

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 42

Dear Members,

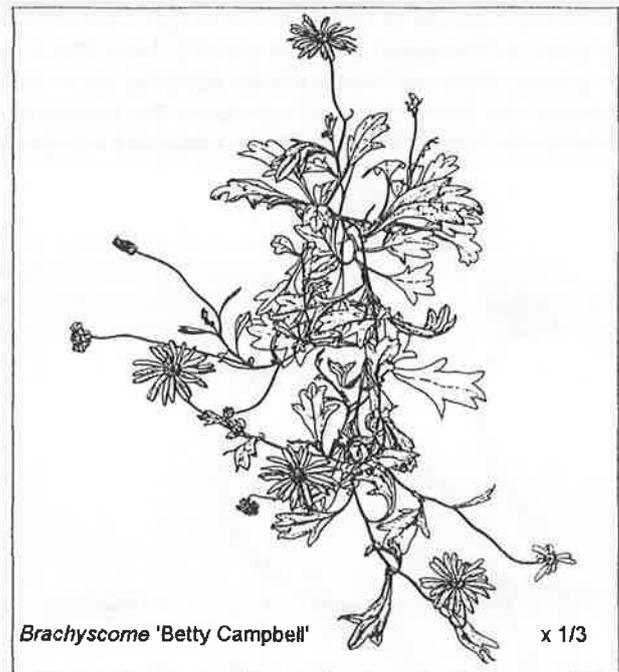
The genus *Brachyscome* has been dominating the lives of most of the Melbourne members (and of Gloria's in Shepparton). May 'Launch day' not be far away. My seed sowing has been reduced by two thirds, but I'm keeping up with seed trials. I'm thinking ahead as well, and sowing species for display in September.

Judy and I have continued with pollination trials. It would appear that the high temperatures we experienced early in the year inhibited pollen production and seed set in *Brachyscome sieberi* var. *gunnii* and *B. riparia*. Dr. Jo Kendrick of Melbourne University suggested that high temperature was the more likely cause, rather than reduced light, i.e. the light available to pots isolated in a 'cage' of green mesh or a polyhouse of opaque plastic. Despite this set back I've had good seed production from *B. sp.* (Darling Downs), *B. riparia* (Rare and Endangered in Victoria) and *B. sieberi* var. *gunnii*, a Tasmanian species recently introduced into cultivation.

May Meeting: This activity appears set to become an annual event if joyful chatter is a guide. The main event was a report on Colin Jones' experiences in creating a new garden, which appears elsewhere in the NL. We always await his detailed reports on the performance of daisies in Orange with keen anticipation. 'Swaps', or rather 'Gifts', took much longer than expected and trays of seedlings from our N-E member were eagerly accepted. The 'Banksia Man' offered a few Proteaceae so that others could prove that Proteaceae and Asteraceae are incompatible. Taxonomic Teasers had to be deferred. Never mind, you won't escape. They're on the agenda for future General Meetings. The success of the meeting hinged on the organisation in the kitchen. Thanks to Helen, Barbara, Jenny and honorary members who took over while the 'frazzled' leader attended yet another *Brachyscome* meeting.

Conservation matter: I'm pleased to report that the Marble Gully Daisy, *Olearia astroloba*, whose habitat was being endangered by a projected marble mine, has had a reprieve. The development project was lost in the Appeal Court. I still have three plants in the garden. This olearia has blooms over most of the year. It has produced seed in the garden and does hybridise. I suspect it may have crossed with *O. adenophora* (identity not confirmed). *O. adenophora* was tucked away behind a *Banksia cunninhamii* and after contaminating *O. astroloba*, it died.

The garden: The best performers in the garden on this dull autumn day are *B. multifida* var. *dilatata* in a hanging basket outside my window. It is covered with pale mauve flowers. *B. 'Sunburst'* is a rival. I'm using it as a pot plant and an edging plant. It is susceptible to aphids. In fact, a recent infestation was so bad that the plant had to be severely pruned. This drastic action was very beneficial and within weeks it was a 'picture'. *Podolepis neglecta* is the third good performer. This species died down in the heat of summer but still bloomed, and now it has responded to recent rains, put forth fresh basal growth and lovely golden flower-heads.



Hybrids: Please report any brachyscome hybrids that produce viable seed. In the past a hybrid of *B. ciliaris* x *B. dentata* of mine produced progeny, but all this generation were sterile. I also suspect the *B. 'Sunburst'* may produce viable offspring but will wait until pollinators are more active in spring before I can confirm this. We will pass on the information to Dr. P.S. Short at the National Herbarium in Melbourne. If you also have seed collected from the hybrid or pressings of the hybrid and progeny, all the better.

We are very sorry that Val MacConchie has had to retire. We hope she can rejoin us when she feels fit again, meanwhile there is always a welcome at our monthly meetings. Val has been growing daisies very successfully at Emerald in Victoria, and it was her enthusiastic report on her sand bed that encouraged me to build up a sand bed. Best wishes to you and Ted. The Study Group has valued your participation and shall miss you on Field Trips, when Ted was always at hand to keep the activities going smoothly

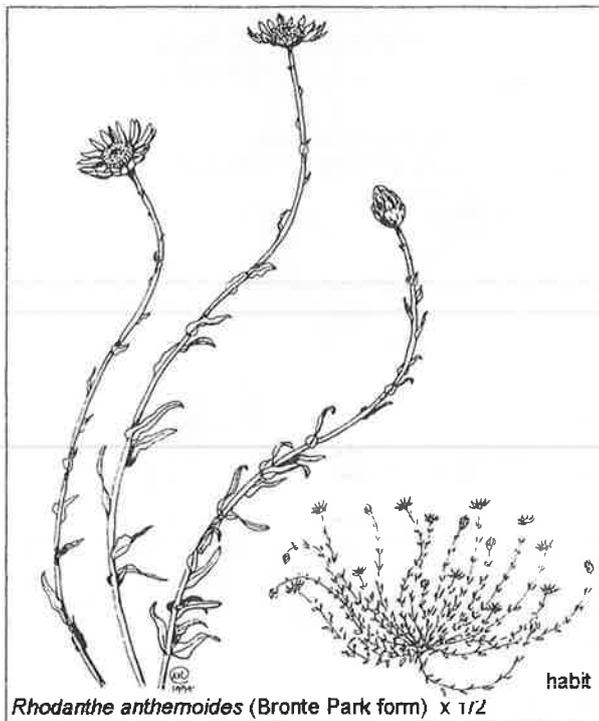
Regards,

Esma

Species or Forms new to the Group

Rhodanthe anthemoides Forms

Two forms of *Rhodanthe anthemoides* gave me great pleasure last year — one from Bronte Park (a property in the New England area on the Western Slopes of New South Wales) and one from Kiandra. I have only grown two other unbranched forms this year, Whitlands and Liverpool Range. Whitlands form has fine, dainty, blue-grey foliage and needs more protection from hot sun in my sandy loam soil, but it flowers almost continuously. Whereas Liverpool Range form has larger, greener leaves and seems to have a protracted period of rest at some stage. I endorse Julie Strudwick's observations about the appearance of the seed in Members' Reports (NL41). Now that I have numerous seedlings of both forms in the garden I am getting more self-sown plants popping up in surprising places. I will see if I can detect any hybridising between the forms, and will compare the appearance of any mature seeds produced by the Bronte Park and Kiandra forms with that of the Liverpool Range and Whitlands forms.

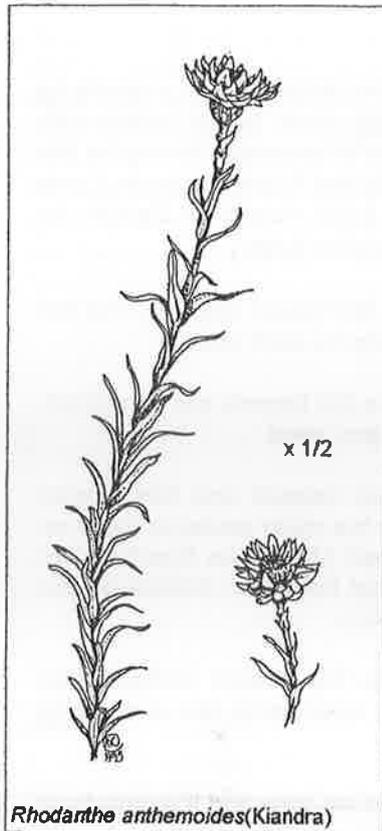


The **Bronte Park form** was collected by Esma in 1993. My plant is 25–35cm high and about 60cm across and is growing in a pot in part sun. The stems are unbranched, ascending and 40cm long. Moderately dense woolly hairs are present on the stem, with a few shortish septate hairs thrown in lower down. The leaves are sessile, lanceolate, about 16mm x 2mm, and borne sparsely almost to the top of the stem. Near the head there are a few bract-like leaves with transparent appendages at the tips.

