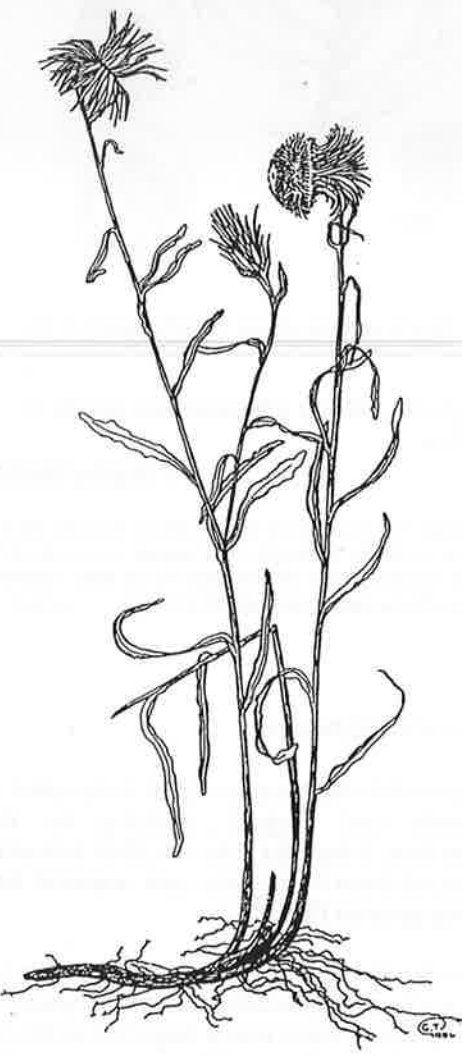


ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS**THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 56**

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SPECIES OR FORMS NEW TO MEMBERS

***Bracteantha bracteata* (Sandy Beach form)**

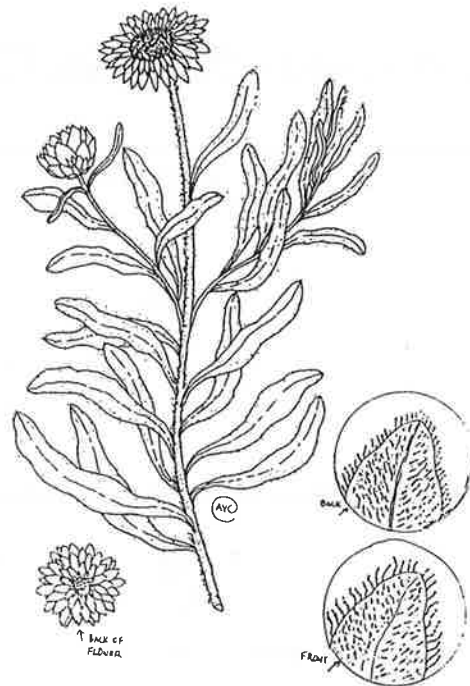
I recently pressed a specimen of the *Bracteantha bracteata* form that I raised from seed collected in 1997 from Sandy Beach between Coffs Harbour and Woolgoolga in northern New South Wales. The population was growing on the headland — windblown salt-laden air in a rugged environment for survival. The flowering 'heads' were relatively short, about 20cm above the ground, the capitulum broad (about 5cm in diameter), and a bright golden yellow.

Plants raised from this seed, now in our garden in several places, have grown to be up to 85 x 85cm and 40cm high — some this size with close to 100 inflorescences and/or buds, so it is a species with which Jenny and I are delighted. I am enclosing seed from the original ('97) collection and from the current recurring flowers of the plants in the garden now. The plants completely ignored the odd - 6°C in July, and subsequent lighter frosts, so are acting like true perennials in this temperate climate that is so different from that of Sandy Beach. I have enclosed a pressed specimen for your interest.

Addendum, 20. 1. 2000 — The *Bracteantha* from Sandy Beach in our garden continues to flower, as it has for months now. The plants are dense and broad, the gold of the inflorescences contrasting well with the deep green of the 'velvet' textured leaves. The largest plant (derived from one seedling) now with an inflorescence height of 0.7m; the plant's diameter — about 1.2m. A fine horticultural plant I feel.

by **Barrie Hadlow**.

(Editor's note: When Ailsa looked at the leaves of the specimen under the microscope she exclaimed with pleasure that the hairs on the margins looked like strings of beads. They were multicellular hairs, varying quite markedly in length, the longest occurring on the margins and the mid-rib on the lower surface, but also appearing flattened on both surfaces. The stems were white with masses of tangled, long multicellular hairs. This is an interesting, very grey-leafed form. The seed Barrie sent germinated in 8 days. ... Judy.)



Bracteantha bracteata (Sandy Beach) x 1/3

Helichrysum calvertianum

I had never heard of this *Helichrysum* until Judy gave me three small plants last August. Judging by their appearance at the time, I thought they wouldn't amount to anything much, so put them in my tube rack, watered them daily and practically ignored them

When tiny, wine-coloured buds started appearing in late September, I felt guilty at overlooking these little plants for so long, and hastily potted them into a large terracotta pot. Here was the possibility of something nice — totally unexpected. Since then, they have not looked back, and I have been thrilled with the ease with which they have grown.

Pot culture seems to suit them because they spill nicely over the sides. They are continually covered in pink to wine-coloured buds and small white papery daisies which appear to last for a very long time.



Helichrysum calvertianum x 1/2

After a couple of months bare brown stems were obvious at the base. Fortunately I put off pruning and now all the old wood is covered in fresh green growth. I have been collecting seed since early December and am looking forward to sowing it in autumn. Hopefully, plants will be available for members at our May meeting.

After reading in the *Encyclopaedia* (Elliot and Jones) that this species would be suitable for cool temperate regions in filtered or part sun, I moved my pot from full sun on the patio to a partly shaded spot, under trees, for the summer months.

Fresh flowers make a nice miniature posy in a small, discarded, scent bottle. They last up to two weeks in water. Stems are too small to wire.

by Maureen Schaumann

In the *Flora of New South Wales*, Vol. 3, this dear little plant is described as a 'twiggy sub-shrub to 30cm high. Flowers winter–summer. Grows in dry sclerophyll forest; restricted to a small area around Fitzroy Falls, Berrima and Mittagong.' I have looked forward to growing this species for years, ever since I saw a colour print of it in some book which I don't possess, and the name of which is forgotten. Often these dreams prove to be a far cry from the plants I actually rear to maturity. The reasons might range from poor growing methods and completely different climatic conditions to the fact that the photographer took a close-up at a perfect moment. In this case I am delighted with my plants. They are all as pleasing as Maureen has said.

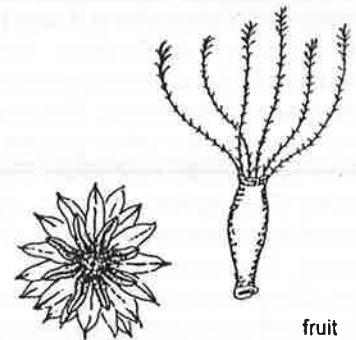
The first seeds germinated in 15 days when sown on 26/1/99. In the middle of April I potted on 6 seedlings into forestry tubes. They were very slow to grow but they lived, and in August I put 3 plants into a 35cm pot and gave the other valuable trio to Maureen. Little did I know with what disdain she was going to treat them!

My plants in the big pot are now 20–27cm high and 20–40cm across. The stems are much-branched. They began to produce flower-heads on 24/9 and are still flowering profusely in late January. The heads are white, 13–15mm across, on leafy stems about 8cm long. The stems bear tiny hairs and there are some woolly hairs just beneath the heads.

The leaves are linear, bright green, 0.5–2cm long and less than 1mm wide, with a thin cover of the same tiny hairs as are on the stems. On the flowering stem the leaves diminish in size to about 2mm long and are tipped with papery brown appendages.

The fruits are brown, cylindrical, 1 x 0.5mm, covered with very short glandular hairs. The pappus consists of 14 barbed bristles, the barbs becoming slightly longer and more clustered at the tips.

Like Maureen, I have been collecting seed since late November, so it is now available from the seed bank. I have not been able to resist sowing some of it, and did so on 15/1/2000. It started to germinate on 26/1/2000 (after good rain), and there were 12 little seedlings next day. This is the sort of plant I like — amenable!



fruit

back of flower-head



leaves magnified

by Judy Barker

Helichrysum calvertianum

My first encounter with *H. calvertianum* sent me to the reference books. I was on the Box Vale Walking Track not far from Mittagong in the Southern Highlands of New South Wales. The Wednesday walkers of SGAP Canberra had decided to do the walk in July 1998 not knowing what we would find. The track follows an historic railway line, passing through cuttings, along embankments and through a tunnel, with steep terrain often on either side and ending overlooking the Nattai River and gorge. Those of us with our usual references for our close-to-Canberra walks soon realised our mistake as we found ourselves in Sydney sandstone country and a completely different collection of plants.

After walking for only a few metres on the approach to the old railway line I spotted a low growing, fairly twiggy, branching plant which seemed to have spent daisy flowerheads with white papery bracts. The foliage was quite dark green with blunt, linear leaves. It was growing fairly precariously in a small pocket of soil on a large wet rock above a creek. On my return home I flipped through the excellent photos in the Asteraceae pages of the *Native Plants of the Sydney District — An Identification Guide* by Alan Fairley and Philip Moore (Kangaroo Press in association with The Society for Growing Australian Plants — NSW Ltd, 1989). I was pleased to find the daisy that I had seen — *H. calvertianum* — and was interested to learn that "it has a very

restricted distribution and has only recently been recorded for the Sydney district". It occurs on rocky sandstone escarpments, often in moist sites (exactly where I had found it) and its distribution is on cliff-tops near Fitzroy Falls, Carrington Falls and near Mittagong.

