

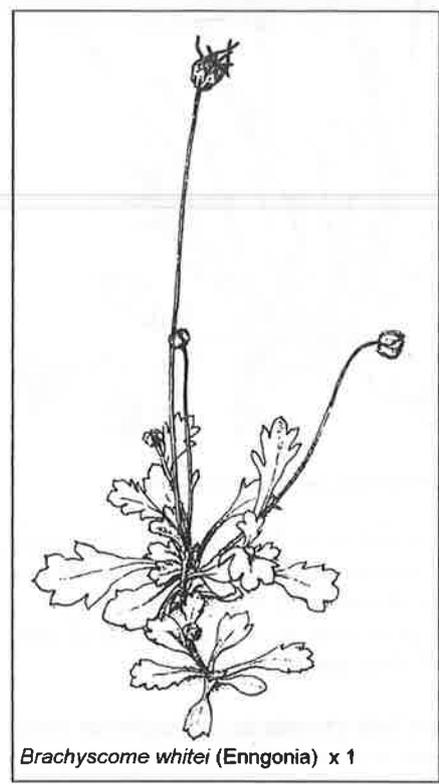
**ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS**

**THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 43**

Dear Members,

The publication of *Australian Brachyscomes* marks the end of six years of focused activity.

I sincerely thank all Book Committee members for their dedication to the task, especially over the last six months. There has not been much 'let-up' in the involvement in producing a book.



*Brachyscome whitei* (Enngonia) x 1

I'm sure all AD SG will recognise and appreciate the efforts of a core of our membership in producing *Australian Brachyscomes* when you read through the book. It may take a while to absorb all the information recorded but all members have contributed. The Study Group has valued your reports. The illustrations of each plant and its fruit reveal how diverse are the characters of the plants. As a friend who is photographing brachyscome fruit said recently, 'Why didn't you tell me about these before? They're fascinating.'

This is my last message to you after eight years as leader. I have been privileged to share with you your enthusiasm for daisies. Since joining the Group in about 1983 I've been amazed at how quickly knowledge of the Asteraceae we have been studying has progressed. A glimpse of Newsletters will reveal how far we've come in amassing this knowledge.

I'm sure you will all be delighted with the new leader once formalities with ASGAP are finalised.

I won't be retiring from daisies (an impossibility), but after sharing a very pleasant afternoon with ANPC Victorian members visiting the Cranbourne Annexe of the Royal Botanic Gardens last Saturday, I feel in need of becoming a 'generalist' again. I've forgotten the names of so many other species I once knew well.

Best Wishes

Sincerely, *Emu*

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**Species or forms new to members**

***Brachyscome dissectifolia***

In 1992 the Salkins visited the Northern Tablelands of New South Wales, well prepared with location lists of a number of brachyscomes required by the Study Group. We were successful in finding most on the list. What made the field trip more rewarding was the collection of certain species that appeared to be variants or species closely related to those we sought.

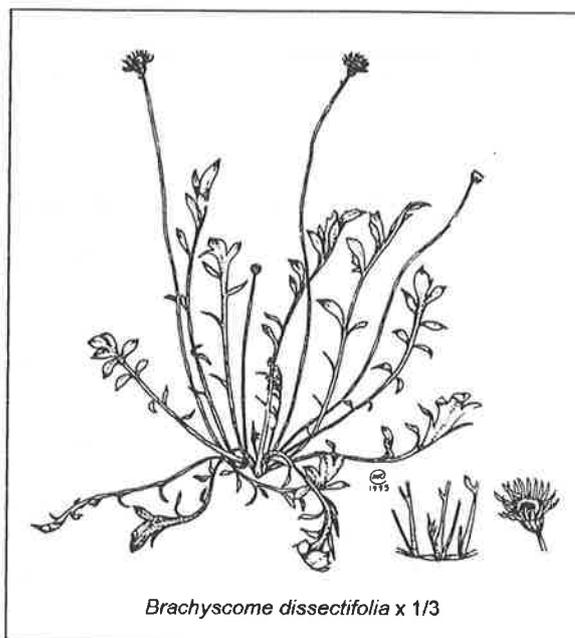
The search for *B. dissectifolia* was easy — it was right where we expected to find it. In fact we nearly overlooked it. The population consisted of a few individuals in an exposed site where the ground was

churned up by the browsing of animals seeking succulent roots. Plants were very small, just little basal clusters of leaves about 5cm across, bearing pink flower-heads on stems about 3cm long. Two other sites in the area were associated with natural springs. In these situations *B. dissectifolia* formed dense, stoloniferous networks, metres in extent. Rays of plants in these populations were mainly white.

Near Tingha (NSW), 70km north-east of Mt Kaputar, we collected a form of *B. dissectifolia* in a boggy site in roadside vegetation. This brachyscome was not stoloniferous. The apical lobes of the pinnate leaves were long and narrow (broad in *B. dissectifolia*). The fruit of the two entities are similar. Both have a broad wing but the pappus of the *B. dissectifolia* form is large (*Australian Brachyscomes*, pp. 97–9).

In surrounding areas *B. stuartii* occurs. The fruit of this species has either a thickened margin or a narrow thickened wing. At Emmaville, 65km north-east of Tingha, there is a small population that appears to be a variant of *B. stuartii*. The leaves resemble those of *B. stuartii* (see *Australian Brachyscomes* p. 225). The fruit of this species has either a broad wing or a thickened narrow wing (see *Australian Brachyscomes* p. 224). The Study Group has included this variant in the *B. stuartii* complex (see *Australian Brachyscomes* p. 187.)

*B. dissectifolia* is a small, stoloniferous perennial with a long flowering period (spring to autumn). It grows in most situations except full sun (unless kept very wet). It is not vigorously stoloniferous and is ideal for covering small areas or for use in rockeries. Although I have retained provenance material in pots, it is not suitable as a container plant for more than one year. *B. dissectifolia* responds to added nutrients; the growth is lush and leaves especially are much larger. Under cultivation plants are 5–20cm high and 5–15cm wide (depending on age of plant). Leaves form a basal tuft and are oblanceolate with an entire margin, toothed with a few acute teeth or pinnatisect (6–12 lobes). Leaves are glabrous, but long woolly hairs are seen at the base of the leaves. Rays are white or pink. Fruit are black, 1.5–1.8 x 1–1.3mm, obovate with two raised folds enclosing tuberculate faces. The wings are broad, pale with inrolled hairs on the margin.



*B. dissectifolia*, in common with all species in the *B. stuartii* complex, produces full heads of seed which is shed quickly. Seed germinates in 13–18 days. The main characters observed in the form from Tingha are mentioned above. My provenance pot of this species is now regenerating. The leaves in the basal tuft are entire, lateral lobing is developing and the apical lobe is elongating. This variant forms a compact mass of tufts. Flower-heads bloom over a long period and seed collection is simple. This species has horticultural potential but will need further assessment.

*B. stuartii* form (Emmaville) has been planted extensively in my garden and has proven its horticultural value (for me anyway). It forms a leafy basal tuft about 20cm across in the garden and more than 25cm across in a pot. Flowering stems are 20cm long. In a sheltered warm spot during Melbourne's chilly winter it began to bloom and will bloom right through to autumn provided it is watered in dry periods and spent flowers are removed. This form will grow in most situations, but not in deep shade or where it is exposed to late summer sun.

In compiling this article I have referred to our recently published book, *Australian Brachyscomes*. The differences between species or forms noted are readily seen when the illustrations are consulted. If you don't have a copy, use your hand lens to examine the fruit and observe the variation. Garden collected seed of species described is available from the Seed Bank.

by **Esma Salkin**

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### Update to the Census of the Vascular Plants of Victoria (4th edition)

Two members of the Asteraceae family have received new names or have been renamed in the Update Bulletin No. 4.4 compiled by Dr Tim Entwisle. The two species are:

1. *Picris angustifolia* DC. subsp. *merxmulleri* Lack & S. Holzappel, *Wildenowia* 23: 190 (1993). This is a new name for *Picris* sp. (Eastern Highlands). It is vegetatively close to *P. squarrosa* but differs in the appearance of the bracts.

