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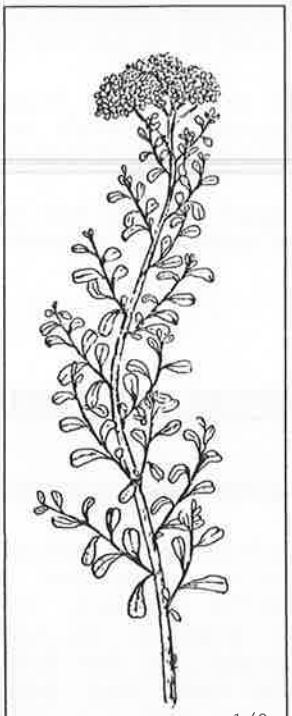
ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO.35

Dear Members,

I have just returned from a long weekend at Mount Hotham. Five ADSG members joined a walking group and once again our alpine sojourn was marred by weather. We arrived on a day of 40°C and left in dense fog. We had one good morning of walking and botanising and thereafter intermittent rain storms, sunshine and mist. The daisies were near their peak — lush and floriferous — celmisias in dense clumps as white as fresh snow and *Brachyscome nivalis* in innumerable tufts scattered over the slopes. *B.spathulata* and *B.rigidula* were still in bud, but *B.decipiens* was in full flower, hiding among the grasses. Craspedias were yet to reveal their full glory, but there were enough in flower to check out the new names.

In November ADSG took part in a week-long seminar 'Towards a better understanding of Australian plants' at Kawarra Gardens, Kalorama in Victoria. It was a seminar for professional landscapers, architects, local government employees, the nursery and floriculture industries and the native plant enthusiasts. The daisy display set up by Judy Barker was a drawcard and was admired by the participants, agog at the variety in the Asteraceae family. Thank you, Judy, for your continuing selfless support to the Group, and especially for three long treks up the mountain. Bev Courtney demonstrated the propagation of daisies and drew a large, appreciative audience as her considerable skills in this field are widely recognised. 'Perennial Daisies' was my topic at two sessions, a less familiar aspect because when one thinks of daisies it is frequently the annuals that come to mind. There is scope to combine the two in the garden where perennials can take over as the annuals fade. I'm working on it.



x 1/2

Ozothamnus obcordatus

ACTIVITIES FOR THE YEAR:

April 3-4 SGAP.Vic Flower Show and Plant Sale to be held in the Herbarium and precincts, Royal Botanic Gardens. Judy will put on a small display and members are invited to sell plants. Here is the opportunity to promote and talk daisies to the general public.

May 8 Saturday Meeting at 38 Pinewood Drive, an irregular annual meeting held to encourage country and perhaps interstate members to join us. The meeting starts at 2.00pm and there will be a simple meal at 6.00pm. Our guest speaker in the evening is Dr. Philip Short from the National Herbarium, Melbourne. Maybe you would like to speak for ten minutes at the afternoon sessions or suggest topics. As usual there will be plant swaps, the Seed Bank will be available, and of course we will hold 'Show and Brag' so don't forget to show us your latest success. Let us know if you are coming; it helps with the catering and we have the odd spare bed at hand.

September 20 to October 6 — ASGAP Conference in Sydney.

October 29-31 — North-eastern Victoria Weekend. We have half a dozen keen daisy growers in this region who also know their local flora intimately. We extend a very warm welcome to interstate members. The scenic alpine areas are not far away, there are some good nurseries and, for wine buffs, there is scope for essential detours. Details of cost, booking arrangements and program will be in the June NL.

Seed Bank. Despite promises to the contrary I have only used revised names, so keep the list of name changes handy. You'll learn more quickly this way.

Some provenance seed, excess to our requirements, is released (see the separate list). Please send your results to Bev Courtney. It requires a little more effort on your part. Look at the seed. Is it mature? If you are not sure, sacrifice one by cutting it in two. A healthy embryo is white. Please note germination times, germination rates, method used, etc., as you did for the Brachyscome Project.

Over the Christmas break we have been preparing for a big onslaught on the Brachyscome Project. We are anxious to hear if any members have observed *Brachyscome angustifolia* var. *angustifolia* in its natural habitat. Its range is coastal to the ranges, south of Sydney to the northern areas. It is a species that has been widely grown in gardens. It suckers and the rays are mauve-pink or mauve, with a flower-head about 1.5cm across. Leaves are entire, narrow and lanceolate, but you can also find the odd lobed leaf near the base of the plant. We are also anxious for reports on *B.diversifolia* var. *dissecta* found in the northern ranges of New South Wales. If you have invested in the invaluable *Flora of New South Wales* Vol.3 edited by Gwen Harden you will find details of *B.angustifolia* on p.166 and *B.diversifolia* var. *dissecta* on p.160.

For many years we have been fortunate in having our newsletter subsidised. This arrangement will cease this year. From June 30th 1993 subscriptions will be **$7.00** (overseas members **$14.00**). The price rise is modest, equivalent to two Saturday papers or a packet of tea!! The alternative is to reduce the size of the NL.

The article on *B.graminea* promised for this issue has been deferred. I've been preoccupied with household renovations and processing New England material and consequently dismayed to hear, "Where is your article?" "What article?", I reply.

I hope we may see you at some of our activities this year. If not, don't forget the newsletter eagerly awaits your comments or articles. Regards,

Elmar.

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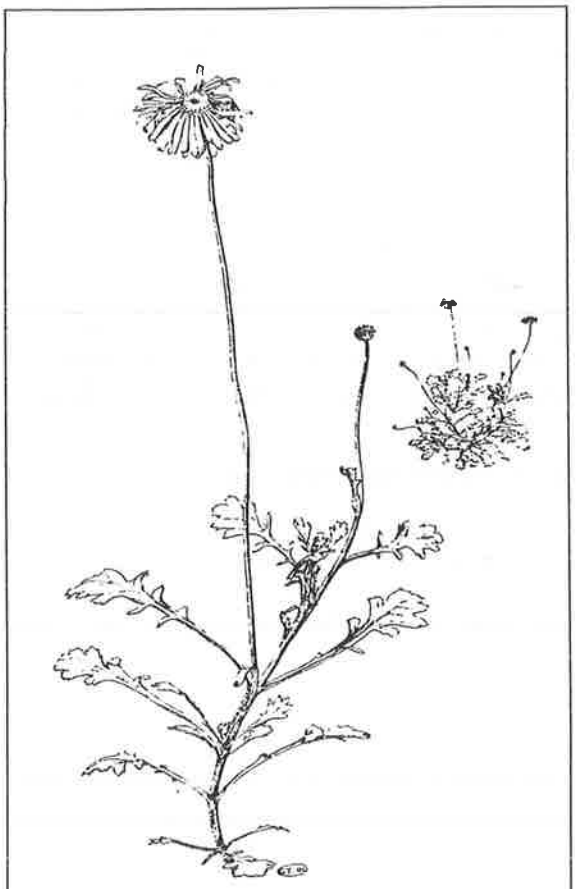
SPECIES AND FORMS NEW TO THE GROUP

Brachyscome procumbens

Brachyscome procumbens was one of the species allocated to me for trial in the 1991/92 project, the seed originating from Mt. Kaputar in the Nandewar Ranges near Narrabri in New South Wales. Germination of this seed was poor (8 only from autumn sowing and nil from late winter sowing) though later sowings of seed from my project plants gave excellent germination results. Germination occurred over a period of 24 days, commencing 8 days after sowing. Seedlings were pricked out into 2" (5cm) tubes in May and transferred to permanent positions in July. As requested, three plants were grown in a container – a polystyrene trough 53 x 17cm and 14cm deep – placed on the ground in a full sun position; two were planted in an easterly aspect with half a day of sun but good light all day; one was planted in a southerly aspect in full shade in winter (shaded by the house) to full sun in summer. Two plants were lost to rabbits.

The plants in the polytrough commenced flowering in early October and flowered profusely and continuously until late May when they tapered off to cease flowering in

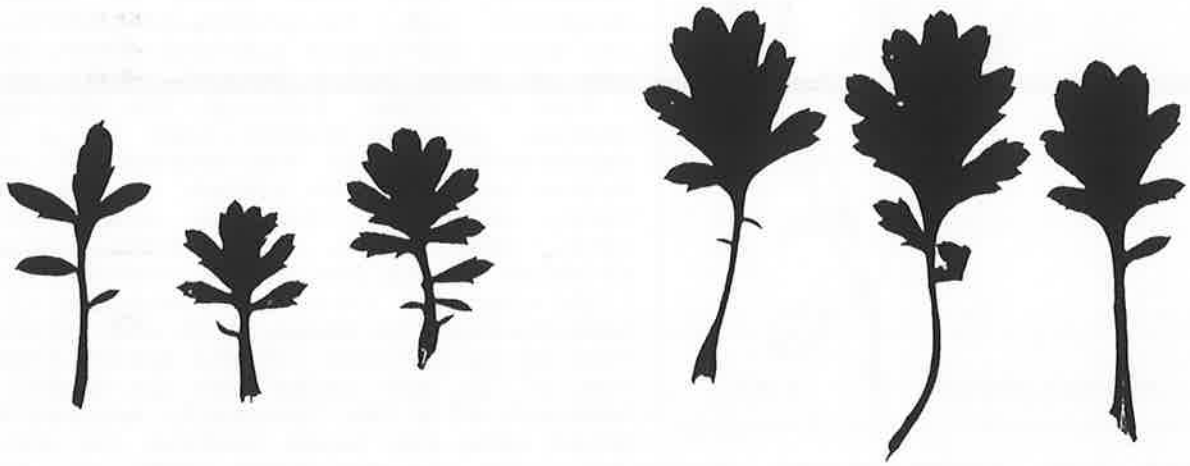


Brachyscome procumbens x 1/2

June. Those in the easterly aspect flowered from mid-November to May also continuously, but not as profusely as those in the trough. The other plant was the "runt of the litter" and took some time to get going, producing a few flowers only in December. All, including the runt, survived and grew on well and are again in full, prolific flower at time of writing (November 1992).