We returned to the Box Vale Walking Track at the end of September 1999 and were delighted to see *H. calvertianum* in bud and beginning to flower — a pretty plant worthy of more attention and another visit to see it in full flower.

by Ros Cornish

Ammobium craspedioides

Ammobium craspedioides is a fairly rare plant found in grassy woodland in the Yass district of NSW. It is listed as vulnerable under the *Threatened Species Conservation Act 1995 (NSW)*, that is, it is likely to become endangered within the next 25 years. I first became aware of it on a roadside walk in the Dalton area (near Gunning and Yass) where it was pointed out to me by an ANBG officer. There were only a few plants on private land and on the roadside verge, in among *Themeda australis* mainly and other grassland plants such as *Burchardia umbellata*, *Brunonia australis*, *Calocephalus citreus*, *Stylidium graminifolium*, *Bulbine bulbosa*, *Dianella longifolia*, *Dichopogon fimbriatus*, *Tricoryne elatior*, *Chrysocephalum apiculatum* as well as *Cheiranthra cyanea* and *Daviesia leptophylla*. We only saw a few plants in two locations although we travelled extensively in the area, so it certainly appeared to be rare to me.

In late October 1999 while on a Friends of Grassland tour of cemeteries and travelling stock reserves, I was lucky enough to see a vast number of *A. craspedioides* in full flower at the Bowning cemetery, off the Hume Highway not far from Yass. It was a stunning display and impossible to guess at numbers — thousands. *A. craspedioides* was flowering with *Craspedia variabilis*,

Thelymitra sp. (blue), *Thysanotus tuberosus*, *Dichopogon fimbriatus*, *Bulbine bulbosa*, *Chrysocephalum apiculatum*, *Leptorhynchus squamatus*, *Themeda australis* and *Burchardia umbellata*. The colours were spectacular and breathtaking. Imagine my horror when I returned ten days later with the Wednesday Walkers to find that the whole cemetery had been mowed and there was not one flower to be seen. Nothing would have had time to seed and many weeds were starting to take over. To make matters worse, the cut plants had been left where they fell and will take some time to decompose.

NSW National Parks and Wildlife officers were horrified too on hearing about it, particularly as there is a recovery plan in place for this daisy. Further investigation by them revealed that a zealous neighbouring farmer had slashed the cemetery "to eliminate a bushfire threat". To my mind, the surrounding fields of browning off exotic grasses and crops presented a greater threat. It's no wonder that rare plants, supposedly protected in areas such as cemeteries, can very quickly become endangered.

I have had little experience growing *A. craspedioides*. In June 1999 I obtained seed from AD SG which had been provided by the ANBG originally. It was used by the Growing Friends of ANBG in our daisy seed-growing extravaganza reported on in NL 55. It was only a small sample of seed but about twelve germinated within a few days and were coaxed on for potting up. Needless to say the resulting plants were not put on



Ammobium craspedioides x 1/2

sale to the general public but instead were bought by those Growing Friends who are AD SG members or who have a keen interest in daisies. I shall try and keep track of their progress.

I planted out two of my plants in mid-November as we had a mild spring and the soil was still moist. However, we soon had hot weather and the plants stopped growing. The underdeveloped flower stalks gradually withered but the plants remained green for quite some time before dying back. As *A. craspedioides* is a perennial I hope that the plants will reappear in late winter/spring and flower for me. I have kept two plants in pots and they died down in a similar fashion but retain a small amount of basal greenery. I will be careful not to lose them among the other plants waiting to be planted when we get autumn rain. I will keep them in pots to see how they compare with those in the ground. Judging by the display I saw last spring, *A. craspedioides* flowers in October/November and can produce flower stalks up to 30cm tall. I look forward to having my own flowers to admire next spring.

by Ros Cornish



(Addendum: In Melbourne, seed germinated in 8 days when sown in late February. By late March there were 11 seedlings. They were potted on in early May and in August 3 plants were placed in one hole so that a clump was produced. Flowering began in late September and continued into the beginning of December. The basal leaves were stalked, 18–20 x 2.5–3cm, but the sparse stem leaves (only 4–5) were sessile and diminished in size up the stem. Flower stalks were 65cm long, some being erect and some straggling over towards the sun. The pretty yellow heads, 3–3.5cm across, were lacy, somewhat similar to *Trachymene coerulea*. The outer bracts are pale brown with interesting red markings. Maureen, who also grew this species, rang to tell me it was not at all like *Ammobium alatum*, and she was right! There are no radiating papery bracts, and we certainly couldn't wire it. We have both worked hard to rub heads and collect seed, and so this species is also represented in the seed bank....

...Judy.)

REPORT from ENGLAND

by Jeff Irons

Brachyscome aculeata The Captains Flat plants did not survive the winter. This year I have tried Barrie Hadlow's Brindabella strain. Its flowers are larger than those of the Captains Flat plants, but the group as a whole is less floriferous. Seed stays longer in the head.

Brachyscome decipiens My four plants look well, but have not flowered.

Brachyscome nivalis (Mt Cole) Plants varied in height considerably. The short ones have prospects as pot plants for exhibition. Like *B. tadgellii* this species is unsuitable for 'in ground' culture in my area. It gets infested with *Cardamine flexuosa*, *C. pratense* and *Sagina*.

Brachyscome rigidula A strain from Falls Creek Alpine Nursery has larger flowers than the DSG Mt Sedgwick strain. The colour is the same, but it fades less.

Olearia elliptica Seed germinated well in spring. Plants have been given to our National Collection of *Olearia* and to a nursery which specializes in southern hemisphere plants.

Ozothamnus ericifolius This has been quite tricky. Both in the ground and in pots many seedlings have died. I have only two left.

Ozothamnus obcordatus* var. *major Another tricky species! Most of my 1998 seedlings died after planting out. Again only two are left.

Ozothamnus obcordatus* var. *obcordatus Usually this flowers in late summer. The 1999 winter was unusually warm, and temperatures were such that growth continued right through. Buds began to form in late spring and flowering was in early summer.

Ozothamnus rodwayi* var. *backhousii These were grown from seed collected in 1996 and sown in 1997. The parent plant was about 0.8m high. My seedlings are now nearly 2m high and are unflowered. They illustrate well how Australian plants often perform differently here from the way do in their homeland.

Celmisia sp. Thirty-seven seedlings were raised from seed given to me by Roger Good of the NSW Parks and Wildlife Service. Whether in pots or in the ground, they have dwindled away. Only two are left. Three years old, they have not flowered.

Craspedia sp. N. of Dargo This bloomed in the late spring and early summer. Two shades of yellow were evident, yet when I took a photograph of them the colour sensitivity of the film was such that they came out as the same hue. The species is perennial.

Craspedia DSG' seed labelled *C. aurantia* had not been growing for long before I decided that it was not *aurantia* and was probably *C. crocata*. When the plants bloomed my tame taxonomist decided that they exhibited features of both *C. crocata* and *C. jamesii*. A specimen was sent to Australia for comment. At the time of writing identification is still awaited. My three plants produced 13 flower heads, which gave 922 seeds. Normally I regard 10 seeds from 12 plants as good. A specimen plant has been given to the Herbarium in Liverpool.

Calomeria amaranthoides Far from dying, my four year old *Calomeria* is making new extension growth. Fairley and Moore state that the species rarely lives more than two years. All my other books describe it as a biennial. This specimen, grown from seed collected on Mt Tomah, seems to shed new light on the longevity of Lady Hume's elegant plant. With its coating of dead leaves my specimen is far from being elegant. In fact it is rather gaunt. With disposal in mind I've taken a couple of cuttings. It will be interesting to see when these September cuttings root. Some taken in November 1998 did not root until March 1999. Another aspect which intrigues me is that although my narrow-leaved plant is the only *calomeria* in the greenhouse all its seedlings have wide leaves. Since botanists rarely grow the plants they study information about compatibility is rare in books. The fact that it sets large amounts of seed indicates that my plant is self-compatible.

It seems that DSG members have not found it easy to germinate the seeds yet I've had no trouble. My seed is sown in cool airy conditions, with light. The reasoning behind this is that wild seed falls off in late autumn. It lands on the surface, being in what is effectively air saturated with water vapour. Conditions are cool, whether germination takes place immediately or in spring. I try to replicate these natural conditions, and sow when maxima are around 10–15°C. Germination occurs within a fortnight.

REPORT from JAMBOREE HEIGHTS

by Beth McRobert

Yet again I am appalled that so long a time has gone by and I haven't been in touch. I think it must have been about this time last year that I wrote, for I remember in your reply that you said that Esma was travelling through the west, and I thought that she would have been thrilled if she had seen what I had seen on my trip out to Tambo this time last year. The west was just ablaze with flowers, whole areas just as we see in Western Australia's spring flowerings. The plains around Tambo were covered with *Calotis*, *Ozothamnus diotophyllus* was in full colour between Chinchilla and Miles, and we found some apparent hybrids between *O. diotophyllus* and *O. diosmifolius* — one had a deep lemon flower, the other more a green-lemon colour. In the same area *O. diosmifolius* was about 8 feet tall, with a fasciated stem. When we returned all the tall flowers had gone, and this year (we have just had another quick trip out), the plants in the same area have been mown down and the new shoots are about a foot high. The cuttings last year did not take. I have tried again, so, here's hoping (a) that they grow, and (b) that they are not *Cassinia laevis*, which has taken over as a woody weed on the property of the friend I visit out west, and which was also in the area.

