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ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 51

Podolepis neglecta x 1/2

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Podotheca wilsonii P. S. Short

(WA)

Derivation: *wilsonii* — named in honour of Paul G. Wilson, senior botanist at the Western Australian Herbarium

Podotheca wilsonii x 2/3

Dr Philip Short collected seed from Hamersley Lakes (WA) in 10/95 and kindly sent us some of it. About 50 seeds were sown on 2/1/97. Germination began in 7 days and 14 seedlings were potted on after 6 weeks. After another month 30 more seedlings were potted on. Six seedlings were planted in a 25cm pot but gradually every one of them died as winter advanced.

At the end of June two forestry tubes, each containing 3 seedlings, were planted in a 20cm pot. Some died but two lived to grow into quite robust plants 40cm high and 40–50cm across. Since August I have been watching buds develop, and in late September they delighted me by putting on a colourful display until a burst of very hot weather in December put an end to them.

Plants in cultivation are branching. The habit is erect at first, the weight of developing buds tending to pull the stems down later. Stems are slightly hairy. Leaves are 1.5–9 x 0.4–2cm, lanceolate, sessile, slightly stem-clasping. The basal part of the margin is often revolute, the tips acute, and short hairs cover both surfaces, but the cover is not dense. Leaves and stems have a reddish hue which gives plants an olive-green appearance.

Buds are numerous, terminal, solitary or in loose clusters. They are large, 28–30mm long, almost too big for the size of the plants. Bright yellow florets froth out beyond the bracts, which are green, lanceolate, and in 3 rows. The lowest one or two bracts appear singly on the peduncles just below the heads. Peduncles are 6–8cm long. Fruits are brown, obovoid, 1–2 x 0.5mm, with a sparse covering of short, transparent hairs. The pappus is made up of 5 bristles, 18–20mm long, joined at the base and glabrous in the lower third. The

upper part is moderately plumose. In this case the bristles were all yellow but they may be white or pink-red in the upper third. Paul Wilson referred to this colour in NL 47 p. 14 when he said *P. wilsonii* resembled *Bellida graminea* and *Lawrencella davenportii.*

This is a cheerful plant. I have collected seed, and will try to grow it again.

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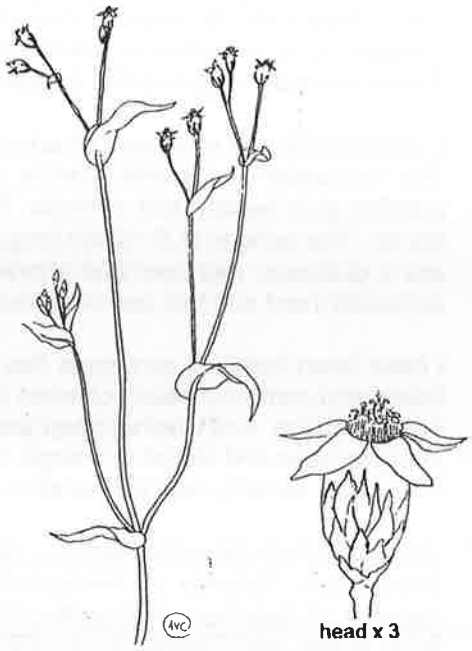
Rhodanthe propinqua (W. Fitzg.) Paul G. Wilson



Rhodanthe propinqua

Synonym: *Helipterum propinquum*

Derivation: *propinqua* — related, referring to an affinity to another species, possibly *R. stricta.*

Distribution and habitat: WA. Occurs in central Western Australia in the Austin Botanical district from around Laverton to west of Meekatharra. Grows on sands or sandy loams in mulga.

Description: An upright annual, 10–20cm high, with many branching, slightly hairy stems. **Leaves** are sessile, 1.5–3.5cm x 5–15mm, green, lanceolate to oblong, often wider at the base and slightly stem-clasping. The undersurface is either glabrous or bears sparse short stiff hairs. **Flower-heads** are held on short slender stems in loose clusters at the tips of branches. Each head is cylindrical, 4–6mm across when open, and 5–6mm long. Outer bracts are shining gold, brown or sometimes reddish; inner bracts have white blades 1–2mm long which radiate. Small stems immediately below the heads are often cottony. **Fruits** are 2–2.5 x 1–2mm, top-shaped, covered with cream silky hairs. A ring-like carpopodium is present. The pappus is 2.5–3mm long, persistent, with 16–18 evenly plumose bristles. **In cultivation** plants may grow to 30–35 x 15–25cm.

Flowering period: In the wild *R. propinqua* flowers from August to September; in cultivation plants flower for a period of 6–8 weeks between July and November, depending on sowing times and temperatures.

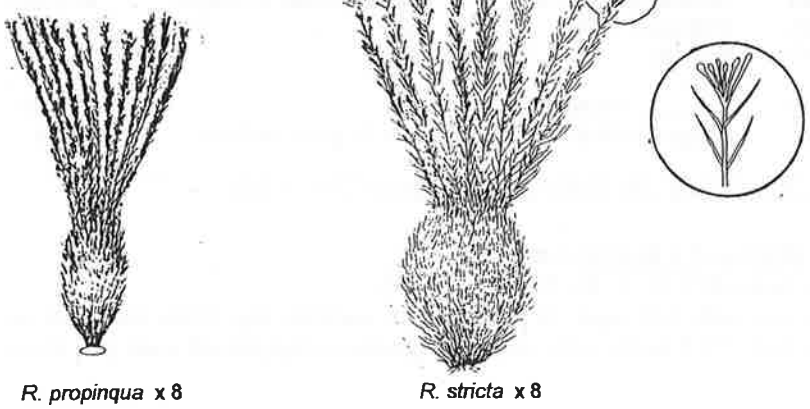
Propagation: Seed germinates poorly to moderately well in 5–25 days. Pretreatment with SISP or detergent sometimes increases germination. Best sowing times seem to be early autumn and late winter, and better results are obtained from seed stored at room temperature than at 4°C.

Cultivation and uses: *R. propinqua* flowers profusely but the flowers are small and the flowering period is relatively short. It does not thrive in cold wet weather but grows well in inland climates. Mass or group in gardens. It is not a good cut flower due to the rapidity with which the disc centres develop. Air drying will be tried this year.

Similar species: ***Rhodanthe stricta*** has larger flower-heads (1–1.5cm across) and the white radiating blades of the inner bracts are longer (2–4mm). Fruits are markedly larger (3–3.5 x 2mm), and the pappus bristles have clusters of club-shaped cilia at the apices.

Special notes: *R. propinqua* is included in the section *Leiochrysum.*

Comparison of fruits



R. propinqua x 8 *R. stricta* x 8

Lawrencella davenportii

by Esma Salkin

This daisy is an attractive pink-flowered everlasting 7–40cm high. An erect flowering stem arises from a cluster of aromatic lanceolate leaves.

The achene is cylindrical, tapering slightly to the apex. Excluding the pappus the achene is 1.2–1.8cm long and 1–2mm wide. An unusual character of this achene is the hollow carpopodium (point of attachment to the receptacle), and another is that the pappus elongates after anthesis, i.e. the period of flowering to seed set. These are features shared by *L. rosea* and *Bellida graminea.*

L. davenportii has two types of achenes. The fertile achenes (1/3) are situated at the periphery of the disc. The remainder are sterile. Fertile achenes have more than 50 pappus bristles, straw-coloured, often purplish-pink basally and connate. These bristles are plumose for 1/3–1/2 length, becoming barbellate at the tip. The achene is 8–12mm long, glabrous to hoary. Sterile achenes have less than 50 pappus bristles, are ± glabrous, narrower and shorter. The bristles are barbellate over the whole length. The pericarp is extremely hard and this and other factors contribute to difficulties with germination.

I have been trying to germinate this species for a number of years. Results of these seed trials are listed below and comprise seed collected on visits to Western Australia. The amount of seed collected depended on the season, and whether seed was mature or lost when you reached a particular site. Seed was collected in paper bags and stored in a large, lidded plastic storage bin at room temperature. The seed was subject to fluctuating humidity and temperature in the Melbourne household.