The outer involucral bracts have the typical central dark line of *R. anthemoides*. The heads are 15–20mm across when they first open: in September; in early January the size has been reduced to 12–15cm. The buds are reddish purple, but the really outstanding feature of this form is that the heads look candy-striped (pink and white) from above because the outermost intermediate bracts are purple-red on both sides. Esma's plants were put into the garden and have since died. Mine lives and some basal cuttings have been taken but are not always successful. Until other members propagate it I will continue to be nervously

apprehensive about its well-being. (You all know I'm hopeless at vegetative propagation, except for division.)

The **Kiandra form** is completely different. It has foliage reminiscent of a *Richea* sp. — grey-green leaves crowded right up the stem so that it is almost totally obscured. Unlike the leaves of *Richea* spp., these are soft to the touch. They are lanceolate, 10–30mm long and 1–4mm wide, small at the base of the stem, increasing in the middle half and reducing in size again near the head. There are obvious deep, round



Rhodanthe anthemoides(Kiandra)

indentations on the leaf blades but the only hairs to be seen are relatively sturdy bristles along the margins. Lack of glandular hairs may explain the fact that the crushed foliage does not smell like camomile, rather there is a faint aroma of soft fruit like fresh apricots. The stems are glabrous.

In February '93 three 5cm pots were planted in the centre of a 20cm container of potting mix to which various goodies had been added, such as peat moss, cow manure, zeolite, osmocote and IBDU. In January '95 the group is 30cm high and 70cm wide.

This form only flowers in summer. Soft, straw-coloured buds swell in December to remind me to put the pot in a more conspicuous position. By Christmas I am charmed by cupped white heads, 2–2.5cm across. The bracts are more the shape of those of *Rhodanthe* 'Paper Baby', blunt, broad and pleated. A suggestion of dots on the inner bracts around the disc centre adds to the piquancy of this form. Both forms described here are well worth adding to your collection of *R. anthemoides* forms.

(This account was written for the March newsletter. It is now June and my fears have come to pass with regard to the Bronte Park form. It is dead as a dodo! I did not collect any seeds of either Bronte Park or Kiandra for comparison with the Liverpool Range and Whitlands forms because the *Brachyscome* Book was taking all my spare time. I hope some of the cuttings taken from my plant have struck.)

by **Judy Barker.**

Report on daisies in the A.C.T.

by **Ros Cornish.**

You asked about our block and what daisies we have on it — here is a list (hope I've got all the new names correct):

Brachyscome rigidula, *B. spathulata*, *Bracteantha viscosa*, *Chrysocephalum apiculatum*,
C. semipapposum, *Craspedia glauca*, *Leucochrysum albicans*, *Microseris lanceolata*, *Vittadinia muelleri*.

Our block is probably best described as open woodland and heath. We have still to identify all of the plants. Near the house, at the top of the block it is fairly flat, very rocky (virtually no good soil just clay and shale) and mainly heath/grassland. Sloping down to the creek at the bottom of the block it becomes more heavily wooded and the soil depth increases markedly. We have a problem with blackberries in this area and are trying to remove them.

The main *Eucalypts* are *E. mannifera*, *E. rossii*, *E. polyanthemos*, *E. melliodora* and *E. macrorhynca*. *Acacia dealbata* and *A. gunnii* are fairly prevalent, the other *Acacias* being *A. paramattensis*, *A. rubida* and *A. dawsonii* but in fairly small numbers. We have found a few plants of *Grevillea lanigera* and nearby some hybrids with similar flowers but very different leaves. (A neighbour has quite a large population of *G. lanigera* which suckers extremely well.) We have also found one plant of *Kunzea parvifolia* although there are some others on our roadside and on a neighbour's block. It is very common on the Kings Highway between Bungendore and Braidwood so ours is probably a remnant population.

The dominant plant in most of the heath area is *Kunzea ericoides* which unfortunately takes over and chokes everything else out. It is now 10 years since a major bush fire burnt through this area and after the fire we had a wonderful display of ground orchids and peas. However, *K. ericoides* has now taken over. We are trying to clear some of it, particularly near the house for a fire break, but it is extremely persistent, both from seed and root stock.

Down by the creek in a fairly heavily wooded area we find occasional *B. rigidula* plants. The *B. spathulata* is in a fairly moist area which is also fairly heavily wooded.

The *B. viscosa* seems to be mostly on a bare slope up from the creek with the odd one or two scattered elsewhere in other open areas. There are quite a few on our roadside as well.

We seem to have a number of types of *C. apiculatum*. (I should probably try and identify them properly by taking samples to the Botanic Gardens or sending them to you.) There is a very short, silvery variety with very small flowers and a taller silvery to green form with larger flowers and forms in between. It may be the varying soil conditions and water availability causing some of the apparent different forms, however, I see from your daisy book that it is a very variable species. (We already have the book *Australian Daisies for Gardens and for Floral Art* and use it all the time. Can't wait to see the *Brachyscome* book.)

We have only found a few specimens of *C. semipapposum* - one quite close to the house which is nice but it is obviously struggling in very rocky conditions and only produces one or two stems each year.

The *C. glauca* are found mainly near the main catchment to our two dams. Here the flowers are very short-lived because of the grazing 'roo population and we haven't managed to collect any seed.

The *L. albicans* appeared in front of the house after all the building work had ceased and has spread beautifully according to the prevailing (very strong!) north-westerly wind. This is the main roadside daisy on the Queanbeyan-Captains Flat road but is not common on the blocks in our road (Widgiewa Road) so we are very pleased that we have our own small population. (We have noticed that the same daisies on the Kings Highway between Bungendore and Braidwood tend to be the yellow variety.)

The *M. lanceolata* comes up in most of the open heath areas and quite likes the cleared orchard area where we are attempting to grow fruit and nut trees, much to the delight of the local parrot and currawong populations.

The *V. muelleri* is down by the creek on rocky slopes. Since building our house we now find it everywhere around the cleared site, on paths, in rock borders and even in the driveway. We occasionally have to pull up vast quantities to control it.

Just by coincidence, as your letter was on its way to us, we stopped on the way home in a bit of roadside bush to see if a *Calotis* was flowering that we had found the year before (*Calotis scabiosifolia* var. *integrifolia* I think). As we got out of the car we nearly tripped over a white *Brachyscome* which on later identification from books and looking at a growing, named specimen in the Botanic Gardens, we think is *Brachyscome aculeata*. Once I received your letter about *B. aculeata* at Mt Gingera and in the Braidwood area we stopped again and collected a sample and some seed (both enclosed) and did the identification. It was very exciting and I hope you agree that it is *B. aculeata*. Unfortunately there are only two clumps in this spot with about 4-5 separate plants in each clump. I have given details of the location on the specimen. The clumps seem to be flourishing but you never know when the local council is likely to dump road work material or clear the verges a bit further in than usual or the bush fire brigade may decide to burn off.

I have germinated some of the seed and potted on five today, so it seems to be viable. The only other *Brachyscome* in the patch of scrub is *B. rigidula* but it is a fair distance back from the road. On the same visit we found large clumps of *Calocephalus citreus* which I had never seen before. They aren't obvious when you whizz by in the car because they're a bit dusty and blend in with the grasses. After finding all of this in one small spot I'm hooked on daisies and now want to explore further afield.

We are growing the following daisies in various garden beds:

Brachyscome angustifolia, *B. ciliaris*, *B. iberidifolia*, *B. segmentosa*, *B. multifida* var. *dilatata*, *B. multifida* 'Breakoday', *B. multifida* (a white form), *B. formosa* 'Pilliga Posy', *B.* 'Pink Haze', *B.* 'Valencia', *Bracteantha bracteatum* (mixed seed from Gippsland Seeds which has produced an amazing variety of colours with most plants close to 1.5 metres tall), *B. viscosa*, *B.* 'Princess of Wales', *B.* 'Diamond Head', *Calotis cuneifolia*, *C. glandulosa*, *Chrysocephalum apiculatum*, *Craspedia globosa*, *Helichrysum rutidolepis*, *H. scorpioides*, *Leucophyta brownii*, *Podolepis jaceoides*, *Rhodanthe manglesii*, *R. chlorocephala* subsp. *rosea*, *Rutidosis leptorhynchoides*.