*Siloxerus multiflorus* Nees in Lehm., *Pl. Preiss.* 2: 244 (1845). This is a new name for *Rutidosia multiflora* which botanists now think has characters closer to *Siloxerus* species. It has been returned to the genus *Siloxerus* in which it was described originally.

(Source: *The Victorian Naturalist* 112(3): 140 (1995). This journal publishes the full updates to the Census as they come to hand. The article is titled Census of the Vascular Plants of Victoria. Update Bulletin No. 4.4 and the author is Entwisle, T. J.)

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## The Collector's Garden at Monash University Clayton Campus by Paul Thompson

(Paul Thompson is one of our foremost landscapers who established his business, Plant Design Pty Ltd, in 1970. He enjoys a great reputation for his knowledge and application of Australian plants for display and conservation. Paul has worked as a landscape designer/contractor in the design of domestic gardens, rural parks, wetlands and university environs. He has received citations from the Robin Boyd Environmental Board, from the Royal Australian Architects and has won the Nubrik Landscape of the Year Award in 1991. Eight further awards were bestowed upon him from the Landscape Contractors Association and the Landscape Industry Association. His book, *Water in your Garden*, is a most valuable reference book. Paul and landscape architects, Taylor and Cullity, have recently completed the master plan for the 25 hectare Australian Garden at the Royal Botanic Gardens Cranbourne.)

The brief in November 1993 was to design the surrounds to two sports grounds, the outside perimeter of the new Engineering building and the approaches and space between the Engineering and Computer buildings.

There was a need for seating for students and the planning was to be a diverse and showy display.

The central space was built by Plant Design Pty Ltd, and the balance of the planting was executed by Monash grounds staff.

Conditions of the site were that concrete paths were existing and all garden areas were heavy orange clay, sometimes mixed with the 75mm stone base rock remaining from the building construction works. There was negligible topsoil and two existing trees.

The design solution for the hub of this garden revolved around four large steel artefacts from the failure of the Westgate Bridge which are used for instruction. It was agreed that, instead of hiding these away as previously was the case, they would take pride of place as sculptural elements and as the pivot for the garden. A free form concrete plinth was set as a peninsula protruding into a shallow clay pond as a symbol of the original use. The concrete was rough rendered in different colours with coarse sand to symbolise shallows and wave action.

The clay resulting from the pond was used to build up garden areas so as to create both instant form and areas for dry land plantings. No soil was imported. Composted tree prunings and leaf litter were added to most gardens, with coarse sand incorporated for the floral display gardens. The mulch is of tree prunings and was placed by Monash staff.

Seating areas were developed as areas in which groups could collect. Red Gum was selected as it was the most economical method of providing a large number of seating positions. All of the positions will be shaded either by trees or by weldmesh shade structures that are yet to be festooned with climbers.

There are three main themes to the plantings:

1. A small collection of the daisy family with particular emphasis on different forms of the same species, for example, various forms of brachyscomes and chrysocephalums. Most plants selected are either perennial or have a propensity to self-sow or sucker.
2. One discrete garden is based on a collection of low *Allocasuarina* species, of which we have nine so far.
3. The major theme is for a large grouping of melaleucas. Twelve months ago Monash University became the site for housing the *Melaleuca* collection for the Ornamental Plant Collection Association. This is a major commitment for the University and it was the first opportunity to extend their existing collection. Amongst the melaleucas are some new cultivars of callistemons to add to the collection as these may be reclassified as melaleucas in the future.

Minor themes are dry land plants with particular horticultural curiosities such as various mulgas, eremophilas and salt bushes, all of which have greater potential in hot, dry gardens.

Watering is minimal, and a maximum of about one hour per week has been spent in weeding since installation.

The mesh fence construction was devised to keep people away from the young plantings, and to do it in an economical, permanent and visually interesting way, adding an additional pleasing detail rather than having to apologise for the fence.

Altogether about 200 species or varieties were planted, most of which were well known in horticulture. Some, such as *Callistemon* c.v. 'Great Balls of Fire' (a form of *C. pallidus*), *Allocasuarina crassa*, *A. zephyrea* and *A. grampiana* being new introductions — at least under those names. Thirty-seven different species or forms of *Melaleuca* have been used, with the most experimental for this climate being the northern *Melaleuca leucadendra* which so far is doing fine.

Daisies were selected to provide showy seasonal display as conditions were thought to be ideal, with places of maximum sun and heat reflection off buildings. In most of my gardens I aim to promote the plants, hoping to entice others to become keen to use them. Gardens have to sell themselves tacitly over their whole lives. In a collection garden such as this there was a great opportunity for this to happen with daisies as a key focus.

Plants were grouped together, reliable ones interspersed with unknown performers, vigorous with vigorous, and plants that may become tatty reinforced by stronger looking species. *Brachyscome multifida*, of which I think there are 8 forms here, is of course the backbone of the display of pretties. There is also the white form from Blackwood, the Hat Head (NSW) form, the large, the pink, the mauve of Peg McAllister's 'Breakoday', plus a form from Waverley and some others. All of these are essential for the success of this garden and many other gardens that may follow. The dainty *Brachyscome basaltica* that I bought from Ian Shimmen at Bushland Flora seems to have two forms. One came from Maranoa gardens and may prove to be either a form of *B. angustifolia* or a hybrid between *B. angustifolia* and *B. basaltica*. *Pycnosorus chrysanthes*, also from Ian, has proved a most reliable and spectacular plant both here and on other sites of mine. This form is from the Basalt Plains of Melbourne.

*Chrysocephalum apiculatum* is present in several forms from two broad, woolly foliage types to different fine foliage varieties. Gardens cannot do without these forms and especially the form of *C. apiculatum* that is sold as *Helichrysum ramosissimum*. *Calotis scabiosifolia* and *C. scapigera* are worthwhile subjects for gardens, with *C. scabiosifolia* showing great promise for massing.

*Pycnosorus globosus* and the *Craspedia* spp. that were formerly included under *Craspedia glauca* also create a wonderful effect when growing well near ephemeral water (which had been the original intention). The water is now permanent due to the client's current requests, so the water table is always high in some areas. We shall have to wait to see how these species persist or spread in these new conditions.

*Bracteantha bracteata* and *B. viscosa* are going along fine so far, with *B. viscosa* planted amongst grasses, lilies and rushes so that the rangy nature of the plant is disguised. *Calocephalus citreus* and *C. lacteus* are useful landscape plants, tough, reliable and showy in the dry positions in this area. When used in association with grey prostrate acacias such as *A. iteaphylla* and *A. suaveolens*, they fill in the gaps between foliage and so cover the ground more thoroughly.

*Helichrysum rutidolepis* is a splendid predictable plant in tough conditions, suckering freely as it does and presenting many flowers. It warrants more than the present inconsistent availability in nurseries. The wetland species which has been available as *Helichrysum hydrophyllum* (and may now be known as *Bracteantha* sp. aff. *subundulata*) makes a great display along the margins of fluctuating water bodies. Here visiting ducks nip off the long flowering stems, yet the plant suckers freely and the large, papery, yellow flowers in summer are quite a show.



*Cassinia quinquefaria* was planted late last year to offer some winter display and has yet to prove itself with regard to how tidy or compact it will remain. *Olearia lanuginosa* falls into a similar category, yet it has flowered particularly well with its cover of bright blue daisies. (In a different garden at Monash *Olearia pannosa* is doing splendidly in a terrible piece of dirt in shade.) *Ozothamnus turbinatus* has grown quickly, as expected, providing instant effect. In the long term I would imagine it will be dominated by banksias and hakeas nearby unless maintenance pruning clears a space.

*Minuria leptophylla* has been planted in a raised display bed next to a sitting wall. When resting here the subtle detail of the plants that touch your hand is evident. How these and others such as unknown *Calotis* and *Vittadinia* species will continue in the garden is yet to be discovered. In these raised beds there is an opportunity for the Monash Grounds Department to continue experimenting with annuals such as *Rhodanthe chlorocephala* and its subspecies and *R. humboldtiana* which I have planted in a minor way with limited success.

If we are to excite the uninitiated with our flora we can lead them to the subtlety of the Australian vegetation through brazen displays of the flowers of the ground flora like *Actinotus*, *Trachymene* and the reliable daisies. Our landscape is filled with an intriguing, infinite variety of detail and diversity, much of it not obvious to those who only glance. When gardens are planted in a similar way, yet with care not to produce a fruit salad effect, there may be found a strength in variety and certainly an unlimited interest and surprise.

