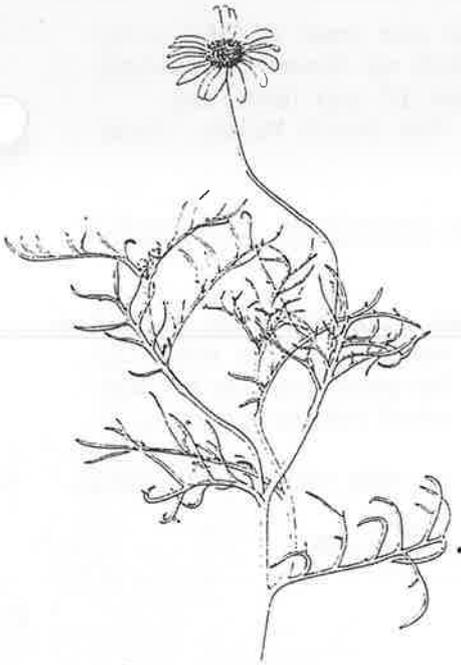


ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTSTHE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO.32

Dear Members,

One of the joys of returning home from a trip is getting reacquainted with your daisies. Thanks to other Study Group members and friends all my pots were thriving when I returned from Western Australia. The scene in the garden was less admirable, so I sank pots in the garden beds for display.



B.cheilocarpa x ½

The program at the Biennial Conference was varied and of unending interest. The speakers introduced us to some of their conservation issues, some high tech procedures and gave us an appreciation of the flora of Western Australia, and what a diverse flora they have! The Study Group Leaders' meeting was well attended, with more observers than delegates, which surely indicates the crucial role study groups play in SGAP. What was apparent to me was that each study group has different priorities, problems and solutions, depending on the genus or genera being studied. Common themes were the enthusiasm emanating from the leaders and the perennial problem of financing the groups' activities. Some groups relied on subscriptions from regional groups to survive; others felt they had to restrict the numbers of regional groups and give preference to individual members.

The recently formed Australian Network for Plant Conservation (devoted to in situ and ex situ conservation of rare and threatened species) has recognized the contribution of bodies such as SGAP and of the study groups in particular. Many members have considerable expertise in propagation and cultivation of our native flora and, in addition, a number of dedicated members have found 'lost' species, discovered new ones and been responsible for extensive field collections. With funding from ASGAP, ANPC will hold a training session for some study group leaders covering topics such as the ethics of collecting, herbarium techniques, keeping a seed bank, data recording, and endangered species recovery plans, etc. The ANPC will also act as a valuable source of information for groups such as ours. Those willing to support ANPC should enquire from GPO Box 1777, Canberra, ACT, 2601.

I suppose one disappointment from my trip to the west was that I was unable to find two brachyscomes I sought. I'm afraid weeds seemed to have invaded the habitat in one case, and in another I was beaten by a creek and a deep waterhole over the track. I didn't fancy a swim. I did collect mature fruit of Brachyscome cheilocarpa, B.ciliocarpa, B.oncocarpa and B.halophila, so we can do more detailed study of this group of brachyscomes.

No matter how carefully you plan you depend on the weather, or rather where and when the rain falls. Spring had gone in some areas and was just coming into full flush in others, so regrettably there are too many collections with immature fruit. A highlight of the trip was to find a minute specimen of B.goniocarpa 7mm high, with a fruiting head, 2mm wide, on a detour through Eyre Peninsula.

I was very pleased to meet South Australian members on my way home. Thanks to

Christina for showing Alf and I the daisies of Kimba, to Colleen and Ray for introducing us to the flora of the Adelaide Hills and for putting us up for the night, and to Corinne for letting us view her excellent propagating set-up. Foremost I must congratulate Colleen, Corinne and Mary for a first-class daisy display, and give a special commendation to SGAP - SA for a fine floral display and the endless choice of plants at their recent Flower Show. I must say we were tempted. To those South Australian members I missed this time, I'm sorry, but car troubles interrupted our plans.

Thanks to members who sent us lists of recent name changes in the Asteraceae. We are aware of these changes, but decided to be guided by procedures at the National Herbarium of Melbourne. You will already find some name changes in the Seed Bank list. Remember, the species listed have a garden or commercial origin. If you would like seed from a certain area or of known provenance please ask, we may be able to help.

The Brachyscome Project still needs your assistance. How are your plants progressing? I'm surprised I've had such good germination with my November sowing. We would like to know what brachyscomes grow in your area if you have any natural bush nearby, especially in northern and central New South Wales. Some of us hope to make it up that way next spring.

Under HELP HELP!!! we still need seed of B.microcarpa, B.ascendens, B.diversifolia var. dissecta, B.dissectifolia and B.stuartii.

Thank you for paying your subscriptions on time. This has enabled me to finalise membership for 1992 by the November NL. Please note our membership is now FULL. I regret I cannot accept passive members; those wishing to participate in our activities can go on the waiting list, but please don't send subscriptions.

I welcome eight new members to the Group, to share with us the study and cultivation of a fascinating and diverse group of plants.

Ehna

SPECIES OR FORMS NEW TO THE GROUP

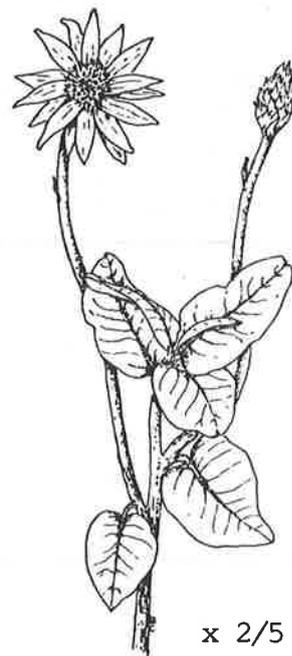
Olearia pannosa Hook.

Silver-leaf Daisy, Velvet Daisy-bush

I was introduced to this daisy during a collecting expedition for our local SGAP flower Show in the spring of a few years ago. The idea was to display small cuts of the mallee plants in flower to show that the mallee scrubs were not just drab Eucalypt trees.

I thought that this olearia was an escapee from a garden as the blooms were the size of cultured asters. This was the trigger for my daisy interest, and I started taking note of the mallee daisies. Since purchasing our five acres and revelling in space to plant what I want, my aim has been to try mallee plants and, since daisy-itis, to particularly grow those which I could propagate for myself.

This article is in response to a comment I made to Judy in a letter about the habit of this plant I was propagating. It appeared that the daisy, here in Murray Bridge district at least, was somewhat perennial as it appeared to shoot from the base, while the older stem was bare apart from a few leaves at the top with flowers.



x 2/5

Olearia pannosa

Since this comment and Judy's interest I checked the colony at Monarto for its habit. Each clump is multi-stemmed and woody, indicating two things to me. Firstly, the habit of the plant is to send up shoots from the base, and secondly, there have been no new shoots from the base of these clumps for some years. In fact, over the last three years I've known of the colony, the plants appear to be deteriorating. This is the only colony we know of in the district, and it is growing on deep mallee sand under Eucalyptus leucoxylon.

I have found my own plants to be very tatty during winter. Red-legged spider creates a silvering of the leaves in the same manner that they attack silver beet during the winter. The leaves are looking good now (30/9/91). The Monarto clump has the same problem. Two seedling grown plants have stronger looking stems and leaves, better looking plants altogether.

