uninjured by the 1962/3 winter. The yellow colour comes from an exudate which covers the sparsely woolly stems and leaf undersides. This shrub is especially attractive when lit by a low winter sun and my own plant is fairly close to a window, where it can be viewed with side or back lighting. On sunny days the shrub has a pleasant aromatic smell.

The natural habitat is on mountains in Tasmania, above 800m. Rainfall there is 1250-2000mm spread throughout the year. Snow can fall in any month. Often it is seen as fire pruned bushes about 30cm high. The shrub's adaptability is shown by its tolerance of Wirral's 600mm rainfall.

My second Ozothamnus, O. rosmarinifolius, is very different. Its leaves are dark green, or silvery; the buds are dark red, opening to snowy white, and the shrub will reach 2m in height. This is a shrub from moist, even wet, places and is ideal for damp or boggy sites. Plants grow quite quickly, taking as little as five years to reach 2m.

It is a matter of personal preference whether one cuts them back, or removes and replaces. If cut in red bud, sprays will last for a fortnight. Quite large branches can be cut, and this is an ideal flower for large arrangements. My clone has a rather unpleasant smell which makes it unsuitable for the house. Others that I have seen in Australia had a pleasant smell.

Three clones can be bought in Britain. Mine, the inland form, is one. Another is sold as "Silver Jubilee". It was first sold by John May when he was at Wimborne. It was grown from seed collected by the Tasmanian plantsman Jeannette Closs, and sent to John. The seed had been collected at Tasmania's South Cape. The resulting plants were found to be a grey leaved form, different from that known in Britain. Botanists know it as the coastal form. Because it was the year of the Queen's Silver Jubilee the plant was sold as Helichrysum rosmarinifolium "Silver Jubilee" (double quotes because the name is unregistered.) This form has a greyish indumentum of cottony hairs on the upper surfaces of the leaves. You would expect a coastal shrub to

withstand wind, and Paul Allanson finds that it is an excellent shrub for the west coast of the Isle of Man. On the other hand Stephen Sage says that in inland Suffolk it is neither very wind tolerant nor very hardy. I wonder whether there are different plants sold under the same name, for some plants seen in garden centres have been very gawky and open, others had the expected tight, close habit. A form called 'Purpureus' is offered in the 1994/5/6/7 Plant Finders. Stephen Sage of Smallscape Nurseries, which offers it, says that the buds are purplish and the leaves yellow-green. He believes that his name is wrong, but does not know the correct one. Possibly this plant is the species O. purpurascens. I have not been able to get details of the plants sold as Sussex Silver and Threave Seedling. O. rosmarinifolius is found in S.E. Australia; from Tasmania through Victoria to southern New South Wales, often beside streams and in wet places. It is quite variable and I have seen dark red and almost white budded forms growing side by side.

You can take your pick of common names for O. thyrsoideus. The Australians call it Sticky Everlasting, or sometimes Cascade Everlasting. Hillier's Manual uses the name Snow in Summer, which Stearn ascribes to Cerrastium tomentosum. This shrub, which can be up to 2m high has tiny white flower heads, each about 2mm across, in dense heads at the end of short branchlets. These heads are so profuse that they cover the upper sides of the branches, weighing them down to give a cascade of bloom. Flowering is in July and August. Cut branches will stay white for months and make excellent floral decorations. The sticky young growth explains the common name. This species is found from the Australian Alps down to Tasmania.

Another plant which does not extend to Tasmania and which is usually called Cascade Everlasting is O. secundiflorus. It flowers at the same time as O. thyrsoideus and superficially is similar to it. However the leaves are smaller and are not sticky. I grew this from a collection at Bennison Flat, in Victoria. The plants flowered in their third year, then died. The 1997 APS seed list includes seed collected in NSW which I hope will be more amenable to cultivation. Seedlings do vary, and some are much greyer than others.

Alpine Show exhibitors have a very high regard for O. coralloides. Unlike the other species covered so far it comes from New Zealand where it is found in the High Kaikouras and other dry mountains in Marlborough. These mountains receive high rainfall, but have acute drainage. A small shrub which grows fairly slowly to 60cm, it has stout woolly stems with leaves pressed closely to them (apressed) and overlapping so that only the upper halves show. The plant's appearance is like that of a branched piece of coral. This is a superb small shrub which grows well in a pot. One can drool over it all the year round. Outside it grows well in a gritty scree. Although I haven't tried it there, tufa should make a good growing medium. New Zealand botanists are not happy about some of Anderberg's decisions, and while agreeing that this species does not belong in Helichrysum they are not certain that it should be in Ozothamnus. For the time being they still refer to this and related species as Helichrysum.