Two different growth habits were displayed. Those in full sun grew as tightly tufted plants with stiffly erect stems foliaged with alternate leaves, decreasing in size, to approximately 10cm above the ground. The flowers are held a further 18-20cm above the foliage on naked stems (some with a small bract). These plants, having outgrown the trough, were transferred to a larger container in May and have suckered slightly close to the original tufts, but have otherwise maintained the original habit. They are still in full sun. The runt plant also grew this way originally, but is now somewhat overgrown by other plants and has developed the habit of the easterly aspect plants. These lived up to the specific name and grew as procumbent plants with trailing stems approx. 30cm long, producing lateral growths from leaf axils approx. 5cm apart. Flowers arose from these laterals with similarly stiff stems to those in the trough but held at about 45°C as though reaching for stronger light. These two plants became quite shabby after flowering finished and I pruned them back hard in winter. They are again growing with the procumbent habit. The other plants were not pruned.

B.procumbens is a native of the northern tablelands and slopes of New South Wales. The *Flora of New South Wales* Vol. 3 (1992) edited by Gwen Harden states



that it also occurs in Queensland. Plants are perennial and entirely glabrous. The leaves are lobed and dark green with a slight reddish tinge on the underside. The stems too are reddish towards the base, gradually lightening to green. Leaves and stems are quite fleshy. Flower-heads are 35-38mm diameter, held at right angles to the stem, and the ligules are a bright lolly pink, virtually identical in colour to *B.formosa*, but with some slight differences in shading between plants. The colour remains constant until the ligules shrivel. The involucral bracts, approx. 38 in number, are held in three rows and are green with a purplish-red tip which intensifies as the flower-head fades. By the time the florets fall the bracts are almost entirely purplish-red. Ligulate florets are 40-48 in number. The fruiting involucre is broad and shallow and achenes are shed very quickly – two to three days after the florets die. In windy weather they will fall with the dead florets. Achenes at this stage are pale, yellowish green to reddish brown – many two-toned – drying to reddish brown, quite flat with a slightly ruffled wing along each side, 3mm by 2mm overall, and with a minute tuft of pappus at the top. Seed set is prolific.

Judging from sowings in December 1991 and autumn 1992 virtually all achenes seem to be viable. Seedlings appear to be true to type though, as the trough plants from which the seed was collected were fairly well isolated from other brachyscomes except one plant of *B.multifida*, this is inconclusive. I do **suspect** this species of being the male parent in some hybrids which have resulted from *B.melanocarpa* and *B.angustifolia* seed. However, given the propensity of so many brachyscomes to hybridize, this species is certainly no worse in this respect than others.

The plant is frost hardy. It does require some water in the warmer months, going quite limp if allowed to dry out but recovering very quickly (one hour in the trough) after watering. It has deep, fleshy roots and would probably survive extended dry periods by drying out and reshooting after rain (as does *B.formosa*) but, as yet, I have not had the opportunity to trial this.

I fell in love with this species and would thoroughly recommend it as a beautiful, long-flowering daisy requiring little space.

by **Julie Strudwick**.

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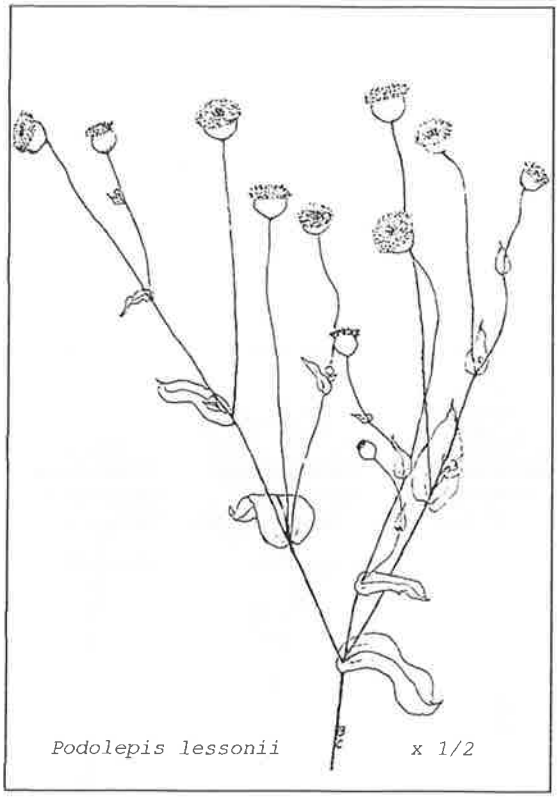


Podolepis lessonii x 1/2

Podolepis lessonii (Cass.) Benth. (WA)

This little annual has been a delight for many weeks and bids fair to be my favourite plant of the year. It is quite similar to that other little pet, *Asteridea athrixioides*, but the leaves easily distinguish the two species.

Individual plants have an erect, rounded habit and are 25–30cm high and 25–30cm across. The leaves are ovate and stem-clasping, very like those of *Rhodanthe manglesii* (syn. *Helipterum manglesii*), but are green and almost glabrous above, with a web of white hairs beneath. They measure 7–50mm x 2–20mm. Although the foliage is sparse, grouped plants take on a dense appearance due to the masses of yellow button heads, 7–10mm across, at the tips of wiry, red-brown flowering stems, 5–10cm long. Many broad, translucent, slightly wrinkled bracts are packed together in six tight rows to form the involucre. It is hemispherical in shape, soft and silvery. A fuzz of yellow disc florets sprout from the top of it and later age to brown. The addition of a few judicially applied blobs would have the heads looking for all the world like Sesame Street characters. The stiff stems seem to branch dichotomously, that is they fork a number of times, each time into two equal branches. These stems are so fine at the tips that the least activity - raindrops or questing pollinators - will set the tiny heads bobbing.

The fruits are terete (circular in cross section). The pappus of the outer florets consists of one bristle which is plumose at the tip; that of the inner florets consists of 3 or 4 similar bristles.

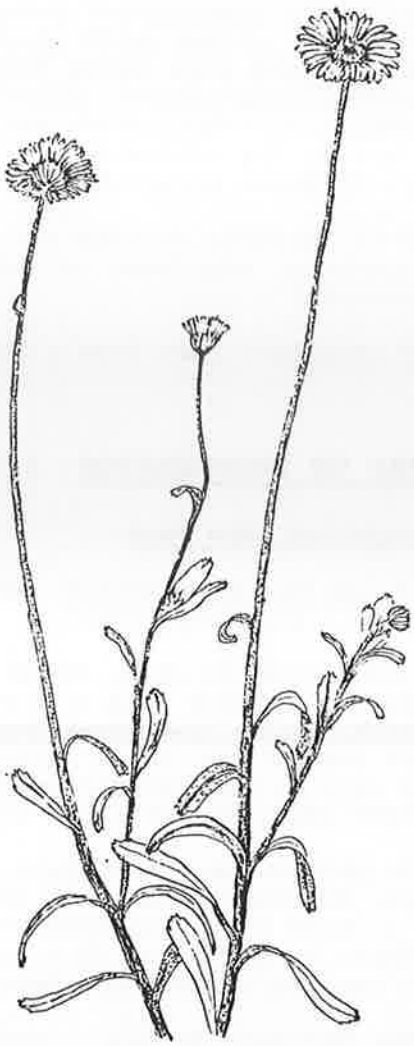
Seed germinated in 10 days when sown in late May. Twelve seedlings were placed in a 35cm shallow bowl of rich mix in August and left to fend for themselves. They began to flower in October and were gratifyingly at their peak in early November for a display at a Kawarra Gardens seminar. The growth in the pot at that stage measured 30 x 70cm, and elicited much admiration. The pot remained inside for a whole week without losing any of its colour or vigour. This is unusual because a couple of days at a show often sees plants turn pale and look unhealthy, but it may have been due to the very cold weather we had at the time. Twelve seedlings were probably too many for the size of the pot and some may have died undetected. *P.lessonii* will also grow in the garden.

The plants began to sprawl in December, but continued to flower. Seed started to mature later in the month. In its natural habitat it flowers between August and December, depending on where it is growing and the seasonal conditions. *Podolepis lessonii* and three other species, *P.davisiana*, *P.muelleri* and *P.tepperi*, form a natural group in which all the florets are tubular.

This cheerful, undemanding species has given pleasure to many members this year. I am grateful to Esma for giving me the seedlings and the germination details.

by **Judy Barker**

Brachyscome spathulata — Mornington Peninsula form



Brachyscome spathulata x 1/2

I have been growing this form for many years now and I find it both a frustrating and a rewarding experience; frustrating because I haven't yet managed to grow it in the garden, and rewarding because it grows superbly in a pot.