The Kings Park Research Notes — Number 7
Germination Records of Western Australian Plants compiled by W.H. Kullman state that from 7 seed samples of *Helichrysum* (*Lawrencella*) *davenportii,* the average germination time was 10 days. In the trials listed below, germination occurs within this range or slightly over but the number of seed per trial was small (maximum 30). Percentage germination was not recorded.

Seed mix: 3 parts coarse sharp sand
1 part moistened cocopeat

Pretreatments

Soak: Seed sown on surface of mix. Pot immersed in water 16–24 hours.
Detergent soak: As above but 1–2 drops washing-up detergent / litre added to water.
Heat treatment: Seed subjected to 50°C for 3 months prior to sowing (133/94, 134/94).
Potassium nitrate: 0.125% solution for 24 hours, then sown.
Control: No pretreatment.

Results of Seed Trials

No.	Origin of seed and date of collection	Treatment	Date sown	No. sown	Germinants	Days
128/92	WS 123 (87.3Km Nth of Cleary, 9/91)	soak	12.3.92	25	1	in 13
283/92	WS 123	a) KNO3	29.5.92	20	0	
		b) control	29.5.92	20	0	
133/94	WS 123	heat treatment and soak	13.3.94	24	1	
134/94	WS 123	control	13.3.94	25	0	
129/95	Bindoon Hill WA 9/91	Max McDowall's method	20.8.95	20	6	in 8–15
131/95	Rothesay 1988	soak	1. 9. 95	30	0	
*60/96	WS 123	soak	15.2.96	5	1	in 7
				5	0	
246/97	Progeny 129/95	soak	23.4.97	9	0	
30/98	Progeny 129/95	June Rogers' method	6/3/98	20	9	in 9–18

* Propagating unit with plastic cover and plugs, 3.5 x 3.5cm

Max McDowall's Method (adapted)
Seed collected 19. 9. 91. Sown 20. 8. 95 .
Seed mix with 1cm layer of pure coarse sand on top. Seed inserted, upright to half its length (avoid contact with peat). PET bottle with ventilation holes in top placed over pot. Pot on north-facing glassed-in verandah.

Six germinants from 20 seed 8–15 days.
NOTE: Flowering plants isolated in insect-proof polyhouse and hand pollinated. Seed collected, dried, and stored in heat sealed foil packets at 4°C. Progeny sown 23/4/97 (246/97) and 6/3/97 (30/98).
Only two plants produced good flowers and survived to yield seed.

June Rogers' Method (adapted)
Seed sown on top of mix (not inserted). Pot immersed to neck in detergent water (1–2 drops/litre) — 24 hours. Additional spraying with detergent water over next two days as seed looked dry. Then covered with limestone chips and watered well with fine spray for 2–3 minutes daily.
Nine germinants in 9–18 days (6 large seedlings, 3 small seedlings [half the size of the large seedlings]).
When sowing seed, the small seed was assumed to be sterile, but both small and large seed germinated.

Excision of non-germinants

Large seed	Small seed
Embryo present — 3	Embryo present — 4
No embryo — 2	No embryo — 3

Two excised seed from each group were sown on moistened filter paper, covered with moistened filter paper, and placed in a petri dish treated with fungicide. The petri dish was wrapped in aluminium foil and placed in a sunny position on the verandah. Sown 27. 4. 98. Results pending.

Seed was excised by splitting open the soaked and aged achene at the carpopodium. The pericarp splits lengthwise to expose the seed.

Discussion

The poor germination of this species in Melbourne, as well as that of other arid area daisies, is both a challenge and an irritant to this member. As well as the usual hypotheses, e.g. immaturity of seed, and after-ripening induced secondary dormancy to explain poor germination, it is obvious that more attention should be paid to the number of sterile seed in a head, and to the number of potentially fertile seed that weren't pollinated. Therefore, when collecting seed, examine heads to sort out the differences between fertile and sterile seeds. If you can spare seed, investigate a number of samples of seed to determine the percentage of seed with an embryo. Are the empty shells a decoy?

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OZOTHAMNUS

by Jeff Irons

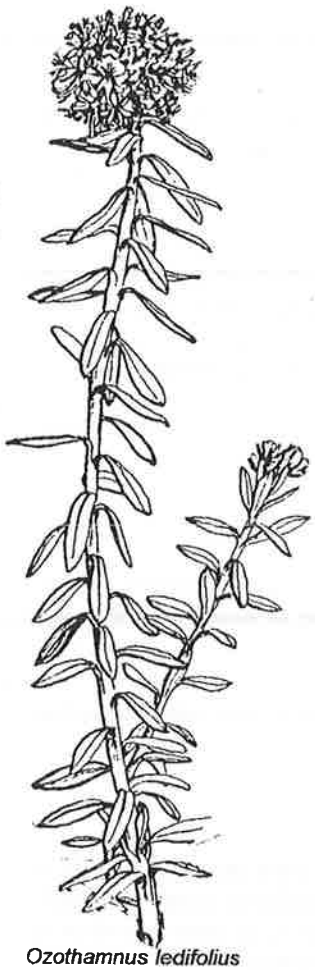
(Reprinted from *Pentachondra* Issue 18, May 1997 with kind permission .)

O — zo — tham — nus: Greek Ozos — smell, thamnus — shrub

The name of this genus has had a somewhat chequered history because a botanist called Burbidge got rid of it in 1958, and put all the species into *Helichrysum.* Many British nurseries and books never caught up with the change. Luckily for them botanists all over the world agreed that these evergreen shrubs do not fit properly into *Helichrysum*, and in 1991 Anderberg reinstated *Ozothamnus.*

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

Roy Lancaster has described *O. ledifolius* as one of the most neglected and under-estimated shrubs. I share his view and would include it in my top ten plants. My only reservations are that I do not know how it would fare in the dry climate of mid-Anglia, and that I do not know whether it will tolerate alkaline soil. The thing that makes this shrub stand out is its leaves. Everything else about it is a bonus. Firstly though, it is ideal for small gardens, and takes years to outgrow its allotted space. My specimen has been in the garden since 1976 and is still only about 1m high and through. The shrub is one of several with the common name of kerosene bush, given because of the way it ignites in a bushfire. After these fires it regrows and, as you might expect, stands up to severe pruning in the garden. The best time to carry out any remedial pruning is early spring. If cut back at that time plants soon put out new growth. Plants pruned immediately after flowering do not make any new growth till the following spring, and look like dead things throughout the summer. In late March or early April the flower buds begin to turn terracotta, and eventually the whole shrub



Ozothamnus ledifolius

glows with the hue. So much so in fact that I am disappointed when the creamy white flowers open. They are in dense terminal corymbs, packed tightly across the shrub, and each is so small that only the keen eyed would recognise them as daisies. The leaves are tiny and rolled under at the edges like those of a *Ledum* (hence the name *ledifolius*), and the growing tips of the plant are bi-coloured in yellow and green. The effect is much better than that of the similarly coloured *Cassinia leptophylla* var. *fulvida*. Even people who dislike variegated plants find it attractive. The shrub is hardier than the *Cassinia* too, and Hillier's Manual notes that it was uninjured by the 1962/3 winter. The yellow colour comes from an exudate which covers the sparsely woolly stems and leaf undersides. This shrub is especially attractive when lit by a low winter sun and my own plant is fairly close to a window where it can be viewed with side or back lighting. On sunny days the shrub has a pleasant aromatic smell. The natural habitat of *O. ledifolius* is on mountains in Tasmania above 800m. Rainfall is 1250–2000mm spread throughout the year. Snow can fall in any month. Often it is seen as fire pruned bushes about 30cm high. The shrub's adaptability is shown by its tolerance of Wirral's 600mm rainfall.

My second *Ozothamnus, O. rosmarinifolius*, is very different. Its leaves are dark green or silvery; the buds are dark red, opening to snowy white, and the shrub will reach 2m in height. This is a shrub from moist, even wet places, and is ideal for damp or boggy sites. Plants grow quite quickly, taking as little as five years to reach 2m. It is a matter of personal preference whether one cuts them back, or removes and replaces. If cut in red bud, sprays will last for a fortnight. Quite large branches can be cut, and this is an ideal flower for large arrangements. My clone has a rather unpleasant smell which makes it unsuitable for the house. Others that I have seen in Australia had a pleasant smell.