Maintenance, the key ingredient of any successful garden, is directed by the Grounds Manager, Johann de Bree, who does as much as the restricted budget of staff availability allows. The grounds are one of the most significant collections and show cases for Australian flora in Melbourne. Through the dedicated guidance of Johann de Bree and the Grounds Committee and the support and recognition from outside it shall remain so.

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## Nocturnal Anthokinetics in Australian Asteraceae

by Joy Greig

Esma has drawn my attention to a paper published by C. H. Stirton of the Botanical Research Institute, Department of Agriculture, South Africa, in which a study was made of the night positions of the ligulate petals in the capitulum of Asteraceae growing in the Royal botanic Gardens, Kew, and in the wild in Canada, Great Britain, France, Switzerland, Italy, Greece, and the Canary Islands (Bothaha 14, 3 & 4; 1003–1006 [1983]).

It was found that each of the 48 genera studied (with 3 exceptions) adopted a single characteristic night position and that no species adopted more than one night position. Nine different night positions were observed (see Fig 1).

The author has speculated on the implications of the data with respect to evolution, pollination, protection of flowers, protection of fruit, release of ripe achenes and avoidance of herbivores, but has not drawn any definite conclusion about the correlation of floral movements and the microstructure of floral parts.

No work was done on Australian genera, so it would seem an appropriate study for this Group. The summer months ahead would be an ideal time and you are encouraged to take part. The proforma on p. 42 can be used to co-ordinate the data.

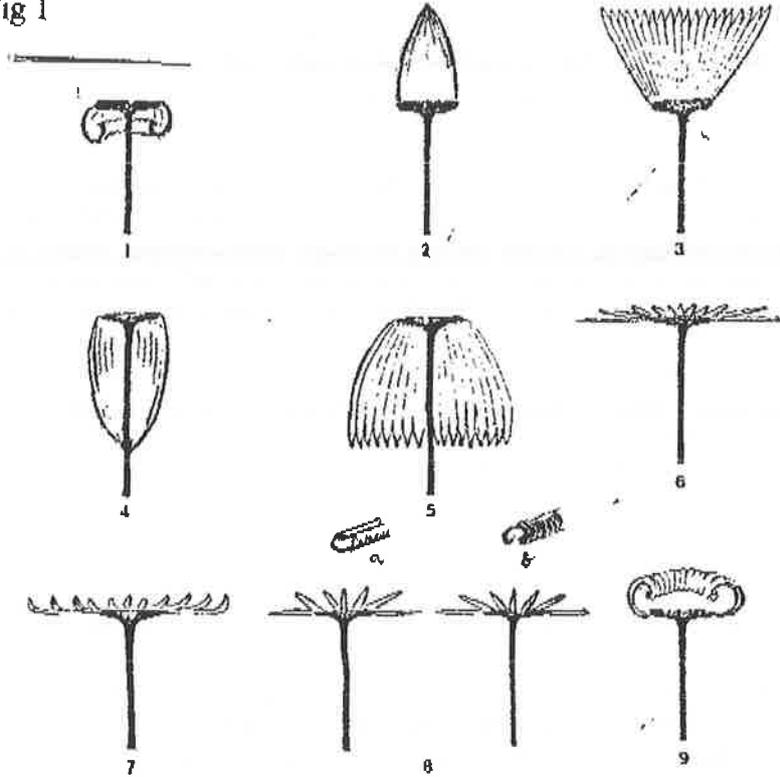
We ask that you record only the movements of the ligulate florets, avoiding older flower-heads. Choose a fine day/evening when the weather is expected to be calm. Wind and/or rain may cause flower-heads to close. It is important NOT to overhead water any plant during the period it is under observation, but a drip system or hand watering at the base of the plant should be OK. Thus the observations should be the result of response to internal and not external stimuli.

Note the position of the ligulate petals one hour before sunrise (A), six hours after sunrise (B), one hour before sunset (C), one hour after sunset (D) and three hours after sunset (E). (The exact times for sunrise and sunset are set out on the weather page of the daily papers.) Use the numbers 1 to 9 as in Fig 1 to describe the position. If an undescribed position is observed use the number 10 and draw a picture of it. Make observations on at least two, but preferably more days and try to observe as many different species as possible on each occasion. If possible, set up a camera and take time-lapse photos (à la David Attenborough).

Proforma

Date	Genus	Species	Variety or form	A	B	Time C	D	E
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Fig 1



Note: Position 8 has two variations - the ligules curled up as in 8a and curled down as in 8b.

Please send your data to Joy Greig, 10 Stanfield Court, Glen Waverley, 3150 by 31st March 1996.

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**Riceflower Farming at Helidon (12/7/95)**

**by Esther Cook**

The drought still drags on. It's into its fifth year now and still the biggest factor in growing anything. Our bore, which normally puts out 25,000 gallons an hour, is limping along at 150 galls per hr! We can only water two rows at a time. The water is so hard that we have given up measuring soil pH as it is too depressing

We had a very patchy harvest for 1994. Four heavy-flowering early lines of pinks did not regrow after harvest, our heaviest losses in years. A heat wave in October and scorching winds off bushfires raging a few miles away were the last straw for anything that was a bit stressed.

In contrast, some of our seedlings have thrived in the heat and despite the salt water. Of 1249 plants, no two were identical. Difference in bush habits, flowering time and quality, and regrowth vigour have all been recorded. Thank heavens for computer data bases which can sort them out by flowering time or regrowth vigour just by pushing a few buttons. We have established '10 trials' from about 80 promising specimens, with more extended trials of a few that flower later than our commercial lines. Growing 10 in a row, side by side, soon shows up any problems such as dropping branches, iron inefficiency or susceptibility to pathogens.

The seedlings were out-crosses taken from selected commercial lines. They showed incredible variety. Bush shape ranged from prostrate to 2.5 metres tall. As well as the normal pinks and whites we had one

group of bushes with lime foliage and cream flowers. One prostrate bush, presumably a hybrid, has a bright yellow corolla inside white bracts. We call it Curry 'n' Rice. It flowers very unevenly and has short stems curving upwards from the ground.

We also had eight seedlings which Dr Chris Puttock, from the National Herbarium at CSIRO in Canberra, has confirmed are a cross between *Cassinia laevis* and our *Ozothamnus diosmifolius* — the first time such a cross has been recorded. The seedlings have cassinia foliage but riceflower heads in pink and white. The individual florets look like cassinia but are finer, with only a few florets in each of the capitula, the florets separated at the base. We have propagated cuttings from the best three of the survivors. Unfortunately, the very best one with solid, clear pink heads dropped dead immediately after flowering! The rest are growing back vigorously. These hybrids are especially important as cassinia grow wild here, even in the paddock where we lost 5000 riceflower to root-knot nematodes. We are hoping some of the hybrids are nematode resistant.

We also have about 40 second cross seedlings from the best hybrids. I had another batch of seedlings at the four leaf stage when a swarm of springtails moved in. They didn't touch anything except my precious hybrid seedlings. I couldn't believe my eyes. One day 40 seedlings, the next day 40 bare little stalks with not a leaf in sight. I am keeping the new lot sprayed with insecticide and so far so good. The seedlings are so tiny that we use a magnifying glass to locate them, and we pot them on immediately into Jiffy-7s with a centre plug of kaolin chips. The kaolin chips do not splash on to the tiny meristems and smother them as peat does, and we have very few losses. Even when we can barely see the seedlings with the naked eye, the roots may already be 2 inches long and corkscrewing through the potting mix.

I am finding kaolin chips (plus a little slow release fertiliser) ideal as a capillary mat for Jiffy-7s and other pots. I water from the base, and the kaolin holds the water well, with plenty of air spaces. Seedlings develop very sturdy root systems, and I am even getting some cuttings to strike in pure fine-grade kaolin. The suppliers, Amgrow, gave me the original bag at a farm expo, and when I went back to buy some more they were so impressed by our results so far that they gave me another three bags to try. Scoria also encourages good root growth but it is very expensive here and so coarse that it needs fine-grade kaolin as well to form a more level, uniformly damp base.