B.spathulata grows on well-drained eastern-facing slopes in open eucalypt forest. I decided to grow it as one of my species for the brachyscome project. In February 1991 I sowed seeds in a 30cm diameter, shallow terracotta pot, using Debco potting mix topped with granite screenings. Seeds took 40 days to germinate and germination was excellent. Growing on was very slow as usual, but that year it was exceptionally slow and I wasn't potting up till early July. I had hoped to have a beautifully flowering pot for a local flower show in September, but by then all I had was a pot full of seedlings only a few centimetres high. (This was the first time I have not had a spring flowering from autumn sown seeds.)

Seedlings start as a basal rosette of spoon-shaped, slightly fleshy leaves with rounded serrations at the end. They usually wither as flowering stems elongate. Flowering stems are branched and carry smaller leaves up the stems, the final 15cm of stem being bare. Flowers are mauve and 3-4cm in diameter. All this happened in spring 1992 (after growing through the 1991 summer and the following winter) and I finally had my beautiful pot (but no flower show to take it to!). Flowering stems filled the pot and were up to 40cm high. (Plants which were potted up and planted in the garden in 1991 died before flowering.)

I rubbed flower-heads together to get better pollination, but eventually lots of little hovering things appeared in the garden and I let them take over the pollination. I collected a lot of seed before plants stopped flowering around Christmas.

The pot is looking very scruffy now, with most plants looking dead. It has been watered every day (when it wasn't raining!), and some plants are shooting from the base. There are also seeds germinating, which is interesting because I wouldn't have expected this to happen until autumn, when temperatures drop and day lengths shorten. It seems that day length is not a factor in germination in this case. Melbourne has had an odd summer, with temperatures lower than normal and more rain. It is possible that rain has washed out any germination inhibitors present (more than my daily squirt would do).

I can recommend this species for pot culture at least. If anyone can grow it in the garden I'd like to know how you did it!

by **Bev Courtney**.

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SMOKE VERSUS FIRE Natalie Peate presented ADSG with a newspaper account of research at the National Botanical Institute at Kirstenbosch in South Africa. Seeds of *Audinia capitata* or False Heath are only known to germinate naturally after fire. Researchers found that fire caused virtually no temperature change in the soil at the depth at which the seeds were lying. They constructed a smoke generator and blew smoke from burning fynbos plant material into plastic tents covering experimental plots. (Fynbos species are known to need fire for regeneration.) The result was that plants germinated in the smoke treated plots, but not in the untreated plots. The conclusion has been drawn that these species react to smoke stimulation rather than to the heat of the fire.

This is valuable information for horticulturalists and conservationists. Perhaps it explains why some of the fire-following species germinate 'down by the incinerator'.

(The reference came from a South African newspaper – The Argus, May 27 1992.)

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NOTES ON PROPAGATION (from the Little Desert tapes)

Propagation from Seed:

1. Brian Walker's method. Brian's propagating mix is 1 part sharp propagating sand to 1 part peat moss.

He fills his 30 cm x 30 cm seedling trays almost to the top, firms down and makes six furrows with a ruler moved sideways. He sprinkles fine seed along the furrows, folds them over gently and soaks well with a fine nozzle spray. The trays are put out under eaves facing east and are protected with wire netting to keep cats at bay. Bigger seed is mulched with granite gravel. The trays are mist sprayed each day until the seedlings appear.

This year he has tried part filling polystyrene planter boxes rather than seed trays. He hinges the clear plastic bag that contained the sand over the planter box to make a mini-glasshouse. He has not evaluated the results yet. None of his attempts to germinate *Helichrysum davenportii* (now *Lawrencella davenportii*) have been successful, an experience echoed by all except Natalie.

2. John Barrie's method. John's mix is 50/50 coarse creek sand and peat moss. His trays are mulched with granite gravel and watered every fourth day. He claims that granite is hydrophobic and therefore keeps water under the mulch. It does not act as a wick. The trays are placed outside and his seedlings never damp off under this regime. Freshly picked and sown seed of *Brachyscome parvula* gave him almost 100% germination.

He has a novel method of pricking out his seedlings which allows minimum root disturbance. He puts one 12 cm (5") pot inside another, cuts the inner one in two parts vertically and puts in his mix. When ready to pot on he lifts the inner pot out carefully. One side falls apart and he pricks out with ease. The seedlings go into his polyhouse with no bottom heat and no misting.

3. Colleen Simpson's method. Colleen has worked on her mixes with the help of Kevin Handreck, an expert on potting mixes from CSIRO.

CUTTING MIX	POTTING MIX	SEED MIX
5 parts perlite 1 part peat moss	2 parts Mt. Compass loam 3 parts shredded pinebark plus iron, blood and bone, a pinch of trace elements, and IBDU. Mix well. (not steam treated.)	1 part cutting mix 1 part potting mix

There is no dolomite or lime in Colleen's mix, the most important ingredient being iron.

Seed is sprinkled on top of the seed mix and a little crushed rock is scattered over it. The pots are placed outside in a sheltered full sun situation and covered with flywire. They are not watered in if sown in autumn or winter. When

pots are placed in the tunnel house they are watered in and allowed to soak a few hours in a shallow tray of water. They are then placed on the bench. She avoids watering again until the seedlings are pricked out, but if it has to be done it is done by capillary action in a shallow tray. If germination has begun Maxicrop (cut flower strength) is added and pots are allowed to stand in it for about half an hour. This Maxicrop treatment is repeated about twice in three months. Seedlings grow on rapidly. They go into a tunnel house and are kept relatively dry. The maxim Colleen emphasised was "If a plant looks as if it needs watering, do it tomorrow".

In a recent letter Colleen enlarged on the subject of not watering until really necessary. She said that with all potting mixes we need to add two very important ingredients, oxygen and water. We tend to overwater our plants, which continually keeps the oxygen level too low. By allowing the mix to dry out to a sensible level and then giving a thorough watering we are fulfilling the plant's needs for oxygen. We can work on reducing our watering of plants in pots by mulching beneath them with water retaining mulches such as crushed rock and shredded pinebark, by covering with Sarlon in summer and by using potting mixes which will give the desired result. Gluggy mixes should never be used. An open, free draining mix that allows the root systems to develop and search for nutrients is essential, more so with natives than anything else.

Colleen had attended a Dry Lands conference at Loxton and had been powerfully impressed with the success reported from Roxby Downs where the soil had been ripped, the seed sown in the furrows, not covered and just left alone. She is planning to make channels in her seed mix, sow into them and leave nature to do the rest.

Colleen does not prick out at an early stage. She feels there is really no point in doing so in winter unless some of the seedlings have grown too big.

4. Mary Mckay's method. Mary uses commercial seed mix. She covers her helichrysum (now bracteantha) seed with a little gravel, but leaves the brachyscome seed uncovered. She mist sprays and transplants with a kitchen knife. When ready to pot on she makes up small quantities of potting mix to which she adds Osmocote and IBDU. Mary had heard Malcolm Campbell say that fertilizer should not be added too long before the mix was used. Natalie confirmed this view. She said that fertilized mix could be kept a week or so in winter, but only two or three days in summer. The problem is that toxins can develop from fertilizers.

5. Corinne Hampel's method. As Corinne was unable to come to the Little Desert she wrote to us about her propagating methods. She lives at Murray Bridge in South Australia.

"My whole propagating area at the back of the house is on a slight slope, a fact which helps prevent frost damage to the baby plants, I think. Everything is raised above ground level by about 6 inches (14 cm), on planks laid on bricks (pine offcuts from a mill) and lately some pallets obtained from a carrier (on sale as firewood!).

When I first began growing here the original plan was for plants for our five acres, but a batch of seed produces such a lot of plants that I thought I'd try growing for SGAP sales. (This is certainly the way to learn about plant propagation.)

Having plants raised up does not prevent slugs from inhabiting the pots! However, snail bait can be put under the planks very effectively hiding it from the birds, and still doing its job on the slugs. I don't have snails there, but out in the paddock white snails are a problem on young plants, and small conical snails in the vegie patch on strawberries.
I make good use of margarine and similar containers for raising seeds and striking cuttings. The cuttings are placed in foam vegetable boxes (broccoli) with glass or plastic over the top in semi-shade (dappled) during the summer and more open during the winter. Seeds go into an A-frame propagating frame (2m x 0.6m) covered with shadecloth in summer and plastic in winter (although this is mainly to prevent seed being washed out of the pots by heavy rains). I use the A-frame because I inherited it, and would probably use the vegie boxes if I didn't have it.

Plants are potted on into the black poly bags holding about half a litre of mix, and put into tomato boxes (foam). I had to do this to overcome the losses during the summer from the sun baking the black bags. Even the pots were in shade from 11.00 am in summer.

The whole plot is sheltered in the north by a couple of *Eucalyptus dumosa* and large *Acacia cyclops*. Consequently, I frequently get seedlings of these species popping up in bags and seed containers. I also get a few weeds because of the exposed aspect of everything to the paddocks only one metre away.