Three clones can be bought in Britain. Mine, the inland form, is one. Another is sold as 'Silver Jubilee'. It was first sold by John May when he was at Wimborne. It was grown from seed collected by the Tasmanian plantsman Jeanette Closs, and sent to John. The seed had been collected from Tasmania's South Cape. The resulting plants were found to be a grey leaved form, different from that known in Britain. Botanists know it as the coastal form. Because it was the year of the Queen's Silver Jubilee the plant was sold as *Helichrysum rosmarinifolium* "Silver Jubilee" (double quotes because the name is unregistered). This form has a greyish indumentum of cottony hairs on the upper surfaces of the leaves. You would expect a coastal shrub to withstand wind, and Paul Allanson finds that it is an excellent shrub for the west coast of the Isle of Man. On the other hand, Stephen Sage says that in inland Suffolk it is neither very wind tolerant nor very hardy. I wonder whether there are different plants sold under the same name, for some plants seen in garden centres have been very gawky and open, others had the expected tight, close habit.

A form called 'Purpureus' is offered in the 1994/5/6/7 Plant Finders. Stephen Sage of Smallscape Nurseries, which offers it, says that the buds are purplish and the leaves yellow-green. He believes that his name is wrong, but does not know the right one. Possibly this plant is the species *O. purpurascens*. I have not been able to get details of the plants sold as Sussex Silver and Threave Seedling. *O. rosmarinifolius* is found in S.E. Australia, from Tasmania through Victoria to southern New South Wales, often beside streams and in wet places. It is quite variable, and I have seen dark red and almost white budded forms growing side by side.

(..... to be continued)

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REPORT FROM TERRIGAL

by **Bruce Wallace**

(Bruce reported on the results of the trial species he was growing for the Everlastings Project on 26/1/98, and added his observations on them and on other daisies being grown at his nursery.)

Leucochrysum albicans subsp. *albicans* var. *tricolor* — we grew this last season but with poor results. This time I've kept it in the upturned polybox with some overhead shade. It flowered in spring and again has buds.

Rhodanthe chlorocephala subsp. *rosea* (dwarf white form) — we grew them mass planted in large bowls. Beautiful — a hit at the Flora Festival.

Rhodanthe manglesii (pink and white-flowered forms) — good results.

Schoenia filifolia subsp. *subulifolia* — again good.

Brachyscome iberidifolia — mass plantings in large pots.

B. cardiocarpa (Mt Wallace form) — grown from seed last spring, 100mm x 100mm plants, slow but steady growth. White flowers.

B. tenuiscapa var. *pubescens* — new this season, growing strongly in 200mm pots.

B. aff. *stuartii* — 2 year old plants, good.

B. spathulata subsp. *spathulata* — second season, leggy.

B. tadgellii — recovering from down potting and root aphid. **(Bruce has described these root aphids in less than flattering terms ... Judy.)**

Pycnosorus thompsonianus — these plants are into their third season growing in 30cm pots. They flowered in the spring and again now.

Pycnosorus globosus — are also in 30cm pots and flowered in spring.

Pycnosorus chrysanthes — 30cm pots also flowering for a second time.

Leucochrysum albicans subsp. *albicans* var. *albicans* was overwatered and the original plant died but cuttings taken in spring are doing well, and some are flowering.

Cuttings of *Brachyscome microcarpa* struck in a few weeks in December with almost 90% strike rate.

An addendum arrived from Winton/Longreach with an exciting little bundle of *Rhodanthe gossypina* (which ADSG craves) on 10/6/98: 'We were able to persuade the coach driver to stop for the daisy. At the 36.9km from Winton we found a few in the side cut. The sides of the road are green from some run-off but the paddocks are dry. We talked to a shopkeeper in Winton who said it has been very warm till the last couple of days. Apparently Winton missed out on the last lot of rain – it stopped around Kyuna. We only found a few scattered plants.

We are having a lovely holiday. Carnarvon Gorge, and Cape York trip through the rainforest was great. Different from what I expected — more dry forest. We have been talking, collecting tips and flowers, and ID's of what we could. There are a lot of "I don't knows". There are a couple more books to our collection now too. Kuramba at the gulf was very hot but enjoyable. My highlight was Lawn Hill N.P. It was fantastic — the uniqueness of it all. There are only a few days left but I could keep going. It is so nice to be out here again after a few years.'

(The little plants were swiftly (and lovingly) potted into a container, and cut back hard. The stems were immediately placed in a small bowl of water. Natalie took four of the stems tipped with buds in an attempt to strike them, and we hope the remainder of the flowers may have been pollinated and will mature into viable seed on a sunny windowsill. Medals will be struck for Thel and Bruce. ... Judy)

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Brachyscome multifida 'Purple Mist'

by Pat Shaw

In mid-March Pat rang from Macgregor (Qld) to answer the request for help in NL 50. *Brachyscome* 'Purple Mist' is a seedling that arose in her garden. She believes that it is a hybrid between *B.* 'Amethyst' and *B. multifida* as it came up in close proximity to both plants. The foliage and the flowers are like those of *B.* 'Amethyst' but the flower colour fades to give a two-tone effect to the plants. The habit is prostrate, spreading 0.6–1m (2–3'), and this hybrid is more vigorous and reliable in Brisbane than *B.* 'Amethyst'. It flowers very well in spring and autumn, and has not been PBR'd.

Pat said that the *Cassinia subtropica* form from Nyrang is superior to the Springbrook form in her opinion. Her plant is 2–3 years old, 3m high and 2m wide, and covered with large clusters of flowers. The Nyrang form flowers later than the Springbrook form, and Pat thinks it would make an excellent cut or dried flower.

SUCCESSFUL GERMINATION — the Barrie Hadlow Method

by Judy Barker

Barrie Hadlow suggested in November 1997 (NL 49, p. 46) that seed punnets showing no response to any of the pretreat-ments should be dried out after a determined period, stored in a dry place, and rehydrated in autumn 1998. This idea had stemmed from information given to him by Patrick Courtney on germination successes at Kings Park.

I am willing to try almost anything concerned with germination, and so some time in early January I packed up three deep-sided polystyrene boxes with punnets of difficult species from 'down by the incinerator' and put them in our windowless shed. I must admit that I wanted the space to put all the punnets that had been sown in winter /spring but were doing absolutely nothing in the way of germinating. In March, just before we had been promised a period of good rain I pulled out one box and again laid out an assortment of pots down by the incinerator. We did get good rain. Some time later I happened to glance at these old pots and what did I see? Twelve seedlings in a pot of *R. rubella* (sown 12/4/97, treated with GA_3), 1 of *R. oppositifolia* ssp. *ornata* (sown 27/7/97, treated with GA_3 + SW), and numerous seedlings in variously treated pots of *R. haigii, R. psammophila, R. condensata* and *Schoenia macivorii.* This was exciting because *R. rubella* and *R. oppositifolia* ssp. *ornata* have always been very difficult to germinate in any numbers. I now have 23 seedlings in the *R. rubella* pot (7/6/98) which means >50% germination when the original 3 seedlings transplanted from this pot last year are taken into account.

At the May meeting I was able to brandish this pot of *R. rubella* as living proof that Barrie's suggestion worked. Needless to say the other two boxes were speedily unpacked and laid out without delay. I'm delighted to announce that four more pots of *R. rubella* are showing signs of activity, together with three pots of ssp. *ornata* and one of ssp. *oppositifolia,* and a number of other species, such as *Haptotrichion conicum.*

In the first box there were also some unlabelled pots that I had brought home from the October foray in South Australia and New South Wales in lieu of seed. Why un-labelled? Because I knew what they were — at that time! They are also sending up little seedlings, and now I must try to identify them from their cotyledons and first seedling leaves. Among them will be *R. microglossa, R. troedelii, R. corymbiflora,* and *R. laevis* (which I do recognise as it is pale grey-green and spindly).

On hearing of this outcome, Barrie replied on 22/5/98: '... particularly pleased to hear of your success with the 'stored' seed punnets. The potted plants so treated that have produced seedlings (hopefully the required species) within the pot suggest to me that this dry, dark period away for a few months, or at least several weeks, satisfies the 'after-ripening' needs of the species. It may particularly be relevant to dry country plants where to germinate at the wrong time would be a disaster. Anyway, I am delighted.'