O. selago also comes from New Zealand and is most easily described as being similar to O. coralloides, but with a silvery green appearance, rather than one which is whitish green. I cannot do better than quote

Philipson's description in 'Rock Garden Plants of the Southern Alps' (Caxton 1962). "...is a true cliff dweller, drooping from high crags in profusion, but does not despise even the smallest outcrops. It is a small rounded shrub, from inches to a couple of feet in length, with many switch like branches which appear leafless. In fact the leaves are reduced to small rounded bosses forming a regular pattern up the shoots. These smooth shining green leaves are usually set in a network of fine felted hairs. The species is extremely variable, particularly in the diameter of the shoots, which may be almost as fine as those of H. microphylla or approach the thickness of H. coralloides. Two striking local forms are var. tomentosum which has the whole shoot covered in soft fawn coloured hairs, and var. acutum with fresh green pointed leaves which lack the normal white tomentum. The small flowerheads emerge from the ends of the branches and far from gracing the plant they mar the regular pattern of its shoots especially when the seed is shed and only white chaffy scales remain. This Helichrysum is easily grown, small plants making good shrubs in a season or two. In an open situation it will flower profusely, so ours are mostly in the shade where the shoots display the green or white tesselation to the best advantage." In Britain O. selago is usually treated as an alpine house plant. Outdoors it grows well in tufa or hypertufa.

O. parviflorus is basically similar to O. selago but its branchlets are only 1-2mm in diameter and even though they have fewer florets the flower heads are bigger - about 1cm across. Philipson does not rate it very highly.

O. rodwayi was introduced to Britain by Harold Comber in 1929-30 as O. backhousii. However there is no mention of it in either the 8th edition of Bean or the RHS Dictionary. The current name is Ozothamnus rodwayi Orchard. Usually a shrub less than 1m high it is found on Tasmania's mountains between about 900-1300m, most commonly in open positions. The small white flower heads appear in summer. Their papery bracts are not very prominent. The variety backhousei has obovate leaves which are dark green on top and white underneath. Gardeners will prefer var. kingii, from N.E. Tasmania, which has leaves which are felted white on their upper surfaces. Seedlings of it do vary in the amount of felting. In the north central mountains var. oreophilum has narrow dark green leaves and less attractive flowerheads. The variety backhousei has been sold in Britain. I don't know whether it is still around but the seedlings sold could not stand the winters in my wet garden, neither could they survive in Dewi Price's well drained garden. I am now trialling var. kingii.

O. scutellifolius is found on dry hillsides in Tasmania. Its slender branches, 4-6mm in diameter, are clad densely with white hairs. The branchlets appear to be covered with little dark green warts. In fact they are the leaves, on stalks pressed closely to the stems. Though small the flowers increase the attraction of this bizarre plant. At the branch ends, they are a curious dirty colour. Little straw yellow florets are grouped in 3s or 5s and are surrounded by brownish bracts, large in comparison with the leaves. All said this is definitely a shrub for the cool glasshouse of those interested in one upmanship. It will certainly catch Show judges unawares, but I cannot imagine it ever fitting in with the AGS definition of "hardy in the place where exhibited".

AUSTRALASIANS IN THE AZORES

Some Observations On A Recent Holiday There
By Tony Entwistle

These dramatically scenic volcanic islands have an extensive introduced flora, perhaps not surprising with their long history as a navigational stopping-place from the southern hemisphere and the far east.

The roadsides everywhere are planted with Hydrangeas, Agapanthus, Camellias and evergreen Azaleas which provide a colourful display from late winter onwards.

The woodlands are full of large trees of Acacia melanoxylon, very striking with cream scented flowers.

Huge tree-ferns are common in damp spots (Dicksonia and Cyathea), and the many palms include the bangalow palm Archontophoenix cunninghamiana from Australia and the New Zealand 'shaving-brush' palm Rhopalostylis sapida.

There are also a lot of Cycas media, the Queensland 'nut palm', very striking with centres of orange fruits.

I have never seen before such huge Araucarias - A. heterophylla and A. bidwillii from Queensland (they are protected here). Also large trees of the Queensland Agathis robusta and the New Zealand Metrosideros excelsa.