My daisy display in the garden is pretty, but not as good as it was last year. The *Rhodanthe manglesii* are lovely, as are the forms of *Bracteantha bracteata*. *Rhodanthe chlorocephala* ssp. *rosea* has been a bit disappointing as some of them seem to have a mildew and have died off. The plants which I had hoped were *R. chlorocephala* ssp. *splendida* turned into *R. chlorocephala* ssp. *rosea* Balladonia dwarf form, but they are very pretty. The few plants of *R. humboldtiana* are flowering well. I had a lovely strike of *Lawrencella rosea*, but as with many of my daisy plants, they fell victim to the marauding snails, so I have only a few plants left to flower. Neither have the self-sown *R. stricta* made it — I think the possum got to them last year, and I suspect has done it again. *Brachyscome iberidifolia* is just starting to flower.

Last year I was thrilled to find that the paper daisies which were used by my Mum to make daisy chains as she walked to school were probably *R. anthemoides*, as I found a lovely display of them just a few kilometres away from where she lived. I obtained a few seed, and have a few plants just beginning to flower. My plan was to have them, with a border of mauve *Brachyscome melanocarpa*, the seed given to me by an SGAP friend. Well, that plan has come unstuck because I have a mystery daisy — white, long, strong flowering stems, and quite attractive. What I think are *B. melanocarpa* plants are being grown over. When I get some

seed I shall be seeking advice. I did plant a number of different species in different sections of one pot, and did have some unknown seeds planted, but there were only a small number of them, so I don't think my daisy is that one. That particular unknown daisy came from a plant on Fletcher's Road, west of Roma. I collected that on my trip west last year.

This year we found two mysteries — one is like a white *Ixiolaena* (? *Rutidosis*. Yes, probably *leucantha*) — a specimen and some seed enclosed, but I am not sure if they will be mature as the plants were in full flower, and a few were dying off. They were about 30km north of Augathella — just a small patch on the roadside, and it was quite an attractive little plant. The other is a mauve-flowered plant to about 40cm, growing at the base of a rocky tower. Some seed is enclosed. Sadly, I must have left the cuttings in the car in which I travelled, so I haven't a specimen to send on. (*Vittadinia hispidula* var. *hispidula*, I think.)

I am also enclosing some seed of an olearia which, I think from previous years, may be *O. subspicata*. Often when we go out the plants are all seeding, but this year we saw quite a few flowers as well. It has been quite an unusual year out there this year — the property we visit had its annual rainfall by June, and have had very little rain since, so it is very dry at present. Flowerings have been unusual, some spring-flowering ones having flowered in June, others which are usually in flower at this time are still only in bud — just some of the challenges we still have to overcome in understanding about our flora.

Also enclosed is a photo of the ADSG display at the ASGAP Conference, and one of a little dried arrangement featuring daisies — one of the varied small dried arrangements presented to speakers and those who lived in at the College for the Conference. I am sure Irene has mentioned the mess and beauty in her garage as the 200+ arrangements were assembled.

On 1/12/99 Beth sent a report on the meeting of The Small Plants Group in November: 'I hope those attending found the discussion both interesting and helpful. I certainly did, but I think that we tried to cover too much in the topic "Daisies". I suggested that one of our meetings next year should focus on one genus, e.g. *Brachyscome* or *Rhodanthe*. It was great that Pat Shaw was able to be with us. Esther Cook also came, and we were thrilled to see some of her wonderful photographs and to have all the information she shared with us. Sadly Margery (Stutchbury) rang just before we left for the day to say that as she had picked up an infection, she was not well enough to travel down (from Bundaberg). Next day, though, in the mail was a lovely note from her and packets of seed to be shared at forthcoming meetings — I guess a sort of Christmas gift to daisy lovers. But with Pat, Irene, Lorna, Esther and me, almost half of the Queensland members of ADSG were present.

In either fresh or dried forms we saw 35 different species and hybrids over 11 genera, and there were so many forms of *Bracteantha bracteata*, and 5 different forms of *Chrysocephalum apiculatum* — it was all rather exciting. Irene had *Helichrysum newcastlianum* in flower in a pot, Pat showed *H. lanuginosum*, and a slide of a hybrid *Brachyscome* with a flower about 7cm wide. She told us that a possum had devoured 6 plants of this lovely hybrid. Another interesting discussion point was a pot of *Cymbonotus* sp. in flower. There were many daisies available for the plant raffle, and we were challenged to try to get more daisies accepted into more gardens.

Pat said that at the September Toowoomba Carnival of Flowers there was a huge bed of *Rhodanthe manglesii* in full flower, and she said it was just spectacular. People wanted to know what it was and how to get plants. Our hosts for the day had a number of *Brachyscome* species and hybrids flowering beautifully in pots, as well as having a range of other daisies flowering in their extensive gardens.'

Postscript to the Daisification of Canberra

by Ros Cornish

As reported in NL 55, the Growing Friends of the Australian National Botanic Gardens grew many daisies from seed provided by ADSG and SGAP Canberra. Despite our cold winter, they grew well in our igloo and outside under shadecloth. Following an inspection of them at our October meeting we decided that most of them were ready so we decided to go ahead with a sale on 13 November 1999. We made daisies the focus of the sale as we had only a small number of other plants and well over 1,000 daisies. We prepared a take-home sheet for buyers, describing the plants and where they should be grown and mentioned daisies in our advertising material.

On the day, many of the daisies were flowering and they all looked strong and healthy. We had priced them at \$2 each and many of the pots had more than one plant so they were a bargain. Buyers were held at bay outside the ANBG gates until 9am but were given copies of the plant list to read so that they knew what was

available and could make informed decisions. At 9am we were swamped by eager buyers. By 10am most of the daisies had been sold. Those remaining were mainly *Bracteantha bracteata* of various colours, *Helichrysum elatum*, and *Leucochrysum albicans* ssp. *albicans* var. *albicans* as they had all germinated well and we had over 50 pots of each type. We moved them quickly by showing prospective buyers the excellent photos in *Australian Daisies for gardens and floral art*. The photos and illustrations in *Australian Brachyscomes* were also very helpful to show.

I was impressed with many of the comments and questions from the buyers. A number of people bothered to say how delighted they were with such a good selection of local daisies. Some people knew just what they wanted — several asking for Hoary Sunray; one even asked for *Ammobium alatum*. The Growing Friends were thrilled with the response and that we made \$3,700 for the Friends of ANBG, over two-thirds of which would have come from the sale of the daisies. We intend to offer a smaller number of daisies at all of our sales in future. For our January 2000 meeting we focussed on various *Cassinia*, *Olearia* and *Ozothamnus* species (cuttings) that should grow well here, so the daisification of Canberra continues.

Brachyscome ciliaris — Enngonia form

by **Esma Salkin**

P.S. Short in discussing the *Brachyscome ciliaris* group in the *Flora of Victoria*, 4: 844 notes that this group 'is a highly polymorphic, polyploid complex of mostly apomictic entities', widespread throughout central and southern Australian states. Most entities have dimorphic cypselas, but some, eg. var. *brachyglossa* and some undescribed entities, do not. He also noted that some entities with entire leaves are referable to var. *subintegrifolia* (Davis, G.L. 1948, 'Revision of the genus *Brachycome* Cass. Part. I. Australian species', *Proceedings of the Linnean Society of New South Wales*, vol. 73, p. 225).

The Enngonia form was collected at the Enngonia Racecourse in 8/93. The racecourse is situated on a sandy rise, its soil being the sandy silts washed up during flooding. The vicinity of the racecourse is dissected by creek systems on heavy clay soils and interspersed between the creek systems are low red sandy hills.

B. dentata is found on the heavy soils of the creek system, but in another area where water congregates on heavy soils, *B. smithwhitei* was massed with *B. dentata*. *B. whitei* is found on the red sands. In the outer section of the racecourse the flora is stunted. *B. ciliaris* and another brachyscome with pink rays included in the *B. iberidifolia* group were barely 5cm high, so it was a surprise to see how well the *B. ciliaris* behaved under cultivation.

The species has been thriving in an open sunny position in a garden at Mt Waverley, Vic. Its growth has stabilised at 15 x 15cm and 20cm high. Two or three plants grow together so the clump is about 40 x 50cm. It is a decumbent herb which has terminal white flowers with fine delicate rays. Numerous branching leafy stems about 35cm long arise from the base. Branching commences about one-third up the stem. A pair of stipule-like leaves 1–2mm long are seen at the base of the branching stem, and can reach 5mm at maturity. A mat of white woolly hairs surrounds these leaves, the rest of the plant is glabrous. Stem leaves are up to 2.5cm long, entire, sessile, terete and tapering to a brown tip. The involucre is cup-shaped, 2mm wide, and the involucral bracts are in 2 rows. They have pink scarious tips and the body is sparsely covered with papillae. The inner bracts are linear. The flower-head is 1.5–2cm across with about 30 rays 6–10mm long and 1mm wide. The split style of the ray floret is white. Bisexual florets, styles and anthers are yellow. Cypselas are of two types. The ray cypselas are 1mm long and 0.5mm wide. The disc cypselas are winged. Papillae cover the body and the pappus is short.

Propagation and cultivation

Given the number of seed produced by *B. ciliaris*, the number of germinants is low. Checking through my records of the last 10–12 years the average number of germinants is less than 5%. Exceptions were a collection from Gunnedah, NSW, in 1/92 — 30%, and from Marree, SA, in 1990 — 30%. Seed from Enngonia sown 5 months after collection gave a rate of about 7%. Seed from the same batch kept at room temperature after culling species in the Provenance Seed Bank collected before 1/99 and sown 1/2000 is giving slightly better results.