These results may be another indication that Joy Greig's suggestion of using wet/dry cycles for germinating difficult species is a good one. This idea appeared in NL 49 pp. 41–44. It was also a reminder of Julie Strudwick's observations in NL 46, p. 47. Julie had decided to throw out her SISP trials after a period of no further activity but had left them stacked up out of the way, and had forgotten all about them. When she went to throw them out after heavy rain in May she found seedlings in one, and later potted on 27 seedlings. Julie's experience may well have been another example of wet/dry cycles triggering germination.

Fortuitously, at a recent ADSG meeting Esma produced an article from *Aust. J. Bot.* (1997) **45**, 783–815 by Shauna Roche, Kingsley Dixon and John Pate titled 'Seed Ageing and Smoke: Partner Cues in the Amelioration of Seed Dormancy in Selected Australian Native Species'. These workers examined more than 180 species of freshly collected seed for viability and smoke responsiveness. They also used soil storage in combination with smoke and other pretreatments, and observed viability of seed over one year. The results are extremely interesting although, unfortunately for us, only four species of Asteraceae were trialled.

In their trials seed was sown evenly over the surface of punnets (14 x 8.5cm). Six replicates of 100–500 seeds were used if enough seed was available, and 30 seeds were sown if seed was in short supply. All punnets were kept in a shaded glasshouse and watered as required. Fresh seed was sown in March (from seed collected the previous year) and watering was begun. In November the number of seedlings were counted and this period of time constituted the first season. 'Soil-stored' seed was achieved by allowing these punnets to dry out and remain untouched until the following March. At this time the punnets were treated again and watering began. The smoke treatment used for these tests was cool smoke pumped into a tent which housed the punnets.

The results drawn from the experiments described in the article indicated the following:

- the viability of fresh seed over one year declined from 10% to 80%,
- the germinability of smoke-treated viable seed increased after 1 year of soil storage for all groups tested (which included monocotyledons, dicotyledons, seeders or resprouters),
- pretreatment with smoke increased germination whether or not seed had been soil stored,
- when species were subjected to smoke, soil storage and smoke again, germination percentages were still higher than those of the unsmoked controls. It was noted on this point, however, that fewer numbers of germinants in the second season may have been observed after soil storage due to the effect of a reduction in viability.

It seems likely that my storing of punnets in the shed equates to the soil storage described above. These punnets were not treated again but perhaps the results of Roche, Dixon and Pate suggest that it would have been interesting to squirt some SISP on the surface of the punnets before exposing them to the elements.

PROGRESS of the EVERLASTINGS PROJECT

The germination results achieved so far by ADSG members are indicating that, in the majority of *Rhodanthe* species, the following observations hold true:

- Most of the seeds of the species we are studying require a period of at least 6 months at room temperature (RT) before they germinate in reasonable numbers. It appears to us that seed collected in 1996 has germinated better when sown in autumn and even winter of 1998 in Melbourne. The colder it is, the slower the germination but the numbers are there. As winter progresses the seedlings will probably need some protection from frost and cold, wet conditions.
- In general, the most successful pretreatment for wild seed is a soak in the SISP solution, usually with higher germination if a trace of detergent is added to the SISP. Our results may be hinting that more seedlings die after germination when detergent is added but we will have to look at this possibility more closely before being positive. Meanwhile, caution should be applied. (I add 1 drop of Soil Wetter from the tip of a darning needle to 8—10ml of the pretreatment solution.)
- If seed is not quite through the dormant period, a 24 hour soak in 50mg/l solution of GA_3 (with or without a trace of detergent) is the most successful pretreatment. This is especially the case for most *Rhodanthe* species, but *Schoenia* invariably responds better to GA_3.
- If none of these methods seems to trigger germination, allow the punnets to dry out in some dark spot and try again after some convenient time, as described above. This method is particularly applicable to *R. rubella* and *R. oppositifolia* ssp. *ornata*.

We think we now have reached the stage at which we can stop germination tests, and concentrate on the actual growing of species in various climates and conditions. The Melbourne members are intent on growing these plants in quantity, testing their ability to survive in gardens and containers, and their potential as cut and dried flowers. We would hope that members in other states will continue to assist us in these activities. We can either provide viable seed with good instructions on how to germinate it, or seedlings if you can arrange to have them collected. On p. 34 you will see that ADSG will hold an Everlasting Daisy Sale on the weekend of October 3rd/4th. Seedlings in abundance would be available at that time, and even before October if members could arrange to pick them up.

Many of us now have large pots or troughs of healthy-looking seedlings of the following species of *Rhodanthe — ascendens, charsleyae, chlorocephala* ssp. *rosea* (dwarf white) and ssp. *splendida, collina, corymbiflora, cremea, floribunda, diffusa* ssp. *diffusa* and ssp. *leucactina, moschata, polygalifolia, propinqua, psammo-phila, stuartiana* and *tietkensii*. Our gardens are strewn with drifts of *R. anthemoides, charsleyae, chloro-cephala* ssp. *rosea, cremea, diffusa, manglesii, polygalifolia, propinqua,* and *stricta.* Some of these drifts are small but the overall picture should be superb in late winter. Should be!

A number of these annuals will grow from cuttings. When I planted out my 12 pots of tall *R. charsleyae* in a group in the garden, I nipped off the top third, removed the lower leaves from the thick stems, and stuck them in beside the plants. Within two weeks they had rooted. This also proved successful with *R. cremea* cuttings in two containers. There couldn't be an easier way of multiplying plants.

Of course, there is still the little matter of collecting those outstanding species on the wanted list. Since we published the list on p. 4 of NL50 we think we have acquired or will soon have access to *Chrysocephalum eremaeum, Hyalosperma zacchaeus, Rhodanthe gossypina* and *R. uniflora*. That still leaves 19 spp. for which we have absolutely no material. We are extremely grateful to all those members who have helped in any way. Please keep on helping now that we have entered this new phase of the Project.

FURTHER THOUGHTS ON WIND POLLINATION

by **Jeff Irons**

Yesterday (30. 3. 98) I went to Kingsley Dixon's brilliant lecture (at Ness Botanical Garden) and afterwards asked him about wind pollination of daisies. His answer was that there is no evidence of insect multitudes in the WA daisy fields. Since the flowers bloom very quickly they cannot believe that insects have time to breed and proliferate. Hence they think that the flowers are wind pollinated.

Another answer could be that they are insect pollinated, and that it needs only a small percentage set to give more than sufficient progeny to perpetuate the display.

Considering plants from the other side of the country, I always rub my craspedia heads together, yet get a low seed set. Wild uncleaned seed from New South Wales has a much higher proportion of viable seed.

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DAISIES ARE HARD WORK

by **Bill Owen**

When I was permitted to join the Daisy Group in 1985 I thought all of my gardening problems were solved. Judy had spoken to our Central Highlands Group, and I could see my garden with masses of hardy plants, flowering profusely, and needing no care.

The reality is that it is an endless job, growing and planting replacements for the daisies that simply vanish, while exotic perennials seem to thrive for ever. So I have had to limit my plantings to those with some prospect of surviving, and here is my grouping for daisies suitable for Ballarat's climate, with 28 inches rainfall, hot dry summers and a winter with very cold south-west winds.

Daisies that should survive:-

Brachyscome angustifolia, basaltica var. *gracilis, melanocarpa, multifida, sieberi* var. *gunnii*
Bracteantha bracteata, viscosa.
Calocephalus citreus, lacteus, brownii (now *Leucophyta brownii*)
Cassinia aculeata
Chrysocephalum apiculatum, semipapposum
Helichrysum rutidolepis
Ixodia achillaeoides
Olearia adenophora, erubescens, ramulosa
Ozothamnus diosmifolius, obcordatus, thyrsoideus
Rhodanthe anthemoides

Daisies that may survive:-

Brachyscome ascendens, dentata, diversifolia, formosa, gracilis, nova-anglica, parvula, segmentosa, spathulata, stuartii, tadgellii, whitei, sp. Darling Downs
Chrysocephalum baxteri
Helichrysum elatum, scorpioides
Ixiolaena species
Leptorhynchos squamatus
Olearia phlogopappa
Ozothamnus ledifolius
Podolepis jaceoides, neglecta
Pycnosorus chrysanthes, globosus

Daisies that have to be replaced each year (if I have the energy):-

Brachyscome iberidifolia
Bracteantha bracteata — dwarf form (Hat Head)
Leucochrysum albicans
Rhodanthe chlorocephala ssp. *rosea, manglesii*
Schoenia cassiniana, filifolia ssp. *filifolia* and ssp. *subulifolia*

Many other daisies have been left off the list because they are really not garden plants, or because I have not tried to grow them.