Very dramatic were clumps of Doryanthes excelsa with huge spikes some 3 metres high of vivid scarlet flowers.

Hebes flourished but I did not see any Grevilleas or Banksias; perhaps the climate is too humid.

Some other botanical observations: the extensive forests (important commercially for timber) are almost entirely Cryptomeria japonica. The Azores has the only commercial tea plantations in the E.U. The taro (Colocasia esculenta) is grown in the equivalent of paddy-fields irrigated with warm volcanic spring water; the Polygonum capitatum was ubiquitous in the stone walls, providing vivid drifts of pink.

TASMANIAN DAISY BUSH

By Brian Halliwell

Olearia phlogopappa sometimes called Tasmanian Daisy-bush occurs also in Victoria and NSW where it is known as Dusty Daisy-bush or Alpine Daisy-bush. It is a compact evergreen shrub to 2m with alternate oval/oblong leaves with toothed margins. Usually they appear to be grey due to the hairiness of both sides. Flowers in corymbs, produced on previous year's growth open their white daisy flowers in late April or May.

It was introduced into England in 1848 by Ronald Campbell Gunn. In 1840 Joseph Hooker as surgeon/naturalist on HMS Erebus had visited

Hobart whilst on an antarctic expedition under Captain James Ross. On this trip Hooker met and collected with Gunn. Joseph was to follow his father Sir William Hooker as Director of the Royal Botanic Gardens Kew. Gunn was to send many plants to Kew and Sir Joseph Hooker commemorated him by naming the daisy bush, O. gunniana. The Swiss botanist Alphonse de Candolle had already named it O. phlogopappa so under the rule of priority this becomes the valid name.

In 1929, Harold Comber visited Tasmania to collect plants for the Royal Horticultural Society and a group of wealthy sponsors. At Tea Tree he discovered some daisy bushes with coloured flowers to which he gave the name of O. gunniana splendens. In his collecting notes is the following comment: "Generally speaking this is a taller looser edition of O. gunniana but the flowers range from white, pale pink, deep pink, mauve pink to blue and as seed was collected from plants of all these colours growing together, a good variety should result. Every plant should be saved and I consider this to be quite the best find I have made so far in Tasmania."

The plants produced from seed sent back by Comber achieved some popularity in England as cool glasshouse plants. They circulated as Comber hybrids sometimes prefixed by their colour. Comber named the one he considered the best "Mrs H. F. Comber", after his wife. In Britain they were unreliable out of doors surviving only in south-west England and Scotland, and in parts of Ireland. They found their way to New Zealand where in a more favourable climate they were to become popular garden shrubs but with a cv. name of Gem preceded by flower colour. Some survive in milder parts of Britain but are now uncommon. Usually all colour forms are referred to under the group name of "Splendens". The Plant Finder lists Comber's Blue and Comber's Pink and those which I have seen under these names seem the same as those I knew in New Zealand under the names of Blue Gem and Pink Gem.

In most of England, the straight species with white flowers is hardy even though a colder than average winter can cause damage.

This is a very good plant and it is surprising that it is so little grown. At flowering time, the flowers are so abundant that the leaves and stems cannot be seen. O. "Scilloniensis" which is now considered a horticultual form of O. phlogopappa is outstanding being smaller, more compact and even more floriferous than its parent.

The colour forms are not very hardy and are damaged even killed, in quite mild winters. In recent years the warm summers have ensured good ripening of wood and with mild winters, bushes have escaped damage to show just what good plants these can be.

O. phlogopappa is a bush for a lime-free soil in a warm sunny garden; planting at the base of a southfacing wall will provide some winter protection in cold districts. Following flowering prune hard, removing almost all the growth which has bloomed. After pruning apply a dressing of a general fertiliser eg. Growmore, at the rate of 68 grams per sqm of root spread.

APPENDIX BY JEFF IRONS

A plant bought from Wallace and Barr and planted out in the open was not injured in my parents' garden during the 1962-3 winter. Yet there

was one day with a maximum of 9°F. In Derbyshire I found that propagules from my parents' plant were unaffected by 0°F with no snow cover. Some people tell me that they are lucky to get the species to survive 18 months. It seems that hardiness depends very much on soil and site.