I have just bought *Brachyscome segmentosa* which surprisingly was in a Canberra nursery - I plan to keep it in a pot as I don't think it will withstand our winter outdoors. I've also just bought *B.* 'Strawberry Mousse'.

You may be able to help me with a major problem - wallabies. There are about 3-4 wallabies which roam this area and they love flowers - one of them is very tame and will come right up to the garden while we

watch. They eat the flowers and often the foliage of *L. albicans*, *C. globosa*, *Rhodanthe* sp., *P. jaceoides* not to mention native violets, parsley, chives, garlic, leaves of the fruit trees and even the bright purple seed capsules of *Dianella tasmanica*. We have put a 2 metre fence around the vegie and herb garden but don't want to do this around the house garden. Do you know if any others in the Group have found a solution - we have tried a product called D-ter and a new product called Keep Off but we're still having problems. We don't know whether the wallaby only passes by occasionally or whether the various deterrents are working but only for a short time! We obviously have to do a controlled experiment.

Rhodanthe 'Look-alikes'

by **Esma Salkin**

In forthcoming newsletters 'Volunteers' will identify and describe a number of *Rhodanthe* species that have characters in common, i. e. white bracts.

Group 1 consists of collections from Southern Cross-Caiguna, WA.

Group 2 consists of collections from the Eneabba-New Norcia area, WA.

Group 3 consists of collections from north-west New South Wales and south-west Queensland.

Group 4 is a collection from Yelarbon, Qld.

As well, we'll look at the fruit of a collection from Paynes Find-Yalgoo area. (There's a clue here.) Unfortunately I have misplaced the herbarium specimen and this species is proving difficult to germinate.

Julie Strudwick has written a comprehensive report of germination results of a collection in Group 1. We'll hold that over until Group 1 is written up.

Rhodanthe consists of the majority of species formerly included under *Helipterum* and we've grown many of the species.

The golden cluster of flower-heads of *Rhodanthe humboldtiana* is familiar, but is easily confused with the closely related species, *R. haegii*. Both of these species are found in Western Australia, but only *R. haegii* occurs in South Australia. These species are easily differentiated by their fruit. The fruits of *R. humboldtiana* are covered with long silky hairs (i.e. silky, pilose) whilst those of *R. haegii* have longish stiff or hirsute hairs.

There were a number of other species, formerly classified under *Helipterum*, prepared for the May meeting but they'll keep.

Tassie Daisies

by **Joy Greig**

We were fortunate enough to have spent six and a half weeks in Tasmania in February and March of this year. We chose these months very carefully to ensure good weather but unfortunately the weather wasn't very kind and we had lots of drizzly days which caused flowers to close and made collecting and photography difficult.

Being such a small island, I imagined that we would be able to cover it all in the amount of time available, but we have left quite a few unexplored parts for a later visit. Essentially what we tried to do was visit most of the National Parks, Protected Areas, State Forests and World Heritage Areas, but if you look at a map these cover the majority of the island. What is left is largely farming and agricultural land to the north and along the east coast.

Tasmania lies in the path of the 'Roaring Forties' and has many mountains which deflect the cold winds, resulting in high rainfall and generally low temperatures in the west, but lower rainfall and milder temperatures in the east.

Six main types of vegetation exist: temperate rainforest, wet and dry sclerophyll forest, sedgeland, coastal heath and montane.

The main rainforest species are Myrtle (*Nothofagus cunninghamii*) and Sassafras (*Atherosperma moschatum*), but daisies are not represented.

Wet sclerophyll forest is home to the valuable hardwood species sought for logging. The understorey species are among the first to regenerate, and these include *Olearia argophylla* and *Bedfordia* species. *Bedfordia linearis* is a Tasmanian endemic which grows as a shrub or small tree and has a showy mass of yellow flower-heads in December and January. *Olearia argophylla* is commonly a much smaller shrub and apparently more floriferous than I have noticed it in Victoria. A less common species is *Olearia glandulosa*. *Olearia phlogopappa* also occurs, along with *Senecio linearifolius* and various shrubby species such as *Ozothamnus ferrugineus* (syn. *Helichrysum dendroideum*) and *O. thyrsoides*.

Dry sclerophyll forests often have an understorey containing *Ozothamnus purpurascens*, a Tasmanian endemic, *O. costatifructus* and *Olearia stellulata*, but these had largely finished flowering when we were there. Another endemic, *Ozothamnus scutellifolius*, was fairly common but hard to distinguish from *O. hookeri*. *Bracteantha papillosa* (syn. *Helichrysum papillosum*) was found in forest on Bruny Island, where it had almost finished flowering.

Sedgeland occurs on poor peaty acid soils where the water table is high. It is typified by button grass (*Gymnoschoenus sphaerocephalus*) plains. Large areas occur in the south and west. Daisy specimens we found were limited to a few paltry specimens of *Helichrysum pumilum*.

Coastal heath occurs on sandy soils low in nutrients, mainly in the north and east. *Leptospermum scoparium* was in brilliant display, along with various Epacridaceae. *Olearia stellulata* often occurred behind the dunes, as did *Olearia ramulosa*. On the open cliff face at South Cape Bay we found two species of *Olearia* in flower. One was *Olearia floribunda* and the other was a very attractive rock-hugging species, as yet unidentified. *Ozothamnus reticulatus* is a much more handsome and robust species than it is when growing at my place, and it was fairly prominent on cliff faces in the south and east and on Bruny Island. Another *Olearia* sp. from Bruny Island is possibly a form of *O. ramulosa* but it seemed to be more compact.

Herbaceous species we found included an apparently dwarf form of *Bracteantha bracteata* which we found at West Point growing among rocks in association with a tiny white brachyscome, also unidentified. In a small soak in the same general area we found *B. graminea*. Of course the ubiquitous *Helichrysum scorpioides* is everywhere, as are *Leptorhynchus tenuifolius* and *L. squamatus*. *Chrysocephalum apiculatum* was found behind the Henty Dunes near Strahan and in one or two places along the east coast.

Near St Helens *Brachyscome sieberi* var. *gunnii* was in flower with delicate pale mauve flower-heads appearing through the grasses. We also found this species on Maria Island and along the Prosser River west of Orford, albeit sparsely, and at Mt Rumney. These two latter locations would have to be described as dry sclerophyll forest.

A similar species, *B. spathulata* subsp. *glabra*, occurred on Maria Island too. We found what appeared to be *B. diversifolia* var. *maritima* near Bicheno, growing right on the sea face, but closer examination of the achenes throws much doubt on this identification and I suspect it may be a garden escape. *Argentipallium dealbatum* occasionally poked a flowering head between the grasses behind the dunes on the west coast, but it was past its best.

Montane vegetation occurs at higher altitudes and is characterised by plants that tolerate cold winds, rain and snow. Typical locations were Cradle Mountain, Mt Wellington, Mt Barrow and Ben Lomond, and it is on the faces of these escarpments that the daisies are best represented, particularly the olearias. The pity was that they had all but finished flowering when we arrived.

Olearia tasmanica is an endemic formerly known as *O. alpina*. It has large flower-heads held on long stalks above the foliage. *Olearia ledifolia* is another endemic with large flower-heads but these are held above densely compact, leathery foliage. We also found *O. obcordata*, *O. persoonioides* and *O. pinifolia* but, alas, not in flower. *Ozothamnus ledifolius* and *O. hookeri* are fairly common too.

In the heathy areas around the lakes and tarns we found some herbaceous daisies which included *Brachyscome spathulata*, *Bracteantha subundulata* and *Helichrysum milliganii*. Cushion plants, among them the tiny *Ewartia* species, are a feature of the high plateaux,

At a lower altitude, along the road to Cradle Mountain where forests have been long since cleared to make what is now cattle grazing country, there is a place known as 'Daisy Dell'. This area incredibly supports large patches of *Bracteantha subundulata*, *Helichrysum scorpioides*, *Leucochrysum albicans* subsp. *albicans* var. *tricolor* (syn. *Helipterum albicans* var. *incanum*) and *Rhodanthe anthermoides*. All of these had finished flowering but hopefully I have collected some viable seed, even though it was raining at the time!

We didn't find *Brachyscome angustifolia* var. *angustifolia*, as Esma had hoped, but we did collect some pressings of a few interesting brachyscomes, which I have yet to identify.

Some links from the daisy chain

by Jeff Irons.

(This article appeared in *The Heart's Ease*, Journal of the Cumbria Group of the Cottage Garden Society, Spring and Summer 1995. It is reproduced with the kind permission of the author, and Jeff has added some supplementary information.)

I don't live in Cumbria and I don't belong to The Cottage Garden Society so why am I writing for *The Heart's Ease*? The answer is that your editor is very good at long distance arm-twisting and thinks I can contribute something interesting.