Under cultivation plants have been given minimal care. They were planted in a bed that had been used for annuals so the soil is now nutrient poor. The only concession to their welfare is that the garden has been mulched with organic mulch over summer. In late autumn plants are heavily pruned, removing all the dead wood and pruning back stems as the new growth appears. The decumbent nature of this brachyscome is an adverse feature and lessens its universal horticultural appeal as the flowers grow to one side, facing the sun. Nevertheless the healthy, lush, dark green appearance of the leaves and spattering of white flowers in the middle of the summer earns it a place in my garden.

NAME CHANGES

Esma has drawn attention to the following name changes in *Flora of Victoria* Vol. 4 (1999), edited by N.G. Walsh and T.J. Entwisle:

- The name *Lagenophora* has been conserved over the original spelling *Lagenifera*. In the *Flora* *Lagenophora montana* has been included. It is stated that 'This species has been overlooked or sometimes relegated to synonymy or varietal rank under *L. stipitata*, but the numerous recent collections at MEL form as distinctive a taxon as the other Victorian species of *Lagenophora*.'
- *Pycnosorus chrysanthes* has been retained for *Pycnosorus chrysanthus*. The entry is — ***Pycnosorus chrysanthes*** (Schltdl.) Sond., *Linnaea* 25: 492 (1853), as *P. chrysanthus*. *Calocephalus chrysanthes* Schltdl., *Linnaea* 20: 592 (1847); *Craspedia chrysantha* (Schltdl.) Benth., *Fl. Austral.* 3: 580 (1867). The decision probably has been made on the dates of publication.
- *Leptorhynchus nitidulus* DC., *Prodr.* 6: 160 (1838). [syn. *Leptorhynchus linearis sensu* J.H. Willis, *Handb. Pl. Victoria* 2: 720 (1973), non Less. (1832)].

LETTER from WAMBOIN, NSW

by Jo Walker

(Jo is the intrepid leader of the Rhamnaceae Study Group. She kindly sent us some beautiful prints of *Podolepis jaceoides* and *Calotis glandulosa* with a most interesting letter on daisies. It is reproduced here with permission.)

We came across a whole churchyard full of *Podolepis* at Round Plains (sort of south-west from Cooma, a long way on a dirt road) while on a Friends of Grasslands trip. There was a sort of 'understorey' of *Leptorhynchus squamatus* also, around the edges. And, just down the road, what looked like several acres of daisies (mostly *Leptorhynchus elongatus*).

During another trip to the Mondo with our SGAP Wednesday Walkers group we visited 'Happy Valley', a farm near Adaminaby which has been owned by the same family for over 100 years. The present owners are conservation-minded and are proud of their piece of hilly grassland which contains several rare plants, lots of different daisies (and, for me, some lovely stretches of *Cryptandra amara* var. *longiflora*!). Ros Cornish has probably told you all about this area, but I've enclosed a photo of *Calotis glandulosa*. The plants shown are of three different colours — blue, almost white and a pink one. I took five cuttings from this group, four have already rooted, so I hope I have the range of colours. I have been growing a blue form of this plant for several years. It's fast growing and quite showy. I've not yet managed to germinate seed from it, but it strikes very readily from cuttings.

Before I finish, I must tell you about my *Leucochrysum albicans* experience. Although there are extensive roadside populations around Queanbeyan and a few good patches along the Sutton Road, there are very few growing around Wamboin and there were none on my place. So three or four years ago I put in about half a dozen plants. I now have a suburban garden sized area out the back of the house covered with *Leucochrysum*, and large patches near the nursery and at the front of the house, and there are little clusters of them over the hillsides. There is one very large plant near the nursery on a clay bank which is great-grandma to most of the others. It is 3–4 years old and still going strong. I mention this because Ros says a lot of people can't get them to thrive for more than a year. These are watered only by natural rainfall and are growing in shaly clay which dries out quite quickly even after heavy rain. Probably in gardens their roots are wet for long periods? The only problems I've had with mine are that they are very tasty to sulphur-crested cockatoos. In late winter the birds pull the whole plant out and feed on the roots, and in spring they nip off all the buds and chew them with blissful looks on their faces! Fortunately, late in spring they seem to find something else to feed on and the leucochrysums recover amazingly quickly to give a lovely display.

REPORT FROM ELIZABETH EAST

by Sylvia Oats

We have had a glorious display of daisies this spring. We planted *Rhodanthe polygalifolia*, *Schoenia filifolia* ssp. *subulifolia*, *Brachyscome* aff. *curvicarpa* all together "very close", some in pots, and it made a lovely carpet of yellow. We also put in *Waitzia suaveolens* var. *flava*, *Brachyscome iberidifolia* along with *Rhodanthe anthemoides*, *R. chlorocephala* ssp. *rosea*, *Schoenia cassiniana* 'Gabriele', and around the edges *Brachyscome formosa*, which really does well here. All the various colours looked simply superb.

As you can imagine it is a very colourful garden, and we have had many passing strangers complimenting us on it. But we get a big thrill when a little boy of three or four passes. We have planted about 80 *Bracteantha*

bracteata outside our fence. He passes very slowly, looks at all the daisies, then picks the one he fancies most. He hopefully will turn out to be an avid native daisy grower when he's a man.

We are continually amazed how few Australian natives are used in the gardens of this area. We have a wonderful display of *Anigozanthus* varieties — most flowers are 8 feet tall. The display looks good as it's in the centre of the garden, and the birds love it.

Syd reported by telephone (14/11/99) that he had heard the Director of the Brisbane Botanic Gardens, Ross McKinnon, telling his radio audience that insects, fungi, worms, etc. can be killed in pots simply by plunging the pot into a bucket of water to which a pinch of Condy's Crystals (potassium permanganate) had been added. He said that the water must turn colour, and that the foliage was unaffected. We could try this method to eliminate mealy bug or root aphid. Syd has received permission for us to report this information, and to say that it came direct from the British Horticultural Society Magazine.

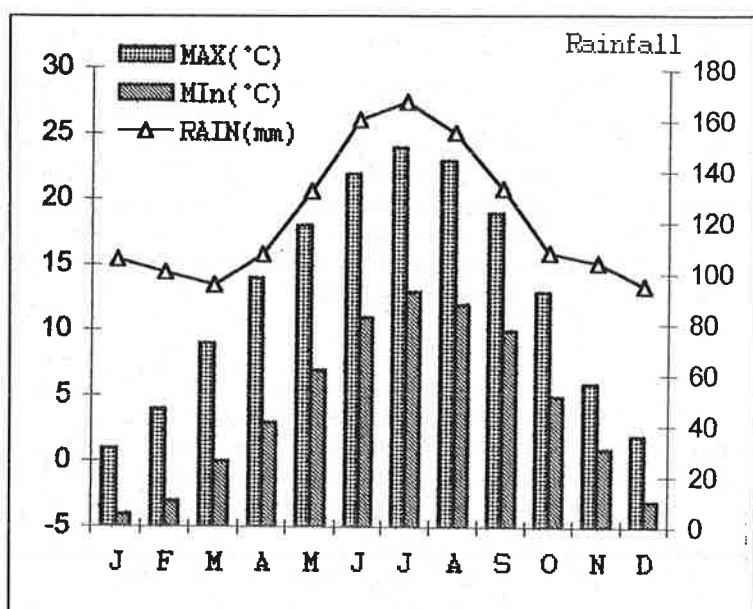
Syd added that the waitzias loved the limey soil, and that *Podolepis neglecta* grew to 3' high and had loads of flowers.

(Also enclosed was a most interesting item from Syd and Syl's son, Alan, who lives at Rorschberg in Switzerland. Four handsome prints of Australian daisies in Alan's garden attested to the fact that he grows daisies almost as well as do his parents.)

AUSTRALIAN NATIVE DAISIES IN SWITZERLAND

— A brief tribute to the hardy nature of the Australian native daisy.

by Alan Oats



We were hopeful yet not necessarily optimistic as we decided to devote a portion of our restricted garden space to Daisies. Our success, although small, has given us at least a touch of Australia in Switzerland.

Climate and Location

Kräzerin is located 636 M above sea level overlooking the Lake of Constance, one of the largest fresh water lakes in Europe. The average annual precipitation is over 1400mm per annum, a large proportion of this falls as rain during the warmer months. Precipitation occurring as snow contributes to a lesser but still significant quantity. 1999 was a particularly cold and wet year with record snowfalls, rainfall and low temperatures. In summer the sun was often obscured

by rain-filled clouds. The garden is on a steep (8:1) north-facing slope. It is important to remember that in the Northern Hemisphere a north slope equates to a south slope in the Southern Hemisphere.

Initial Stages

We planted the seeds in trays in late February. The trays were placed by the south-facing windows. The internal temperatures in the house were, however, at this time of year at best 3 or 4° above zero. External temperatures as low as minus 16°C were recorded. In addition up to 1 metre of snow lay on the prospective garden patch.

The seeds, somehow, managed to germinate. In May the small seedlings were planted out. The rainfall this year was well above average. We did not need to water the seedlings once they were set out. One thing in the seedlings' favour was the fact that they did not present a tempting target to the hordes of slugs and snails. The cool wet weather and clear lack of sunshine enabled the brown black plague to roam at will day or night. I had expected problems with disease, particularly fungal invasions due to the waterlogged soil. The plants grew slowly and only a few of them managed to attain a height greater than 50cm. We were surprised as in late June the first flowers bloomed leading to a small but proud display of Australia in this often cold and wet corner of the world.

Conclusion

The wildflowers of the Alps are very beautiful. Some say it is just the nature of the light in the mountains and the effects of the thin pure air. The wildflowers above the tree line seem to possess a richness of colour far in abundance of that for the same species living in the lowlands. As for our garden, plants that require less effort seem to be the way to go. In particular local varieties seem to have the most to offer.