As cuttings make roots in the glass covered boxes I remove the pot and place it out under the mallee to harden for a few days before potting on. I have shelter for a few pots, not heaps in bags. I know the books say "prick out of seedling punnets to pots and shelter them to harden off", but I don't have the facilities to do that, hence my method.

People also say to me that I can't strike cuttings in winter. I was never one to be told what I couldn't do without feeling challenged. The main cause for my losses in striking cuttings is that I forget to water them – forgetting that they are covered with plastic or glass and rain can't get at them. I take cutting material when it presents itself, whatever time of year. Obviously a mild autumn like we've had is ideal!

The SGAP Journal, *Australian Plants*, is a mine of information about propagating. I learnt much about potting mixes, fertilizers and watering from them and also from any library books I could borrow. I bought the CSIRO booklet "Discovering Soils" series on potting mixes and armed with all this knowledge I'm gradually getting a pattern that makes me happy.

Seed raising and Cutting Mix – 2 parts coarse creek sand
1 part peatmoss
1 part vermiculite

During winter this seems to grow a fungus on it, so I'm experimenting with perlite in place of the peatmoss.

Potting Mix – 2 parts coarse creek sand
1 part composted pinebark

This is a heavy mix which I'm not happy about (as in weight!). However, I read that plants going out in the field probably need the wetness achieved in the mix. Most of my plants are in this category, but I think I'll go back to 1 part coarse sand to 1 part composted pinebark. Originally I used 2 parts compine to 1 part sand, and this is a little too free draining for summer. In the mix I used a small amount of soil wetting agent. I am now also adding a small handful of blood and bone to 3 x 2 gallon buckets of mix. This is my attempt to feed the microbes breaking down the pinebark so the plantlings don't starve! Slow growth has been a bugbear to me and I'm sure this is the reason. I'm also feeding fortnightly with Nitrosol and will begin a weak Maxicrop feed as well during the winter. A decent potting mix is a continual puzzle, with access to bulk ingredients a problem. I seem to be "making do".

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NEW NAMES AND MORE NAME CHANGES

by **Judy Barker**.

As a result of a number of articles published in Australian journals recently we have many name changes and new species to learn. A much more logical pattern is emerging as far as growers are concerned, so members should find these changes fascinating rather than challenging or even downright difficult.

The articles by Paul Wilson deal mainly with the classification of species currently included in the genera *Helichrysum*, *Helipterum*, *Waitzia* and related genera. The articles by J.Everett, J.Thompson and A.N.L.Doust deal with the genera *Craspedia* and *Pycnosorus*.

NAME CHANGES

This list presents the previous names in alphabetical order and the new names in

BOLD print. Some names have been referred to by an alphabetical code and they will be included in this list if they are known. The situation has been complicated by the fact that different authors have sometimes used a different alphabetical code.

Craspedia chrysantha (Schldl.) Sonder = ***Pycnosorus chrysanthes* (Schldl.) Sonder**
Craspedia globosa (Bauer ex Benth.) Benth., and *Craspedia* species Q in Jacobs and Pickard (1981) = ***Pycnosorus globosus* Bauer ex Benth.**
Craspedia pleiocephala F.Muell. = ***Pycnosorus pleiocephalus* (F.Muell.) Everett & Doust**
Helichrysum ayersii F.Muell. = ***Schoenia ayersii* (F.Muell.) J.Black**
Helichrysum blandowskianum Steetz ex Sonder = ***Argentipallium blandowskianum* (Steetz ex Sonder) Wilson**
Helichrysum cassinianum (Gaudich.) DC. = ***Schoenia cassiniana* (Gaudich.) Steetz**
Helichrysum davenportii F.Muell. = ***Lawrencella davenportii* (F.Muell.) Wilson**
Helichrysum dealbatum Labill. = ***Argentipallium dealbatum* (Labill.) Wilson**
Helichrysum filifolium (Turcz.) F.Muell. = ***Schoenia filifolia* (Turcz.) Wilson subsp. *filifolia***
Helichrysum lindleyi H.Eichler = ***Lawrencella rosea* Lindley**
Helichrysum macivorii F.Muell. = ***Schoenia macivorii* (F.Muell.) Wilson**
Helichrysum obtusifolium Sonder = ***Argentipallium obtusifolium* (Sonder) Wilson**
Helichrysum obtusifolium var. *tephrodes* (Turcz.) Benth. = ***Argentipallium tephrodes* (Turcz.) Wilson**
Helichrysum podolepidium F.Muell.= ***Anemocarpa podolepidium* (F.Muell.) Wilson**
Helichrysum semifertile F.Muell. = ***Schoenia ramosissima* (F.Muell.) Wilson**
Helichrysum spiceri F.Muell. = ***Argentipallium spiceri* (F.Muell.) Wilson**
Helichrysum subulifolium F.Muell. = ***Schoenia filifolia* subsp. *subulifolia* (F.Muell.) Wilson**

Please note the brackets after the new generic name *Rhodanthe* refer to eleven sections which Paul Wilson has recognized, of which one is new and ten are new combinations.

Helipterum adpressum W.Fitzg. = ***Chrysocephalum puteale* (S.Moore) Wilson**
Helipterum albicans (Cunn.) DC. = ***Leucochrysum albicans* (A.Cunn.) Wilson**
Helipterum albicans subsp. *albicans* = ***Leucochrysum albicans* subsp. *albicans***
Helipterum albicans var. *buffaloensis* Wilson = ***Leucochrysum albicans* var. *buffaloensis* (Wilson) Wilson**
Helipterum albicans var. *incanum* (Hook.) Wilson = ***Leucochrysum albicans* subsp. *albicans* var. *tricolor* (DC.) Wilson**
Helipterum albicans subsp. *alpinum* (F.Muell.) Wilson = ***Leucochrysum albicans* subsp. *alpinum* (F.Muell.) Wilson**
Helipterum albicans var. *graminifolium* Wilson = ***Leucochrysum graminifolium* (Wilson) Wilson**
Helipterum anthemoides (Sprengel) DC. = ***Rhodanthe anthemoides* (Sprengel) Wilson** (sect *Leiochrysum*)
Helipterum australe (A.Gray) Druce = ***Triptilodiscus pygmaeus* Turcz.**
Helipterum battii F.Muell. = ***Rhodanthe battii* (F.MuelJ.) Wilson** (sect. *Helichrysoides*)
Helipterum charsleyae F.Muell. = ***Rhodanthe charsleyae* (F.Muell.) Wilson** (sect. *Helichrysoides*)
Helipterum chlorocephalum (Turcz.) Benth. = ***Rhodanthe chlorocephala* (Turcz.) Wilson subsp. *chlorocephala*** (sect. *Leiochrysum*)
Helipterum condensatum F.Muell. = ***Rhodanthe condensata* (F.Muell.) Wilson** (sect. *Achyroclinoides*)
Helipterum corymbiflorum Schldl. = ***Rhodanthe corymbiflora* (Schldl.) Wilson** (sect. *Leiochrysum*)
Helipterum corymbosum (A.Gray) Benth. = ***Rhodanthe corymbosa* (A.Gray) Wilson** (sect. *Achyroclinoides*)
Helipterum craspedioides W.V.Fitzg. = Possibly referrable to *Polycalymma*
Helipterum diffusum DC. = ***Rhodanthe diffusa* (Cunn. ex DC.) Wilson** (sect. *Leiochrysum*)
Helipterum fitzgibbonii F.Muell. = ***Leucochrysum fitzgibbonii* (F.Muell.) Wilson**
Helipterum floribundum DC. = ***Rhodanthe floribunda* (DC.) Wilson** (sect. *Synachyrum*)
Helipterum forrestii F.Muell. = ***Rhodanthe forrestii* (F.Muell.) Wilson** (sect. *Achyroclinoides*)
Helipterum frenchii F.Muell. = ***Rhodanthe frenchii* (F.Muell.) Wilson** (sect. *Actinaria*)
Helipterum fuscescens Turcz. = ***Rhodanthe fuscescens* (Turcz.) Wilson** (sect. *Leiochrysum*)
Helipterum haigii F.Muell. = ***Rhodanthe haigii* (F.Muell.) Wilson** (sect. *Achyroclinoides*)
Helipterum heteranthum Turcz. = ***Rhodanthe heterantha* (Turcz.) Wilson** (sect. *Helipteridium*)
Helipterum humboldtianum (Gaudich.) DC. = ***Rhodanthe humboldtiana* (Gaudich.) Wilson** (sect.*Leiochrysum*)
Helipterum laeve (A.Gray) Benth. = ***Rhodanthe laevis* (A.Gray) Wilson** (sect. *Achyroclinoides*)
Helipterum manglesii (Lindley) Benth. = ***Rhodanthe manglesii* Lindley** (sect. *Rhodanthe*)
Helipterum margarethae F.Muell. = ***Rhodanthe margarethae* (F.Muell.) Wilson** (sect. *Actinaria*)
Helipterum maryonii S.Moore = ***Rhodanthe maryonii* (S.Moore) Wilson** (sect. *Monencyanthes*)
Helipterum microglossum Maiden & E.Betche = ***Rhodanthe microglossa* (Maiden & Betche) Wilson** (sect. *Leiochrysum*)
Helipterum molle (DC.) Wilson = ***Leucochrysum molle* (Cunn. ex DC.) Wilson**
Helipterum moschatum (DC.) Benth. = ***Rhodanthe moschata* (Cunn. ex DC.) Wilson** (sect. *Monencyanthes*)
Helipterum niveum Steetz = ***Argentipallium niveum* (Steetz) Wilson**
Helipterum oppositifolium S.Moore = ***Rhodanthe oppositifolia* (S.Moore) Wilson** (sect. *Leiochrysum*)
Helipterum polycephalum (A.Gray) Benth. = ***Rhodanthe polycephala* (A.Gray) Wilson** (sect. *Achyroclinoides*)
Helipterum polygalifolium DC. = ***Rhodanthe polygalifolia* (Cunn. ex DC.) Wilson** (sect. *Leiochrysum*)
Helipterum polyphyllum F.Muell. = ***Rhodanthe polyphylla* (F.Muell.) Wilson** (sect. *Polyphyllum*)
Helipterum propinquum W.Fitzg. = ***Rhodanthe propinqua* (W.Fitzg.) Wilson** (sect. *Leiochrysum*)
Helipterum pygmaeum (Turcz.) Druce = ***Rhodanthe pygmaea* (DC.) Wilson** (sect. *Leiochrysum*)
Helipterum pyrethrum (Steetz) Benth. = ***Rhodanthe pyrethrum* (Steetz) Wilson** (sect. *Anisolepis*)
Helipterum roseum (Hook.) Benth. = ***Rhodanthe chlorocephala* subsp. *rosea* (Hook.) Wilson** (sect. *Leiochrysum*)
Helipterum roseum var.*nigropapposum* Ostenf. = ***Rhodanthe chlorocephala* subsp. *rosea***
Helipterum rubellum (A.Gray) Benth. = ***Rhodanthe rubella* (A.Gray) Wilson** (sect. *Leiochrysum*)
Helipterum saxatile Wilson = ***Anemocarpa saxatile* (Wilson) Wilson**