Why should that be?

Well, I am someone who only gardens in warm weather. Since I garden in north west England this means that for most of the year I look out at my garden from the house. I am lazy, I like evergreen shrubs, my plants have to be easy to grow — and I like daisies. (If I were a nurseryman, my garden centre would probably be called *The Daisy Chain!*) So I thought you might find it interesting to hear about the various forms of an evergreen shrub member of the daisy family which you can grow in suitable conditions in the north west — and almost any conditions are suitable.

Olearia phlogopappa is one of my favourite daisies. If you don't know it, imagine a shrub 3 to 6 feet high, with grey-green leaves, which is smothered in daisy flowers in May or June. At that stage it looks like nothing so much as a giant 'Charm chrysanthemum' in bloom. This daisy bush is long-lived. I've known it last for 18 years. It is absolutely hardy and has been uninjured by winters which froze the ground to a depth of 3 feet, and by days when the maximum temperature was 6°F. In summer it never needs watering, even when the drought is such that clover dies down and only yarrow stays green. It can be grown in wet gardens, even ones where the water table can be at soil level for several winter weeks. In short, it is an ideal shrub for almost any garden — except that somehow it has acquired the reputation of being tender!

O. phlogopappa is available in several commercial forms. All are good and it is very much a matter of going along when it is in flower and choosing one that you like. Some forms have flowers with prominent centres, some forms have more open flowers. Some have flowers which are sweetly scented. Some are white, others are pale lavender or mauve. (The mauve form is sold as 'blue', which it isn't.) All can be grown in either acid or alkaline soil. They demand only that they be given plenty of sun. (A word of warning. You will occasionally come across forms of *O. phlogopappa* with leaves that reek of cat wet.)

A plant called *Olearia* 'Scilloniensis' is currently regarded as being a different species but it is likely in time to be considered simply a form of *O. phlogopappa*. Indeed, there is a good deal of confusion about the various forms of *O. phlogopappa*. Reference books are not very informative and nurserymen often get the forms mixed up. Here is an attempt to sort out the confusion!

'Scilloniensis' has a flat top and flowers of an almost blinding white, without a prominent centre. The coloured forms fall into two groups, those called 'Comberi' (after the plant collector, Harold Comber) and those called 'Splendens'. 'Comberi' plants have relatively sparse flowers with narrow 'petals'. 'Splendens' plants are so covered with bloom that scarcely a leaf can be seen. Their 'petals' are much wider than those of the 'Comberi' forms and there aren't gaps between the 'petals'. Both 'Comberi' and 'Splendens' can be obtained in white, pink, lavender and mauve. Good blues are rare in *O. phlogopappa* and the best I have seen was on a wall plant at Chirk Castle.

Most authorities suggest that the coloured forms of *O. phlogopappa* are not quite as hardy as the white forms and **some** growers think that the blue forms are less hardy than the pink ones. If you live in a really cold area it might be as well to bear that in mind and start with a white-flowered plant. If you live anywhere

near the coast, though, absolutely any form of *O. phlogopappa* can be guaranteed to thrive. Plant your daisy bush or bushes — of whatever colour or form — in late spring, prune them after flowering — and you will not be disappointed.

Addendum to *The Heart's Ease* article (7/4/95)

Jeff grows seven different forms of *O. phlogopappa*. They are the white 'Comberi' and the blue, lavender and pink 'Splendens' which he obtained from London's Kew Gardens, along with *O. 'Scillonensis*, and something which he calls *O. phlogopappa* 'Gerry Munday' after the man who gave it to him. Another form is a sweetly scented seedling grown from Tasmanian seed sent as *subrepanda*, but the leaves are too big for it to be that variety. The last was grown from seed collected on Mt Buller and it has leaves which are very different from those of the other forms.

Harold Comber collected plants at Tea Tree and to eight collections he gave the name *O. gunniana splendens*. There is the following quotation: 'Generally speaking this is a taller rather looser edition of the popular form of *O. gunniana* but the flowers range from white, pale pink, deep pink, mauve purple to blue and as plants from seed were collected all of these colours growing together, a good variety should result. Every plant should be saved and I consider this is quite the best find I have made so far in Tasmania.'

These various colour forms were distributed as Comber Hybrids. Comber considered No. 1536 to be the best. It was a fine pink which he named 'Mrs. H.F. Comber'. It may still be around in a private garden, but is not available commercially.

The pink 'Splendens' from Kew has a tinge of purple in it, but stands up to winters here, which was not the case with the very nice pale pink form that I had.

The effect of smoke on germination

by **Judy Barker.**

For some time there have been reports that germination of certain species may be enhanced by smoke. In October 1993 Professor Alan Buchanan, former Professor of Physical Chemistry at Melbourne University and now Emeritus Professor, had this to say about smoke, 'Smoke is all-pervasive; not only does it diffuse through the pores of litter, sand and earth but also at the molecular level it will diffuse through the protective casing that surrounds the seed.'

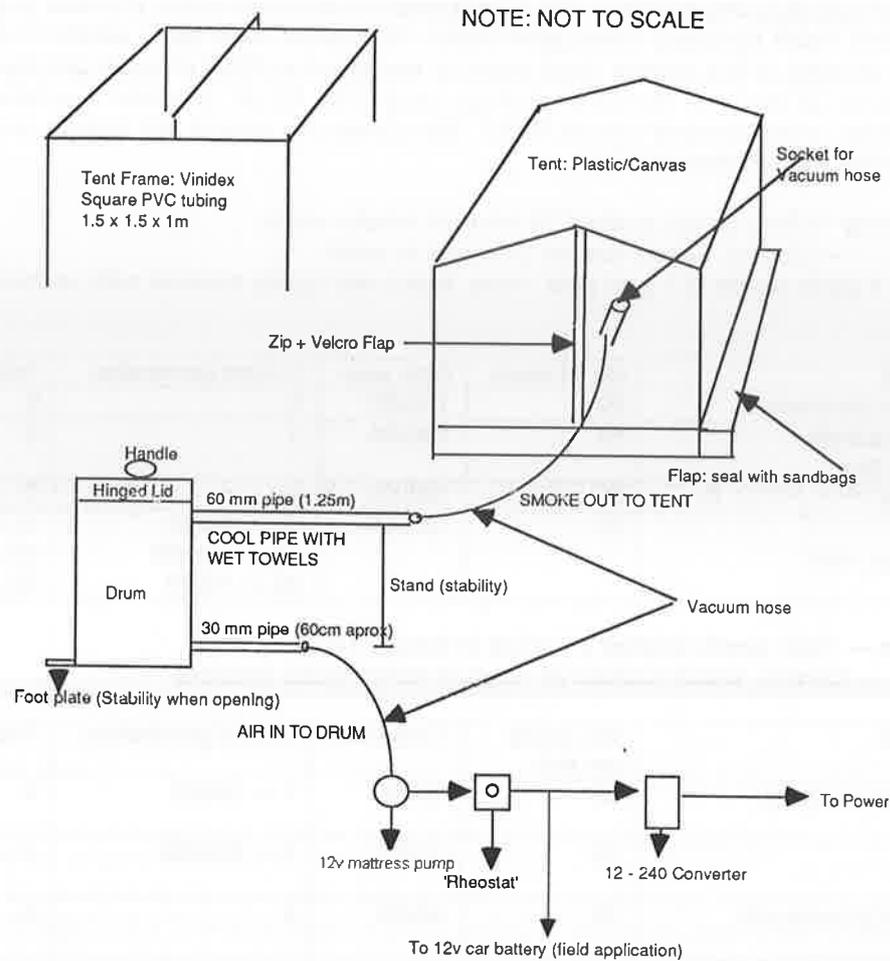
The heating process can generate volatile substances from the litter material. This suggests that the nature of the litter materials could be important. Ethylene would certainly be one of the volatiles and it is known that ethylene can trigger the ripening process in fruits.'

We have tried smoking certain species by various primitive methods (see Beth Armstrong's articles in NL. 29, p. 9 and NL. 38, p. 11). We thought that the smoke increased germination of *Ixodia achillaeoides*, but our results were somewhat inconclusive. Some time in 1994 I had heard Dr. Kingsley Dixon, Assistant Director of Kings Park and Botanic Garden, speaking about this subject on the radio. I wrote to ask for more information. In Dr. Dixon's absence Shauna Roche, a Research Officer at Kings Park, replied with a diagram for testing the smoking process and the following information:

- Seeds are subjected to smoke for one hour. One trial using a *Schoenia* sp. may have inhibited germination. She suggested starting with a 30 minute exposure of the seed.
- The seed mix should be free-draining, not too acidic, and should contain no fertilizer.
- The type of vegetation used for smoking should be a mixture of leaf and stem, with emphasis on leaf. Species of Proteaceae can be used as they produce smoke which is low in tannin residues. When Myrtaceae species are used, more tannin residues are produced and sometimes more fire than smoke.
- Research results indicate that the seeds of some species have to weather for some time in nature before they become responsive.