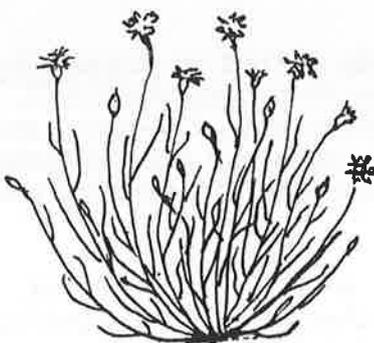
The seed of my original propagation was collected one March and sown a few weeks later, with a dozen plants being pricked out. I haven't been able to collect good seed since - the insects have beaten me to the heads.

Black's Flora of South Australia describes this daisy as being very close to O.grandiflora which occurs in South Australia in the Mt. Lofty Ranges. O.grandiflora is described as an undershrub 30-100cm high, the branches, peduncles and lower face of leaves velvety with a dense close white or rusty tomentum of centrifixed mostly T-shaped or forked hairs; leaves shortly petiolate, ovate or ovate-lanceolate, rigidly denticulate, mostly 4-10cm long, 1½-6cm broad, green, glabrous and reticulate on the upper face; involucre tomentose, 20mm long, on long stout peduncles, the bracts lanceolate; ligules 12-30, white, 20-25mm long; achenes pubescent. O.pannosa has leaves that are entire, more frequently broad-oblong or elliptical, rarely with a thin tomentum persistent on the upper face; achenes pubescent, to 6mm long. It is found in South Australia in Southern Districts to the Flinders Ranges; Murraylands; Yorke and Eyre Peninsulas; South-East, flowering August to November. It is also found in Victoria and New South Wales.

I have found that the daisy appreciates afternoon shade here. Mine are in a very wind-exposed position under some mallee trees.

I sometimes despair of having large flowering clumps like those at Monarto, but am determined to persist with this one which grows so close to home.

by Corinne Hampel.



Helichrysum filifolium
(habit)

Helichrysum filifolium (Turcz.) F.Muell. (WA)

filifolium = with thread-like leaves

Thread-leaved Everlasting

This species excited my interest from the time the seed was first bestowed upon the Group. It had been collected in "WA" in 10/88. I thought it was a helipterum because the pappus plumes were more feathery than barbed. It became 'Natalie's yellow helipterum' and was sown in May '89. Ten days later only one seed germinated and it disappeared without trace by July.

At the end of '89 the pot was put down by the incinerator to see if anything interesting would occur if it was left to its own devices. In April '90 what was my delight to find eleven little seedlings in the pot? In May five were of a size to be transplanted into 5cm tubes, but the species did not appear to relish Melbourne winters as only four of my eleven seedlings ever lived to be cherished. Three of these were transplanted into a rich mix in a 28cm terracotta bowl.

The seedlings resembled Helichrysum subulifolium, but they formed tufts of narrow green leaves with a fine fuzz on them. (H. subulifolium is usually smooth, without hairs.) As the seedlings developed it became obvious that they differed from H. subulifolium in several small ways and I was delighted to conclude that 'Natalie's yellow helipterum' was actually Helichrysum filifolium.

Individual plants grow to 26cm by 26cm; the group of three measured 28cm by 50cm. They are upright, with filiform leaves in quite a dense tuft and a profusion of bright yellow heads at the tips of the stems. The heads were 21-24mm across when they first opened in mid-September, but became smaller as the season progressed. Plants flowered and looked most attractive for at least eight weeks.

The leaves are thread-like, 1.5-8cm long and 0.5-1mm wide, with acute tips and a few sparse hairs. The stems branch near the base. There are small bristly hairs on the lower stems and sparse wispy hairs just below the heads. Plants are more hairy when young.

The fruits are very similar to those of H. subulifolium too. They are 2-3mm long and 1mm across, brown to dark brown, narrowly obovate, with long upright transparent hairs. The pappus is quickly separated from the body. Eighteen cream bristles are joined at the base and are almost as feathery as those of the genus Helipterum.

I have only grown H. filifolium in pots so far, but will try it in the garden this year. It likes a lot of sun and should be nipped back in its youth to promote bushiness. Young seedlings should be protected from cold, wet weather. Group planting seems advantageous.

The heads were easily wired, as are many species with similar cylindrical, densely filled involucre, such as H. subulifolium and Schoenia cassiniana. Flowers also dried reasonably well.

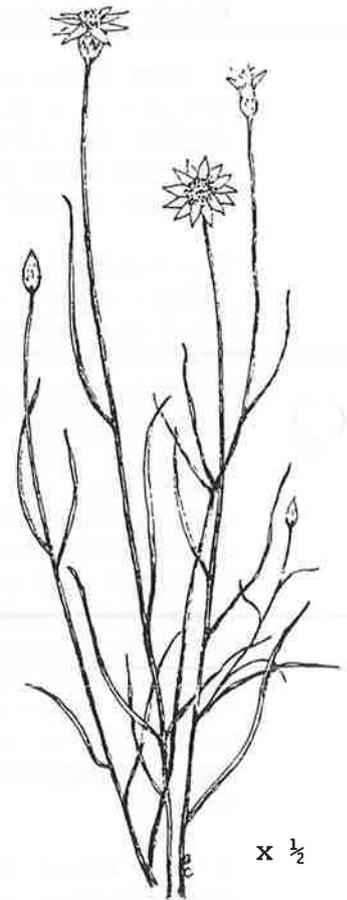
Seed was collected throughout December. It is not ready for harvesting until the outer bracts develop a small split, loosen slightly, and the mass of enclosed florets looks fluffy rather than dense.

Not much has been written about H. filifolium. It is closely allied to H. subulifolium, but differs in having a bell-shaped involucre (rather than hemispherical), a smaller flower-head (2.1-2.4cm across in cultivation rather than 2.5-4cm), and the habit is short, dense and tufted compared with taller, open and more branched. (Differences in habit may be accidental and associated more with tip pruning than with inherent habit.)

Helichrysum filifolium appears to have enormous potential as a neat, colourful, floriferous annual. In November '91 Colin Jones observed that he had a beautiful display of the species in four self-watering pots, and added "I think it is even more attractive than H. subulifolium."

Schoenia cassiniana 'Gabriele'

A Tasmanian member, Bob Magnus, obtained a packet of this seed from a seed company in USA and sent some over for me to try. It germinated with enthusiasm in four days and about twenty seedlings were planted in a very large pot of rich mix last May.



Helichrysum filifolium

At the end of August the plants were producing masses of buds, pale pink, pale purple and pale yellow. "Hullo" I thought, but all the flower-heads turned out much the same pretty pink, perhaps there was some variation of shade.

The pot was a delightful sight from mid-September to mid-November. It was just a mass of pink. I'm not sure how it is supposed to differ from S.cassiniana, but my experience suggested that although the individual heads might be smaller, the clusters were larger and more numerous, and the plants more robust.

Individual plants measured 27cm x 20cm and were inclined to bend over with the weight of the flowers. Large single heads could be wired with ease.

Plenty of seed was produced and is available from the Seed Bank. I am grateful to Bob for introducing such a gem.

by Judy Barker.