This article will probably mean my immediate expulsion from the Daisy Study Group, but someone has to be brave and tell the truth. However, the compensating factor has been the friendships that have resulted, so the hard work has been well worthwhile.

REPLY TO BILL'S DASTARDLY ARTICLE by Judy Barker

We can't contemplate expulsion. Bill is one of our most valuable members, treasured for his forthrightness on all manner of subjects (including finance), his good company and his knowledge of wine. Besides, he is right to some extent — certain daisies are not easy to grow. Two questions spring immediately to mind: what does he expect if he insists on living in Ballarat, and does he realise that six species on the list are annuals?

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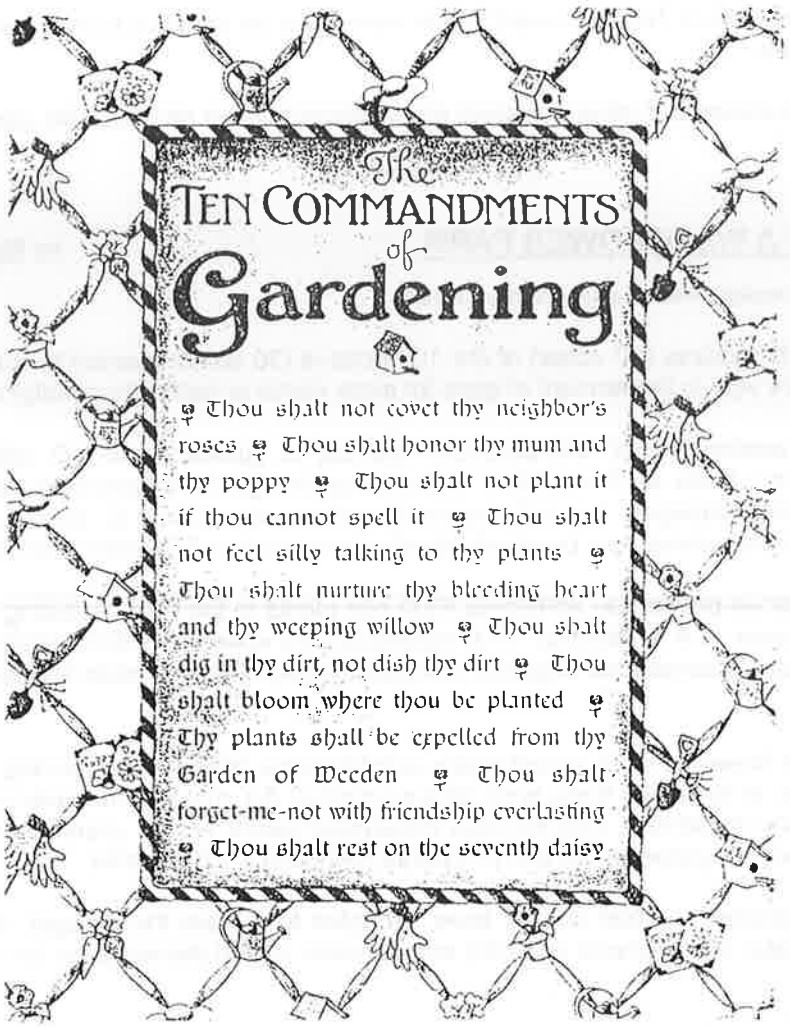

— given to John Armstrong as he left the Ted Kipping garden San Francisco March 1998

THE MEANING OF *PHLOGOPAPPA*

Jeff Irons started the ball rolling (9/2/98) by observing that the seventh volume of *Encyclopaedia of Australian Plants* by Elliot and Jones stated that the meaning of *phlogopappa* was 'with a *Phlox*-like pappus'. He wrote: 'Admittedly I haven't looked up any *Phlox* but one does not expect the Polemoniaceae to have a pappus. Usually the seeds are sticky. What has happened to the Phlogiston — flame — beard explanation?' The Melbourne members were consulted but could shed no light on the problem. Unfortunately, Rodger Elliot was not at home when I rang to ask for information.

Peg McAllister did some research and produced the following: 'I looked up my Funk and Wagnall to see what I could find on *phlogopappa.* I found —

phlogosis — Pathol. 1. Inflammation
2. Erysipelas
phlogosis — an inflammation
phlox, phlogos — a flame; phlogotic — adjective
phlox — a description given of the North American flower we know ending with —
Phlox — a wallflower, lit. a flame (phlegein — burn)

Do you think the *Olearia* pappus is red or inflamed?'

Well, 'no', would have to be the reply. In *A Popular Dictionary of Botanical Names and Terms with their English equivalents* by G. F. Zimmer the meaning of *phlogopappus* is said to be 'with bright red feathers'.

In a later letter (6/3/98) Jeff had drawn his own conclusions: 'My idea of the derivation of *phlogopappa* in the eponymous *Olearia* is:

Gk phlogos — flame
pappos — beard

So, old men with straggly beards have a beard which resembles an inverted flame. Hence *phlogopappa* means flame shaped beard.'

This seems a reasonable answer but other members are welcome to have an educated guess.

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DEVELOPMENT OF A WILDFLOWER FARM

by Ray Purches

(Rose and Ray Purches are developing a wildflower farm at Wangaratta.)

Currently we have some 5 hectares (12 acres) of our 12 hectares (30 acres) planted to cut flowers, and the good thing after such a dry year is the amount of gaps for more plants or better (hopefully) selections.

We grow riceflower and waxflower well, and *Dryandra formosa, D. quercifolia,* and *D. nobilis* var. *fragrans* (unfortunately known in the trade as 'hewardia'). We also grow agonis, thryptomene, banksia, *Pimelea nivea,* verticordia, scholtzia, isopogon, waratah, ixodia, *Cassinia quinquefaria, C. uncata, C. leptocephala* and gum foliage. This hot dry summer has provided lots of information for us to learn from and to use.

As it happened, last winter we planted an additional 4000 odd plants in the field, including 900 riceflower in 6 selections, 1200 waxflower in 9 selections, 1500 eucalypts in 5 species. Unfortunately, our farm water supply ran almost dry, making occasional irrigation possible for only a few specials like waratah and some established waxflower.

The name of the game in flower farming is continually selecting new lines and discarding those which are unsuited to our conditions, or for which there is no defined market. So, many of the selections we tried last year will be ripped out and replanted. This includes *Eucalyptus gunnii* and *E. crenulata* which hated last summer. We will replant with *E. pulverulenta* and *E. cinerea* (pendulous), 700 plants.

The waratahs which we planted in 1996 and 97 have struggled to survive the drought, especially on the higher ground. We will water the survivors (30/100) and consider added plantings on our flatter country in two or three years.

Interestingly, plantings of *Banksia coccinea* and *Dryandra quercifolia* are growing superbly in their second year beside drought-killed waratahs. A small harvest is expected next season.

The outstanding result would have to be the riceflower, including two Queensland selections. We now have 1000 riceflower in the ground with another thousand to go in soon. All have shown adaptation to dry hot summers with less than 10% losses. We still have to find out whether optimum stem lengths (60–110cm) can be achieved by October this year. At this stage Cook's Snow White is looking better than our own Jacobs' Pink selection which is a smaller plant at maturity. Cook's Snow White gets to 2 metres at Helidon (Qld) and most of ours, planted as small tube stock in June last year, are now 1m high and growing strongly. The other Cook's selection, Tall Pink, has not performed so well, with generally weaker growth and several plants flowering sporadically through autumn, and thus reducing production at harvest. Other selections with both pink and white buds are being trialled, including three from South Australian sources and one from the bush in New South Wales south of Sydney.