We are gradually gearing up for the 1995 harvest which will start in early September. Despite the most crippling drought on record with no end in sight yet, we should still have quite a good crop of flowers. Some of the new lines bred in the drought look especially promising for the future, and we are gradually expanding our plantings with later flowering varieties. It makes us wonder how many other plants out there in the bush could also be developed commercially. It's daunting to think of the time over the past eight years, the heartbreak and the money that we've invested in one single species, and we still have more questions than answers.

Questions that are currently plaguing us:

1. What would be a 'good' leaf analysis of a healthy riceflower at different times of its growing cycle? Long established crops have this data, which makes it easier to adjust nutrition to suit different growing conditions. We are currently following Cook's Snow White month by month by leaf analysis to start a data bank. We will also have complete stems tested at harvest, to see how much of the different nutrients per bush/per acre are carried away at harvest. We expect the results to be a shock to those growers who cling to the idea that native flowers don't need fertiliser. Export quality flowers certainly do!

2. Why are pinks usually harder to grow than whites? Good pinks are relatively rare in the wild, so it is a common problem. They are more susceptible to pathogens and water stress. Many flower extravagantly in their first year, are pretty ordinary the second year and die before their third harvest. (Some whites follow the same pattern, but there are more likely to be sturdier substitutes for them.) Is it a nutritional difference? Or is it a build-up of some minor pathogen? Leaf analysis and a lot of work by a variety of experts have not shed any light so far.

3. How can we cross breed more specifically? My efforts with a soft brush and by rubbing heads together were 100% unsuccessful last year.

Any ideas welcome!

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## Finding Daisies While Surfing the 'Net

by Ros Cornish

While learning how to use the Internet at work we were encouraged to practice and experiment - navigate our way through countless screens of information to find what we wanted. In other words we were encouraged to "surf the 'Net". I took up the challenge and started at the Australian Government home page which provides links to most of the information put on the Internet by both Federal and State Governments. When you are browsing through a home page, the links to other home pages or databases are highlighted for you and if you "click" on the highlighted bit with your "mouse" you start to follow your nose from screen to screen. If you go in the wrong "direction" you can "click" on the "go back" arrow and then make another choice.

It wasn't long before I found the Australian National Botanic Gardens (ANBG) home page. I was able to view the weekly paper it produces which describes what's flowering that week in the Gardens. Not only could I get the latest version but I could also get the previous weekly papers for the past few years - and I could search for a particular plant. I tested this out by asking for a list of all the *Brachyscomes* that had been written up and was rewarded with quite a few pages of information which I could have printed out if I'd wanted to.

I progressed from there to follow my nose into the databases available and discovered that I could get access to the herbarium records of plants which had been collected and recorded throughout Australia. I could search by family name, by genus and species name, or by place name. For example, I was able to get a listing of all plants that had been recorded in the Bungendore area - 131. As this was a rather long list I did a further search on the list to find all the *Asteraceae*. This brought it down to 12 records. I was also able to find all the recorded locations of *Rutidosia leptorrhynchoides* which is quite rare but found in the Canberra area. This is an example of a record:

CBG 9316775

ASTERACEAE

*Rutidosia leptorrhynchoides* F. Muell.

AUSTRALIA: New South Wales: Southern Tablelands: Molonglo River Valley, Captains Flat Road, 1 km NNW of Grose Meadow Hill, NNE side of road.

35~27'48``S 149~25'35``E

Altitude 760 m

Disturbed roadside, moderate slope, SSW aspect. Reddish clay loam with gravel. Grassland: *Stipa bigeniculata*, \**Phalaris aquatica*, *Danthonia* sp, *Botriochloa macra*, with herbs *Vittadinia muelleri*, *Chrysocephalum apiculatum*, *Calocephalus citreus*, \**Hypochoeris* sp.  
Common, localised.

F. E. Davies 1746

16 Dec 1993

This was all quite exciting for me because I could see many weekend trips looking for particular *Asteraceae* which interested me. And with such detail - how could you miss finding them?

Last Easter (April 1995) we decided to go for a drive in the local area to see what daisies we could spot and to see if we could find the location of the above *R. leptorrhynchoides*. We had been given two plants the previous year from the launch of the rare and threatened plant display at the ANBG and had also bought two plants from the Friends of the Gardens spring plant sale and had grown them over summer. So we knew what we were looking for - or so we thought.

We had a map and off we set in very cool, fine but windy conditions. We decided to do a circle from our place (Widgiewa Road, off the Captains Flat Road) across the Molonglo River and on to Hoskinstown, then meet up with the Captains Flat Road near Foxlow. The drive back along the Captains Flat Road should reveal Grose Meadow Hill (marked on the map) and the site we were looking for. It was only a journey of about 20km.

The first part of the trip was fairly boring through farm land on the Molonglo River flats. Once out of Hoskinstown though there was remnant native vegetation along the roadside - even a few *Eucalyptus*

*stellulata*. Suddenly I spotted a patch of daisies - a large mat of them with flat, bright yellow heads similar to what our *R. leptorrhynchoides* looked like at home (the flowers that is, not the mat as ours hadn't grown much). I was so excited - we weren't anywhere near the recorded site described above. Could this be a new site? Looking on the map we were exactly downwind from the recorded site (the prevailing wind in our area is a very strong north westerly). Perhaps the seeds had blown across the pasture and established this population on the roadside.

We marked the site on our map and some seed accidentally fell into my hand. Unfortunately I was so excited I didn't really look closely at what we'd found - I'd made an assumption.

Onward. We reached the Captains Flat Road and the point where the road curved near Grose Meadow Hill and yes we were headed NNW of it. 1km further on we saw nothing. We cruised up and down looking for the bright yellow flower heads, but nothing. Finally, we stopped the car and got out. There was a raging NW gale blowing and we were freezing. The roadside was awful - great clumps of wheat and lots of litter. There was only about 2m of verge before the paddocks and they were heavily grazed with lots of thistles. I lost heart but John forged on. He shouted that he had found something and as I caught up to him I noticed some metal markers on the fence.

He had found some old seed heads on what looked like a daisy. The plant was quite woody with a few thin leaves on a number of woody stems. Nearby were some *C. citreus* - and another marker on the fence. As we walked I noticed more of the woody daisy - and more markers on the fence. It was so cold and windy that we left quickly. It wasn't until I was home and looking at some reference books that I realised that *R. leptorrhynchoides* is quite woody - I'd only seen it in its first year of growth which is quite lush and supple (especially when protected and watered well). The seed head on ours was very similar to that on the woody plant we found on the roadside.

When I did a search later on the 'Net for plants on the Captains Flat Road I discovered that F. E. Davies had recorded a lot of plants in December 1993, including *C. citreus* NNW of Grose Meadow Hill - I bet he put the markers on the fence!

As for the first daisy we found, I have one seedling from the "accidental" seed. My bet is that it is *Helichrysum rutidolepis*, but I intend to check it out thoroughly instead of making any more assumptions. Those of you familiar with these species will probably wonder how someone can possibly mis-identify them. I'm only an enthusiastic beginner who has yet to see most daisies in their natural habitat. I'm learning from my mistakes!

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## Report on growing daisies in Kimba, South Australia

by Christina Leiblich

The last year has been disappointing for gardeners as well as farmers, the rainfall on our farm being 568 points (mm) for the year and so not much rain to help gardens or crops. The water for town gardens comes from the Poldas basin (good water) and Tod Reservoir (bad water — salty!). This is combined to give a suitable mix for gardens and stock but something goes wrong and the mix gets too much Tod water. The gardens suffered badly this summer, so shrubs are getting to be more popular than annuals. In the Kimba U.C.A. Church garden there are two soil types that have been put in. One section is a white soil from a deep sandpit which has no life in it and which has been difficult to build up sufficiently for plants to be grown in it. The other soil came from near mallees, a drift soil, and it has done better plantwise, with the exception of *Eremophila nivea* which gave up after a couple of years. Maybe the water was not to their liking. There are some self-sown *Bracteantha bracteata* plants thriving in this soil. A mulch of sheep manure is a great help too, I feel, as this helps to retain moisture.