Olearia lanuginosa

In November 1989, Study Group members spent the long weekend leading up to Melbourne Cup Day, looking for new daisies in the Little Desert in Victoria.

One of those we found was Olearia lanuginosa, the Woolly Daisy-bush. It was an upright shrub, about a metre high and, (from memory), growing in dryish, sandy conditions. Although it was not in flower, it appealed to me immediately because of the unusual foliage and the attractive grey-green colour.

I took cuttings and was pleased to find that they survived the journey home and eventually produced a couple of plants. One of these is now in the garden in a dryish spot, not quite under the eaves, facing north, and doing reasonably well. The other has ended up in a 25cm terracotta pot, with Helichrysum baxteri 'Midget' reclining happily at its feet. It is now flowering (early January) and looking a picture.

O.lanuginosa has fleshy lanceolate leaves, up to 2mm long, crowded in tight clusters along the stems. Both stems and leaves are covered with a white woolly tomentum. Flowers, 8mm across, arise from the centres of the leaf clusters, and are confined to the top 15cm or so of each stem. The 5 or 6 ray florets are white, tinged pink, and the 3 or 4 disc florets are a deeper mauve-pink. The hand lens reveals yellow stamens with a forked purple stigma pushing up between them.



x 1

O.lanuginosa

Cuttings of firm tip growth strike readily, although they don't like too much humidity. I haven't tried seed as yet but will attempt to collect some this season as I have noticed bees at the flowers. O.lanuginosa makes a very striking container plant.

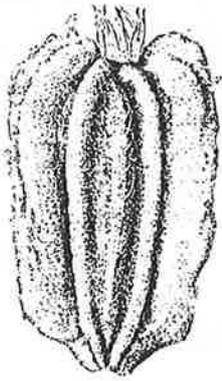
by Bev Courtney.

Brachyscome tadgellii Tovey & P.Morris

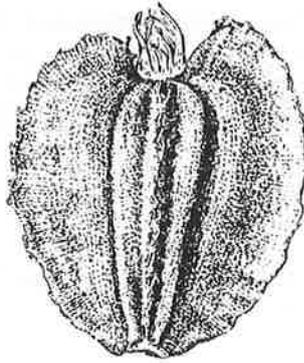
(syn. Brachyscome nivalis var. alpina (Benth.) G.Davis)

Brachyscome tadgellii is found in the Australian Alps in New South Wales and Victoria in moist situations at about 1500m. In Tasmania it occurs at lower altitudes, about 1100m in marshy sedgeland, e.g. near the Great Lakes. These habitats are snow covered in winter. As mentioned in the last Newsletter, NL 31,

p.39, it is one of a number of alpine brachyscemes growing in similar habitats. B.tadgellii is most commonly confused with B.radicans, but can be differentiated easily. B.tadgellii has fruit with a pale brown, thin broad wing. The wing of B.radicans is swollen.



x 20

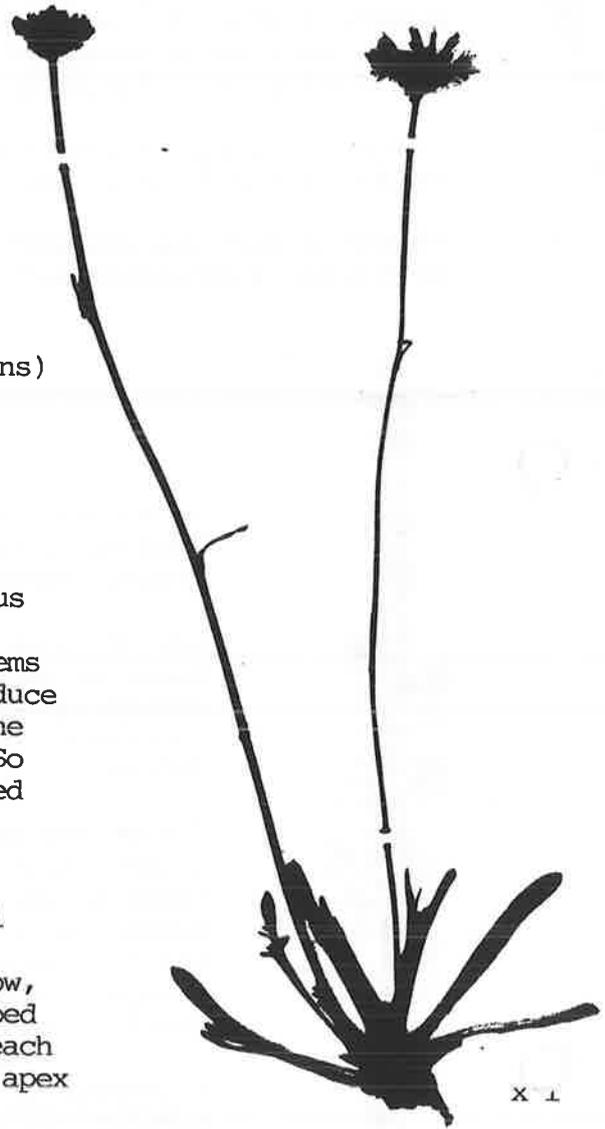


B.tadgellii (Lankey's Plains)

B.radicans (Nunning Plains)

The involucre bracts of B.tadgellii are also narrower, but the habit of the plant may give you the best clue. Both are stoloniferous, but B.tadgellii is more restrained in its stoloniferous growth, maintaining a compact dense growth that expands gradually outwards, whereas B.radicans seems to be spurred on by some biological urge to reproduce and sends out elongating stolons that anchor in the nearest patch of soil beyond the parental orbit. So the habit is more open. I have to isolate my potted plants of B.radicans lest they migrate and swamp kindred species.

Brachyscome tadgellii is a stoloniferous perennial with white terminal flower-heads standing above a basal clump of dark green leaves. Leaves are narrow, linear, fleshy, sessile, entire to irregularly lobed with an obtuse tip, usually 4-5cm long, but can reach 8cm, and is about 2mm wide. Lobes 1-4 towards the apex are 5mm long and about 2mm wide. The mid-vein is prominent in the upper surface of the leaves, and both lower and upper surfaces are covered with short glandular hairs. The basal clump is 6-8cm to 16cm depending on nutrient conditions. As already mentioned, stoloniferous growth maintains a compact clump. Scapes are glabrous with up to 4 small bracts up the stem. Involucre bracts are green, narrow-obovate with a purplish tip. Glands are present on the outer edge. Inner bracts are wider. The flower-head is 2.5 to 3cm wide with about 50 white rays. The fruit is 2 x 1.75mm with a broad thin pale brown wing about the same width as the body, and with a few glandular hairs on the edge. The body is dark brown, has a thickened margin (stands out from the wing) with a central ridge bearing a few glandular hairs. The pappus is large, uneven and white.



Brachyscome tadgellii pressing

B.tadgellii grows readily from seed. I haven't tried division as seed germination is so easy. In cultivation it prefers a moist situation with broken shade. In Melbourne it blooms 2-3 months in spring and produces an abundance of seed. My plants receive little attention other than making sure they don't dry out and removing dead flower-heads. They are fertilised with an occasional dose of Thrive.

The conservation status in Victoria is "r", i.e. rare with relatively few stands.