REPORT FROM KINGSTON

by Jeanette Closs

We had an Open Garden here in October, but it poured raining all day, so only 28 brave souls came to view it. However they all said nice things and many bought plants. The garden did look good with masses of daisies and isotomas, as well as the usual array of Aussi goodies. I'm not sure if we will do it again, but perhaps we should, as we do need to promote our Australian plants.

I followed Rosemary Verbeeten's suggestion and placed lots of dead flower heads of *Rhodanthe chlorocephala* ssp. *rosea* along the borders of some of my plots. I then covered them with coarse sandy/gravel and watered them daily until the leaves appeared. I now have lots of these lovely pink and white flowers to share with friends and to brighten up the garden.

One of my daisies that performs well and spreads by underground suckers is *Chrysocephalum semipapposum* x *apiculatum* or that is the name by which it is known here! It has erect stems, with clusters of flower-heads, which have bright yellow flowers. It has groups of narrow silvery leaves alternately up the stiff stems. It is excellent for the vase. This year not far from this plant another plant has established itself beside a path. This has probably hybridised with the aforementioned and another plant from our garden. It is sprawly and more silvery, and the flowers are a shade brighter yellow.

Some time ago Rosemary Verbeeten gave me seedlings of a few podolepis. One has done very well and is displaying many stems of bright yellow shaggy daisies. It is *Podolepis rugata*. I seem to have lost *P. neglecta* and *P. nutans*. *Podolepis jaceoides* is a disappointing plant in my garden. Although it self-sows a little, the few flower stems fall over and are not as attractive as those that I have seen in the wild. It may be that most of my soil is heavy and holds the moisture, but where I have *P. rugata* it is sandy and a dryish spot alongside the house.

WILDFLOWER TRIP TO WA

by Margery Stutchbury

(This account continues from the point at which Margery left Cervantes (see pp. 48–49, NL 55.)

From Cervantes we went to Perth and then south to the wonderful south-west forests and oceans, experiencing exhilarating differences in the weather from what we are used to. From Albany we travelled up to Mt Barker with the main purpose of visiting the banksia farm owned by Kevin and Kathy Collins. We spent a wonderful few hours with Kevin who showed us around his living collection of all the known banksias. From there we travelled via Stirling Ranges to Esperance and north to the goldfields.

Here on the Esperance Highway 70km S of Coolgardie we saw more everlastings. Many pink and some white forms of *Schoenia cassiniana*, *Waitzia acuminata*, *Rhodanthe floribunda*, *R. rubella*, and some white and stunning reddish pink forms of *Cephalopterum drummondii*. This was a really beautiful area with many lovely eucalypts including mallees, the red soil, saltbush and everlastings. We went on a few bush roads around Coolgardie and were rewarded with many miles of everlastings, mainly the above species.

After crossing the Nullarbor we visited the fairly new but very interesting Arid Lands Botanic Gardens at Port Augusta, where I saw the poached egg daisy cultivated, plus many interesting plants and displays. We then went to Wilpena Pound (in a dust storm) and I found a few interesting small daisies near Quorn, such as *Hyalosperma semisterile* and a white form of *R. chlorocephala* ssp. *rosea*. Then on to Broken Hill, Cobar, Bourke and up to Cunnamulla and Charleville, Miles, Chinchilla and home. We again saw daisies near a rest area between Wilcannia and Cobar, *Leucochrysum molle* and *Rhodanthe polygalifolia*. We saw lots of *R. floribunda* around Cobar and north on the Kidman Way, and further patches of it right through to 10km S of Cunnamulla.

Our quest for daisies was somewhat limited by our conventional road vehicle, but I'm sure that if we had had a 4WD we would still be on the road somewhere.

SNIPPETS

- Jeff Irons has sent an article from the 5 July 1999 Issue of *Chemistry & Industry*. It is titled 'The weed Oz needs', and is written by Sue Williams. Sue reports that a CSIRO (Perth) researcher, Ross Chapman, and his colleagues suggest that *Arctotheca calendula* (capeweed) is an important nutritional source for grazing sheep in the Western Australian wheat-growing areas. In these areas wheat is sown in rotation with pasture, such as subterranean clover, which is used to feed sheep. Because the soils in those areas are sandy and nitrates leach out quickly, the soil becomes acidified, and this reduces wheat and pasture yields. Capeweed, however, acts to take up nitrate quickly because it grows fast and has a large root system. In this region the climate consists in general of hot, dry summers and wet winters. False breaks occur in seven years out of ten, that is good rain falls before the real winter rains begin, and is followed by hot dry conditions which may last for many weeks. Good germination results. If the original rain is not followed quickly by more rain the pasture seedlings die, and capeweed takes over. CSIRO workers have found that sheep are happy to eat the capeweed and that it is a good source of nutrition for them. The conclusion is that capeweed should not be regarded as a noxious weed in these areas, but could be used as an alternative pasture .
- Jeff Irons also sent a copy of *Pentachondra* Issue 23, December 1999. Dennis Rowlinson, in his 'Report from Cultivation Survey Enquiries' suggests that two alternatives might overcome the inability of some Australian plants to take up nutrients. One is that soil from the garden containing clover roots should be incorporated in the potting mix, and the other is the inclusion of small amounts of chopped dried banana skin to the top part of the mix. In NL 55, p. 40 I was getting excited because I had reared *Argentipallium obtusifolium* seedlings to the dizzy height of 3cm. Well, all the tubes died at some time between October and November without growing 1mm taller. I have sown more seed (without counting it again!) and it has germinated well when covered with Regen 2000 Direct. Perhaps it is time to try the two methods suggested above.
- Another article in the above issue of *Pentachondra*, 'Seaweed Salvation' by Tim Longville, is also of interest. He belongs to an internet garden group based in California. He says that contributors to the discussion on the benefits of spraying plants with seaweed solution claim that the plants' resistance both to cold and to heat is increased. Can any of our members add information on this subject?
- There is a good nursery near Geelong run by John Mahoney and Tony Drew. (I am not sure that is Tony's surname.) It is called "Glenleith", and you can find it at 275 Whites Road, Mt Duneed, Vic, 3216 (MEL 229 A 12). Ph: (03) 5264 1091, Fax: (03) 5264 1012. It is open 7 days a week from 8.30–4.30. They stock a surprisingly large variety of species in 5cm and 12.5cm pots, and there is a large garden for display.
- Paul Slattery has sent us a copy of *SA Veg. on the Edge* which contains an excellent account of the Spiny Daisy. He also sent two prints of the daisy, one a close-up taken by Ann Prescott (who wrote *It's Blue with Five Petals*) and the other a print of a typical habitat. Paul added: 'The other interesting point about the daisies near here is that 6–7 small plants have grown up through the road rubble, about 6 feet from the road's edge. They will disappear when the road gets graded, but it shows how tough it is. The Herbarium has had success with propagating cuttings, and they hope to multiply their stock using tissue culture.'

MEMBERS' REPORTS

Ray Purches of Wangaratta (Vic) writes in 8/99: 'Riceflower harvest is going full bore. We've managed a better outcome with Cooks Snow White this year (thank goodness) and our Jacobs Pink is superb at the moment.

I thought of you Daisy Ladies today as I carted a ute load of offcuts (suitable for drying) to the bonfire. Three trips to Melbourne with Riceflower so far. It works like this — start picking at daylight. Pick, grade, bunch all day, finish at 2.45am, 2.00am or 12.30am, rise at 4.00am, drive to Melb., arrive 8.00am. It's all worth it when the quality leaps out at you, the exporter loves it and they want all we can grow this year.

I have two beautiful flowering *Brunonia australis* in a sort of rockery beside a driveway at home. They were smiling at Rose and me today. I think they came from you at Peg's last year. They seem a tad earlier than the local ones I viewed in the bush on Sunday. The nicest part about gardens is that the different home grown things remind you of people and places. For instance, near the *Brunonia* is a lovely specimen of Tinsel Lily

from the Grampians which Alf Salkin and I collected during that wonderful AD SG Camp. I am reminded of how privileged I feel to be involved with the skill, charm and fun of all you daisy fanatics.

(Couldn't resist that last sentence, and adding that we reciprocate the feeling, Ray. Judy)

Maree Goods of Horsham (Vic) writes on 4/11/99: 'On Sunday we went on a Trust for Nature inspection on a couple of properties in the Minyip district. Neil Marriott was one of the leaders. These properties have covenants on them for their grassland. In the course of conversation I learnt that *Brachyscome chrysoglossa* grows not far from one of the properties. One of the participants said she would take me there some time to have a look. Lo and behold, the next day we went across to Donald for a Wimmera Farm Tree Group meeting. Before the meeting we were taken to some plantings and to some roadside vegetation next to Lake Buloke, and there was *B. chrysoglossa* in all its glory. Guess what? It was in heavy clay, so I collected some seed and, if all goes well, will be able to try it out in our clay, not in our built-up sand beds. Neil tells me that *B. chrysoglossa* is very rare in the Wimmera.

Yesterday evening Graham and I went for a walk in the next door neighbour's paddock which has a patch of bulokes. In amongst them was *C. semipapposum* in full flower in clay just like ours. It is only about 2–3km as the crow flies from our house. I took some pieces to try and strike them. While we were wandering around we came upon a crimson chat's nest with three eggs in it. That was a great thrill because they are very rare around here, and only fly south when it is extremely dry up north.