A diagram of the equipment in use for smoking material is reproduced here. If any member would like to try it, please send your results to Shauna at the Science and Education Unit, Kings Park and Botanic Garden, West Perth, W.A. 6005. She is interested in 'hits' as well as 'misses'. I have a few Smoke Register forms

for any member who would like one. Shauna described the equipment as 'rather Heath Robinson' but it is a very handsome and sophisticated outfit by comparison with my 40 gallon drum on its side, and our best (and only) pair of bellows.



Julie Strudwick (at Upper Lurg, Victoria) was keen to try smoking seed of *Rhodanthe chlorocephala* subsp. *chlorocephala*. The seed was collected from plants grown in her garden. Her methods were simple and her results impressive. On 27/5/95 she wrote, 'Seed was tied in a small sachet of Chux, hung from a long stick and held in the smoke from a small bonfire with green material added. (No *Eucalypt* was added.) The process was carried out for 1 hour with the seed receiving a total of approximately half an hour of actual smoking.'

On 22/4/95 twenty-five seeds per test were sown on the surface of commercial seed-raising mix and a thin layer of fine gravel was sprinkled on top to 'weight' the seed and prevent 'migration'. Julie recorded the following results:

Germination

Smoked seed	Control (untreated seed)	Smoked seed + sulphate of potash*	Control (untreated seed) + sulphate of potash*
1 — 2/5	0 — 27/5/95	1 — 14/5	0 — 27/5/95
3 — 4/5		2 — 16/5	
6 — 5/5		4 — 19/5	
8 — 11/5		5 — 20/5	
10 — 14/5			
13 — 19/5			
14 — 21/5			

* sulphate of potash was sprinkled on top of the punnet at the time of sowing.

Julie felt it was a great pity that she couldn't smoke the seed in March and sow it at that time because control seed had germinated in March in another experiment she was trying, so the difference in temperature and/or length of day between March and May might have had a marked effect. She has kept some smoked seed in an airtight container to sow in March next year to see what will happen.

The September '94 issue of *Veld and Flora*, the *Journal of the Botanical Society of South Africa*, carried an article by Dr. Neville Brown titled 'First The Gas, Now Instant Dehydrated Smoke'. This article described a product called Kirstenbosch Instant Smoke Plus Seed Primer which had proved very useful in overcoming seed dormancy present in some South African species. The research team developed and patented absorbent paper which is impregnated with fynbos-smoke-saturated water. (Fynbos is a type of vegetation akin to Australian heath species.) Other germination stimulators have been added to the smoke solution. Each package consists of five papers. Each paper is immersed in 50ml of water and the solution is used to soak the seeds for 24 hours. A standard package costs US\$ 10.00 or about Australian \$20.00. I bought one and Dr. Brown kindly donated one to AD SG. We shared the papers out among some of the members and asked that they record their results.

1. Beth Armstrong — Test, seeds soaked 24 hours in smoke water.

— Control, seeds soaked 24 hours in water.

Seed mix was 4 parts perlite to 1 part peat moss. Seed was lightly covered with vermiculite and pots were left outside.

Species tested	No. of seeds	Date sown	Control germination	Test germination
<i>Cephalopterum drummondii</i>	50	18/3/95	0	0
<i>Rhodanthe moschata</i> (Wirrulla, 243 SA)	50	18/3/95	1	0
<i>R. polygalifolia</i>	50	18/3/95	0	0
<i>R. stuartiana</i> (Gawler Ranges, SA)	30	18/3/95	1 — 3/4/95 10 — 10/4/95 30 — 1/5/95	6 — 3/4/95 40 — 10/4/95 50 — 1/5/95

2. Esma Salkin — Test, seeds soaked 24 hours in smoke water.

— Control, seeds soaked 24 hours in boiled water (cooled).

Species tested	No. seeds per test	Date sown	Control germination	Test germination
<i>B. basaltica</i> var. <i>basaltica</i> (Kincheqa)	25	3/3/95	1 — 5/4/95	0
<i>B. halophila</i> (WS176)	25	3/3/95	1 — 23/3/95	2 — 22/3/95
<i>Cephalopterum drummondii</i> (small form)	25	3/3/95	0	0
<i>Leucochrysum molle</i>	25	3/3/95	0	0
<i>Rhodanthe rubella</i>	25	3/3/95	0	0
<i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>	25	3/3/95	1 — 2/5/95	0

Esma reported that the seeds of *L. molle* formed a gel in the test solution. The seeds of *Rhodanthe chlorocephala* formed much more gel in the test solution than in the control. She also observed that growth of *B. halophila* was very poor.

3. Judy Barker — Test, seeds soaked 24 hours in smoke water.

— Control, seeds sown 26/2/95 were not soaked, and seeds sown 11/4/95 were soaked for 24 hours in tap water.

Species tested	No. of seeds	Date sown	Control germination	Test germination
<i>Argentipallium blandowskianum</i> (Carlisle River, 3/90, stored 4°C)	1/2 pkt.	11/4/95	0 — 27/6/95	1 — 18/5/95
<i>Argentipallium obtusifolium</i> (Anglesea, 11/93, stored 4°C)	1 tsp.	26/2/95	0 — 27/6/95	0 — 27/6/95
<i>Brachyscome breviscapis</i> (SA, 7/94, stored at RT)	8	26/2/95	0 — 27/6/95	1 — 8/4/95 2 — 12/4/95 3 — 3/5/95
<i>Brachyscome dichromosomatica</i> (Carieton pots, 11/94, stored at RT)	25	26/2/95	0 — 27/6/95	0 — unsoaked pot 1 — 15/4/95 in pot soaked 24 hrs in water up to rim

<i>Brachyscome halophila</i> (Yarra Yarra Lakes, 23/9/91, 4°C)	40	26/3/95	4 — 2/4/95 7 — 3/4/95 12 — 3/5/95 0 — 27/6/95	8 — 2/4/95 11 — 3/4/95 13 — 3/5/95 6 — 27/6/95
<i>Brunonia australis</i> (Anglesea, '94, RT)	30	26/2/95	1 — 21/3/95 3 — 2/4/95 16 — 27/6/95	3 — 21/3/95 5 — 2/4/95 15 — 27/6/95
<i>Calomeria amaranthoides</i> (UK, ? '94, RT)	35-45	11/4/95	0 — 27/6/95	0 — 27/6/95
<i>Cephalopterum drummondii</i> (Thundelarra, 7/92, 4°C)	1/2 pkt	26/3/95	0 — 3/4/95 1 — 4/4/95 0 — 8/4/95 0 — 3/5/95	4 — 3/4/95 5 — 4/4/95 12 — 8/4/95 4 — 3/5/95
<i>Ixodia achillaeoides</i> (Anglesea, 24/4/94, 4°C)	1 tsp.	26/2/95	0 — 17/3/95 1 — 2/4/95 6 — 18/5/95 6 — 27/6/95	1 — 17/3/95 12 — 2/4/95 16 — 18/5/95 16 — 27/6/95
<i>Ixodia achillaeoides</i> (Anglesea, 24/4/94, RT)	1 tsp.	11/4/95	1 — 18/5/95	6 — 18/5/95
<i>Lawrencella davenportii</i> (garden, 11/94, 4°C)	40	26/3/95	0 — 27/6/95	0 — 27/6/95
<i>Lawrencella rosea</i> (garden, 11/94, 4°C)	60	26/3/95	0 — 2/4/95 1 — 6/4/95 2 — 3/5/95	3 — 2/4/95 4 — 6/4/95 5 — 3/5/95
<i>Leptorhynchus linearis</i> (Anglesea, 12/91, 4°C)	1 tsp.	6/5/95	0 — 27/6/95	0 — 27/6/95
<i>Leucochrysum fitzgilbonii</i> (NS 5879, '90, 4°C)	1 tsp.	6/5/95	0 — 27/6/95 1 — 27/6/95	0 — 27/6/95
<i>Leucochrysum molle</i> (NS, 10/93, RT)	110	11/4/95	1 — 18/4/95 1 — 3/5/95 1 — 27/6/95	0 — 27/6/95
<i>Leucochrysum molle</i> (Cobar, 7/90, 4°C)	75	11/4/95	0 — 27/6/95	1 — 24/4/95 5 — 27/6/95
<i>Leucochrysum stipitatum</i> (NT, 8/89, 4°C)	1 tsp.	6/5/95	0 — 27/6/95	0 — 27/6/95
<i>Rhodanthe polygalifolia</i> (garden, '91, 4°C)	100	11/4/95	0 — 20/4/95 0 — 3/5/95 1 — 18/5/95 1 — 27/6/95	3 — 20/4/95 8 — 3/5/95 6 — 18/5/95 9 — 27/6/95
<i>Rhodanthe polygalifolia</i> (garden, '91, 4°C)	100	6/5/95	0 — 18/5/95 0 — 27/6/95	1 — 18/5/95 1 — 27/6/95
<i>Rhodanthe polygalifolia</i> (garden, '93, 4°C)	55	6/5/95	1 — 18/5/95 4 — 27/6/95	1 — 18/5/95 4 — 27/6/95
<i>Rhodanthe polygalifolia</i> (Mootwingee-Broken Hill, '89, 4°C)	115	6/5/95	0 — 27/6/95	0 — 27/6/95