Thanks to Dr. Philip Short for confirmation of species identification, and to Dr. J.H.Ross, National Herbarium of Victoria.

by Esma Salkin.

EXTRACTS OF CORRESPONDENCE WITH OUR MAN IN SOUTH AUSTRALIA, BRIAN WALKER.

(Brian lives in Valley View, SA, and is a relatively new member.)

31/7/91 ... Valley View is an inner suburb of Adelaide about twenty minutes driving time from the very heart of the city. It lies in a north-easterly direction on the lower slopes of the Mount Lofty Ranges. Before housing development began about thirty years ago the land was used for growing almonds and other agricultural pursuits. Parts of the suburb about the slopes of the Dry Creek which winds its way down to St. Vincents Gulf. Hence, I suppose, the name Valley View. The creek only flows in winter, leaving the odd stagnant pool at other times of the year.

The soil is definitely alkaline, as are most of the Adelaide Plains soils and lower foothills regions. I have only done one pH spot testing which measured about 8; any acidic soil loving plants must be grown in containers.

The average annual rainfall for Adelaide is 585mm.

My seed trays are placed under the eaves against an east facing wall of cream brick. As our rainfall comes generally from the west they only receive the occasional shower of rain. They get morning sun until about midday. This situation suits me best because I walk past them daily and can keep a close watch on their progress. Watering is done by hand mist spraying.

The helichrysum seed was sown in 12cm (5") pots and left in the open exposed to all the elements but other than H.obcordatum, which germinated prolifically, none of the other Helichrysum spp. did so, not even my own fresh seed of H.bracteatum 'Princess of Wales'. I know that seed from this plant is viable because I found three self-sown seedlings in the gravel around the parent plant. So there is a mystery.

2/9/91 ... The last few weeks or so I have been busy potting on brachyscomes, namely B.aff.curvicarpa (yellow rays) and B.melanocarpa. I counted them and now have 54 of the former and 132 of the latter, with remarkably few losses along the way. All from the seed I sowed back in May.

I have also just potted on a number of B.multifida cuttings, pink and white form. The cuttings were taken in April and placed in 12cm (5") plastic pots with coarse sand as the medium. I prefer a 50/50 peat/sand mix for cuttings but had no peat at the time so went without. The pots were stored in a former bird aviary for safekeeping and watered when the surface of the sand looked dry. I did not use a rooting powder, in fact I have given up using it. I suspect that bottom heat and automatic mist spraying should be used with hormone powder to get fast results. The cuttings then took 12 weeks or so to strike, with new light green growth being a good indicator that roots had formed. The strike rate was about 90%. I am quite pleased with my new plants, especially the different colours as I had only ever grown or seen the mauve form before April this year. The next job is to keep the slugs, snails and "woolly bear" caterpillars away, especially the last mentioned as they are everywhere at the moment.

My H.bracteatum 'Princess of Wales' is flowering prolifically with particularly large flowers and leaves, which is common for winter/spring. In fact this plant is never without flowers. It is interesting that during the summer months the flowers produced are smaller. Of all the helichrysums growing in my garden this is my favourite and is always admired by visitors, who usually end up with a plant grown from a cutting. I take cuttings from the plant all year so I am

never without plants. Just turn your back on them and they've struck — well, almost !

You can probably guess by now that helichrysums are real favourites of mine. The following are those I currently have: H.bracteatum 'Princess of Wales', 'White Monarch', 'Cockatoo', 'Dargan Hill Monarch', and 'Diamond Head', H.ramosissimum, H.apiculatum (dry land and alpine forms), H.baxteri and H.diosmifolium. All are affected to some degree by the alkaline soil which locks up the iron. I use iron chelates but it doesn't always help, particularly with H.diosmifolium on which a number of growing tips go white !

Of the two forms of H.apiculatum, the alpine form strangely has fared the best. Both have been subject to cat disturbance and the dry land form to chlorosis. In future, I shall grow these plants in pots or hanging baskets.

8/11/91 ... As I look out the kitchen window I can see a potted mass of delightful B.bellidioides smiling back at me, a group of Helipterum roseum, H.splendidum and Helichrysum subulifolium relaxing together, all guarded by H.bracteatum 'White Monarch', 'Princess of Wales', 'Dargan Hill Monarch' and 'Cockatoo' in floriferous state. Not far away a mound of B.multifida var. dilatata (pink) in full display, and beside that B.multifida (white, tall) likewise. Two dainty Helipterum anthemoides with delicate star flowers contrast with the brachyscomes, and a lone Craspedia glauca pokes up a single flower-head triumphantly. All in all a happy sight!

Calocephalus citreus have all settled in and are putting on new silvery growth. A clump of H.ramosissimum with fresh green foliage and a profusion of orange-gold heads adds another dimension. And still more to come with a pot of Craspedia globosa promising to show off a little later. Whoever said that Australian natives lack colour must have been a daisy-phobe!

27/11/91 ... For many weeks now I have had a superb potted display of B.melanocarpa, aff. curvicarpa (yellow) and bellidioides in a "Roman Decor" self-watering pot. Soil mixture is kept uniformly moist by capillary action and water is not wasted through drainage holes. Evaporation is reduced with a sand or gravel mulch. These types of pots are very useful for our hot, dry summers provided you top up the well in the bottom, say every three or four days.

ISOLATING PLANTS

by Judy Barker.

It has become obvious that many, if not all, of my Brachyscome angustifolia seedlings have been crossed with other species. I suspect B.melanocarpa, B.formosa, B. aff. formosa and even B. aff. curvicarpa (yellow) of dalliance with my B.angustifolia plants. Some of the seedlings produced are very pretty indeed, but I can only guess at their fathers' identities and this is not good enough. So I constructed several isolation wards by tacking or stapling flywire over one wooden frame and the metal frame of three hanging baskets. The plants I wanted to isolate were placed under the frames in the sun, and received ten minutes fine spraying night and morning.

From the moment the plants were put under the frames they began to ail. The leaves lost their lustre and their firmness, and the buds took ages to produce sickly, little heads for rubbing together. So small and fragile were they that I could barely see what I was doing.

After watching this appalling spectacle with increasing horror for four weeks I removed the pots to a number of relatively isolated spots where they could be watered by hand and nursed back to health. Now they are all thriving again and I am starting to collect seed. Next year I'll reveal my results and disclose whether the "isolated" spots were sufficiently removed from this licentious mob.

FURTHER ADVENTURES WITH RICEFLOWER

by Esther Cook.

I thought the group might be interested in the latest news on our Helichrysum diosmifolium (riceflower) which we grow commercially for export to Japan.

The biggest problem this year has been the drought. Even though riceflower stands up to normal dry conditions well, we have seen many stands dying as the drought wears on. Rain in the past few weeks may be in time to save some of these, and perhaps bring up fresh crops of seedlings. Our plants have had enough water, but as the quality of our underground water deteriorated, so did the quantity of flowers. We finally harvested 289 cartons compared with 400 for last year from the same area.

We have begun propagating another 6000 plants from 20 different strains. Some of these are types that have already proved their commercial value; others are still experimental. At one stage our original 7000 plants, which were propagated directly from the wild, had nearly forty distinct types. Some types have died out entirely, while others are not suitable for the commercial market.