Helipterum spicatum (Steetz) Benth. = ***Rhodanthe spicata* (Steetz) Wilson** (sect. *Helichrysoides*)
Helipterum splendidum Hemsley = ***Rhodanthe chlorocephala* subsp. *splendida* (Hemsley) Wilson** (sect. *Leiochrysum*)
Helipterum sterilescens F.Muell. = ***Rhodanthe sterilescens* (F.Muell.) Wilson** (sect. *Synachyrum*)
Helipterum stipitatum (F.Muell.) Benth. = ***Leucochrysum stipitatum* (F.Muell.) Wilson**
Helipterum strictum (Lindley) Benth. = ***Rhodanthe stricta* (Lindley) Wilson** (sect. *Leiochrysum*)
Helipterum stuartianum Sonder = ***Rhodanthe stuartiana* (Sond.) Wilson** (sect. *Synachyrum*)
Helipterum tietkensii F.Muell. = ***Rhodanthe tietkensii* (F.Muell.)** (sect. *Achyroclinoides*)
Helipterum troedelii F.Muell. = ***Rhodanthe troedelii* (F.Muell.) Wilson** (sect. *Synachyrum*)
Helipterum uniflorum J.Black = ***Rhodanthe uniflora* (J.Black) Wilson** (sect. *Monencyanthes*)
Podotheca pollackii (F.Muell.) Diels = ***Rhodanthe pollackii* (F.Muell.) Wilson** (sect. *Helichrysoides*)
Waitzia acuminata Steetz in Lehm. (bracts orange-yellow) = ***Waitzia acuminata* var. *acumiata***
Waitzia acuminata (bracts white or the outer violet-red) = ***Waitzia acuminata* var. *albicans* Wilson**
Waitzia aurea (Benth.) Steetz in Lehm. = ***Waitzia nitida* (Lindley) Wilson**
Waitzia citrina (Benth.) Steetz in Lehm. = ***Rhodanthe citrina* (Benth.) Wilson** (sect. *Citrinae*)
Waitzia conica Turner = ***Haptotrichion conicum* (B.Turner) Wilson**
Waitzia paniculata (Steetz) Benth. = ***Pterochaeta paniculata* Steetz.**

NEW SPECIES, SUBSPECIES AND VARIETIES

Acomis kakadu Paul G Wilson
Anemocarpa calcicola Paul G.Wilson
Craspedia alba Everett & Thompson [This species was referred to as sp. H in Jacobs & Pickard (1981), and as sp.A in Costin *et al* (1979) and Thompson (1981).]
Craspedia aurantia Everett & Thompson [This species was referred to as sp. D in Jacobs & Pickard (1981), and as sp.F in Costin *et al* (1979) and Thompson (1981).]
Craspedia canens Everett & Doust [This species is in part referred to as sp. C in Jacobs & Pickard (1981).]
Craspedia coolaminica Everett & Thompson [This species was referred to as sp. K in Jacobs & Pickard (1981), and as sp. G in Thompson (1981).]
Craspedia costiniana Everett & Thompson [This species was referred to as sp. F in Jacobs & Pickard (1981), and as sp. D in Costin *et al* (1979) and Thompson (1981).]
Craspedia crocata Everett & Thompson [This species was referred to as sp. A in Jacobs & Pickard (1981)
and as sp.I in Thompson (1981).]
Craspedia haplorrhiza Everett & Doust [This species was referred to as sp. O in Jacobs & Pickard (1981).]
Craspedia jamesii Everett & Thompson [This species was referred to as sp. B in Jacobs & Pickard (1981) and as sp. H in Thompson (1981).]
Craspedia lamicola Everett & Thompson [This species was referred to as species E in Jacobs & Pickard (1981) and as sp. E in Costin *et al* (1979) and Thompson (1981).]
Craspedia maxgrayi Everett & Thompson [This species was referred to as sp. J in Jacobs and Pickard (1981), and as sp. C in Costin *et al* (1979) and Thompson (1981).]
Craspedia paludicola Everett & Doust
Craspedia variabilis Everett & Doust [This species is referred to as sp. C (in part), sp. M and sp. N in
Jacobs & Pickard (1981). The authors note that it is a complex species with several forms, some of which may be separable in further work.]
Haptotrichion colwillii Paul G.Wilson*
Pycnosorus eremaeus Everett & Doust
Pycnosorus melleus Everett & Doust
Pycnosorus thompsonianus Everett & Doust [This species was referred to as sp. P in Jacobs & Pickard (1981).]
Rhodanthe ascendens Paul G.Wilson (sect. *Achyroclinoides*)
Rhodanthe collina Paul G.Wilson (sect.*Leiochrysum*)
Rhodanthe cremea Paul G.Wilson (sect.*Leiochrysum*)
Rhodanthe diffusa* subsp. *leucactina (F.Muell.) Paul G.Wilson (sect. *Leiochrysum*)
Rhodanthe gossypina Paul G.Wilson (sect. *Leiochrysum*)
Rhodanthe nullarborensis Paul G.Wilson (sect. *Achyroclinoides*)
Rhodanthe oppositifolia* subsp. *ornata Paul G.Wilson (sect. *Leiochrysum*)
Rhodanthe psammophila Paul G.Wilson (sect. *Achyroclinoides*)
Rhodanthe rufescens Paul G.Wilson (sect. *Leiochrysum*)
Rhodanthe sphaerocephala Paul G. Wilson (sect. *Synachyrum*)
Schoenia filifolia* subsp. *arenicola Paul G.Wilson
Waitzia acuminata* var. *albicans Paul G.Wilson
Waitzia suaveolens* var. *flava Paul G. Wilson

* *Haptotrichion colwillii* commemorates John Colwill, who first collected this species. John , as a member of ADSG, made many valuable contributions to our book, *Australian Daisies.*

A number of Australian species of *Helichrysum* have yet to undergo generic classification, among them *Helichrysum adenophorum, H.elatum, H.leucopsideum, H.pumilum, H.rupicola, H.rutidolepis* and *H.scorpioides.*

These articles contain keys to genera, descriptions of new species and descriptions of the diagnostic characters on which the classifications are based. In addition, there are a number of beautiful botanical illustrations in Paul Wilson's articles drawn by his wife, Margaret Menadue. These papers may be borrowed from the Study Group's library for closer scrutiny.

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Wilson, Paul G. (1992) The classification of Australian species currently included in *Helipterum* (Asteraceae: Gnaphalieae): Part 2 *Leucochrysum*. *Nuytsia* 8(3): 439-446.
Wilson, Paul G.(1992) The classification of some Australian species currently included in *Helipterum* and *Helichrysum* (Asteraceae: Gnaphalieae): Part 3 *Anemocarpa* and *Argentipallium*, two new genera from Australia. *Nuytsia* 8(3): 447-460.
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Wilson, Paul G. (1992) A new species of *Acomis* from the Northern Territory and a new combination in the genus *Thiseltonia* (Asteraceae: Gnaphalieae). *Nuytsia* 8(3): 479-483.

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A 'SURPRISE' ON HYBRIDIZATION FOR JUDY

by Julie Strudwick.