Pat Shaw of Macgregor (Qld) reported in November that her friend, Geoff, had found a group of *Helichrysum lanuginosum* on the road from Roundhead Hill to Bundaberg. She also reported the finding of a form of *Bracteantha bracteata* on Moreton Island which is entirely different from the one she found at Yeppoon. The Yeppoon form is extremely hairy. Pat is growing a *Cymbonotus* sp. with a big yellow flower and thistle-like leaves in a basal rosette. It is about 1m across and appears to be rotting away without setting any seed. It was growing on heavy black soil at Roma. This species is known as the Darling Daisy, and is described as *Cymbonotus* species A in the *Flora of New South Wales* (1992). In *Flora of South-eastern Queensland* by Stanley and Ross it is described as *Cymbonotus* sp. 1.

Ruth Payne, one of our new members, of Gunnedah (NSW) writes on 4/12/99: 'It has stopped raining for a week, and I have signs of germination in my trials — 4 *Leucochrysum albicans* ssp. *albicans* garden-collected 11/98, 3 *Rhodanthe anthemoides* (4°C), and 4 *R. anthemoides* (RT) both garden-collected 11/98, all planted on 22/9. I have 42 *Bracteantha bracteata* planted on 1/10/99.

My *Bracteantha bracteata* plants (the commercial packet just said "strawflowers") in the garden number 200 plants. They are full of weeds but are producing about 100 blooms per day. I have been wiring them. Their heads measure 2.5–3.5cm across. I would like to grow some bigger forms next year.

I can't believe the size difference in *Pycnosorus thompsonianus*. The Wandobah version was growing in red, gravelly soil, and the one off our farm was in floodplain country. They must like it wet.

My husband came home with a nice surprise from our neighbour's back paddock yesterday. It was a specimen of *Ozothamnus diosmifolius*, and I have included a piece for you to look at. He could only find the one plant.'

(Editor's addendum: If my identifications are right, Ruth's two specimens of *P. thompsonianus* differed in size very greatly. We know from experience that they like water.

Another point raised was that the species I had sent her for trialling for the Everlasting Project, namely *Bracteantha macrantha* (Kimseed), *L. albicans* and *R. anthemoides* (stored at two different temperatures) had failed to germinate when she had written some two weeks before. Good Heavens! We shouldn't have new members failing with our seed, and I had specially selected this seed from Esma's garden and from Maureen's garden because I knew from experience that it germinated. So I sowed all four species myself on 23/11. The weather was fairly hot at the time and we had no rain. I kept the pots damp by spraying the surface once a day. Here are the results:

B. macrantha — 2 germinated in 7 days but were probably blow-ins. There was no further germination until we had a little rain and then there were 11 seedlings on 22/12. After the heavy rain we had over the Christmas period there are many small seedlings.

L. albicans — there was no germination for 26 days compared with 5–8 days, the usual time for Esma's garden seed to get going. We had 18mm of rain in a two day period from 14–16th December and the first seedling appeared on 19/12.

R. anthemoides — I sowed 50 seeds from each storage temperature, and again there was no germination for 26 days compared with 4–6 days for past sowings. The first seedlings appeared on 19/12, and on 29/12 there were 14 seedlings in the RT punnet and 28 in the 4°C punnet.

Ruth had told me that it had been a cold, wet spring in Gunnedah. I think that these results indicate yet once more that germination of seed harvested from cultivated plants is triggered by a combination of rain and warm temperatures. Even so, 26 days can seem interminable when you are anxiously hanging over the punnets two or three times a day! It also seems that *R. anthemoides* seed should be stored at 4°C to retain good viability. ...Judy.)

Corinne Hampel of Murray Bridge (SA) writes on 17/12/99 from Nelson: 'We went for a drive on Wednesday and I found two paper daisies. I'm frustrated because I left my daisy references behind, and brought the wrong volumes of Black's with me. One of the paper daisies I am sure is *Argentipallium blandowskianum*. *Senecio lautus* is flowering everywhere, as is *Ozothamnus ferrugineus* (syn. *Helichrysum dendroideum*).

Barrie Hadlow of Theodore (ACT) writes on 20/1/2000: 'I am so pleased that my last seed has produced propagules. The plant that you determined as possibly *Streptoglossa adscendens* was a herb, and the *Pterocaulon sphaceolatum* is a non-woody sub-shrub to < 1.0m high, often found along or in watercourses. My previous experience with *Pterocaulon*, probably from more northern areas, has reminded me that, for at least one species, the foliage is highly aromatic, smelling rather like fruit salad.'

TWO ADSG EXPEDITIONS

BLACK RANGE TRIP

On Monday 25th October fourteen of the members were gathered up by Greg Johnson, Peg McAllister's son-in-law, and taken to his property on Panrock Ridge Road, but first we visited the native garden at Seppelts Winery. This fairly new garden has been planted by Philip Vaughan, and fairly took our combined breath away. It was a difficult task to keep some of the members away from the tasting area, and also difficult to stop them from mingling with visitors on tours and becoming lost, but finally they were rounded up and we set off to see Greg's place.

It is no wonder that Greg, Louise and Peg love this spot. As it says on the Trust for Nature Covenant it is an open grassy woodland with some large granite rocks in several places. The property had a shed on it which Greg and Louise have fitted out with their own hands, and it is now a most comfortable, friendly place with solar power. There was also a very fine example of the Great Australian Dunny which commanded an excellent view of the long drive from the gate. The trees are *Eucalyptus aromaphloia*, *E. camaldulensis*, and *E. melliodora*. Among the plants we saw in flower were *Podolepis jaceoides* (with very large heads), *Microseris lanceolata* (in seed in some places), *Ozothamnus obcordatus*, *Leptorhynchos squamatus*, *Pimelea humilis*, *Pultenaea pedunculata*, *Brachyloma daphnoides*, and a number of orchids. We saw one specimen of *Convolvulus erubescens*, and quite a few dwarf plants around one of the dams, such as *Rutidosis multiflorus*, possibly *Triptilodiscus pygmaeus* or *Hyalosperma demissum*. There were a few *Brunonia australis* in flower but there were extensive drifts that were not yet in flower. We could only imagine the sheer magnificence of the property in a few weeks time. There is a beautiful view of the Grampians from certain spots. One thing only took the edge off our thorough enjoyment of this visit. It was that neither Peg, nor Esma and Alf were there enjoying it with us. They had planned to be with us but ill health had intervened.

After lunch Greg took us almost next door to Neil Marriott's magnificent property. His array of plants was stunning. He grows all sorts of WA plants that most of the rest of us wouldn't have a hope of growing. I'm not particularly fond of grevilleas but his collection moved even me to a degree of envy. He seems to have all those big-brush, long-stemmed species in brilliant colours and in excellent health. Other new species of *Grevillea*, new forms and species difficult to grow put a sparkle into the eyes of those present. He also had a collection of eremophilas, melaleucas and small mallee eucalypts. Rabbits are a very large problem in this area. Neil's mud brick house, which was constructed by the Marriotts, is set on top of a ridge with a 360° view, which also includes the Grampians. Neil was astonishingly generous with his permission for the members to take cuttings. A period of frenetic activity followed, and we all went back to the Great Western Hotel for dinner with excellent appetites. We thank Neil very much for showing us his plantings. He is a busy man and gave generously of his time.

Next morning we set off to visit the Goods' garden which is quite near Dimboola. As we were somewhat earlier than expected Maree suggested we should visit the Wail Nursery first. We discovered that the staff are using Regen Germinator on many species, and they are delighted with the increased germination that has resulted. We bought some pots and some honey, were given a tray of *Ixiolaena leptolepis*, and then retraced our steps to Maree and Graham's lovely old farm house. There is a large garden around the house, and two big plantations beside the long drive. Graham is the fourth generation of Goods to farm there. Apparently the wind often blows hard across the paddocks, so there is usually a shrub or tree lying on its side

but Maree says this is an opportunity for new plantings. She is also a member of the *Eremophila* Study Group and she has over 100 spp. of *Eremophila*. The garden had a good feeling about it — comfortable, settled and friendly. There were seats of all sorts everywhere. A *Dampiera linearis* in its prime, covered with deep blue flowers and flowing over the edges of an urn was a sight I thought I'd like to emulate. *Ricinocarpus* 'Bridal Star' was a knockout, and so was a large tuft of Golden Pennants. The daisies were impressive, and lots and lots of cuttings were taken.

The lunch Maree provided was delicious. It was a most relaxed affair, thoroughly enjoyed by all of us. Our thanks to our generous hosts.

CHRISTMAS BREAK-UP

This was a most interesting and pleasant way to end the busy ADSG year. Our hosts welcomed us most warmly, and some had gone to prodigious lengths to be present on 7th December. The Stricklands had risen at the crack of dawn or before, and had flown back from Brisbane, arriving about half an hour before our contingent arrived. John Hodgson had been gripped by a viral infection which had put him in hospital for three weeks, in rehabilitation for two weeks, and released him with warnings on the Sunday before our Tuesday visit.

Pat and John Webb's front garden was packed with daisies, grasses, ground covers and a nice collection of shrubs. In a strategic central position was an inviting bench upon which one could contemplate a restful water area. The daisies, hibbertias, myoporums and scaevolias provided masses of colour. A delicious morning tea fortified us for a challenging identification of an unknown daisy from Carnarvon Gorge in Queensland. I was proud of our members who first of all proclaimed it to be a *Calotis* sp., although there were no burrs to be felt. Then a hand lens was whipped out, seed extracted from the head, and a close examination made on members' hands. It was later observed under a microscope and pronounced *Calotis cuneifolia*. This species is variable, the form Pat had was upright, about 50cm high and 60cm across. The heads were pinkish mauve. Pat told us it seemed to flower almost all the time. Julie took the cuttings back to Upper Lurg, and so it may be seen in ADSG gardens in future. (Some of us have already been presented with well grown plants in 7.5cm pots.) Most of the seeds we examined had only one awn, which may be the reason for the lack of burrs. Pat's back garden houses her container collection and some bonsais. It was pleasing to see many daisies among them. We exchange newsletters, so there were many species in the containers that I had read about — the Huon Pine, the *Goodenia humilis* and *Kunzea ericoides* as a bonsai.