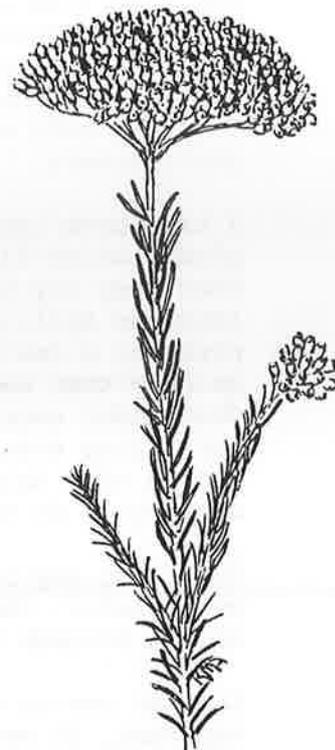
Cuttings are propagated for us by Gatton College Nursery. Even though almost all the cuttings are taken from our farm, they are finding that some types strike better after chilling; others are not affected or are worse. The cuttings are potted on into 2" jiffy fibre pots and planted out when the roots show through the pots. This has eliminated problems with twisted roots which cost us hundreds of the original plants which were transplanted from square 4" plastic pots. Mature plants that die after their third or fourth harvest almost always have badly twisted roots. Whether the roots strangle each other, or rub the skin off and allow pathogens to get a foothold (or whether the root twisting is not important) is not certain at this stage. As far as we know, the plants grown in fibre pots do not have root twisting, and our survival rate for new plants has improved significantly.

Root rot is still a serious problem with our original plot. It strikes after harvest when the plants are most vulnerable. Although we do not yet know the sequence of events and the exact culprits, spraying regularly with phosphoric acid (used originally to control phytophthera in avocados) seems to be helping. Our Lady Stephanie waxflower plants have to be treated in this way to combat phytophthera, so we will continue using the spray with the riceflower as well until more information is available from current research.

Another vital question for commercial growers is "What initiates flowering?" The colder weather of autumn is not the answer since riceflower, originally from this area, flowers a few weeks earlier in Adelaide than here. Riceflower's short season is its biggest disadvantage for marketing. If we knew exactly how flowering is initiated we might be able to manipulate conditions to lengthen the season.

Another way to lengthen the season would be to find strains that flower earlier or later than the rest of the crop, and some of the new types we are trialling flowered later in the wild than our cultivated plants. We are also trying to get more variation in flowering time by propagating from seed. We are hoping that other characteristics might be enhanced in the long term by selective breeding.

My first effort at growing seedlings was frustrating. Plenty of seeds germinated (using the bog method). I transplanted them when the second pair of leaves



H.diosmifolium x 1

developed. This was difficult as the plants were still too tiny to handle, but had tap-roots a couple of inches long. They lingered for weeks, not dying but not thriving, with only one making it to the garden.

This year has been much more encouraging, especially with seed that was about six weeks old when I planted it. Fresh seed had an extremely low strike rate compared with "older" seed. As soon as the seedlings are about 24 hours old, I put them into peat pots. They are still too tiny to handle, but the tap-root is more manageable! I have found that a wet matchstick is handy to guide the tap-root into place. The root clings to it until it can be pressed gently against the soil at the right depth in the hole. After the root is covered with peat I fill the hole with sieved COMPOSTED pine bark, which is thought to discourage phytophthera.

I have been intrigued by studies into native plants and nutrition. especially plants which (like riceflower) grow on poor, gravelly or rocky soils. It seems that they may take nutrients directly from the particles of rock weathering into the soil. Just in case they need some rocks, I finish off transplanting by pressing a few pieces of scoria into the top of the pot. Scoria breaks down so quickly that under every chip I can find a layer of red particles. It is also damp under every "rock", the water being drawn up from the bottom of the pot and persisting even when the temperature is in the mid-thirties. I am hoping the scoria will help keep the soil cool enough for the seedlings' roots, and certainly they do not seem to be stressed at all by the heat.

The first day-old seedlings were transplanted on 1/12/91 and now, just five weeks later, they are 2-3cm high and starting to branch out, with their roots coming through the base and sides of the pots.

Even at one or two days old many of the seedlings already have a long spiralling tap-root. It seems designed to burrow down at a remarkable pace through the debris to stay with the soil moisture as the surface dries out after rain. It would be essential for such fine seeds germinating on the surface of the soil to have a mechanism such as this, but it means that within a couple of days the twisted roots common to so many natives are already established. Next year I will try germinating seeds in different media to see if straight or spiralling roots can be predicted by the texture of the soil surface.



MAGNUS IN THE MIDDLE

by Bob Magnus

(This part of Bob's western trip was unaccountably missing when the article appeared on p.43, NL 31.)

We drove out of Kalbarri by the main road and overlooking the Murchison River amongst the rocks were masses of Helichrysum lindleyi already going to seed, plus waitzias and podolepis. Very soon after we came across the only Helipterum splendidum we saw - large, robust plants growing with creamy cephalipterums and as beautiful as their name suggests.

Back to Geraldton and inland to Mullewa. This is considered to be the real everlasting country: the hundred kilometre stretch is dotted with patches of cephalipterums, first cream then increasingly more and more yellows mixed with H. lindleyi, waitzias and podolepis in profusion. That was hard to believe, but believe it or not, there was even better to come! In and around Mullewa and on the road to Pindar, where we were sent to see the elusive Wreath Lechenaultia (we did find them!) were cephalipterums now mixed with Helipterum craspedioides plus a few yellow waitzias and H. lindleyi and podolepis in such profusion that the whole area for kilometres was a yellow carpet. This sounds like a cliché

but it's the way it was. This was the northernmost part of our trip and the daisies were past their best in some areas and rapidly going to seed.

From Mullewa south through Coalseam National Park to Mingenew. The Park is in a stunningly scenic area where the plateau has been eaten away by the Irwin River. The mesas, cliff sides and valley floor were a profusion (that word again!) of cephalipterums, Helipterum manglesii, Helichrysum lindleyi and others that must rival any floral spectacle in the world.

There is a Bed and Breakfast farm just south of the Park owned by Frank and Christine Michael - wheat and sheep farmers - who would like to diversify into tourism and who took quite a bit of trouble to show us around. I'd recommend a stay with them. They would also be interested in collecting seed for our Group and are keen to learn more about daisies. Frank is the honorary park ranger too. (You can get more information from Judy.)

Believe it or not, we could barely handle any more daisies, thryptomene, dryandra, Kangaroo Paws, banksias, grevilleas etc., etc., etc. However, at Three Springs we found lots of a small brachyscome growing on salty flats.

(The continuation of Bob's journey south can be found on p.44 of NL 31.)

MY TRIALS WITH ISOLATION AND POLLINATION

by Esma Salkin.

Aim: To collect 'uncontaminated' seed by excluding potential pollinators.

- Conclusions:**
1. I should have started this caper twenty years ago when I had perfect sight.
 2. I abandoned accurate placement of pollen on receptive stigmas - too difficult to manipulate pollen on a camelhair brush, hold the flower-head and continually remove and replace my glasses as I attempted to use the dissecting microscope.
 3. Rubbing heads - random but easier.
 4. The insect proof mesh cage reduced light and transpiration, therefore I tended to overwater the plants.
 5. The yield of seed was low.