I read with interest Bev Courtney's article "To hybridize or not to hybridize" in NL34. I too became concerned about losing the true **species** of *Brachyscome* in my garden when strange-looking, self-sown seedlings began coming up last year. Consequently I decided to do some trials to see if I could determine which species do or do not cross with other species. I deliberately "rubbed noses" on some plants in pots I'd separated from other plants, and also collected seed from various plants in the garden which were entirely insect pollinated. Not all germinated or grew on, but those which did are now coming into flower. There are enough of them to convince me that few, if any, of the perennial brachyscomes I am growing will **not** interbreed with other species. A few species do seem to come true from seed but are "suspect" as the male partner in some of the obvious hybrids. The greatest divergence has come from the garden seed rather than from the plants that were deliberately manipulated, some of the crosses between plants that are 6 metres apart. Of the annual species I have previously grown only *B.iberidifolia* and *B.bellidioides*. They self-sow and do seem to come true, but this year I have also grown several other annual species so I am awaiting with interest the results of trial of this seed.

While I sympathize with Bev's point of view – I too love these charming, dainty little plants – I feel the need to make the following points:-

(a) By growing all these species, contributing seed to the seed bank and growing plants from garden seed for sale at shows, it is ADSG which has promoted this problem, albeit unwittingly at first.

(b) Many people who obtained seed or plants from ADSG could therefore be growing **as species** plants that are really hybrids. They could be sharing them with friends or selling plants propagated from them at local shows under the **species** name, thus causing untold confusion.

(c) Even if this is not so, hybridization is inevitably occurring all over Australia and possibly overseas, wherever people are growing multiple species of *Brachyscome* (and other Australian daisies, e.g. species of *Bracteantha*). Since hybrids **are** going to be around, I can see no harm in the orderly marketing of suitable plants, whether accidentally or deliberately produced, as long as they are clearly marked **as hybrids.**

(d) Not all people like the same things – what one regards as a favourite plant would not be given garden room by others. The hybrids I've seen so far are neither bigger nor better than the parent species – they are simply different. They will appeal to some and not to others. The same applies to the **species** – those that do not appeal to people will not be grown by them whether or not they have the choice of hybrids, and those that do appeal will be grown. Whether or not people choose to grow either or both is surely their individual right.

(e) With hybridization occurring in gardens I can't help wondering how long

species will survive there anyway. Even perennials do not last forever. Study Group members can probably keep all or most of them going by growing them from cuttings or divisions and by periodic access to wild seed, but most 'ordinary' gardeners will not bother with these methods. They will be perfectly happy with self-sown plants which replace any that die out or they'll just replace them with something else. So, are we promoting the continuing hybridization of Australian daisies?

I don't mean to seem all doom and gloom but feel we need to face the fact that hybrids are now here to stay and that these plants are **Australian daisies** too. Where their particular attributes of colour, form and/or ease of growing make them appeal to some people, what is wrong with them being grown **as long as they are known to be hybrids**? Those who prefer not to grow them have a perfect right to choose not to do so.

I recently heard a comment made about grevilleas that they hybridize so freely because they are still evolving. If this is so it could well apply to brachyscomes and other Australian daisies – the number of "species aff." daisies we have would seem to support this theory – in which case, **what is a species**?

Certainly, as Study Group members we should continue to grow and study as many species as we can as long as we bear in mind that it **is** the growing of the **species** which is **causing** the hybrids. Because of this I fail to see how including appealing hybrids in one's garden should interfere with the aims of our Study Group. In fact, since so many of our daisies do hybridize, trying to find which ones do and if any don't should surely be an essential extension of our study of them. Testing how well or otherwise hybrids do in the garden in comparison with the parent species could also provide useful information in our overall understanding of these lovely little plants.

Since we cannot guarantee the purity of seed (unless we find some way to keep plants isolated from other species) keeping the **species** going **in our gardens** is really only a personal satisfaction – it does nothing for conservation. In order to have material for re-introduction into the wild if necessary – the only way growing the plants in our gardens could truly contribute to their conservation – we would need to keep isolated not only the species but all the local forms as well. I can't see any of us being able to do that.

More questions come to mind:-

(1) Do we have the moral right to contribute seed (whose purity we cannot guarantee) to the seed bank and sell it as a **species**? Is this honest?

(2) Should we, in fact, be promoting the growing of brachyscomes and other suspect Australian genera at all? We already **know** that they will hybridize and undoubtedly **will** "be replaced by a collection of hybrids". However, will they necessarily "have lost the daintiness and charm of their forebears"?

(3) The current forms of the exotic daisies Bev mentions have all come about from the continual selection of better forms and aren't we doing the same thing ourselves? We get the best forms we can of our native daisies to grow in our gardens and try to adapt the difficult ones so we can grow them too.

I don't know if there are any definitive answers to these questions. I do know the problem of hybridization is not going to go away. I intend to keep trialling seed of brachyscomes for hybridization in an endeavour to find if any species are stable and can be relied on to come true from garden seed. I am not seeking to produce hybrids but, if any worthwhile ones occur, I will not be disposing of them. I can see no merit in destroying beauty, specially when it serves no purpose.

My own inclination **is** to continue to promote Australian daisies as garden plants. Many of the genera do seem to be stable and to come true from seed so there seems no reason to have any qualms about selling **them**. For the suspect genera such as *Brachyscome*, *Bracteantha*, etc., I feel we need to devise some strategy for advising people of the possibility that seed they buy may not come true, or that plants they buy may eventually produce hybrids. At the same time we do not want to deter people from growing them. After all, we're planning to produce a book on brachyscomes for that purpose. Perhaps all seed packets of suspect genera could

have a small explanatory note attached? Certainly this problem must be featured prominently in the *Brachyscome* book.

I'd like to thank Bev for putting forward her views. It's made me think seriously about a subject I've previously been inclined to put in the "too hard" basket. It is obvious from the above that my thinking is still very muddled but I hope, with Judy, that others will put their views forward too and, between us all, perhaps we can come up with some concensus of opinion that will show us how to cope with this problem that certainly won't go away.

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MY THOUGHTS ON HYBRIDS

by Colleen Simpson.

I understand the concerns of Bev Courtney, but feel that they largely stem from fear of what **might** happen. First let us look at the aims and objectives of the Society:-

1. To encourage the cultivation of Australian plants and to **improve them by breeding and selection.**

2. To encourage the establishment of gardens in all types of soils and climates for the preservation of the Australian flora.

I believe the only way we are going to conserve and preserve our flora is by marketing. Take the species of *Fuchsia* for example; they are being preserved because of their luxuriant hybrids. Once camellias became a commercial proposition the various species were preserved for all time. Israel has shown us quite clearly what can be achieved from our native plants. They have the ability to market successfully through necessity. Perhaps some day we will catch on.

We would have a better chance of preserving our flora if we could scale down production of beef and lamb, but this is wishful thinking.

It is a fact that many of our lovely natives have done their own hybridizing. I think we must try to promote good forms. All too often the natives in nurseries are bad forms of species.

The majority of Australians live in cities, more and more in units with small garden space. It is my view that we need to breed suitable plants for these limited spaces to maintain the public's interest in our flora and to keep the edge over the exotics. Our daisies have a huge potential for the smaller gardens, and we should be selecting the best forms and hybrids for our plant sales. We should also demonstrate their many uses with visual displays.

By growing the best forms of species and hybrids in our gardens we are showing what can be achieved and leading the way for others. We are not going to get the public to grow natives because they **are** natives – that is putting the cart before the horse.

It all boils down to the Holy Dollar! If three or four forms of *Brachyscome angustifolia* could be marketed properly (as Natalie Peate is doing with 'Paper Cascade'), we would then preserve the species because it has the ability to produce adaptable hybrids that perform well. I think 'Paper Cascade' has sealed the future for *Rhodanthe anthemoides* (formerly *Helipterum anthemoides*). Once a plant has proved it is of some value and has an economic potential it is quite easy to get it preserved in its habitat or botanical park or suitable arboretum. I have found that Ministers are very co-operative if a good reason (such as that it is potentially profitable) is given for preserving an area. We have come a long way in the past ten years; we have made the public and the politicians aware of our Australian flora, but we must capitalize on it. If we could select and promote just one plant a year we will be heading in the right direction. Many of the public are sitting on the edge – shall I or shall I not? By well planned and successful marketing we may be able to sway them into going native. If we don't our Australian plants will be history in the nurseries and we will lose the battle.

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AUSTRALIAN DAISY STUDY GROUP FINANCIAL REPORT July 1991 - June 1992

Cash Receipts		Cash Payments	
Cash at Bank 1.7.91		Cash at Bank 30.6.92	
Term deposit	$1479.28	Term deposit	$1607.35
Term deposit	629.08	Term deposit	706.44
Cheque account	871.04	Cheque account	1091.61
Cash in hand	56.11	Cash in hand	65.67
Subscriptions	405.00	Postage/phone	104.42
Seed sales	465.00	Newsletter	203.45
Donations	12.00	Seeds/packets	57.40
Interest	240.29	Computer	15.00
Book	20.00	FID	1.98
Sundries	5.90	Stationery	17.94
Newsletters	19.80	Hessian	62.82
		Aust. Flora Foundn.	25.00
		Book	16.00
		Artists' materials	174.62
		Sundries	53.86
	$4203.50		$4203.50

Summary of Receipts and Expenditure 1.7.91 - 30.6.92

Cheque Account:		
Opening balance		$927.15
Receipts	$962.43	
Expenditure	$732.30	
Closing balance		$1157.28
Term Deposits:		
Opening balance		$2108.36
Interest	$205.43	
Closing balance		$2313.79
At 1.7.91 total of all accounts		$3035.51
At 30.6.92 total of all accounts		$3471.07
Net profit for year		$435.56

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MEMBERS' REPORTS

June Rogers (from Horsham, Vic) on 26/4/92 writes:- "For the first time this year we grew *Calocephalus lacteus* and it was quite attractive cascading over the edge of a terracotta pot on the front (north) verandah, with *Leptorhynchos squamatus* and *Helipterum albicans* (since dead). Another large pot had Bill Owen's plant of *B.multifida* with blue and white flowers, also his plant of *B.segmentosa* x *B.multifida* cross, *Spilanthes grandiflora* and a royal blue *Veronica gracilis* (I think), so it was quite a show.