As many of you would know, riceflower dries beautifully and even air dried is quite durable. The pink forms fade as they age, and can be picked for drying earlier than for the fresh market with outstanding deep pink buds from our Jacobs' Pink, for example. If harvesting is delayed too long the opened flowers can dry with a brownish tinge, to the detriment of the dried product.

Export markets for cut flowers rely on extended vase life as well as quality post harvest handling (including packaging). To get premium prices in say Japan vase life must be at least 10 days, as up to 5 days can be lost getting the product there by air freight. Export Simulation Trials of our Jacobs' Pink selection by I.H.D.

Knoxfield resulted in vase life of 12 days, however, best practice involves forced air cooling on farm and cool transport to Melbourne. If our crop management is good enough to grow riceflower well, a coolroom and refrigerated vehicle are on the agenda for 1999. Riceflower, however, is susceptible to a range of pests and diseases, notably phytophthera and root knot nematodes. That is why we continue to chase and trial other potential crops as well as closely monitor results from our current ones.

Flower farming is certainly interesting. We hope to make it profitable too.

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REPORT FROM JAMBOREE HEIGHTS

by **Beth McRobert**

I'll send my daisy study project results to Bev in the near future. I really wish I could say the results were great overall, but not so, although there was a 'minor success' with *Rhodanthe stricta.* Although the individual flowers were so tiny, I thought the little bushes were quite delightful, covered as they were with the tiny, raggy-starlike white flowers in such profusion. The plants need to be 'clumped' together, it seems to me, to make a show.

I am in awe of all the inspiring experimental work done by ADSG members, and think they are wonderful in trying so many different ways to get those lovely little 'puzzles' growing in our gardens. So, I thought, well, I'll try an experiment. Because I did not have gibberellic acid, and because some people use bleach, why not try vinegar, I thought. Hmm — how much, how long, and all that stuff. Well, I tried some *R. chlorocephala* ssp. *splendida,* and *R. stricta.* I diluted the vinegar to 50%, and soaked the seeds overnight, with the name tag in each container. Also, with those two species, I tried some seed with the smoke water. The next morning I woke with a blinding migraine headache, but because I HAD to get my seeds into the mix, I staggered out of bed, planted the seed, and staggered back to bed. When I 'came to' and went out to inspect what I had done, I was devastated to discover that I had not marked which pot had had which treatment. But because plants of each type came up in only one pot of the two planted, I suspect very strongly that the vinegar treatment did not work. The moral of the story, I guess, is not to plant seeds when you have a migraine — or don't try vinegar as a pretreatment.

Although I was happy with the germination of some of the species, I had no luck with *Calocephalus citreus* and *Rhodanthe diffusa* ssp. *leucactina.* I saw the potential beauty of *R. chlorocephala* ssp. *splendida* when I had a few flowers, but they were smallish. Their pure whiteness is just lovely. *Chrysocephalum semipapposum* was full of promise — lots of seedlings, but they don't seem to like where I planted them out, many have died, and some are just sitting, looking at me. The two SISP papers sent with seeds last year definitely seemed to have had a beneficial effect.

I have some fears though that my participation in the daisy study project has some dreadful connection with weather extremes. In 1996, just after I had planted the seed, we had two weeks of unseasonal, flooding rain, and in 1997 the night after I planted most of the study seed, we had Brisbane's coldest June morning on record. Is it coincidence? Or what should I fear next time? Summer this year in Brisbane has been particularly trying — we have had some showers and storm rain, some areas more than others, but no general steady soaking rain, and many weeks of hot, extremely humid days. (We usually get some humid weather, but not for as long as has occurred this year, it seems to me.)

The *C. semipapposum* seeds were planted in June, but no flowers yet (in mid-March). And I wish I could complain that *Rhodanthe anthemoides* grew like a weed in my garden — no such luck there either. I have the occasional plant, but they don't multiply. Still, they are lovely little things, aren't they? I too had multiple headed *Rhodanthe chlorocephala* ssp. *rosea* flowers but they did not appear to set seed. They were very attractive though. Last year I 'introduced' *Brachyscome iberidifolia* to some keen gardening folk who were just delighted both with the display of flowers and length of flowering time.

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REPORT FROM AN ADSG FRIEND

Ruth Moir of Albany (WA) reports on 18/3/98: 'I recall a good germination of *Leucochrysum albicans, Rhodanthe citrina* and *R. manglesii,* as well as repeats from the Balladonia form of *R. chlorocephala* and good old *Schoenia filifolia.*

The boxes I used for growing some of these daisies were just left out and ignored — their dead flowerheads left. This month has seen two weekends of very light steady rain of tropical origin, amounting to about 70–80mm in total. My small boxes are alive with germination and I'm fairly certain a big percentage are daisies "au naturel". Anyway, I'm going to put more seed in very soon, as well, and will let you know results.'

On 30/4/98: 'Now it's back to the Herbarium for me. I'm collecting acacias for a reference library down there, which will enable people to bring in a bush specimen and compare it with our collections without endangering the collection proper. We have insect precautions etcetera in place, so having this reference in the outside "dirty" area is going to be much more user-friendly.

When I wrote last time I forgot to include some *Lawrencella rosea* flowerheads picked in September '97 at our farming property. They grow alongside carpets of *Rhodanthe manglesii* — quite short, but a haunting perfume. They may grow for you. I hope so. The seeds from last year's sowings, which germinated earlier, are growing well.'

MEMBERS' REPORTS

Jeff Irons of Wirral (England) writes on 9/2/98: '*Brachyscome aculeata* has flowered all winter in my unheated greenhouse. So far the winter has not been very cold. There has been little frost, and even then it was only –3°C. That was sufficient to clobber the young growth on *Ozothamnus obcordatus* Mt Wilson.

On 6/3/98 Jeff explained why he had mentioned seeing *Olearia muelleri* on his last visit to Australia: 'It was really just an incidental. Obviously you don't see many flowers during a January visit to the Mallee. I thought it a fascinating area. Apparently the substrata vary, and while the modern roads go straight across the Mallee, the early roads twist about in order to avoid the parts where they would subside. By accident we came across an old iron well — a large area of corrugated iron sheeting which traps condensation, and lets it run down into a tank. Each iron well produced the equivalent of about an inch of rain.

(7/5/98, in a letter to Esma) — 'Thank you for the news about my Blackheath daisy. We've had a warm winter, with no frost since October, but two very wet months. The Blackheath plants did not survive, but the Mount Wilson *Helichrysum scorpioides* did. The Mt Wilson plant grows on basalt derived soil; the Hargreaves Lookout one was on sandstone. Both flower throughout the summer and into autumn. I recall that you said that the Mt Wilson plant has the leaves of *H. rutidolepis.* There is another different *H. scorpioides* on Darling Causeway at the Mt Wilson end. It was surprising to find that the handsome *H. scorpioides* from Mt Barrow (Tas) did not survive last winter. Luckily I had rooted a cutting, and have plenty of seed. It is a spring flowering plant.'

Pat Tratt of Metung (Vic) writes on 26/2/98: 'This long drought has been devastating in the garden, particularly for daisies. Almost all my *Bracteantha bracteata* have died off; *Podolepis jaceoides* attempted to flower but succumbed eventually. Surprisingly one *Brachyscome spathulata* has struggled on. *B. multifida* mauve and white flowered are very stressed but hanging in there. *B. basaltica* still has a few flowers.

I had some initial success with seeds of *R. anthemoides, L. albicans* and *Actinotus helianthi* you sent, but couldn't keep them going due to being away too much. I still have some seed to try when conditions improve. I had one *Olearia astroloba* germinate but couldn't raise it above 4cm (1½"), then it died.'

Colleen Simpson of Glynde (SA) writes in 3/98: 'The everlastings at Kings Park were in full flower (October) under irrigation. They were mowing down the spent ones (not under irrigation) with a whipper-snipper. The irrigated plants were a spectacle with *Rhodanthe chlorocephala* subsp. *rosea* in drifts with drifts of *R. polygalifolia,* many of which were tinged blue to being blue amongst all the yellow. I suspect they had used a weedkiller or similar.