I have tried various brachyscomes. By far the best survivor has been *Brachyscome multifida* which has done best in the drift soil. It survived only a couple of years in the sandpit soil. *Brachyscome* aff. *curvicarpa* is growing in the church garden but is doing best in our back yard where it is growing in hard clay soil with gravel on top. It is not where it is supposed to be but I enjoy the cheerful little yellow flowers.

Daisies being tried by other local gardeners are firstly *Bracteantha bracteata*. They have been grown by Pam Rodda in a bed with compost and sheep manure mixed in the soil. They have done very well and have had no other fertilizing. Pam is getting tired of wiring daisies. She has a roomful of daisies she has not yet

sold, but is working on that problem. She is growing other flowers for drying and uses a lot of sheep manure for mulching.

Pauline Venning has a trial plot of *Ixodia*; three varieties are doing well. The only mortalities occurred when they were fertilised when dryish, and four were lost out of about sixty plants. The base soil was fallowed before the *ixodias* were planted in October last year. They are heavily mulched with straw, and during the summer they were watered about every 6 days depending on how hot the days were. About 6–8 litres per plant were applied — also depending on the weather.

During March I spent three days on a property near Yetman (NSW). During our explorations of the property I kept an eye out for daisies as there had been rain in this area earlier in the year. The most interesting find was a plant to 30cm high with soft leaves similar in shape to pelargoniums. Only one of these plants had a flower, about 1–1.5cm in width, but it was exactly like a flannel flower, white pointy petals and darkish green centre which was lumpy I seem to remember. This was near the top of a rocky hill we climbed.

I will be trying some *Brachyscome* seeds from a plant in a creek bed, *B. ciliaris* I think. The season has now started to look much better rain-wise, so it should be a good year to look for daisies, and seed later on. I am interested in trying to get up difficult seed by experimenting with smoke in different ways, and also some other ways I have been dreaming up.

I like fiddling about with odd things so have recently got back to my old love of dyeing wool with native plants, mainly eucalypts. I dye in 20–30g lots for a friend who is making wool pictures which are proving to be popular. I have not tried the daisy family as yet.

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## Taxonomic Teasers

by Esmá Salkin

As promised, here is the first report on Groups 1 and 2 of the 'look-alike' *Rhodanthe* species selected for identification at the May meeting.

I am indebted to Joy Greig and Julie Strudwick for assistance and comments on a 'Key' kindly given to the Study Group by Mr Paul Wilson. Julie has also written a comprehensive report on the germination of seed of the Balladonia collection.

Specimens examined were all collected in Western Australia.

### Group 1

E. Salkin Collect<sup>n</sup>: 15.8.88 — 35Km east of Southern Cross  
16.9.88 — west of Balladonia  
17.9.91 — 38Km east of Norseman

B. Armstrong Collect<sup>n</sup>: 7.7.92 — 72Km west of Balladonia  
1.10.92 — Caiguna–Cocklebidy

### Group 2

E. Salkin Collect<sup>n</sup>: 22.9.91 — Mullewa–Mingenew  
25.9.91 — Dangarra–Leeman (coastal)  
15.10.91 — c. 18Km north of New Norcia  
18.10.91 — Lake Logue (via Eneabba)

Most collections were in open woodland, but the Lake Logue collection was in roadside vegetation just beyond the margins of the salt lake. We had some reservations, but Joy, Julie and I agreed that the everlasting daisies we examined could be *Rhodanthe chlorocephala* subsp. *chlorocephala*. In the Key (p. 21) we read, 'Found probably in the Moore River area, south-west of W.A. The circumspection of this subspecies is restricted to the variant represented by the type which came from an unknown locality in the south-west of Western Australia; it has not been recollected.' Small samples of some of the above herbarium specimens have been forwarded to the Western Australian Herbarium for an opinion, so whilst awaiting a reply we will refer to all the above collections as *Rhodanthe chlorocephala* subsp. *chlorocephala*.

**Description** (based on cultivated plants): This species is 25–40cm high and c. 30cm wide. **Flower-heads** are 1.5–2.5cm in diameter and have white intermediate and inner bracts, and bronze-green outer bracts. White bracts had pink reverses, which showed pink in bud. Flowering stems c. 20cm long are ascending, numerous, and with leaves present along the length of the stem. **Leaves** 5–15 x 1–2mm are slightly stem clasping. They are oblong, mucronate, with spherical glands in pits on the upper surface. A few glands may be present on the underside, but spherical glands are prevalent on both surfaces of leaves of the Lake Logue specimens. Involucral bracts are broad-ovate. **Fruit** c. 3mm long, covered with silky hairs. The pappus is plumose with clavate (club-shaped) tips, sometimes yellow.

Group 1 specimens (1988 and 1991), provenance collections, were small, 5–10cm high; leaves 5mm long and flower-heads 1–1.5cm wide. Specimens (1992), collected after good rains, were robust, 20cm high, leaves to 10mm long and flower-heads c. 2cm wide.

Group 2 specimens, collected 1991, were 15–25cm high, leaves 10mm and flower-heads 1.5–2.5cm wide.

#### Propagation of seed — E. Salkin

Collection date	Date sown	No. germinated	Germination (days)
16.9.88	5.89	1	45

Germination results of seed collected from this one plant follow:

Date sown	No. germinated	Germination (days)
2.91	9	11–25
3.3.91 (30 sown)	5	24–51
3.95	12	14–18

Trials were carried out on collections 16.9.88 and 17.9.99 from 12.93 to 3.94:

Seed heated at 60°C for 3 months	Germination
Balladonia seed — heat treated	0
" " " — control	0
East of Norseman — heat treated	0
" " " — control	0

Further trials were made on the remainder of the seed (heat treated) in 1994/5 after refrigeration at 4°C for 12 months:

Seed soaked in water for 24 hours	No germination
Seed soaked in water for 24 hours and pericarp punctured	No germination
Seed soaked in 1% bleach for 30 minutes	No germination

Lake Logue collection, seed was heat treated, refrigerated for 12 months:

Collection date	Date sown	No. germinated	Germination (days)
18.10.91	3.95	12	14–18

#### Propagation of seed — Julie Strudwick

(1) Self-sown in ground under 1994	(2) Self-sown in 1994 pot of heat-treated seed	(3) Self-sown in 1994 pot of control seed	(4) 1995 Bleach- treated seed *	(5) 1995 Control for bleach treatment	(6) 1995 Smoked seed #	(7) 1995 Control for smoked seed	(8) 1995 Smoked seed + pot. sulphate †	(9) 1995 Control for unsmoked seed + pot. sulphate
Started to germinate early March 1995	Pots watered from 2nd wk March '95	As in (2)	25 seeds sown 10/3/95	25 seeds sown 10/3/95	25 seeds sown 22/4/95	25 seeds sown 22/4/95	25 seeds sown 22/4/95	25 seeds sown 22/4/95
No. germinated								
At least 11 in 3 batches up to 25/4	3/4 3 13/4 5 27/4 15 29/4 16	3/4 2 13/4 5 11/5 13 16/5 15	17/3 1 18/3 3 21/3 4 25/3 5	18/3 2 21/3 4 27/3 5 13/4 6	2/5 1 4/5 3 5/5 6 11/5 8 12/5 9 14/5 10 16/5 11 19/5 13 21/5 14	Nil as at 27/5/95	14/5 1 16/5 2 19/5 4 20/5 5	Nil as at 27/5/95
As at 27/5/95 9 remained — some probably eaten by slugs	11/5 28 12/5 32 26/5 35 27/5 37	18/5 16	30/3 6 13/4 7					

(1) This area would have been damp all year due to watering of pot plants kept there.

(2) and (3) Some seed from 1994 plants fell on the surface of the pots and was left to the elements. Prompted by germination of (1) these pots were watered daily from the second week of March to coincide with sowing of (4) and (5). (2) and (3) were left outside; (4) to (9) were kept in the polyhouse.

\* Bleach-treated seed was stirred for 30 seconds in 1% bleach solution (see NL 40, p. 40).

# Smoke treatment. 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 used.) The process was carried out for 1 hour with the seed receiving a total of approx. 1/2 hour of actual smoking.

† Potassium sulphate was sprinkled on top of the punnet at the time of sowing.

Seed for experiments (4) to (9) was 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.