The Mt. Arapiles form of *H.bracteatum* (now *Bracteantha bracteata*) has self-seeded for the umpteenth time this season and I have a lawn of them coming up where they must have got caught under a grevillea. They have crossed with 'Dargan Hill Monarch' so I have larger plants with bigger flowers than the Mt. Arapiles form but the leaves, though large, are green not greyish as are 'Dargan Hill's'.

Helipterum roseum (now *Rhodanthe chlorocephala* subsp. *rosea*)is getting ready to flower again — this is the third generation this season — and the rains have brought up *B.multifida* seedlings in the open garden. Delightful to weed the grass out!

Our big success story though has been *Helichrysum ramosissimum* (now part of the *Chrysocephalum apiculatum* complex) which has doubled in size since Christmas. We've had it for several years but this year it has responded to a sprinkler system, as have some of the forms of *H.apiculatum* while other forms (obviously from dry areas) resent having water each day.

Three other 'daisies' – *Calocephalus citreus* (local form), *Craspedia globosa* (from the Shepparton area) and *Brachyscome basaltica* var. *gracilis* – have relished some moisture in the form of a gutter for extra dampness. The latter is thriving, spreading, and has been flowering for six months. Our mutual friend, Alby Lindner, said of it when in individual pots, "I doubt if it has any horticultural value", and now eats his words whenever he sees it.

Several years ago we scattered seed of *Helipterum corymbiflorum* (now *Rhodanthe corymbiflora*) which is local on our swamp area and we had a little carpet this year."

Beth McRobert (from Jamboree Heights, Qld) on 10/6/92 writes:- "When I last wrote I was delighted that *Helipterum anthemoides* (now *Rhodanthe anthemoides)* and *Ammobium alatum* were doing splendidly. Well, they have both collapsed in the wetness of summer. Or was it the ants? People claim ants don't kill plants but whenever I see a plant looking poorly in my garden the ants always seem to be present, and the Ammobium seemed to have scale on the stem below ground. A few Ammobium seedlings appeared, only to be lost to a marauding grasshopper. My hopes for self-sown *R.anthemoides* have been dashed, although it has naturalized in the garden of a friend who lives not too far away.

The annuals are looking great – some self-sown, others planted by me. Our SGAP had its Autumn Plant Sale in May and I thought I'd try a few seedling annuals for sale. Not really knowing when to plant, I tried a 'progressive technique' – starting with *Schoenia cassiniana* in March. I got some acceptable plants. On Good Friday I sowed *Helipterum roseum* (now *Rhodanthe chlorocephala* subsp. *rosea)*. I think they **all** came up on Easter Saturday – just couldn't believe it – and from then till May 17th it was an effort to hold them so that they wouldn't get too big in the pots. They did, of course, and I had to advise purchasers not to try to separate them – just to plant them in the clump. *Schoenia cassiniana* took four days to come up and, though a bit little, probably were good to transplant, as were *Helipterum humboldtianum* (now *Rhodanthe humboldtiana*). They don't like being in pots – just shoot ahead when put into the garden. *Helipterum manglesii (*now *Rhodanthe manglesii*) was a bit more shy – didn't come up nearly as well as the others. But all my little plants sold, and I hope will bring joy to their new 'owners'.

I had dried some of last season's flowers and they certainly helped sell the plants.

Shirley Dixon (from Tura Beach, NSW) writes on 4/10/92:- "I have eventually made it to Green Cape Lighthouse in search of 'The Brachyscome'. I have to report that I did not sight one brachyscome – though there were some daisies. *Helichrysum elatum* was in flower under eucalypts – straight, tall, with a profusion of flowers. On the rocks close to the sea was a senecio with large flowers. *Helichrysum scorpioides* was there as well. But nowhere could I see a brachyscome. The heathland was covered with flowers and was lovely to see.

Closer to home there is an olearia over 2m high with large leaves and covered in white flowers. I keep an eye on these plants, hoping to collect some seed."

Bob Magnus (from Woodbridge, Tas) writes on 26/1/93:-"On 15 November 1992 the Magnus garden was open to the public as part of the Australian Garden Scheme. Our *Rhodanthe chlorocephala* subsp. *rosea* in the hothouse were greatly admired, as was the 'Daisy Bed' with many and varied helichrysums – oops, sorry, – bracteanthas, craspedias and rhodanthes coming into flower. The weather was fine and the people accomodating.

As far as Bev Courtney's article is concerned – To hybridize or not to hybridize – I do have lots of thoughts on the subject. Personally I'm very happy about the way the Daisy Study Group works, and I like the balance between botany and gardening interests.

I feel that to only study species would be a backward step. We humans are inquisitive creatures, delighting in novelty, changes in fashion and the new. To ignore hybrids would be to ignore many of our most garden-worthy plants. After all, we are members of SGAP – Society for **Growing** Australian Plants –not for just observing them in the wild. As it has been shown so often before, hybrids have proved themselves to be much happier in our gardens and given us much more

pleasure and less heartache than many species. So let's not impose parameters on our little group, but rather keep enjoying daisies of all persuasions."

Mary McKay (from Fitzroy, SA) writes on 10/12/92:-"My daisies have been a constant joy. My yellow hybrid has also been flowering madly, but unfortunately no yellow flowers! *Brachyscome aculeata* flowered well in a large pot, but disappeared in the garden. I had no success at all with *B.halophila*. Four plants of *B.obovata* (Mt. Baw Baw) are doing well in a large pot – not flowering yet, but increasing in size now that we have some warmer weather. We have had our highest rainfall on record this year.

The sweet *Helipterum diffusum* (now *Rhodanthe diffusa*) I brought back from the Little Desert meeting were lovely and made a very pretty picture for weeks. I now have *Leptorhynchos tenuifolius* flowering in a pot and in the garden – I love the little spotted buds. *Calocephalus citreus* is just about to burst into flower – another favourite."

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INTERIM REPORT on the "COLLECTION and EVALUATION of DAISIES (tribe Inuleae) with HORTICULTURAL POTENTIAL

(From the Australian Flora Foundation Annual Report November 1992. Research carried out by Dr. Kerry Sharman.)
Chrysocephalum apiculatum, Leucochrysum fitzgibbonii and *L.stipitatum* and *Hyalosperma glutinosum* subsp. *venustum* required light for germination, while scarification improved germination compared with intact seeds in *Rhodanthe manglesii* and *R.floribunda. Myriocephalus stuartii, Anemocarpa podolepidium* and *Podolepis jaceoides* only germinated following the addition of gibberellic acid at 500mg/L.

THE BRACHYSCOME PROJECT

by Bev Courtney.

The successful publication of what is popularly known as 'The Daisy Book' convinced the editorial committee of the ADSG that a follow-up book, this time concentrating on the genus *Brachyscome*, would be in order.

It was therefore necessary to know a lot more about brachyscomes – where they grow, how they grow, how seed germinates and how well (or not) they perform in the garden. Thus, the Great Brachyscome Project of '91 was launched.

Study Group members all over the country suddenly found themselves in receipt of numerous packets of seed, with growing instructions and forms to be filled in.

This probably caused great consternation throughout the land. Suddenly we were all expected to actually do something, instead of just paying our subs and enjoying a comprehensive, thrice-yearly newsletter.

I offered (somewhat rashly in retrospect) to collate all the information received and found myself with a gradually accumulating pile of forms to be looked at. It was comforting to learn that I'm not the only one with a garden full of snails, and that the 'dropped-dead overnight' syndrome is not peculiar to me. ('Eaten' and 'died' were two of the most frequent comments made.) Those whose seed failed to germinate had the easiest task – their form filling finished about one third of the way down page one and that was that. A few of the more organised individuals, whose seed did germinate, actually made it to the bottom of page two. I'm afraid I wasn't one of them.

A total of 75 members were sent one or more packets of seed; 24 members replied with results of one sort or another – a total of 78 separate records. Some species were duplicated so the number of actual species covered was 37. These were *Brachyscome aculeata, angustifolia* var. *angustifolia, angustifolia* var. *heterophylla, bellidioides,* sp. aff. *campylocarpa, ciliocarpa, curvicarpa, decipiens, dentata, eriogona, exilis, formosa, goniocarpa, graminea, halophila, latisquamea, lineariloba, melanocarpa, microcarpa, muelleri, multifida, nova-anglica, papillosa, parvula, procumbens, radicans, rigidula,* sp. (Sturt NP), aff. *formosa,* sp. aff. *readeri, spathulata, stuartii, tadgellii, tesquorum, tetrapterocarpa, whitei* and *xanthocarpa.*

Members were asked to sow 25 seeds (in order to record percentage germination) and to do this in both autumn and spring. At this point a table might be easier

to understand: Number of records = 78

Autumn sowing:

germ +/grow +	42
germ +/grow −	19
germ −	14
not done	3
Total	78

Spring sowing:

germ +/grow +	22
germ +/grow −	20
germ −	10
not done	26
Total	78

germ + = seed germinated
germ − = no germination
grow + = seedlings grown on
grow − = seedlings not grown on (died or eaten)

The most obvious result to come out of this is that while most members managed to get their seed sown in autumn, spring was another thing. Perhaps spring is a busier time or initial enthusiasm had waned.