As we live close to the Botanical Gardens we often do our walking in there. On Sunday, with all the hot weather, there was a lovely bed of *Rhodanthe chlorocephala* subsp. *roseum,* very strong, vigorous plants flowering freely, and looking none the worse for the hot weather. Here I've been telling everyone not to plant until the first rain. I guess we are never too old to learn.

I sowed seed of *Calocephalus citreus* and *C. lacteus* from you last year , so it is my project for this autumn to work with this species. I find brachyscomes no good for me here and have given up on them.

Ros Cornish of Widgiewa Road via Bungendore (NSW) writes on 31/3/98: 'I told Natalie that I had the feeling that the *Leucochrysum albicans albicans albicans* that she gave me from Licola and Longwood as well as the *L. albicans tricolor* seem to be annuals here. They are very vigorous plants and flower quickly and for a long time, then they suddenly die for no apparent reason. However, the *L. albicans* from the Captains Flat Road and from the Kings Highway seem to be smaller plants and live longer. I felt that those occurring naturally on our block are perennial. So, I'm going to try and determine whether this is so.

I did manage to get some seed this year of *Chrysocephalum semipapposum* which is growing in my garden and was from a naturally occurring plant on our block. If it's not too late I could continue with growing trials and perhaps some seed treatments.

Judy Barker of Hawthorn (Vic) reports in March that a plant of the Anglesea form of *Podolepis jaceoides* in a 30cm pot which looked totally dead in January had the long, dead stems pulled off by hand in a bid to do some quick tidying before a meeting. The whole pot was to be emptied and washed but time did not permit. When I looked at it last week there were green splodges at the ends of these poor mauled stems. A week later the splodges reveal themselves as good growth. What a tough plant it must be! (7/6/98) It was still putting on strong growth at the time of the May meeting, but yesterday it looked dead. Some of these species just can't cope with praise!

Anne Dealtry of One Tree Hill (SA) reports on 12/4/98: 'We have smoked water now and have good results with our native species, so we will give the daisies a try. Our only success is with *Leucochrysum albicans* subsp. *albicans* var. *albicans*. A lovely potted plant, a good border annual. They flowered from an early age and kept going, flowering through our winter into spring. I think our summer drought may have helped to kill them off. A self-sown plant grew from late winter into spring, and flowered through summer into late autumn, and finally died. We live in a frost free area, mild damp winter, dry long summer, no humid conditions. No problems with snails or other insect pests.'

Christina Leiblich of Kimba (SA) sent us some much-needed seed on 21/4/98 with a note about the two packets of *R. stuartiana*. She wrote that her friend, Connie, had helped her to collect the seed, and had noted that one form was different, the flowers being larger. Christina observed: 'It was probably a larger form of *R. stuartiana*, the only other possibility I thought could be *R. floribunda*, so if you get any strays!!! This group of plants had up to about 20 stems, some with 2 flowers per stem, the second one branching off lower down. All the plants in other areas had just one stem with a small flower (probably due to late rains) whereas these must have had some earlier run-off from the road as I had spotted them when going out to the Gawler Ranges for the ASGAP tour. *R. stuartiana* always grows on harder ground in comparison to *R. polygalifolia* which prefers a bit better soil. *R. polygalifolia* comes up here with May rains.

On June 27th and 28th we are having a two day camp in the Gawler Ranges. I gather our areas of interest will be the Organ Pipes and Pine Lodge areas. We had a marine and seashore vegetation day at Arno Bay last Sunday, and saw plenty of *Olearia axillaris* and *Leucophyta brownii*. Next month we go to Hen and Chicken Rocks.'

Gloria Thomlinson of Shepparton (Vic) writes on 22/4/98: 'Some *Rhodanthe humboldtiana* plants are now large enough to plant into the garden, so I started after Sunday night's lovely rain. Still, after all this rain, the soil is dry after a few centimetres in some areas. In every hole dug I water and drain a couple of times, and apply "wettasoil" solution to the area. To make sure of water retention to the root ball I have soaked the pots in the same solution too. Of course, they are then well watered in.

SNIPPETS

- The following information is taken from the abstract of a paper by Stuessy, T.F. and Garver, D. (1996). 'The defensive role of pappus in heads of Compositae.' In P.D.S. Caligari & D.J.N. Hind (eds). *Compositae: Biology & Utilization. Proceedings of the International Compositae Conference*, Kew, 1994. (D.J.N. Hind, Editor-in-Chief), vol. 2. pp. 81–91. Royal Botanic Gardens, Kew.
  'The pappus is one of the distinctive morphological features of the Compositae. Throughout the family, many variations in pappus structure occur including bristles, scales, awns, crowns, glands, and even absence. Traditional perspectives have suggested that the pappus is primarily an adaptation for fruit dispersal, such as seen in the common dandelion (*Taraxicum officinale sensu auct.* non Weber ex F.H. Wigg.). Although dispersal is obviously important in some cases, especially when the pappus is capillary and well developed, the role is not so clear with other modifications, such as scales or awns. It is hypothesized that the original adaptive role of the pappus in the Compositae was protection of ovaries from predation, primarily from insects, but that subsequently it developed a dual role for defence in the developing head and dispersal of fruits after fertilization and maturation.'

- Jeanette Closs sent a cutting from *Raves* March 1998, Issue No. 2 (a newsletter about Rare, Vulnerable and Endangered Species put out by the Parks and Wildlife Service). The article described the rediscovery of *Argentipallium spiceri,* Spicer's Ever-lasting, on a property at Longley in Tasmania. This species has always been regarded as rare and was presumed to be extinct. It is a small shrub or perennial to 0.5m, somewhat similar to *A. obtusifolium,* but having smaller white flowers tinged pink, usually arranged in loose terminal panicles.

- Congratulations to Jeff Irons on the publication of *Australian Plants: A Guide to their Cultivation in Europe* by Thomas Ross and Jeffrey Irons (1997), privately published. An excellent review by Tim Longville has appeared in the newsletter of the UK Australasian Plants Society. We know that this book has been written from experience, backed by years of research. Thomas died before the book had been completed but he would have been delighted with this review. Tim Longville writes that it is a 'thorough and thoroughly practical manual ...' and ' ... a permanently valuable and splendidly produced contribution to horticulture in Europe.' There are four main sections; a general introduction to Australian conditions and plants, detailed descriptions of over 140 plants, a section of tables compressing information on a further 500 or so species, and a final selection of 'Top Ten Plants' for various situations. The book is available from Jeff at 74 Brimstage Road, Heswall, Wirral, L60 IXQ, England for £25.00 (plus packaging and postage).

- Mark Saxon, our only WA member, has announced that his seed company, Sachsenfeld Pty Ltd, has produced its 1998 commercial daisy seed list. There are 5 colour forms of *R. chlorocephala* ssp. *rosea,* 2 of *R. manglesii,* 7 of *Bracteantha bracteata,* 1 of *Brachyscome iberidifolia,* and 2 subspecies of *Schoenia filifolia.* Mark's prices are very competitive, and he aims at 75% germination before he calls a species successful commercially. *R. humboldtiana* will be available next year. He is working on *Haptotrichion colwillii, R. chlorocephala* ssp. *splendida, R. cremea, R. rubella* and a miniature form of *R. manglesii,* and *Schoenia macivorii.* This is very good news. Mark's address is PO Box 2023, Albany, WA; fax and phone (08) 9853 1141, and his email address is mark@albany.jrc.net.au

- Esma Salkin made an interesting observation on plants of *Rhodanthe stuartiana* growing in the Gawler Range. While on her way to Western Australia on she observed that plants had almost finished flowering. Some weeks later, on her way back home, she noted new growth after follow up rain. This follow up rain apparently can initiate a second flowering.

MEMBERS' NEWS

EVERLASTING DAISY SALE
At 61 DIANE CRESCENT, NORTH CROYDON, MEL 37, E11.
3RD/4TH OCTOBER, 1998
FROM 10.00AM TO 4.00PM

Peg McAllister has kindly offered her double garage and very wide, long drive as the venue for this plant sale. We hope that all members who have plants for sale will take advantage of this activity. There will be many other small plants offered for sale, such as goodenias, flannel flowers, brunonias, croweas, and other non-everlastings. A 10% commission on sales will be asked as a donation towards the Study Group. Come and sell or buy or both. We will also have many free seedlings for members to trial at home for the Project.