We moved to the Westernport Nursery where we were mystified by some of the labelling but still managed to part with some of our money.

Then it was onwards to the Strickland's bush block at Bittern. Kathy used to be an ADSG member some years ago, and it was lovely to see her again, and to see Peter. We had our lunch on their front verandah with all the comfort of chairs and tables. Victoria had a very dry spring, which meant that most of the grasses had dried off when we arrived. Kathy drew us a picture of the wildflower scene in early spring that had met the eyes of their overseas visitors — milkmaids, trigger plants, some early nancies, other lilies, and a magnificent carpet of running postman in full flower. She has invited any of us to visit in spring. The Webbs joined us for lunch and then John kindly led the way to John Hodgson's holiday house at Merricks Beach. This allowed us to arrive on time. Left to our own navigating we might have been arriving in the dark.

John's garden was rescued many years ago from farmland. He has tried to restore it to a natural state but has not necessarily used indigenous plants to do so. He wanted to attract birds, worms, ants, koalas and any other wildlife. The back of the house and back garden possess a most beautiful sweep to the north of open paddocks to end on the horizon with a fringe of trees. The day we were there was misty and this scene resembled a painting by a French Impressionist. John had planned the house in such a way that it appeared to be a part of the garden. The garden was designed to leave vistas through which the views were seen, and patterns of the passage of the sun and moon behind the branches were constantly changing. To this end he had pruned trees and shrubs in unusual ways. Where a tree had fallen but was still alive, the branches were pruned to exactly meet his requirements. A large bed of banksias in front of his wetlands area had been pruned to a height such that the expanse of water could be seen from the house over a dense mound of foliage, and the long view to the north was not obscured. He had been helped and advised by Fred and June Rogers when he first began to plant, and later had acquired plants from the Elliots. The soil is surprisingly heavy for a seaside area, and so there are two dry creek beds running from the front down either side of the house to drain into the wetlands area. They were very dry when we were there but have been known to run with a will. This is a garden that remains in the mind for a long time.

After we had afternoon tea provided by John, one of the neighbours led us to a reserve nearby that has been set aside for local plants. On the return trip he took us around his garden which was planted for the protection

and nurturing of local birds. He also put on a display of close-up photography of flowers of callistemons, banksias and grevilleas, many of which had been taken in John's garden.

It was a great day. We thank everyone who had a hand in guiding us to destinations, in entertaining and amusing us, and in regaling us with delicious food and drink. We also thank you for the efforts you put into simply being available so close to Christmas.

LEADER'S LETTER

Dear Members,

I hope the Christmas holiday period was a happy one for you, and that we are all going to be very healthy in this year 2000. It has been a busy time for me, and will probably continue to be so.

We have written all the species' descriptions for the Book, and have corrected most of them — several times. Now it is time to turn our attention to the chapters.

We had a wonderful week of cool to mild temperatures between Christmas and New Year, and lots of nice, steady rain. Since germinating seed is one of my consuming passions, I had sown quite a few perennial species immediately after Christmas, partly because I know there won't be much time in autumn. (That will be when we have our last chance to do more Project sowings of annuals to prove that we know how to germinate the species we have been studying.) The rain and the moderate temperatures have triggered germination in many punnets, some being species I have never grown before. Forgetting daisies for the moment, I have been delighted to see two seedlings of *Gompholobium ecostatum* putting in an appearance. This is one of my favourites, and has defied my previous efforts to grow it. Seed was soaked in slightly less than boiling water for 24 hours, sown on Yates New Seed Mix and lightly covered with a sprinkle of Regen Germinator Direct. One thing has struck me very forcibly — daisies germinate faster than members of other families. I will have to cultivate patience if I try to germinate non-daisies from the Anglesea/Aireys Inlet district. The first seedling of *Pomaderris ferruginea* has also come up nearly a month after being sown with the same treatment. This differs markedly from *Helichrysum collinum* and *H. lanuginosum* — up in 8 days. We have since had several days of 40°C or over. Summer is not my favourite season.

My sincere thanks to Margery and Graham Stutchbury for the seed they gathered on their recent trip, and especially for the beautiful colour scans they sent to AD SG.

Yours sincerely,

MAY MEETING

This will be held on **SATURDAY, 6th MAY**
at **9 WIDFORD STREET, EAST HAWTHORN, 3123. Tel (03) 9813 2916**

PROGRAM (tentative)

1.30–2.30 pm	Plant sharing. PLEASE NOTE THE EARLY START TO THIS SEGMENT.
2.30–3.00 pm	Afternoon tea.
3.00–5.45 pm	Short talks by members on aspects of cultivation of species of <i>Argentipallium</i> and species remaining in <i>Helichrysum</i> . Show and Tell. Members' questions.
6.00 pm	Pre-dinner drinks and dinner (provided by Melbourne members).
7.45 pm	Talk (to be arranged).

Please advise us at least two weeks before the meeting if you intend to be present. We wish to cater adequately so that nobody goes hungry. Let us know if beds are needed and we will organise them.

On Sunday we plan to visit two or three gardens and a nursery.

NEW MEMBERS

Welcome to the following new members:

John Emms, 3 Queen Street, Loch, Victoria, 3945.
Matt Hurst, 13 Urana St, Wagga Wagga, NSW, 2650.

SEED DONORS

Thank you to the following members and friends: Judy Barker, Ros Cornish, Irene Cullen, Maree Goods, Barrie Hadlow, Jeff Irons, Greg Johnson, Beth McRobert, Ray Purches, Esma Salkin, Maureen Schaumann, Pat Shaw, Julie Strudwick, Margery Stutchbury and Theo Wade.

SEED LIST

A full seed list is published in each March newsletter. Please keep this list for reference; only additions and deletions will be recorded in other 2000 newsletters. A STAMPED, SELF-ADDRESSED ENVELOPE MUST BE ENCLOSED WITH EACH REQUEST FOR SEED. Please write to Esma for provenance seed or to Judy for garden or commercial seed. (The addresses are on the front page.) If members require both types of seed a letter to either Esma or Judy will suffice.

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

Seed of some species remains viable for longer periods if stored at low temperatures. Much of the seed listed below has been kept in the refrigerator. The curators welcome feedback on your germination results since the task of testing the germination of so many species (and trialling species for the Everlastings Project) is almost impossible. Some everlastings marked (with an asterisk) may be needed for the Project.

GARDEN or COMMERCIAL SEED

Ammobium alatum, *alatum* 'Bikini', *craspedioides*. *Angianthus tomentosus*. *Asteridea atrixioides*.
Bellida graminea (11/97).
Brachyscome aculeata, *angustifolia* complex (Barrington Tops, Namoi, Nandewar), *ascendens*, *basaltica* var. *gracilis*, *ciliaris* (Enngonia, SA), *ciliocarpa*, *chrysoglossa*, aff. *cuneifolia*, aff. *curvicarpa*, *dentata*, *dissectifolia*, *exilis*, *formosa* (mauve form), aff. *formosa*, *goniocarpa*, *gracilis*, aff. *gracilis*, *graminea*, *halophila*, *iberidifolia*, *latisquamea*, *lineariloba*, *melanocarpa*, *microcarpa*, *muelleri*, *multifida*, *nivalis*, *nodosa*, *nova-anglica*, *parvula*, *petrophila*, *ptychocarpa*, *readeri* (ex Mt Selwyn), *rigidula*, *riparia*, *sieberi* var. *gunnii*, *smithwhitei*, *spathulata* var. *spathulata*, *stuartii* complex, *tadgellii* (orig. Falls Ck), *tenuiscapa* var. *pubescens*, *trachycarpa*, *Brachyscome* sp. (Darling Downs).
*Bracteantha bracteata** — (Ebor, Pambula, Sandy Beach, dwarf mixed form, mixed garden form, orange, pink, lemon-yellow, yellow, white forms, tall form [Tenterfield], *viscosa**.
Calocephalus lacteus, *sonderi*. *Calomeria amaranthoides*
Calotis cuneifolia, *dentex*, *lappulacea*, *plumulifera*.
Cassinia leptocephala
*Cephalopterum drummondii**.
Chrysocephalum apiculatum (ex Murray-Sunset NP), *baxteri* (orig. Wilsons Prom), *semipapposum** (alpine form, Anglesea, Frankston, Lara, Licola).
Craspedia variabilis
*Haptotrichion conicum**.
Helichrysum adenophorum var. *adenophorum* and var. *waddelliae*, *calvertianum*, *elatum*, *rutidolepis* (Blackheath), *scorpioides*.
*Hyalosperma cotula**, *praecox**, *simplex**.
Ixiolaena brevicompta, *leptolepis*. *Lagenifera huegelii*.
Leptorhynchus squamatus,. *Leucochrysum albicans* ssp. *albicans* var. *albicans* (orig. Longwood, orig. ACT)*.
Leucophyta brownii.
Minuria leptophylla. *Myriocephalus guerinae*.
Olearia lirata, *pannosa*, *phlogopappa* (white), *pimelioides* (orig. Broken Hill).
Ozothamnus cordatus, *hookeri*, *obcordatus*, *secundiflorus*, *thyrsoides*.
Podolepis auriculata, *canescens*, *gracilis*, *jaceoides*, *lessonii*, *neglecta*, *nutans*, *rugata*.
Podotheca gnaphaloides. *Polycalymma stuartii*. *Pterocaulon glandulosum*.
Pycnosorus chrysanthes, *globosus*, *thompsonianus*.
*Rhodanthe anthemoides** (unbranched form, Liverpool Range, Whitlands), *anthemoides** (branching, red-bud), *charsleyae**, *chlorocephala* ssp. *rosea* (pink and white red with yellow centre, red with black centre), ssp. *rosea* (Balladonia form)*, ssp. *rosea* x ssp. *rosea* (Balladonia form)*, ssp. *splendida**, *corymbiflora*, *diffusa* ssp. *diffusa** and *leucactina**, *humboldtiana**, *manglesii* and *manglesii* (white form)*, *polygalifolia**, *polyphylla**, *propinqua**, *pygmaea**, *spicata**, *stricta**.
*Schoenia cassiniana**, *filifolia* subsp. *filifolia* (038)*, subsp. *subulifolia**.
Senecio pinnatifolius (syn. *Senecio lautus*)
*Waitzia suaveolens**
Vittadinia muelleri, sp. (white)

PROVENANCE SEED

Freshly collected seed is thoroughly dried and treated for insect infestation. Seed storage procedures are constantly under review. Most seed is stored in sealed foil packets at 4°C. Seed of arid and semi-arid origin is now stored at room temperature. The species stored at room temperature are delineated with the symbol #. There are a few species stored at both 4°C and room temperature

(delineated with a +). (nd = no date) If members would like to undertake a comparison of the results from both temperatures, Judy and I would be pleased.