With regard to sowing times, results were really not complete enough to say which season suits a particular species. The general trend, however, seems to be that autumn sowing is best, particularly for annual species which need to establish well before spring flowering.

Few members managed to assess a species through to completion, ie. growing plants in a large pot and in several places in the garden. The main reason seemed to be the small number of seedlings actually obtained after germination. From my own experience 25 seeds is too small a number to sow when allowances must be made for infertile seed, seed being bounced out of the pot by heavy rain, seed being eaten, seedlings being eaten before or after potting on, weak seedlings struggling (or dying) and a multitude of other catastrophes. I prefer to sow as many seeds as possible and to record germination as poor, reasonable or excellent. With any luck there will be lots of seedlings to play with.

Old faithfuls, such as *B.nova-anglica* and *B.multifida*, performed well, as did *B.parvula* (both the Otways and Port Campbell forms). A very attractive and relatively new form of *B.parvula* from Huntly (Vic), with white flowers and fine foliage, is also showing promise. *B.procumbens* from Mt. Kaputar, a stunner with lovely pink flowers, caused one member to go into raptures. (A single seedling, collected at a Study Group meeting, is looking wonderful in my own garden and has made me determined to grow more of this one. It seems to set a lot of seed even from just one plant.) *B.melanocarpa* has been grown for some years now, and garden collected seed germinated well in both autumn and spring. Its straggly habit seems to be its greatest drawback. *B.dentata* is another straggler which germinated well but lacks horticultural potential because of its habit. An annual from WA, *B.bellidioides*, also germinated well and produced favourable comments from members.

Here are a few final comments after thinking about the project and my own results in particular. When assessing a species I think I would prefer to sow in a large pot filled with good quality potting mix and topped with a layer of coarse gravel. This layer will create a microclimate and prevent seed from washing out. If germination was good I would pot up as many of the seedlings as possible to assess in the garden while leaving several to grow on in the pot. Pots can be monitored easily for seed collection and insect damage and can be moved around as necessary. If germination is poor then all plants can be left to grow on in the pot and more seed collected for later sowings. I have sometimes found that weak seedlings resent potting on; leaving them to grow on in the pot gets around the problem and virtually duplicates the way they germinate and grow in their natural state.

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NEW MEMBERS

We welcome the following new members:

SEED LIST:

A full seed list is published in each March newsletter. Please keep this list as additions and deletions only will be recorded in the other 1992 newsletters. A STAMPED, SELF-ADDRESSED ENVELOPE MUST BE ENCLOSED WITH EACH REQUEST FOR SEED. Please write to Esma Salkin, 38 Pinewood Drive, Mount Waverley, 3149.

Seed is for sale to non-members at 50c per packet. Larger amounts may be bought by arrangement. Most seed for sale comes from cultivated plants or from commercial sources. Please note that much of the seed listed below has come from the garden and may have crossed with other species. One parent only is guaranteed.

Ammobium alatum, Angianthus tomentosus, Argentipallium dealbatum, Asteridea athrixioides, Bellida graminea
Brachyscome angustifolia var. *angustifolia* (pink, mauve-pink), *aculeata, basaltica* var. *gracilis, bellidioides, campylocarpa* C (also known as *B.*sp. aff. *campylocarpa*), *ciliaris* var. *lanuginosa,* aff. *curvicarpa, diversifolia* var. *diversifolia, diversifolia* x *gracilis, exilis, formosa,* aff. *formosa* (Neville), *graminea, halophila, iberidifolia, latisquamea, lineariloba, melanocarpa, microcarpa, multifida* var. *dilatata* (mauve, white, Weethalle [NSW]), *nova-anglica, nivalis, papillosa* (hybrid), *parvula* var. *parvula* (Huntly [Vic], Otways [Vic]), *parvula* var. *lissocarpa, perpusilla* var. *tenella, procumbens, ptychocarpa* (Vic, Mt. Canobolas [NSW]),*radicans,* aff. *readeri, rigidula, segmentosa, spathulata, stuartii, tadgellii, tetrapterocarpa,* sp. (Enngonia [NSW]).
Bracteantha bracteata (Ebor [NSW], mixed colours, orange, yellow, white, double white, *B.papillosa* [included under *B.bracteata* pending revision] and hybrid forms), *subundulata, viscosa and viscosa* crosses.
Calocephalus citreus, Cassinia quinquefaria, Cephalipterum drummondii (garden, WA).
Chrysocephalum apiculatum (Ardlethan, near Blayney, Connemara [NSW], small leaf – Maldon [Vic]), *baxteri, semipapposum* (Kingower, Maldon – fine leaf, Mt. Slide, Stanley [Vic]).
Craspedia glauca (revised names not adopted).
Erigeron pappocromus, Erodiophyllum elderi, Erymophyllum tenellum, Helichrysum scorpioides.
Hyalosperma cotula, praecox, simplex. Ixiolaena sp. (Qld).
Lawrencella davenportii, rosea.
Leucochrysum albicans subsp. *albicans* var. albicans (Dargo, Hovell's Creek), subsp. *albicans* var. *tricolor,* subsp. *alpinum.*
Leucophyta brownii, Myriocephalus guerinae, stuartii.
Olearia grandiflora, lirata, phlogopappa (mixed colours), *tenuifolia.*
Ozothamnus cuneifolius, diosmifolius, secundiflorus, stirlingii.
Podolepis gracilis, jaceoides, neglecta. Podotheca gnaphaloides. Pycnosorus chrysanthes, globosus.
Rhodanthe anthemoides (alpine form, Qld, Whitlands), *chlorocephala* subsp. *chlorocephala,* subsp. *rosea, charsleyae, citrina, corymbiflora, diffusa* subsp. *diffusa* (yellow), subsp. *leucactina* (white), *humboldtiana, polygalifolia, stuartiana.*
Schoenia cassiniana, cassiniana 'Gabriele', *filifolia, filifolia* subsp. *subulifolia.*
Waitzia aurea (revised name not used)

PROVENANCE SEED SPECIES

Brachyscome basaltica var. *gracilis* (Narrabri [NSW]), *obovata* (Lake Mountain [Vic]), *dentata* (Rankins Springs [NSW]).
Bracteantha bracteata – dwarf (Crescent Head 10/92), *B.viscosa* (Mandurang [Vic] 1/92).
Chrysocephalum apiculatum (Penong, Wirrula, Yardea [SA] 10/92), *Helichrysum elatum* (Gwydir Hwy 10/92)
Hyalosperma glutinosum subsp. *venustum* (Paynes Find, Perenjori [WA] 10/91)
Lawrencella davenportii (Cleary [WA] 9/91), *Myriocephalus guerinae* (Paynes Find [WA] 9/91), *M.stuartii* (Lake Eyre 10/90).
Olearia calcarea (Yardea [SA] 10/91), *ciliata* – white (Scaddan [WA] 9/91), *muelleri* (Gawler Ranges [SA] 10/91), *picridiflora* (Kyancutta [SA] 10/91), *pimelioides* (Kimba [SA] 10/91), *rudis* (Eneabba [WA] 10/91, Loch [SA] 10/91).
Ozothamnus obcordatus (Mandurang [Vic] 1/92), *Podotheca gnaphaloides* (Yarra Yarra Lakes [WA] 9/91).
Podolepis lessonii (WA pooled 10/91), *Pycnosorus chrysanthes* (Leichhardt Hwy. [Qld] 6/92), *P.globosus* (Jerilderie [NSW] 2/91).
Rhodanthe chlorocephala subsp. *chlorocephala* (Paynes Find [WA] 9/91), *moschata* (Wirrula [SA] 10/91), *pygmaea* (Kimba [SA] 10/91), *stuartiana* (Gawler Ranges [SA] 10/91).
Waitzia acuminata var. *acuminata* (Gawler Ranges [SA] 10/91).

SEED DONORS

Many thanks to Beth Armstrong, Judy Barker, Shirley Dixon, Colin Jones, Mary McKay, Bob Mylius, Esma Salkin, Maureen Schaumann, Pat Shaw, Colleen Simpson, Julie Strudwick and Paul Wilson.

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SUBSCRIPTIONS

Subscriptions are now **$7.00 per year ($14.00 for overseas members).** Cheques should be made payable to the Australian Daisy Study Group and forwarded to the Leader, Esma Salkin (address above). **FEES ARE DUE ON 30th JUNE, 1993. THIS IS THE FIRST OF TWO WARNINGS.**

Membership is now fully subscribed. If you intend to resign please inform Esma as soon as possible because there are still names on the waiting list. The 'guillotine' is regretfully applied to non-financial members on 31st October.