**Comments:** Seed left to weather and seed subjected to smoke treatment yielded similar results.

Seed from one plant (Balladonia, 16.9.88) was viable and remained viable for 4 years when stored in an air-tight container at 4°C.

Only a few plants are required for an appreciation of this delightful, small everlasting. Seed from cultivated plants appears to give improved germination rates but results from provenance seed subjected to smoke suggest that this pretreatment is the most promising.

### Reply from Paul Wilson as to the identity of the collections (12/9/95)

'Thank you for sending me the three collections of *Rhodanthe chlorocephala*. I am pleased that the Study Group members were able to key them out correctly, at least as to species, however, I consider that they all belong to subsp. *rosea*. The problem is that the type of *R. chlorocephala* has greenish bracts, something I have not seen elsewhere, at least not to the extent as is found on the type. Because of this, and because I was uncertain as to whether this was an artifact due to soil conditions, I decided to treat the typical subspecies as being only represented by the type collection. .... I am sure that there is still a lot to be worked out about the taxonomy of this group, in particular about the large flowered subsp. *splendida*.'

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### 'Taming' species

by Judy Barker

'It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife.' Thus begins Jane Austen's *Pride and Prejudice*. I would like to start this article in a similar fashion by saying the seed gathered from garden-grown species difficult to germinate and/or grow must result in improved germination of that species and more robust, more easily grown progeny. Perhaps it is not a truth universally acknowledged or perhaps it is simply not true. This article is an attempt to explore the situation.

In *Horticulture of Australian Plants* (1985) edited by Byron Lamont and Philip Watkins the following paragraph appears under a chapter titled 'Propagation by cuttings' by R. Aitken: 'One cannot over-emphasise the importance of using stock plants rather than those in the wild. The nature of cutting material may then be controlled by pruning, fertilizing and watering. Thus the ideal time for taking cuttings may be tested and propagation is no longer controlled by the timing of field trips. If stock plants are well maintained, cuttings will be uniform in size and maturity. Given these advantages, there still remains an unexplained favourable factor. The evidence suggests that native plants become "tamed" with each new generation and that successful propagation of cuttings rises accordingly.'

John Colwill has told us that seed suppliers can increase the percentage germination of seed of species from 10% to 90% by harvesting it over several generations. We have observed that forms of *Brachyscome iberidifolia* from the wild germinate slowly and very poorly by comparison with seed from seed suppliers, which will come up in abundance 2-3 days after sowing. From experience we have found seed of *Brachyscome oncocarpa* from the wild hard to germinate, but Gloria Thomlinson has grown a few plants, gathered seed and has reported a marked increase in germination when it was sown. Now plants are self-sowing in her garden with relative abandon.

To illustrate this point I have been working with *Leucochrysum albicans* subsp. *albicans* var. *albicans* (dubbed Alby Alby Alby by Colin Jones) collected from Longwood (Vic) in 10/93. 'Plenty' of seed was sown in a container on 6/11/93 and it began to germinate after 39 days. By 9/5/94 I had transplanted 4 seedlings into forest tubes and then the seed punnet was put down by the incinerator to see what might happen. (Our

council has now banned the use of incinerators and so the whole thing has been moved to a paved area and has been transformed into a barbecue. The phrase 'down by the incinerator', however, has been retained because we all know the area to which it refers. Now this area contains even more old punnets — so old that the writing on many of the labels has become invisible!) By 21/10/94 I had transplanted a further 23 seedlings but they were appearing in the punnet in dribs and drabs. At the same time I planted the four early tubes in a 30cm squat pot and when they began to flower I rubbed heads together with a will.

Seed was collected from this pot in December and January (94/95) and 'plenty' was again sown in January. This time about 100 seedlings appeared after 6–30 days. Groups of three tubes were planted in autumn in many different situations around the garden at Hawthorn and some down in clay banks at the coast at Fairhaven. So far (early October '95) these groups are all thriving and flowering with fervour, even the ones at the coast. I hope to report that the second generation plants last longer in the garden and grow better than my first batch did from wild seed. They all died after one season, although the ones in the large pot are still alive and are flowering again, but they have been watered daily and fertilised as required.

I carried out the same regime for seed of *Leptorhynchos squamatus* collected from Anglesea and the results were much the same. Seed collected from six plants in two pots germinated faster and better and the resultant plants seem more robust. But in neither of these two exercises did I count the seed, and so there is no real proof of my original assumption.

Tests with *Schoenia filifolia* have been slightly better documented. In October '88 Natalie Peate collected seed of a species which we referred to as Natalie's yellow *Helipterum*. There was not much seed and it was sown 6/5/89. One seedling germinated in 11 days and had perished by August. In April '90 I found 11 seedlings in the container down by the incinerator. Of these, only 4 tubed seedlings lived through the winter. Three of them were planted in a 25cm plastic bowl. In due course they flowered modestly and I was able to identify them tentatively as *Helichrysum filifolium* which later became *Schoenia filifolia* subsp. *filifolia*. Since that time I have kept records of the results and have tried to collect as much seed as possible because I think this species has great potential as a small everlasting for the garden or pot culture. As far as I know the Study Group has been the first to bring it into cultivation. One pretreatment and seed storage at two temperatures have been tested. Here are the results:

Source	WA	Pot	Pot	Pot	Pot	Pot	Pot	Pot	Pot	Pot
Date coll <sup>d</sup>	10/88	11/12/90	11/12/90	12/91	12/91	12/93	12/93	12/91	12/93	12/94
Date sown	6/5/89	21/1/91	10/4/91	15/3/92	13/2/94	13/2/94	8/3/94	17/4/95	17/4/95	17/4/95
Storage	RT	RT	RT	RT	4°C	4°C		4°C	4°C	RT
Pre treatment	nil	nil	nil	nil	nil	nil	60°C for 2/12	nil	nil	nil
No. sown	unknown	about 30	plenty	1 tsp	plenty	plenty	about 120	1 tsp	plenty	plenty
No. at time of germination	1 — 11d 0 — 2/12 ***** * 11 — 1 yr	1 — 4/12 2 — 6/12	2 — 13d 7 — 20d 10 — 39d ***** 3 — 1yr	1 — 12d 4 — 2/12 5 — 3/12 9 — 5/12 ***** 27 — 1½yr ***** 3 — 2½yr	6 — 4d 16 — 5d 58 — 7d >70 — 9d >100 — 21d ***** 2 — 1½yr	1 — 9d 3 — 26d 4 — 4/12	5 — 5d 15 — 6d >20 — 7d 0 — 24d	13 — 16d	25 — 16d 31 — 2/12	6 — 16d 31 — 2/12

**Discussion:** These results tell me that numbers should be counted accurately in these tests. At the very least the same teaspoon should be used in every test and, furthermore, it should be a flattened teaspoonful of seed that is sown.

In my opinion the seedlings arising from each succeeding generation of harvested seed are becoming more robust. If any answers can be drawn from these results it looks as though a period of storage at 4°C increases germination. The heat pretreatment may have helped to trigger germination but may have interfered with the normal growth of the seedlings. As I recall it, the seedlings gradually disappeared rather than vanished overnight as they may have done if a predator attacked them.

Esma and Julie Strudwick have offered warnings that after some years the picture may not be as rosy as I hope. Julie says (28/7/95): 'I know cutting material from garden-grown plants generally strikes more easily than from wild plants, probably due to more even or kinder conditions producing healthier growth, so I was curious about the possibility of it affecting seed germination (or maybe fertilization) as well. However, from my experience here with *R. chlorocephala* subsp. *rosea* seed collected from the garden does seem to deteriorate after a few years. Maybe it was just weather conditions or some other cause but I had great success with my own collected seed for 2–3 years, then the plants in 1993 were very poor and produced

very little seed. I had several troughs of them all together so there should have been good cross-pollination but the plants themselves were very small and weedy with small heads, so I didn't save any of the seed.'

Esma says (Aug. '95): 'I agree with Julie's comments on the deterioration of *R. chlorocephala* subsp. *rosea*. I have usually bought in extra seed every couple of years to mix the genes again. The Study Group has also noticed deterioration and loss in viability of seed in *R. humboldtiana*. Seed collected from Colin's garden after several generations produced miserable plants when grown on. Ian Taylor (Keilor SGAP) found the same problem with *R. anthemoides* (Organ Pipes). After a few generations seed production was reduced. This could be related to lack of pollinators but equally may be related to genetic factors.'