Three plants of Brachyscome gracilis were used. One failed to bloom at the same time as the other two and promptly died from over watering. The two remaining plants were pollinated from September to December when a second died (too wet).

Seed was harvested 23/1/92. Only one head was fully developed and yielded 19 seeds. The next best results were 4, 5 and 6 from three heads. From 14 heads - 40 seeds.

SOME ANSWERS TO QUESTIONS RAISED IN PAST NEWSLETTERS

ADSG is now ten years old. To mark this occasion we looked back over the old newsletters to see if we had any answers to questions raised or any further information to proffer. This is the result:-

Leaf cuttings (NL17, p.7, NL18, p.15 and NL19, p.28) Bev Courtney has not been successful in raising plants from leaf cuttings. Esma tried recently with Brachys-

come spathulata, but had no success either. In answer to a query from Esma about this technique Mark Richardson of the Australian Network for Plant Conservation (ANPC) on 20/12/91 wrote, "We have found that a major factor is the production of a good amount of roots on the cutting before it is potted up." He pointed out that if the root system is inadequate in young plants they are very susceptible to any stresses encountered.

Even this encouragement was greeted with a general lack of enthusiasm.

Helichrysum rosmarinifolium - form from Jeff Irons (NL20, p.11, NL21, p.22) The plant in Judy's garden (planted '89) has grown about 30cm, but has never flowered. It grows in sandy loam, mainly in shade, and does not get much watering.

B.heterodonta var. A (or B.chrysoglossa) / B aff. curvicarpa (yellow rays) (NL23 p.3) We are no further in understanding the identity of these yellow-flowered plants, but we can definitely say that PS 3052 seed produces perennial plants. Beware of its activities in the garden! It has crossed with B.angustifolia var. angustifolia, B.multifida and B.stuartii - so far.

B. aff. formosa (NL24, p.21) We now think that the identity of the Mt. Drummer and Cessnock forms of what had previously been identified as B.angustifolia var. heterophylla is B. aff. formosa. This is also the case for the species found in the Killawarra State Forest near the Warby Range (NL24, p.27).

B.cheilocarpa (NL25, p.21) This is definitely an annual in Melbourne.

Spilanthes grandiflora (NL26, p.3) Seed collected from Judy's three plants germinated the following autumn, but very poorly. There is probably little seed and a lot of trash in the collection.

Waitzia aurea (NL26, p.4) Maureen found the best way to wire this species was to bind wire and stem together with Stemtex, as Joy Greig has done with Rhodanthe manglesii.

B.goniocarpa (NL26, p.5) The species growing on the Cunnamulla nature strip is really a new, undescribed brachyscome known for the moment as B.sp. aff. gracilis / goniocarpa (personal communication from Dr. Philip Short). We also know it affectionately as Knobby Fruit. True B.goniocarpa is tiny and occurs only in Vic, SA and WA.

H.apiculatum (NL27, p.29) Esma reports that the Mt. William form has not performed well in her garden. The Fairy Cove form is in a position where it receives little water. It died right back, but is now looking very good (Feb. '92).

Helichrysum adenophorum var. waddelliae (NL27, p.29) Judy did not prune her plant in the 25cm pot until the following season's growth was in bud. The appearance was untidy in the extreme, but it survived and flowered. She was advised to put it out of sight if it offended.

Unwatered bed (NL27, p.32) Judy reported that she planted up a bed about 3m long and 1m deep just before the summer of 1990. She mulched heavily and hand watered a few times to establish the plants. In February '92 the following plants were still alive though not thriving:- B.multifida (Weethalle), H.apiculatum (Lurg and Pyrenees forms), H.diotophyllum, Ixiolaena sp., Leucophyta brownii, Olearia phlogopappa (blue, white and small white forms), O.pimelioides, Actinotus helianthi, Isotoma axillaris, Kunzea affinis, and Orthrosanthus multiflorus.

Those that died were B. aff. formosa, B.aculeata, various forms of H.bracteatum, H.scorpioides (Mt. Kosciusko), H.semipapposum (Tumut) and Olearia lanuginosa.

B. aff. formosa (NL28, p.37) The illustration is of B. aff. formosa from the shape of the leaves.

Helichrysum davenportii (NL28,p.40) The saga continues A few large brown seeds were produced from the periphery of the disc florets. All were collected and sown on 21/1/91 - one pot of 1l with pappus intact, one pot of 1l with pappus removed - the only watering received was rain. Five and a half months later one seedling germinated in the "pappus removed" pot. Another seedling germinated down by the incinerator on 9/7/91 from a sowing made 7/5/89 from seed collected 10/88. This seedling emerged from a pot of seed mix over which a thin layer of red sand from western NSW had been spread. (Patience is certainly a virtue with this species!) Both seedlings were planted together in a large pot of rich mix. After the seedling (sown '90) had produced two flowers it died, but not before I had rubbed heads. The other went on to become very pretty. It produced seed and that will be tested again this year. I will try moist chilling of the seed this time and wait till April/May to sow.

Brachyscome aculeata (NL28,p.46) Esma says that B.aculeata in the Bryce's Gorge area in January '92 had no basal rosette.

Helichrysum milliganii (NL29,p.5) Judy reports that three seedlings resulted from sowing the seed collected from her pot, but they died when they were moved from sun to shade in October. The leaves turned brown and soft.

Helichrysum scutellifolium (NL31,p.38) The "little yellowish knobs" on Judy's plant were only new growth. In February '92 it still hasn't flowered and the browning of leaves and stems, previously complained about in shrubby helichrysums, has begun.

Calotis spp. (NL28,p.52) Beth Armstrong reports that C.xanthosoidea didn't last, nor did C.inermis although the plants all flowered. C.lappulacea is still going, but is not very robust. The flowers are tiny, but are very bright yellow. C.glandulosa is very pretty in the garden. The fruits are fascinating when magnified.

Ixodia achillaeoides and fire (NL29,p.9) Esma lit a fire over old seed in a terracotta pot; two or three seedlings germinated.

Brachyscome tetrapterocarpa (NL30,p.21) Esma sowed seed collected from her cultivated plants. There was no germination. Judy verified this statement.

POTTED PROFILE - COLLEEN SIMPSON

Present address: 19 Waikerie Avenue, Hope Valley, SA, 5090. Formerly in the Adelaide Hills (three years) and before that Mt. Gambier (twenty-five years).

SGAP - SA membership: At least thirteen years.

Offices held: Member of SGAP - SA Council (two years), Liaison Officer of Study Groups for SA Region, Flower Show Committee, Growers Subcommittee. (The latter is a working party which organizes growers, plants, etc., for their twice yearly plant sales. They can now offer 1200 different species of plants and the list is growing steadily as their propagating knowledge increases.)

ADSG membership: Joined in 1989.

Reason for joining ADSG: When the Simpsons lived on two acres in the Adelaide Hills they grew a wide range of natives. They had a special weakness for grevilleas and collected as many species as possible. A fire bug who roved the area at the time caused so many alarms that they moved to suburbia where they needed small plants - hence ADSG. Colleen says, "... to my amazement a whole new exciting era began, discovering new daisies and getting to know wonderful people."

Interest in other genera: Australian - ferns, grevilleas and small plants in

general. Exotic — fuchsias and camellias.