It is difficult to draw many conclusions from these results. They indicate that the smoke treatment enhances germination of *Cephalopterum drummondii* and *Ixodia achillaeoides* at least. Like Julie, I believe that these results would have been more successful had I sowed the seed earlier. The same source of *Ixodia achillaeoides* seed was used in both tests, but the six week delay in sowing the second batch has slowed germination. My seed pots are left outside to cope with all weathers. At this time of year the prevailing temperatures are far below the optima for germination. For instance, past experience has taught that *Lawrencella* spp. prefer warm weather for germination. The smoke-treated '91 *R. polygalifolia* sown in April produced a reasonable crop (as *R. polygalifolia* goes for me), but two months later the germination is poor. I will not discard these pots for at least twelve months in case the warmer months bring pleasant surprises. Other factors which have a bearing on the results are the age of the seed and the method of storage. Tests on the viability of the seed should be done at the time of the trials. In early August I will try Julie's method because I am sure that it is important to germinate and grow some of the more difficult species with the aim of hand pollinating and collecting seed. Her method has an appealing simplicity.

My thanks to all who provided information, performed experiments and produced their results — Beth Armstrong, Dr. Neville Brown, Shauna Roche, Esmá Salkin and Julie Strudwick.

Coping with a new climate — strategies, successes and failures

by Colin Jones

(Colin moved from Ringwood in the foothills of the Dandenongs in Victoria to Orange in the Central Tablelands of New South Wales. He delivered this talk at the AD SG weekend meeting in May.)

When did it all start? — Mid-September 1990.

What did I start with?

- A house facing due south,
- The block with a fall of 1m in 72m from east to west,
- A block of developer's dirt, i.e. soil and clay scientifically blended together with the idea of defying ordinary gardeners, together with an assortment of obnoxious weeds,
- Water penetration of the soil was very poor. As a result, erosion was making its effect seen in both the front and back yards.

Climate: **Rain** — on average, rain occurs each month with lower falls in the months of February and March. Last February and March saw no rain at all, and that is **real drought** for the tablelands,

Temperature — daily averages for mid-winter are 0.5–11°C and for mid-summer are 13–28°C. Severe frosts occur each winter at least to –4°C, and occasional falls of snow,

Growing seasons — two per year, that is in mid-spring and early autumn, although this past season we had massive growth at the end of December following heavy rain after a very hot period.

Trailer load (6' x 12') — we travelled to Orange with the trailer loaded with seedlings in tubes, about fifty pots of *Cymbidium* orchids, and other plants in pots. One pot had a *Ginkgo* 1.5m high which was wound up in a white sheet and looked exactly like an Egyptian mummy. Boy, we had some heads turn to try to figure out what we had on board.

What were my initial problems and what strategies did I use?

- the first problem was how to keep all the plants alive until they could be planted. Daily watering was carried out when possible and shade cloth thrown over to create some protection. There was not a skerrick of shade other than the little bit created by the house. We have a fairly high evaporation rate due to the clear skies, even in winter. (We have found that washing dries by the afternoon on most winter days.) **In hind sight** I should have made a 2m high temporary lean-to or other shelter, and pots should have been standing in water,

- next it was essential to get a lawn going to stop erosion,

- and then to keep the moisture up to plants that had now been planted out around the garden. The solution was to mulch the ground and this was achieved with pine chips from a pine log factory at Blayney which was 35km away. I borrowed my son-in-law's trailer (6' x 12') and for \$10 a giant front-end loader loaded the chips up as high as they would stay on the trailer. This was equal to about 4m³. In Orange the chips would have cost \$25 per m³. I was able to obtain four loads. **In hind sight** I should not have created so many gardens from the beginning and thus spread the plants out too much. Environment / habitat is essential to the well-being of plants; they should have been planted reasonably close together so as to shade each other and alter the wind flow in the garden. The chips lasted about three years before breaking down into the soil. My latest method of mulching is by means of a home-made drum composter using lawn clippings and rice hulls in a ratio of 1 to 1.

What was the main problem requiring a solution?

- as the dry period of spring and summer 1990/91 gave way to monthly rain, the problem of drainage in the so-called soil became apparent. Growth slowed and then plants started to die. One solution was to commence a program of building up beds wherever possible by importing soil, and the other was to add river sand and rice hulls in equal quantities and scratch the mixture into the ground between plants. Both methods have proved equally helpful. I have also tried gypsum but I do not believe it is a long term solution.

What has been the impact of -4°C frosts?

— they either killed plants outright, for example *Brachyscome multifida* (Cape Conran), *Leucophyta brownii* and *Olearia tomentosa*,

— or they maimed plants so much that they were no longer suitable as garden specimens, e.g. *Olearia argophylla*,

— or else they cut back plants severely but did not stop them from providing an excellent showing by the following summer, e.g. *B. angustifolia* (Bemm River hybrid), *B. 'Birthday Boy'* [*B. angustifolia* (mauve) x *B. formosa* (mauve)], *B. multifida* (mauve), *B. multifida 'Amethyst'*, *B. aff. multifida* (Hat Head) and *Ozothamnus diosmifolius*.

Which daisies have naturalized?

— *Brachyscome basaltica* var. *gracilis* (Narrabri), *B. dentata* (Sofala), *B. dissectifolia* (east of Tingha), *B. aff. multifida* (Hat Head), *B. parvula* (Huntly) and *B. ptychocarpa* (Central Tablelands),

— *Bracteantha bracteata* (Ebor, Hat Head), *B. bracteata* hybrids,

— *Calocephalus citreus* (Orange area), *Helichrysum scorpioides*, *Ixiolaena brevicompta*, *I. leptolepis* (Marsden), *Podolepis neglecta* (Hat Head), *Pycnosorus chrysanthes* (Delungra), and *Rhodanthe antheroides* (alpine form).

Which daisies are providing the best show?

— *Brachyscome aculeata* (alpine form), *B. basaltica* var. *gracilis* (Narrabri), *B. dentata* (Sofala), *B. dissectifolia* (east of Tingha), *B. formosa*, *B. multifida* (mauve), *B. multifida* (white), *B. aff. multifida* (Hat Head), *B. parvula* (Huntly), *B. ptychocarpa* (Central Tablelands) and *B. rigidula* (Falls Creek),

— best hybrids are *B. angustifolia* (Bemm River hybrid), *B. angustifolia* D hybrid, *B. 'Betty Campbell'*, *B. 'Birthday Boy'*, *B. 'Colin Jones'*, *B. multifida 'Amethyst'*, *B. multifida 'Pink Haze'* and *B. sp. 23/11 JB*,

— *Bracteantha bracteata* (Ebor, Hat Head, New England) and hybrid,

— *Chrysocephalum apiculatum* low forms (Orange / Milthorpe, Jerilderie / Conargo, Ulan), higher forms (Marsden, Neville, March) and *C. apiculatum* complex (*Helichrysum ramosissimum*), *C. semipapposum* green forms (Grampians, north of Griffith, Inglewood, Mt Samaria, Talbingo, west of West Wyalong), grey forms (Maldon, Seymour, Trunkey, south of West Wyalong) and from a number of other locations,

— *Helichrysum scorpioides* (alpine, New England), *Ixiolaena brevicompta* (Qld), *I. leptolepis* (Forbes, Kerang, Marsden), *Olearia ramulosa*, *Ozothamnus diosmifolius* (North Coast of NSW), *O. purpurascens* (Canberra), *Pycnosorus chrysanthes* (Delungra) and *Podolepis neglecta* (Hat Head).

Which daisies are not suitable for one reason or another?