I will go on with my exercises to prove or disprove the original assumption, but I will watch the results more closely and will try to make time to count the seeds sown from now on. I would like a bit of help with this project, please, because otherwise my garden will be covered with 30cm pots. This year I will be adding to the project with *Podolepis rugata*, *P. jaceoides* (Anglesea) and a white *Leucochrysum albicans* sent to me from the ACT by Ros Cornish. Perhaps perennials react better than annuals in this matter. Perhaps I will need to add fresh seed from other sources from time to time in order to replenish the gene pool. It just seems a good direction in which the Study Group should move when we are dealing with plants new to cultivation. Not only does it produce more seed for others to trial and thus saves collecting in the wild, but it also produces more robust plants (I think).

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## Members' Reports

Ros Cornish from Woden (ACT) writes on 12/6/95: 'John bought me an interesting plant at Woolworths the other day — it's amazing what turns up in supermarkets — Bushman's Gold. The label says *Helichrysum bracteatum* and claims it is "a dense prostrate rockery plant with bright gold 'everlasting' flowers most of the year. Hardy in well drained situation. Excellent container plant." I don't know whether it will flower for most of the year here — I bet it keels over in our frosts. John is going to take some cuttings of it before we test it out. Does anyone know anything about this one?'

Esma sent me a copy of NL 25 which has in it an article on the *Helichrysum apiculatum* (now *Chrysocephalum apiculatum*) complex. I had been thinking that there must be several different forms as I'd observed at least two in our area. One is tall with silver to green foliage and one is quite small with very silvery foliage. The ANBG has recently planted a large number of a very striking form — tall, green foliage and large flower heads.

We have also discovered that *Chrysocephalum semipapposum* (syn. *Helichrysum semipapposum*) has a number of forms when we tried to identify a plant we found on the Captains Flat – Hoskinstown Road at Easter. It is different from any *C. semipapposum* that I've seen in the ANBG and different from the one on our block. The foliage is very pungent — not unpleasant but quite overpowering (if that makes sense — good in the garden but very strong in the house). The flowers are more yellow than orange. We seem to have managed to get one cutting to grow but no seeds have germinated.'

Ros sent an addendum in August: 'The strange weather has meant we haven't been doing much in the garden although today I've planted two *Ammobium alatum* which I'd grown from seed. They grew fantastically, even outside with the frosts, until the wallaby found them. He/she munched them badly so I've planted them out and put wire cages around them. They will form part of our definitive experiment with our wallaby deterrent mixture. Once they've recovered we'll remove the cage from one and spray it with the mixture and see what happens.'

Unfortunately the wallaby has completely pulled up my large *Calotis cuneifolia*. I collected seed from it earlier this year so I'll try to grow some more — it was such a nice specimen. When I say "the wallaby" there are in fact more than one. A few weeks ago we pulled the curtains in the morning to find three of them in close proximity and one of them had a very full pouch with a long tail hanging out of it! Even though she could plainly see us she hopped up to my very bedraggled *Bracteantha bracteata* plants and stripped the remaining green leaves off them. We really must perfect our deterrent.'

Linda Handscombe from Pomonal (Vic) writes on 29/6/95: 'We have finally had some good rain (nearly 6" in six days) and things are looking greener and fresher. We had two bad frosts last week that did the *Rhodanthe chlorocephala* subsp. *rosea* in.'

I haven't done a lot of seed sowing this year, and what I did sow went in too late. I've been concentrating on taking hundreds of cuttings of everything to take up to the farm. The farm is being overrun with rabbits and roos, so we've stopped planting for a while until we get some rabbit-proof fencing up and lots more tree guards.

I did run out of forestry tubes so I bought some cells from "Taylors Treeline". I think there are 48 cells in a tray. The seams in each cell direct the roots down and out the bottom so that they can be air pruned. I took cuttings of my best *Bracteantha bracteata* plants and struck them individually in each cell. They are doing very well. I have also successfully used them to pot rooted cuttings of all sorts of things.'

**Fay Boyle** from Bendigo (Vic) writes in June '95: 'It has been a very bad year for gardens and bush around Bendigo. With over seventy severe frosts — a few of minus 7°C — and little or no rain until April this year, it has certainly been a challenge. We had over 4 inches of rain in one week in May so this helped to revive the plants, and certainly the weeds. We had water restrictions all the summer so, with a garden the size of ours, we made a decision only to water vegetables and fruit trees, leaving the rest to fend for itself. Daisy plants that survived the harsh conditions were as follows:- *Brachyscome angustifolia*, *B. melanocarpa*, *B. multifida* (several colours), *B. tadgellii*, *B. segmentosa*, *Bracteantha bracteata*, *B. viscosa* (which seeded everywhere), *Chrysocephalum baxteri*, *Calotis scabiosifolia*, *Leucophyta brownii*, *Olearia phlogopappa*, *O. teretifolia* and *Ozothamnus obcordatus*. We had a lovely bed of self-sowed *Rhodanthe chlorocephala* subsp. *rosea*, only to be wiped out by a -5°C frost, but I plan to put in some more seeds when the frosts are past. I will also have a go at planting more daisies that are suitable for our harsh conditions — heavy soil and severe frost.'

**Barbara Buchanan** from Myrree (Vic) writes on 12/7/95: '*Brachyscome* aff. *curvicarpa* has been wonderful, has even self-sown, although I don't know if the seedlings have survived the cold and wet. We've had a few mornings when it looked as if it had snowed.

I managed to win a *Brachyscome* 'Happy Face' at our last meeting (presented by Jan Hall) and that is now put into one of my latest hollow logs, lovely wide ones with plenty of space for planting. I put in a *Calytrix* from Esperance with tiny foliage and pinky-purple flowers which I think will match — if they flower together. I hope it won't object to being confined.'

**June Rogers** of Horsham (Vic) writes on 26/6/95: 'After our long, hot, dry summer we've had our welcome rains, without too many frosts, and quite mild weather until this month.

You may be interested that my plant of *B. diversifolia* var. *diversifolia* from the Stawell / Halls Gap Road has flourished, has three large flowers fully out and a great quantity of buds. I'm thrilled with it, and realize the small-flowered *B. ?* which I'd nurtured has no resemblance to this beauty.

The cultivar *B. 'Sunburst'* hasn't stopped flowering in the garden. It was a cutting grown from the original plant, which I've cut back very hard (in a pot) and it's responding well. Other plants of 'Sunburst' intended for our Flower Show in late October, kept in the "igloo", are also in full flower and much larger. *B. 'Valencia'* is still flowering the garden and is beautiful in the igloo. *B. scapigera* (Three Mile Dam) is also flowering in there, appreciating the warmth, I think.

A plant of *B. angustifolia* x *B. formosa* (dark mauve), which I was given at the Grampians weekend, has produced copious seedlings (I think). It is in a 6 inch pot and suddenly all these babies appeared, so they've been potted on and more have come up. During the summer the 'daisies' were together for ease of watering, so something else may have dropped seed there. I also have seedlings from a seed head of *B. segmentosa* which, quite by chance, I had put in a very large tub with *B. aff. curvicarpa* some years ago. A repeat of "Sunburst" perhaps?

A great thrill is to have seedlings from our own seed of *Spilanthes grandiflora*. This species always dies down for us in the winter (not surprising!) and I always worry that I've lost it! Other plants to "disappear" are *Podolepis jaceoides* and *Helichrysum scorpioides*. Both are in leaf at present but, as usual, at this time of year we have problems with red-legged earth mites sucking out the chlorophyll — they're also attacking all the schoenias.

*Leucochrysum albicans* subsp. *albicans* var. *albicans*, another plant from the Grampians weekend, is in full flower again, making quite a show, as well as spreading. *B. graminea* (ADSG seed) is making lovely ground-covering patches wherever it was put in the garden — in fact, we may have to curtail it eventually. It

flowered profusely. Another *B.* just finishing a long flowering season is *B. dentata* from seed we collected along the road from Wail Nursery to Dimboola.

All these garden plants are in full sun, in sandy loam over clay soil, mostly mulched with our own wood/leaf mulchings, and having the benefit of a controlled sprinkler system.'