Other activities: Member of the Hope Valley Recreational Parks and Reserves Committee of the Tea Tree Gully Council (which has proved quite a challenge, but has produced worthwhile results), and passive member of the Camellia Society.

Hobbies: Field trips, caravanning in spring and autumn and babysitting the grandchildren.

Family: Husband (Ray), three children (one son and twin daughters) and six grandchildren (one of whom is a grower for SGAP at age eight).

Favourite TV: Tennis tournaments, "World Around Us", documentaries on National Parks and environmental problems, but does not watch much TV.

Favourite reading: AD SG newsletters.

Principal growing methods: Colleen grows most daisies in pots while re-establishing her garden.

Editorial policy: In future we would like to continue to produce thumbnail sketches of some of our members who have greatly assisted AD SG. For reasons of distance we may not know much more of them than they reveal in their articles. Each sketch will be an attempt to rectify this state of affairs. Esma and I chose Colleen to start the series. When you see her background it will be easy to see why. How lucky we are to have her! (When I saw what Colleen described as her reading interest I was overcome with pleasure, and wild horses could not have dislodged this particular "potted profile"). Editor.

MISCELLANEOUS REFLECTIONS from 1991

by Judy Barker.

Hairy-leaved Seedlings: Most of the species which are difficult to grow on have conspicuous hairs on the seedling leaves. These probably keep the leaves wet at an early stage and then they rot. This has been mentioned (in NL25,p.53) with reference to B. aff. curvicarpa (yellow) and B.nova-anglica. Both of them start to disappear in damp, cold weather unless they can be put under shelter. Add to the list B.blackii, B.tesquorum, B.melanocarpa and probably B.tetrapterocarpa. B.melanocarpa, it was suggested at our February meeting, might better be regarded as a late spring/summer plant sown in early spring. Another difficult species to rear in Melbourne is B.latisquamea, but that has glabrous seedling leaves.

Shell Grit: In a recent AD SG - NSW newsletter it was suggested that limestone granules (used as an addition to chook food) gave excellent results either mixed with soil or used as a mulch on plants needing limestone.

B.tesquorum is a woody perennial which grows on limestone ridges in the Northern Territory. Seed germinated reasonably well when sown in March, but gradually perished in winter. When sown again in July it germinated, but seedlings died during a burst of wet spring weather. I had tried to cater for its alkaline preferences by including dolomite in the mix, but the seedlings quickly showed me they didn't care for that seasoning. In January I washed a bag of shell grit (the nearest thing to limestone pellets) to remove any salt, and mulched my last remaining seedling in its 25cm pot. It has never looked back! Normally a prey to aphid attack, there is not an aphid on it, the flower-heads are much more solid-looking and it seems extremely fit. I will cautiously try this mulch on a few other species that grow in limestone or alkaline soil, e.g. B.tatei and the coastal forms of B.parvula. B.latisquamea may benefit as Esma tells me she found that species in limestone. I will also try a fine layer of shell grit over my seed mix and sow B.tesquorum and B.latisquamea again. They might feel at home!

AUSTRALIAN DAISY STUDY GROUP

Financial Report July 1990 - June 1991

Cash Receipts

| | |
|---------------------|-----------|
| Cash at Bank 1.7.90 | |
| Term deposit | \$1306.99 |
| Term deposit | 563.54 |
| Cheque account | 341.30 |
| Subscriptions | 440.00 |
| Seed Sales | 914.10 |
| Donations | 17.00 |
| Interest | 265.82 |
| Plant Sales | 21.58 |
| Sundries | 10.60 |

Cash Payments

| | |
|----------------------|-----------|
| Cash at Bank 30.6.91 | |
| Term deposit | \$1479.28 |
| Term deposit | 629.08 |
| Cheque account | 871.04 |
| Cash in hand | 56.11 |
| Postage/phone | 117.24 |
| Newsletter | 272.03 |
| Seeds/packets | 79.00 |
| Computer | 151.83 |
| FID | 3.17 |
| Stationery | 54.65 |
| Herbarium | 17.95 |
| Aust. Flora Foundn. | 25.00 |
| Photography | 23.60 |
| Artist materials | 85.00 |
| Sundries | 15.95 |

\$3880.93

\$3880.93

Summary of Receipts and Expenditure 1.7.90 - 30.6.91:

Cheque Account:

| | |
|-----------------|-----------|
| Opening balance | \$341.30 |
| Receipts | \$1431.27 |
| Expenditure | \$ 845.42 |
| Closing balance | \$927.15 |

Term Deposits:

| | |
|----------------------------------|-----------|
| Opening balance | \$1870,53 |
| Interest | \$237.83 |
| Closing balance | \$2108.36 |
| At 1.7.90 total of all accounts | \$2211.83 |
| At 30.6.91 total of all accounts | \$3035.51 |
| Net profit for year | \$ 823.68 |

NAME CHANGE

Calocephalus brownii (Cass.) F.Muell. is now Leucophyta brownii Cass.

STUDY GROUP NEWS

MAY MEETING. The May meeting will be held at Esma's, 38 Pinewood Drive, Mount Waverley on **Saturday, May 9th.** starting at 2.00 pm. The afternoon will start with a report on the *Brachyscome* Project so please return your results as soon as possible. A members' discussion and Show and Tell will follow, so please bring along interesting plants. There will be a break for seed selection.

After a buffet tea (provided by certain members) Sandy Salmon will speak on 'Breeding Systems in the Asteraceae' and other matters associated with his project. If time permits we will show selected slides.

Could you please let us know if you can come?

FLOWER SHOW AT THE MELBOURNE HERBARIUM. AD SG have agreed to put on a display as part of the Autumn Flower Show at the Herbarium on **April 4th/5th.** We will be setting up on Friday, 3rd. If you are willing to assist please ring Esma. Phone number is now (03) 802 6213.

OCTOBER TRIP. AD SG is planning an expedition to the New England area of NSW to look for daisies. The June NL will hold more details.

GARDEN VISIT. On October 12th. last we joined SGAP - Caulfield in a jaunt to three lovely gardens - to Jenny Rejske's, Chris Strachan's and Chris Strachan's Mum's. (The latter is known as Eileen Shanks outside AD SG, but you remember we have a daisy called after her.) All had delightful gardens and we picked up a number of new ideas and plants (from those who sold them). Many thanks to all concerned. The irony was that *B.angustifolia* (Chris Strachan's Mum) no longer grew in her garden. We plan to rectify this matter.

CHRISTMAS BREAK-UP, 1991. We started at Natalie Peate's nursery at Wonga Park where we viewed progress in the breeding program. Sandy Salmon showed us some species collected in the Armidale area which we identified, the most interesting being *Brachyscome procumbens* and *B.tenuiscapa* var. *pubescens*. We marvelled at the variety of shapes and sizes and colours of the plants in the breeding program. A particularly pleasing one was a small clump with the foliage of *B.multifida* and a wealth of bright yellow flowers. We had lunch at Natalie's in Warranwood and returned home with minds whirling. Jenny showed us a suckering plant from Waratah Bay with a lot of potential. It was later identified as *Helichrysum dealbatum* (though one of us has yet to be convinced). The highlight of the day came when Gloria showed us the drawings she is doing for the *Brachyscome* Book. They were absolutely beautiful! We are so lucky to have her in our Study Group. She has finished about thirty-eight species - each one taking about three or four days. Reflect on that!