Many daisies from arid areas do not appear to be suitable, perhaps because their fine roots rot off in the heavier soil. The following daisies do not perform well either:

— *Brachyscome ciliaris*, *B. aff. cuneifolia* (Natimuk), *B. diversifolia* var. *diversifolia* and var. *maritima*, *B. spathulata* and *B. tenuiscapa* var. *tenuiscapa*,

— *Leucochrysum albicans*, *Olearia* spp., with the exception of *O. phlogopappa* and *O. ramulosa* which are growing in pots.

Report from Metung

by Pat Tratt

I am gradually expanding my areas of native grasses interplanted with daisies, amongst other things. Logs and rocks protect roots and grass tussocks afford some protection from wind damage. In spite of prolonged dry conditions, several daisies have performed really well, giving colour for months.

Brachyscome dentata, a purchased plant with Sunshine as its provenance, has suckered to become a slightly sprawling plant, 70cm wide and 45cm high, with its white flowers to 2.5cm across held well above the foliage. Seed sheds quickly, but cuttings strike readily. This grows in a fairly open sunny position on the southern slope where the soil hasn't dried out completely.

Brachyscome basaltica grown from seed sent by a South Australian member of the Australian Grasses Study Group germinated readily, providing numerous seedlings for these grass areas. The showy bushy plants, 30–40cm high, flower continuously.

Vittadinia cervicularis. I am not certain I have the species keyed out correctly as I have limited references. I find this genus most attractive. The upright bushy plants to 25cm high with numerous tiny mauve flowers, were grown from seed collected around the Snowy River. The rounded seed heads are also attractive. As so often happens, these plants are much more vigorous in cultivation than in the wild.

Calotis lappulacea grown from seed collected locally were reluctant to germinate; only 2 in 100 from my attempts. The plants are long-lived, mine were planted in 1992. They have formed large bushy plants which gain some support from adjacent large grass tussocks, and are huge compared to those in the wild. The tiny bright yellow flowers appear year round.

Calotis scapigera (West Wyalong) has spread to cover a large area and flowers generously. The burrs make weeding an uncomfortable task, but the plant is ideal for my requirements.

Brachyscome rigidula has proved to be attractive and long-flowering. The small slender plants grow to about 15cm high, with 2cm flowers that can be white, pale lilac to a deep mauve on plants from different locations. They are ideal between grasses. I have come across this species quite frequently at higher elevations, mostly on poor rocky sites. Seed germinates easily.

THE GROWING OF THE DAISY AT TURA BEACH

by Shirley Dixon

Pure sand is the description of the soil. Weather windy and dry. The plants are mainly in the front which faces east and is about 15 metres long and 25 metres across. After planting I water every second day for two weeks, twice a week from then on. I do not water after the plants have been in the ground for three months. I have a few deaths but in the main they survive on the water given to the citrus trees which are watered once a week. Being on a hill, there is some run-off and a few plants would benefit from that. Some plants near the house benefit from the watering of hanging baskets.

Brachyscome angustifolia — about six different patches and all doing well.

B. microcarpa — two plants obtained from a local source are near the house and probably get a little more water. The flowers are very small and are deep mauve.

B. multifida — white, pink and all shades of mauve. Some are really large and get a regular haircut. They come again, giving a lovely display. All the visitors go away with cuttings. There is only one plant of var. *dilatata*, but I have many cuttings in so I hope to have more in the future.

I have another odd bod which I use as a border here and there along the paths. It seems to be a cross between *B. segmentosa* and *B. diversifolia* but I am not sure. It grows in clumps which keep expanding. It has flowers of a good size, but not many of them. It lacks water, but the foliage is great and the plants work well as edgers.

Every year I put in seed of *B. iberidifolia*. For a couple of years it was good and self-sowed in the garden, but the last lot didn't even come up. I feel this may be due to the large number of dear little ants which seem to devour some seeds when you put them in. The seed problem also occurred with my *Rhodanthe*

spp. but this year I sprinkled kerosene around the planting area and had a much better result. That was a tip from a vegetable grower nearby. It may be an old wives' tale but it was much better than last year.

I have just started to put an indigenous area in the garden. The only daisy in it is *Helichrysum elatum* although there are a few others I hope to establish when I collect some seed.

I seem to muddle along with them and then get a huge spurt on about now (late April) because the weather is neither too hot nor too cold. Here we do not know what cold is as it rarely gets below 10°C.

Members' Reports

Pat Shaw (from Macgregor, Queensland) writes on 26/1/95: 'I grew *Olearia argophylla* many years ago, along with a number of other olearias. Sad to say, I lost all but *Olearia canescens* which is still going strong — one plant being at least ten years old.

Recently I went with two friends to the Toona Rainforest Garden Nursery at the Gold Coast. It is only a small nursery, but it contains a wide variety of rainforest plants, from tall trees to small understorey plants. The plant to make my day was *Helichrysum* aff. *elatum* from Binna Burra, growing near cliff edges. This plant is different from the species collected by Brent Vieritz from the same area. Both have white flowers but have not flowered here yet. The form with the large leaf grows like a rosette. I was surprised to find three seedlings of the tall form of *H. elatum* in a hanging basket of *Dampiera*.'

On 16/5/95 Pat writes that the Division of Plant Industries at Redlands Research Station at Cleveland have started a program of trials with *Cassinia subtropica*. She hopes to receive two plants from there next week. She enclosed a packet of seed and chaff for AD SG and also sent a packet to Esther Cook at Helidon as she is interested in trying it. Pat included two prints of *C. subtropica* to show us how it grows in its natural habitat. One is growing on private property at Nerang, and the other shows the afternoon sun glowing on a clump of bushes. They appear to be alright. Pat thinks it does best in part shade in light scrub.

Jeff Irons (from Wirral, England) writes on 1/3/95: 'You have probably heard that the European winter has been somewhat wetter than usual — I reckon it is the result of all that muck spewed out by the volcanoes in Rabaul. It has also been warmer and windier than usual.

One consequence has been that *Rhodanthe anthemoides* (Sawyers Hill) has flowered continuously since August. Now its new growth is appearing. There are precocious flowers on *Olearia phlogopappa* (Mount Buller). *Bracteantha bracteata* (Crescent Head) didn't make it in the garden, but in my frost free greenhouse it flowered up to December. Now there are new buds appearing.

You may recall that *Helichrysum scorpioides* (Mount Wilson) proved to be a weakling. Instead of growing through the 9 inches of soil that I put on top of it, my colony died. Well, I found that Ness Gardens had two packets stuffed full of my 1990 seed. So I sowed them and got three seedlings. The seed had been stored in an unheated room. I guess the temperature ranges from the mid 40's in winter to as high as 70°F in a summer heat wave.

I'm having doubts about the *Ozothamnus thyrsoides* grown from AD SG seed. They flowered in August 1994, but the flower heads were sparse and terminal. The common name in Victorian England was Snow in Summer. These flowers were the dirty colour of slush. So, I have a shrub which does not cascade, does not have snowy white flowers, does not have sticky young growth, and has leaves which are whipped off by our winter wind.

DSG Newsletter 41 arrived today (2/3/95). *Olearia frostii* to 1m in two years — wow!. It grows to 30cm in three years here if one is lucky. My Falls Creek stock has died out, so I now have only the Mount Hotham stock -- which was in the moister sites.

One of my *Ozothamnus secundiflorus* died last year after flowering. The other blew over this winter. Since some roots were still in the ground I put in a stake and tied the plant to the stake. Here strong winds usually come from between the north-west (can be up to Force 12) and the north-east (less strong). Last winter, as in this, they came from the south to south-east. *Ozothamnus rosmarinifolius* blew over last year. I just tore it apart and planted each piece separately. All grew.'

On 11/5/95 Jeff reported that his *Bracteantha bracteata* plants in the garden were alive after all and were covered with new leaves. The plant that spent the winter indoors died after being planted out.

Julie Strudwick (from Upper Lurg near Benalla, Vic) writes on 16/4/95: 'I was interested to read that Dr. Short is enquiring regarding hybrids setting viable seed. I collected what appeared to be good seed from two self-sown hybrids and sowed it on 10/3/95 — not counted but in excess of 30 — with nil result to date. All other seed sown at the same time has germinated long since and most have been pricked out. I have suspected for some time that the hybrids might be sterile as there have never been any 'following generations' of self-sowns, so I decided I should collect seed and trial it properly. Two samples are not enough, obviously, to enable any sort of definite conclusion but, combined with lack of self-sown plants, would appear to be indicative of sterility.