**Bob Magnus** from Woodbridge (Tas) in July '95 writes a response to Ros Cornish's note in NL 42, p. 22–23: 'We had a wallaby assault over the last few years. At first we thought it was charming having them nibbling the grass in the garden, then they started on the ranunculas, carnations, etc., and last winter at about this time I could count up to 100 wallaby droppings (fresh) in the garden each night. I used to get up at 2.00 a.m. with the torch strapped to the shot gun and hunt them — shooting several — but with heart pounding and adrenalin coursing through my body. I couldn't sleep for hours so reluctantly made the decision to fence our whole 1½ hectare garden, which cost \$2000 (in imported N.Z. wallaby fencing wire!!). So this winter we shut our gate at dusk and I sleep well and the wallabies stay out and our garden flourishes. I suspect Ros will come to the same decision sooner or later.'

(This is a final salvo from Bob as he is 'bowing out of AD SG and letting someone else have his spot'. We will miss his stimulating letters and the enthusiasm he brought to bear on any subject in which the Study Group was involved. Bob and family found *Brachyscome sieberi* var. *gunnii* for us in a flash when we really needed it for the B. Book, and he has also been responsible for introducing us to *Ozothamnus costatifructus* and *Schoenia cassiniana* 'Gabriele'. Our thanks and best wishes to you, Anne-Marie and the boys, Bob. .... Judy.)

**Jeff Irons** of Heswall (England) writes on 22/7/95: 'Enclosed is a piece of the purported *Ozothamnus thyrsoides*, Snowy river Valley. The new stock ex Bennisons Flat looks as though it is going to be the same. Flowering on the Snowy River stock is fairly sparse. As a garden plant its only use is as a quick growing screen. I cut one down in March. So far the new growth is 3 feet long without any sign of a flower. Flowers are on extension growth of last year's wood. Yet the plant is so vigorous that it really needs to be cut down every spring. Young growth is not sticky, and dried flowers do not have an attractive colour.

The first stage of my trials on *Olearia frostii* indicate that, at least in part, flower colour is a function of soil acidity. At pH 4.5 the blooms are lavender. At 5.5 they open white and fade to lavender. At higher pH levels they are white.

The next step will be to check the influence of aluminium. Other elements have had no effect. Can you tell me the origin of the soils in the area of occurrence? Is it felspathic? We are on sandstone here, and I believe that it is affecting the flower colour. My stock from Munich was originally lavender, now it is behaving in the same way as the Mt Hotham stock.

**Seeds:** No seed on *craspedias* or *Bracteantha subundulata*.

**Flowers:** No flowers on *Brachyscome spathulata* and none on *B. tadgellii* (second year).

I get very good results on Ericaceae and Epacridaceae by sowing on sieved dried sphagnum, so tried the substrate with *B. spathulata*. All I got were three seedlings from the Charlotte Pass stock. They died before transplanting.

*Ozothamnus rosmarinifolius*. Tried as a cut flower. It fills the room with the reek of sweaty bodies, and dried material is the same. There is no evidence of smell when outside.

(Esma has identified Jeff's purported *O. thyrsoides* as *Ozothamnus ferrugineus* (syn. *Helichrysum dendroideum*). His doubts were first expressed in NL 42, p. 33. No wonder he has been disappointed in his 'Snow in Summer'! The real *O. thyrsoides* is much more impressive. *O. rosmarinifolius* from Anglesea has a genteel smell whether indoors or out.)

**Pat Shaw** of Macgregor (Qld) writes in late July that she is sending a small quantity of seed of *Podolepis monticola* collected off a tub plant which was given to her as a small seedling by Brent Vieritz. It was collected at Araucaria Lookout, Binna Burra. This plant was the seedling thought to be a white *Bracteantha* species, and it was mentioned in NL 42, p. 33. Volume 2 of the *Flora of South-eastern Queensland* has a full description of this plant. It is very rare in cultivation.

In a phone call on 2/10/95 Pat said that she had visited Redlands Research Station and had seen many species and crosses of interest. In particular, she mentioned a yellow-flowered hybrid between *Ozothamnus diosmifolius* and *O. diotophyllus*. It had arisen in Dave Gordon's property where both species were growing near each other. She had been given a plant of *O. rufescens* which she looked forward to growing. She has promised to write it up for the NL when she has tested it for a time.

**Margaret Hamilton** of Turramurra (NSW) writes on 2/8/95: 'As I have not written before to let you know of my progress (or otherwise) in growing Australian daisies I had better do so now.'

*Rhodanthe anthemoides* did well last summer and produced one seedling and many cuttings before it died — I don't seem to be able to keep it alive for more than one year, whereas *Brachyscome segmentosa* keeps growing and still looks lush and healthy after three years — a star performer!

In my garden in a built-up bed I have two different forms of *B. segmentosa*, I think. One has light green leaves, greenish disc florets and a loose habit, whereas the other has dark green leaves, yellow disc florets and a compact, dense habit. The latter has spread 1 metre across and makes a wonderful ground cover!.

So far I have had no success in germinating seed of *B. multifida* or *B. segmentosa* and so I am concentrating on cuttings which grow easily.

As well as the above I have the following daisies growing in the garden now: *Brachyscome formosa*, *B. 'Sunburst'* (which hasn't stopped flowering for months), *B. 'Lavender Mist'*, *B. 'Happy Face'*, *B. graminea*, *B. angustifolia*, *B. multifida 'Pink Haze'*, *B. spathulata* and *Bracteantha bracteata*.'

(Margaret sent specimens of her two forms of *B. segmentosa* to Esma for identification. Esma thinks one is the dreaded Vulgar Daisy, which she described in NL 36, p. 29, but she felt the specimen was not quite mature enough for a positive identification. It resembles a *Brachyscome* but grows more vigorously and the fruit is spindle-shaped, ribbed, and has no pappus.)

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## Members' News

**Australian Brachyscomes:** The book has been very well received so far. Everyone has commented on Gloria's beautiful drawings. We sent a copy to T. R. Garnett, who writes in *The Age* gardening section every fortnight under the by-line 'From the Country'. The Study Group has tried to follow the advice he gave many years ago to the effect that the most valuable books are written from experience.

The following is taken from Tom's answer: '*Brachyscomes* arrived just as I was about to write an article for *The Age*. I immediately scrapped what I had in mind and started one on your quite remarkable work. As I shall write, it will be a model and a challenge to some other study groups — because it is designed for gardeners. I think what you are charging for it is extremely modest for what it contains and what its compilers have put into it ..... The article I fear will appear after the Conference is over. I know that one of the topics Rodger Elliot is hoping will be discussed is how to persuade gardeners to grow native plants. Your example, if followed by others, will be especially persuasive.'

We are grateful to the many members who have added immeasurably to the book by collecting seed, providing details of growth in their areas, or in other ways. The cost to members will be \$18.00 for the first purchase and \$20.00 for each copy bought after that. For non-members the cost is \$24.95 until 31st December and \$29.95 thereafter. Please don't forget to add the money for packing and postage. (Packing costs \$1.00 and the book weighs 1.8Kg.) Cheques should be made payable to AD SG Book Account. We have printed only 1000 copies and they are selling well. It would make an excellent Christmas present.

Please apply either to Esma Salkin, 38 Pinewood Drive, Mt. Waverley, 3149. (Phone 03. 9802.6213)  
or Judy Barker, 9 Widford St., East Hawthorn, 3123. (Phone 03. 9813. 2916)

**ADSG WINDCHEATERS:** There is one large size left (chest 124cm, sleeve 82cm, length 70cm). The cost is \$23.00 (plus packing and posting costs). Please apply to Esma.

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## SEED LIST

Seed is free to members and for sale to non-members at 50c per packet plus postage. Larger amounts of seed can be bought by arrangement. All requests for seed (**enclosing a large, stamped, self-addressed envelope**) should go to Esma Salkin or Judy Barker (addresses above).

There are no additions or deletions to the seed list for this quarter.

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**SEED DONORS** Many thanks to Judy Barker, Ros Cornish, Bevan Davis, Joy Greig, Colin Jones, Max McDowall, Natalie Peate, Ricky and Katrina Reeves and Pat Shaw.

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