We very much enjoyed our day and were all grateful for Natalie's and Sandy's time and valuable information.

NEW MEMBERS

We welcome the following new members:-

John and Julie Barrie, 1 George Terrace, Coonalpyn, SA, 5265.

Marion Simmons, P.O. Box 1148, Legana, Tas., 7277.

Geoff Butler, C/o National Botanic Gardens, Canberra, ACT.

Barbara Daly, 8 Bussell Cres., Cook, ACT, 2614.

Beth McRobert, 5 Pintle Close, Jamboree Heights, Qld., 4074.

Coral Moore, Harris Rd., Woolsthorpe, Vic., 3276.

Jenny Hughes, 27a Green St., Alstonville, NSW., 2477.
Henri de Bono, 12 Allee des chasseurs 78230 Le Peco, France.

SUBSCRIPTIONS

Subscriptions are \$5.00 per year or \$10.00 for overseas members. Cheques should be made payable to the Australian Daisy Study Group and forwarded to the Leader, Esma Salkin (address p.18). FEES ARE DUE ON 30th. JUNE, 1992. 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 DEADLINE for the JUNE NEWSLETTER will be 1st. MAY. I would appreciate earlier donations as I am an exceedingly slow typist. I appreciate articles at any time, however, with all my heart, but if they are received later they may be saved for the next newsletter. My thanks to all contributors, but especially to the artists, Gloria, Betty and Bev. At least half the value of the newsletter lies in the illustrations.

July

MEMBERS' OBSERVATIONS

Spilanthes grandiflora will layer if its stems are running along the surface.
Maureen Schaumann.

Bev Courtney has noticed a brown "grub with bumps" which lives in mulch or soil - never up on trees or shrubs. It hides through the day and feeds at night. It eats rhubarb leaves (which are full of oxalic acid) and, more to the point, daisy seedlings. With the help of Pests, Diseases and Ailments of Australian Plants by David Jones and Rodger Elliot she identified it as a brown cutworm.

Natalie Peate kills mosses and liverworts in pots in the nursery by dropping a diluted solution of vinegar onto them (or painting them). She uses industrial vinegar, 300ml to 1 litre water, but thinks 1 part of ordinary vinegar to two parts of water should do the trick. If not, try 50/50.

Lorraine Marshall (Keon Park, 8/91) reported that B.dentata and B.bellidioides germinated well, but the seedlings were almost totally destroyed by several days of heavy smog. She also lost other plants in the garden, including H.bracteatum and her beloved Annobium alatum.

Gloria Thomlinson (Shepparton, 12/91) observed that Podolepis neglecta was just the thing for a neglected garden. Self-sown plants, thick in some areas and sparse in others, gave a cheerful but delicate display. Three transplanted seedlings placed right against their full length bedroom window made a good start to the day, especially when back lit with early light.

Barbara Buchanan (Myrree, 6/91) writes:- "There is a fascinating article in Australian Horticulture, which came today, on P (phosphorus) toxicity in relation to Fe (iron) levels in pot-grown plants. It explains, I think, why I see all those yellow seedlings which sometimes respond to chelates and often, slowly, to an old nail in the pot - something Alf suggested. Five percent of Dandenongs clay in the mix and the available P drops by 90%! Other clays may only drop it by 30%."

Judy Barker has noticed that B.stuartii usually collapses soon after being put in the garden - probably after a hot spell. In similar conditions, however, the yellow hybrid, B.stuartii x B.aff. curvicarpa (yellow), does not turn a hair.

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 'Grandiflorum', Angianthus tomentosus, Asteridea atrixioides, nivea, Bellida graminea.
Brachyscome angustifolia var. heterophylla (Tea Gardens, bright pink), basaltica var. gracilis, bellidioides, campylocarpa C, ciliaris var. ciliaris, ciliaris var. lanuginosa, aff. cuneifolia, aff. curvicarpa, diversifolia var. diversifolia, gracilis x diversifolia, halophila, melanocarpa, multifida (mauve, white, Weethalle, NSW), nova-anglica, papillosa, parvula (Huntly, Vic), perpusilla var. tenella, procumbens, ptychocarpa, aff. readeri, rigidula, segmentosa, spathulata, stuartii, tadgellii, tetrapterocarpa.
Calocephalus brownii (now Leucophyta brownii) (Port Campbell), citreus.
Celmisia asteliifolia (Vic Alps), Cephalopterum drummondii (garden, WA).
Craspedia glauca, globosa. Erigeron pappocromus, Erodiophyllum elderi.
Erymophyllum tenellum, Gnephosis leptoclada.
Helichrysum adenophorum var. waddelliae, alpinum, ambiguum (Tibooburra), apiculatum (Sth. Gippsland), blandowskianum, bracteatum (Condobolin, Swift's Creek, Ebor), hybrids (double yellow, large yellow, small lemon, pink, mixed colours, white), costatifructum (Tas. endemic), cuneifolium, davenportii, dealbatum, elatum, filifolium, hookeri, leucopsidium, lindleyi, obcordatum, papillosum, podolepideum, pterochaetum, scorpioides, semipapposum (Maldon, Kingower, Stanley), stirlingii, subulifolium, thyrsoideum (Tas).
Helipterum albicans ssp. albicans var. albicans (Harcourt, Hovell's Creek, Trunkey), anthenoides 'Paper Baby', unbranched form (Qld, Snowy Mountains, Whitlands), charsleyae, chlorocephalum, corymbiflorum, diffusum (white, yellow), fitzgibbonii, floribundum, humboldtianum, margarethae, molle, polygalifolium (garden, SA, NSW), pygmaeum, roseum and forms ('Tetred'), var. nigropapposum, splendidum, stipitatum, strictum, stuartianum, tietkensii.
Hyalospermum praecox, simplex.
Ixiolaena sp. (Charleville), chloroleuca, supina. Ixodia achillaeoides.
Lagenifera huegelii, stipitata. Leptorhynchos squamatus, tenuifolius (SA).
Leucophyta brownii. Minuria cunninghamii, denticulata, integerrima.
Myriocephalus gracilis, guerinae, stuartii.
Olearia ciliata, frostii, lirata, magniflora, phlogopappa, rudis, tenuifolia, tomentosa, viscosa. Othonna gregorii.
Podolepis auriculata, canescens, gracilis, jaceoides, lessonii.
Podotheca gnaphalioides. Rhodanthe manglesii (formerly Helipterum manglesii).
Rutidosis helichrysoides, Senecio lautus (Kimba), magnificus.
Schoenia cassiniana (garden, SA), 'Gabriele'. Spilanthus grandiflora.
Streptoglossa liatroides (SA). Vittadinia sp. (Snowy Mountains).
Waitzia acuminata, aurea, citrina, suaveolens (garden, WA).

SEED DONORS:

Many thanks to Judy Barker, Barbara Buchanan, Betty Campbell, Joy Cook, Bev Courtney, Colin Jones, Bob Magnus, Mary McKay, Dr. R.F. Parsons, Alf and Esma Salkin, Sandy Salmon, Maureen Schaumann, Colleen Simpson, Gloria Thomlinson and Bev Truscott. Special thanks to Hilary Coulson (Arid Zone Institute).