Other brachyscomes which have never produced self-sown seedlings are the three forms of *B. aff. formosa* (Killawarra, Neville and Sydenham Inlet), *B. formosa* 'Pilliga Posy', the mauve form of *B. formosa* and *B. aff. curvicarpa*. (I have never actually looked for seed.) The two forms of *B. formosa* have been close together (although they mostly flower at different times) as have the three forms of *B. aff. formosa*. I have four plants of *B. aff. curvicarpa* (the survivors of several seedlings given to me a few years ago by Gloria, I think. So there should be cross-pollination there. I have been looking for seed on them lately, but with no success. They are lovely, healthy plants which flower prolifically virtually all year but apparently set no seed!. Neither have I seen any indication of hybridization with anything else.

I was looking through back issues of our newsletters lately and reread the article on storing daisy seed in glass jars or sealed, foil-lined packets and at 4°C. I don't have room in my fridge so my seed is stored at room temperature. I found an old foil-lined, commercial packet (3–4 years old) of *B. iberidifolia* and sowed it to see what would happen. I sowed three 500g margarine containers as punnets and got three 'green carpets' — I would say virtually 100% germination. I also found some *B. spathulata* seed from last year and sowed it. Thirty-two seeds and 32 seedlings just potted up — also 100% germination. The latter had been stored in a small, airtight, plastic container. *Erodiohyllum elderi* seed from the Wild Seed Bank, dated Oct. 1991 and kept in an ordinary envelope, has also germinated very well. I'm not suggesting there is no need for the storage method adopted, merely reporting what may be exceptions to that need.

Podolepis rugata is apparently another species that needs cross-pollination. Despite very prolific flowering and lots of pollinators no viable seed was produced except when both plants were flowering together — only about one week overlap. One plant started flowering as the other was finishing, even though they were planted side by side. The later flowering plant has since died but I have some seedlings now. I've tried twice to strike this species from cuttings. It produces what looks like perfect cutting material but results to date have been zero from around 20 cuttings each time. I wonder if anyone else has tried cuttings of this species and what results they've had.

I sympathise with Corinne in her problem with Brush-tailed Possum eating daisy flowers. He / she / it / they have also eaten all the flowers off my *Olearia ciliata*, and either Possum or Wallaby has eaten all the flower heads off some self-sown *Bracteantha bracteata* plants that were looking lovely. They pulled out a cutting-grown plant of *Bracteantha bracteata* 'Princess of Wales', presumably in an endeavour to pull off the head. They don't eat the foliage, just the flower heads so I currently have some healthy plants topped by headless stems.

Corinne Hampel (from Murray Bridge, SA) writes On 1/5/95: 'My plants of *Olearia pannosa* must be at least four years old and are still quite small. It appears then that it is very slow growing, which makes me wonder how old the stand at Monarto is — bushes are over 1m high and 2m wide! The flower display on the little bushes makes it worth growing.

We have only just had rain so two plants not on the dripper line are beginning to produce new growth, still too short to handle for cuttings. The other plant, on a dripper and receiving water weekly, is in a similar state. Which means that *O. pannosa* probably doesn't need the summer water. Could this be due to a dormancy factor? I was going to see if I could keep a nice looking plant going, that is one with reasonably lush growth. The clump at Monarto, which I thought was probably deteriorating, produced much new growth last spring when it flowered prolifically. I had the pleasure of showing a student from Adelaide Uni some of the delights of the mallee here, even though it was a poor year, He was doing a project on Australian native plants.

May Meeting Report

by **Colin Jones**

The Meeting was held on Saturday, 6th May. Several country members and Barbara and I visited Melbourne to share daisy gossip with city members. A lovely afternoon tea greeted us on arrival and this, together with smiling faces and wagging tongues, was a pointer to a good time to be had by all.

A number of members had provided daisy swaps which were eagerly gathered up, not least by this scribe. I was able to obtain a number of specimens that I had been unable to grow past the seed stage.

The monthly meeting followed. Many interesting points were noted for follow-up when I get home. Next followed a delightful evening meal, which was provided by a number of unnamed Daisy ladies.

To round off the get-together we were treated to a slide presentation which comprised of historical and hysterical memories of yesteryear, Esma and Alf's West Coast USA trip and Joy Greig's recent Tasmanian trip.

Finally, a big thank you to all who arranged and contributed to the Day — from your Orange (NSW) member.

Addendum to this report

by **Judy Barker**

Colin was too modest to mention that the highlight of the afternoon was his talk entitled 'Coping with a new garden — strategies, successes and failures', the gist of which has been included in this newsletter. Since he moved from Ringwood to Orange we have missed his thoughtful contributions and his infectious laughter from our monthly meetings. We have especially missed his practical suggestions for overcoming problems and the Jones' inventions that invariably followed those suggestions. It was lovely to see Colin and Barbara again.

These meetings involve a great deal of organisation and meticulous planning on Esma's part. That they proceed so smoothly and afford so much enjoyment for members is a tribute to the Salkin's party-throwing abilities. Cheers and thank you, Alf and Esma, from all of us.

'Paper Cascade' in Japan

Natalie Peate has managed to introduce *Rhodanthe* 'Paper Cascade' into Japan. We were very amused to read this pamphlet — a translation from the Japanese. We thought other members might like to share our amusement.

Paper Cascade ®



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オーストラリア生まれの極めて魅力的な品種に向く品種です。葉はグリーンで緑化する品種もななり、ドライフラワーにもなります。吊鉢・ロックガーデンなどに利用できます。開花期は春から秋までです。

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この品種は登録申請中につき、種々のタネに許可なく複製、販売してはなりません。



Very attractive variety for hanging from Australia. White petals come out of crimson bud when flowering, also turns to be dry flowers. Good for hanging basket, rock gardens. Flowers from spring through autumn.

Note:
Unauthorised commercial propagation or any sale of propagating material of this variety is an infringement because this variety is under PVR application.

the Ministry of Agriculture,
Forestry and Fisheries

PVR application No. 5169

SEED LIST

Seed is for sale to non-members at 50c per packet plus postage. Larger amounts of seed can be bought by arrangement. Requests for seed (ENCLOSING A LARGE, STAMPED, SELF-ADDRESSED ENVELOPE) should go to Esmá Salkin, 38 Pinewood Drive, Mount Waverley, Victoria, 3149.

Most seed for sale comes from cultivated plants or from commercial sources. Please note that much of the seed listed below has been collected from members' gardens and may have crossed with other species. One parent only is guaranteed.

ADDITIONS

Brachyscome segmentosa, tadgellii
Bracteantha bracteata (Dwarf Mixed)
Calocephalus citreus, Cassinia subtropica
Chrysocephalum apiculatum
Rhodanthe anthemoides (Burrendong, Liverpool Range)

DELETIONS

Brachyscome radicans, rigidula, stuartii (Inverell)
Olearia grandiflora

ADDITIONS to PROVENANCE SEED

Bracteantha subundulata
Helichrysum scorpioides.
Olearia argophylla (Tas), *obcordata* (Tas), *phlogopappa* (Tas), *pimelioides* (SA).
Ozothamnus reticulatus.

SEED DONORS

Many thanks to Judy Barker, Ros Cornish, Joy Greig, Colin Jones, Alf Salkin, Esmá Salkin, Maureen Schaumann, Pat Shaw, Doll Stanley and Julie Strudwick.

NEW MEMBERS

Welcome to the following new members:

Ros Cornish and John Wilkes, PO Box 16, Woden, ACT, 2606.
 Karen Marriott, 42 Springs Road, Elderslie, NSW, 2570.

SUBSCRIPTIONS

Subscriptions are now \$7.00 per year for Australian members and \$14.00 per year for overseas members. Cheques should be made payable to the Australian Daisy Study Group and forwarded to the Leader, Esmá Salkin or to the Treasurer, Bev Courtney, (addresses below).

FEES ARE DUE ON 30th. JUNE 1995. This is your second and last warning. A red cross in the box means that you will be overdue if you have not paid by that date.



Newsletter Deadline

The deadline for the November Newsletter is September 25th. Please send articles to Judy Barker (address below). I am particularly grateful for your contributions to this newsletter. The Brachyscome Book has kept the Editorial Committee very busy and definitely out of any such enterprises as writing articles, or even recording daisy facts. Thank you for coming to the rescue. I am grateful to Gloria Thomlinson and Ailsa Hamilton for their botanical illustrations.

Judy

OFFICE BEARERS:

Leader: Esmá Salkin, 38 Pinewood Drive, Mount Waverley, 3149.

Treasurer: Bev Courtney, 3 Burswood Close, Frankston, 3199.

Newsletter Editor: Judy Barker, 9 Widford Street, East Hawthorn, 3123.