Beds will be available for country members. A barbecue is planned at Peg's for the Saturday evening — **BYO meat** — ADSG will provide salads, desserts and drinks. **PLEASE TELL US AT LEAST TWO WEEKS BEFORE THE DUE DATE WHETHER YOU NEED A BED, TRESTLE SPACE (area required) and WHETHER YOU WILL BE PRESENT AT THE BARBECUE.**

John Armstrong's garden will be open to the public on the same weekend, and he is also holding a plant sale for the Friends of the Cranbourne Annexe to the Royal Botanic Gardens. The entire weekend will be an excellent opportunity to purchase unusual plants.

MAY MEETING

It was a pleasure to see sixteen members arrive for the meeting on May 2nd. Thank you to all those members who brought plants, and thank you to those members who took plants home for trialling. Two more members and a number of spouses arrived in time for the delicious dinner provided by the Melbourne

members. My great thanks to all who helped, especially to our caterer daughter and her friend, Sandy, who made sure everything was hot and beautifully arranged by 6.30pm, without any of us having to lift a finger.

The meeting began with an announcement that *Bellida graminea* had been added to the species in the Everlastings Project. Although it is not strictly speaking an everlasting species, it is included in the *Lawrencella* complex as revised by Paul Wilson (1992) in *Nuytsia* **8** (3): 361–77. Its inclusion was prompted by the showing of a superb slide of its seed, an example of the beautiful photographic work of Michael Marmach. Since it was Joy Greig's suggestion that *Bellida graminea* be included in the Project, she was not surprised to find herself nominated as co-ordinator of this attractive genus which contains one species only. She would be most grateful for information from members or for offers to trial it. (Joy's address is on p. 19).

Maureen Schaumann brought daisy specimens from her garden as an illustration of what is flowering in May. Her display was of the following species:

Brachyscome 'Betty Campbell'
Brachyscome 'Evan'
Brachyscome 'Sunburst' — can be cut back and comes again.
Cassinia laevis
Cassinia subtropica
Helichrysum scorpioides (Warrandyte form)
Olearia sp. (Brisbane Ranges)

Joy Greig displayed a pot of *Brachyscome nivalis* (Mt Buller) to show that the seedlings of this form have leaves that are not as divided as those of most other forms.

Jan Hall listed a few drought survivors in her Yarrawonga garden — *Olearia floribunda* (which flowers for her in February/March), *O. teretifolia* and *O.* aff. *lanuginosa*. These plants receive one deep soaking overnight in summer.

Esma Salkin brought a specimen of Jeff Irons' mysterious plant from the Lookout at Blackheath (NSW). Judy had mistakenly thought it to be *Chrysocephalum semicalvum* ssp. *semicalvum* but Esma had always maintained that it smelled aromatic rather than malodorous. It has been identified by Neville Walsh (botanist from the National Herbarium of Victoria) as *Helichrysum rutidolepis*. The *H. scorpioides/rutidolepis* complex has yet to be revised, and may be found to include more than two species.

Esma then gave us a most interesting talk on the germination of *Lawrencella davenportii*. The two members who have had the greatest success with this difficult species are Max McDowall and June Rogers. Esma's efforts to reproduce their results and to try other methods are outlined in her article on p. 22.

The three co-ordinators, Natalie, Bev and Judy, then talked about species under their jurisdiction in the Project. Natalie spoke of *Cephalipterum drummondii*, the many forms of this species to be found, and her progress in growing them. Bev talked about the three subspecies of *Schoenia filifolia*, ssp. *filifolia, arenicola,* and *subulifolia*. She illustrated the differences between them, and showed us how each one grew. Judy gave her talk on three species of *Rhodanthe* in the *Synachyrum* section of the genus, *R. floribunda, R. stuartiana* and *R. troedelii*. At least the first two are very attractive, and should be grown more often. Members were given descriptions of each of these three species set out as we intend to present the information in the forthcoming book, *Australian Everlasting Daisies* Part 1.

After dinner (a mouth-watering array of various casseroles, salads and desserts) we watched entranced as Julie Strudwick again presented a slide show on the 'Denizens of the Daisy Garden'. Julie had already given us this talk when we had a weekend meeting at Shepparton in November 1996 but it was so delightful that we asked if she would give it again. It was even better this time. Julie may have added more of her amazing slides to this presentation. It is astonishing that she has been able to get near enough to these 'denizens' to get large, clear pictures of the colourful, often small and shy creatures.

Ray Purches followed Julie with a fascinating exposition of the problems and pleasures of developing a wildflower farm as set out on p. 30. He had brought specimens of his product, which filled us with awe. It was unfortunate that this year has been one of drought, but he seems to have risen to all the challenges he faced. We all wish Ray and Rose every success in future. Although it was getting quite late we begged to see some of Jan Hall's slides of daisies seen on her trip to the Northern Territory and Western Australia in 1997. The few slides seen were enough for us to want more. We will have to arrange to see them all when next we congregate.

On Sunday we travelled to Eltham to see Bruce Grose's interesting garden, followed by a visit to the Yarra Yarra Group's plant sale where we lightened the load in our purses, and gained many unusual, keenly priced plants. My gratitude to all who helped to make this weekend such a pleasant one.

LEADER'S LETTER

Dear Members,

We are extremely fortunate that Michael Marmach is making slide sets of the fruits of all the species in the Project for ADSG. We did not expect them to be quite as fascinating as those of the brachyscome fruits but they are equally interesting. We hope to include a representative sample of them in the next book.

In NL 50 I was taken aback by the fact that the germination of *R. battii* fell from 26% when sown in November '97 to 4% when sown the following January. I have since sown seed from the same batch in early June and germination (after a SISP pretreatment) is now 40%. I think this probably means that seed of this species should not be sown in summer. I will try sowing *R. charsleyae* from Meekatharra (10/96) also in June to see whether the germination has increased. It is not supposed to germinate well except at 28°C, but we will see how it goes.

Our third son was successfully married. Our second son's twins are imminent.

Regards,

NEW MEMBERS

Welcome to the following new members:

SEED DONORS

Thanks to Joy Greig, Barrie Hadlow, Christina Leiblich, Gordon Ryan, Maureen Schaumann, Kym and Peter Sparshott, Esma Salkin, and Julie Strudwick for seed. Thanks to Bruce Wallace for cutting material.

GARDEN and COMMERCIAL SEED BANK

ADDITIONS
Brachyscome aculeata
Calocephalus lacteus, Calotis dentex, lappulacea
Ozothamnus diosmifolius
Rhodanthe battii, chlorocephala* ssp. *splendida* *

PROVENANCE SEED BANK

ADDITIONS
Brachyscome ciliaris (Caiguna, Cape Arid, Fraser Range, Norseman, WA; 9/97: Iron Knob, Nullarbor, Penong, Wirrulla, SA; 9/97)
Olearia muelleri. Ozothamnus hookeri (Tantangara Reservoir Plain, 16/5/98)
Rhodanthe polygalifolia (SA, '96)*, *stuartiana* (Buckleboo Rd, SA; '96)*
Streptoglossa liatroides (Nth Coober Pedy, '89)
ISOLATED and HAND POLLINATED
Brachyscome dentata, microcarpa, stuartii (N-W slopes NSW, '98)
DELETIONS
Brachyscome decipiens
All *Celmisia* spp.
Olearia exiguifolia, imbricata

* seed may be needed for the Project.

SUBSCRIPTIONS.

Subscriptions are now $10.00 per year for Australian members and $20.00 per year for overseas members. We regret the increase in the subscription. It has been necessary in order to meet the increasing costs of printing the newsletter. **FEES WERE DUE ON 30th JUNE 1998.**
For the members who have not yet paid their 98/99 subscriptions, a red cross in the box is the second and final reminder. Cheques should be made payable to the Australian Daisy Study Group and forwarded to Judy Barker or Bev Courtney (addresses on p. 19).

X

NEWSLETTER DEADLINE for NL 52 is SEPTEMBER 25th. Thank you to all those members and others who have contributed to the newsletters this financial year. Your editor loves to hear from you. We are especially grateful to the illustrators, Gloria Thomlinson and Ailsa Hamilton, for the beautiful drawings which add so much to the descriptions.