BOOK REVIEW - THE SEED SEARCH 1997

(Karen Platt, Sheffield. £8.99)

By Tony Entwistle

This book is intended to be the seed equivalent of the Plant Finder. A good idea, but I don't think it really succeeds. The choice of seed suppliers is arbitrary, incomplete and includes some but by no means all of those Societies who issue seed lists for their members (we are included). Inevitably by the time of publication these are out-of-date and the annual variation is considerable anyhow.

Several Australasian suppliers are listed, but they are ones who sell most of their seed by weight only, which would prove too expensive and wasteful for most individuals.

B&T World Seeds of Olonzac, France is the commonest source listed, and for many Australasians.

I can only state my experience of this firm - an order placed in 1991 is still awaited! (They say they have difficulties with their collectors). Their catalogue costs £10.00 anyhow!

EVEN MORE DAISIES!

By Jeff Irons

CALOMERIA AMARANTHOIDES

Gk. kalos - beautiful; meris or meros - part. A reference to the amaranth-like plume of flowers.

In February 1996, when in New South Wales, I was taken to see this plant in full bloom. Later on my friend collected seed, and I was sent a C4 envelope of it. As is usual, most was empty husks, but I was able to extract a small amount of seed. It is in the 1997 seed list; first come, first served.

The species was described in detail in our first Newsletter. It is a sensational aromatic biennial, with long tassel plumes of flowers 1m or more long. Under glass I've seen plants upto 3.5m high with flower plumes nearly 2m long. Cultivation is easy provided you remember that it occurs on cool southfacing slopes, and grows in fertile soil derived from basalt, containing plenty of organic matter; in areas which receive summer rain. Seed should be sown in June, and with progressive potting on plants should be at least in a 20cm pot by September. They must be overwintered in a frost free place and should either be potted on the following spring, or planted out in late April.

This is a species which we must aim to keep in the seedlist, and I ask members who get seed to grow at least two plants, and to send seed for future distribution.

BRACHYSCOME PTYCHOCARPA (Tiny Daisy)

Gk ptych - refers to folds; carpos - fruit. A reference to the winged seeds.

Were you one of those members who requested B. ptychocarpa from the 1996 seedlist and did not receive it? Not one of those who did has sent in seed for this year's list. I too sowed seed of this species in mid-May. The seedlings began to bloom in mid-July and continued up to the November frosts. I was able to harvest plenty of seed for the 1997 list.

Pretty pink is a good description for the small daisy flowers, each about 3cm across. All 17 of my plants had gone into one 15cm pot, so there was a good display throughout the whole season.

Brachyscome ptychocarpa is found at moderate altitudes in N.E. Victoria, and on the Southern Tablelands and Central Western Slopes of NSW. The flowers are usually white, but an isolated genotype on Mnt. Canobolas (pronounce can-ob-o-las, o as in got) near Orange has pink blooms. A gardening friend who lives in Orange collected seed, and gave me some when I visited him last year. The seed in now in the APS list. Plants can be annual or perennial, and are always found in damp places.

BRACTEANTHA VISCOSA

Known as Sticky Everlasting, this attractive daisy has heads just like those of B. bracteata, but they are smaller and daintier. The habit can be open, sprawling or upright, and the plant can be single or mutli-stemmed. It is a species which is not available commercially. Since it is new to me I don't know what our stock will be like. What I do know is that the donor says that the sheer quantity of flowers can exhaust the soil, so that even in Australia plants may die after one season. The APS stock comes from Newnes Plateau in NSW. Plant it in well drained soil, and be pleasantly surprised if it lasts for more than one season. The yellow flowers dry well if picked in bud, or just as the bracts begin to open. Plants should grow to be 0.5-0.8m high.

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Please allow several days for me to get them printed.

Once again, many thanks to all contributors, particularly to Jeff Irons. Without his articles I would be struggling to fill this issue! Remember, if you have any news or articles, please send them to me.

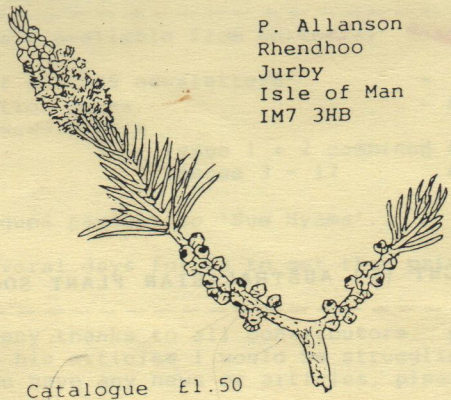
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