Esma Salkin (Provenance Seed Bank Co-ordinator).

Brachyscome species:

aculeata — ACT; 3/95, — NSW; Snowy Mts 2/97, — Vic; Gippsland Alps 3/99.
basaltica var. *gracilis* — NSW; Menindee Lakes 9/94, Snowy Mts 2/97. ? *bellidioides* — WA; Kings Park, 10/94. *blackii* — NT +.
cardiocarpa — 6/96. *ciliaris* — Qld; Quilpie 7/96, NSW; Bundarra, Gunnedah 1992, Tibooburra 8/96, Wilcannia 8/95, SA; Iron Knob, 9/97 #, Nullarbor, 9/97 #, Penong, '97 #, Wirrulla, 8/97 #, Flinders Range 8/95, NT; 8/96,
cuneifolia — SA; Tintinara, 10/95, *curvicarpa* — NSW; Louth-Tilpa, 10/97 #, Qld; 9/98 #, *aff. curvicarpa* — Qld; 9/98,
dentata — Qld; 3/97, Augathella, 9/98 #, NSW; 9/95, SA; Blinman 8/96, *exilis* — SA; 9/94 +, 9/96 #, Yorke Peninsula nd, Gawler Range 10/97 #, *aff. exilis* — NSW; 8/93, *aff. formosa* — NSW; Neville 11/96,
goniocarpa — SA; Keith 0/91, WA; Esperance region, 10/97 #, *gracilis* — Vic; 10/93,
iberidifolia complex — WA; Peak Charles, 10/94, *I*
lineariloba complex — SA; 10/94, Gawler Range, 10/97, Yorke Peninsula, 9/96,
melanocarpa — Qld; Charleville, 9/98 #, NSW; Cobar, 9/98 #.
nivalis variants — Vic; Falls Creek 1/94, *nivalis* — Vic; Mt Nelse, 1/97,
nodosa — Qld; Cunnamulla, 8/98 and 9/98 #, Quilpie 8/98,
parvula — Vic; Mornington Peninsula, 1/94, Otways 11/95, *ptychocarpa* — NSW; nd, — Vic; nd.
rigidula — NSW; Snowy Mts, 9/94, 1/97, 2/97, 2/92 #, Mt Selwyn, 1/97.
scapigera — NSW; Snowy Mts, — Vic; Dargo H. P. 1/96, Gippsland Alps 3/99. *sieberi* var. *gunnii* — Tas; nd.
spathulata subsp. *spathulata* — NSW; Mt Selwyn, 2/97, Three Mile Dam, 2/97, Snowy Mts, 2/97 #, Vic; Dargo H. P. 3/97, Gippsland Alps 3/99, Falls Ck 2/99. *aff. stuartii* — NSW; Tingha 9/92. *tadgellii* — Falls Ck 2/99.
whitei — Qld; Quilpie, 8/95, — NSW; 9/98. *xanthocarpa* — SA; Eyre Peninsula, 9/91, Streaky Bay, 10/95.

Provenance species other than *Brachyscome*:

Ammobium craspedioides — per ANBG. *Anemocarpa podolepidium* — SA; Marree 8/96.
Asteridea nivea — WA; Cape Arid, 9/97 #.
*Bracteantha bracteata** — Qld; Eulo, 9/98 #, Vic; Dargo High Plains.
Calocephalus citreus — ACT; 9/95. *Calotis scabiosifolia* var. *scabiosifolia* — Qld; 9/98 #.
Campactra barbata — Qld; 5/96.
Cassinia aculeata — Vic; Gobur 3/99, Gippsland Alps 3/99, — SA; Blinman 8/96 #, *adunca* — NSW; 3/95, 5/97,
compacta — NSW; 5/97, *laevis* — SA; 8/99 *quinquefaria* — NSW; 5/97, *subtropica* — Qld, Nerang, 7/97 #, NSW;
Mt Warning, 7/97, *Cassinia* sp. *aff. uncata* — Vic; 1/97 #, *Cassinia* sp. — SA; 9/99, Mosely Knobs, 11/95.
Celmisia sp. — Vic; Gipps. Alps 4/97 and 3/99, Falls Ck 2/99 Mt Buffalo, 2/97, 2/98 #.
Chrysocephalum apiculatum — SA; Pine Ck 6/99. *semipapposum* — Vic; Mt Hotham 2/99, Gipps. Alps 3/99.
Craspedia variabilis — SA; Yorke Peninsula, 9/94,
Erigeron bellidioides — Falls Ck 1/97 and 2/99. *nitidulus* — Falls Creek, 2/99.
Erymophyllum glossanthus — WA; Mt Magnet, 11/97.
Helichrysum elatum — Qld; Childers 7/96, NSW; Barrington Tops, 10/95, Tura Beach 10/96.
lanuginosum — Qld; Town of 1770, 11/99, *leucopsidium* — SA; Tiges Rd, 12/96, Murray Bridge 91/92,
Ixiolaena brevicompta — Qld; 3/96 #, *supina* — SA; 3/93. *Ixiolaena* sp. 1 (*Leptorhynchus panaetioides*) — NSW; Gilgandra, 3/93.
Leptorhynchus waitzia — SA; Streaky Bay, 10/95 #. *Leptorhynchus* sp. — Vic; Gippsland Alps 3/99.
Leucophyta brownii — Vic; Sorrento, 3/96.
Microseris *aff. lanceolata* — Vic; Alps, 2/97 #.
Myriocephalus guerinae — WA; 10/96 #, *helichrysoides* — nd, *rudallii* — nd.
Olearia axillaris — Vic; 5/99. *decurrens* — SA; 8/95, *lanuginosa* — Vic; Ouyen 5/96, *megalophylla* — Vic; Dargo 3/95,
muelleri — SA; Lake Gilles 10/95. *pannosa* — SA; 9/99, *phlogopappa* — Vic; Mt Cope 1/97, NSW; Snowy Mts, 1/97,
pimelioides — Qld; 9/95, NSW; Menindee, 9/94, *stuartii* — NT; 8/96. *Othonna gregorii* — NT; 8/96.
Ozothamnus diotophyllus — Qld, '95, *hookeri* — Vic; Mt St Gwinear, 4/96, NSW; Snowy Mts, 6/98, *retusus* — SA; 11/95,
secundiflorus — NSW; Snowy Mts, 2/97, *thyrsoides* — Vic; Gippsland Alps.
Picris evae — Qld; nd.
Podolepis jaceoides — SA; 10/95 #, *kendallii* — WA; 10/96 #, *monticola* — ANBG, *rugata* — SA; Murray Bridge, '92,
Podolepis sp. — Qld; Capella '96.
Podotheca wilsonii — WA; PS 4437 10/95.
Polycalymma stuartii — NT; Alice Springs 9/96 #. *Pterocaulon sphaceolatum* — NT; 9/96.
Pycnosorus pleiocephalus — SA; Gawler Range 10/95 #.
Rhodanthe diffusa ssp. *leucactina* * — Qld; Charleville/Cunnamulla 9/99, *gossypina* * — Qld; Charleville 8/99,
polygalifolia * — NSW; Cobar/Wilcannia 9/99, *rubella* * — WA; Coolgardie 9/99, *stricta* * — WA; Cue/Mt Magnet 8/99.
Rutidosia helichrysoides — Qld; 7/96, Nockatunga, 9/98 #, *leptorrhynchoides* — Vic; '96, *multiflorus* — WA; 9/97 #.
Senecio anethifolius — SA; 9/99. *Stemmacantha australis* — Qld; nd. *Streptoglossa liatrioides* — Qld; '89.
Tricanthodium skirrophora — SA; 9/97 #
Vittadinia decora — Qld; 3/96, ? *muelleri* — NSW, *Vittadinia* sp. — NSW; Cocoparra.
Wedelia spilanthis — 3/96.

SUBSCRIPTIONS

Subscriptions for the coming financial year are \$10.00 per head for members within Australia and \$20.00 per year for overseas members. Cheques should be made payable to the Australian Daisy Study Group, and forwarded either to Judy Barker or our treasurer, Bev Courtney. (Addresses on p.1.) **FEES WILL BE DUE ON 30th JUNE 2000.** This is the first reminder; the second will appear in the July newsletter.

NEWSLETTER DEADLINE FOR NL 54 IS JUNE 1st 2000.