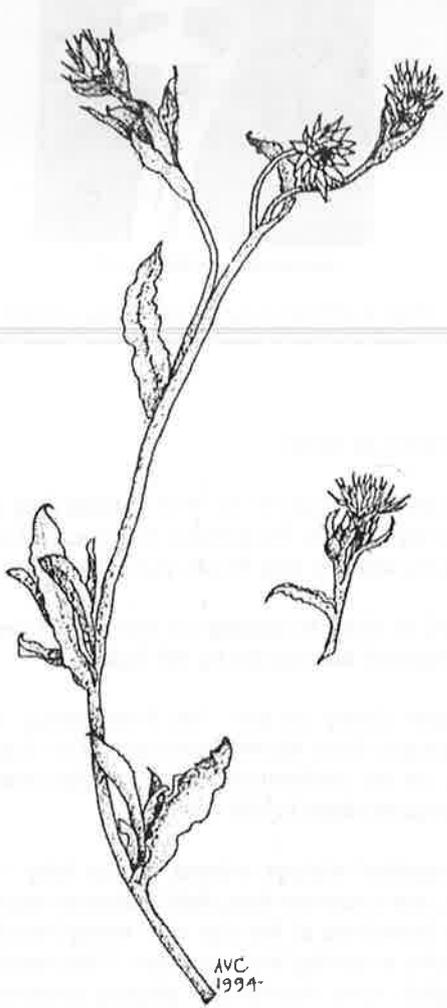


# ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

## THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 57

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## SPECIES OR FORMS NEW TO MEMBERS

### *Helichrysum collinum*

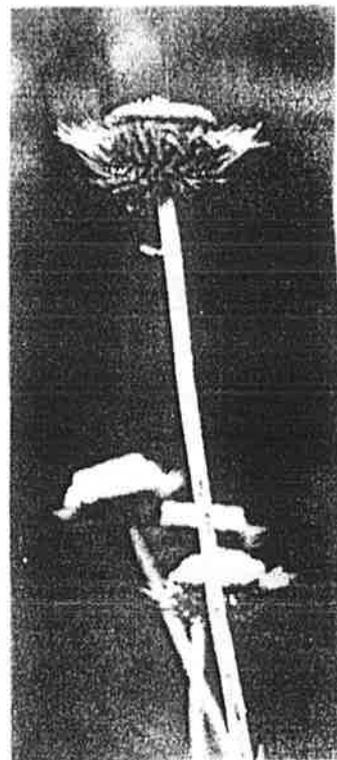
(growing on hills)

Woolly Pointed Everlasting — a name which I think is very apt as the stems and leaves are woolly-hairy on both sides, and the bracts on the flower-heads are very spiky.

*H. collinum* is widely distributed from southern Queensland to southern New South Wales growing in open forests and on rocky slopes. When I first saw it in the early 1980s in the Warrumbungles and the Girraween National Park I likened it to a form of *Bracteantha bracteata*, but soon realised I was wrong. Compared to *B. bracteata* the sharp pointed outer bracts of *H. collinum* appear sparse because they are so narrow.

*H. collinum* is a short-lived perennial of neat upright habit, usually less than 50cm high, open and sparsely branching. Flower-heads, 3cm in diameter, are showy, bright yellow to golden (sometimes brownish yellow) with stiff outer bracts. These bracts have acute tips. Plants flower over summer in the wild. This daisy would be suitable for a rockery. It is frost tolerant and will grow in full sun or part shade. Seed can be sown at any time. When sown in mid-March seedlings appeared in 15–25 days.

by Maureen Schaumann



*Helichrysum collinum* x 1

(from a print taken by Barrie Hadlow, ANBG)

### *Helichrysum elatum* Cunn. ex DC.



*Helichrysum elatum* x ½

*Helichrysum elatum* has two claims to fame:

1. It was collected by Banks and Solander in 1770 at Thistle Bay in Queensland and illustrated by Sydney Parkinson. It appeared as part of the Banks Florilegium when it was finally published in the 1980s.
2. It was chosen by the AD SG in 1987 to appear on the front cover of our first book. The photograph was taken by Alf Salkin.

It is known as the 'White Paper Daisy' or the 'Tall Everlasting'. It occurs along the eastern seaboard from North Queensland to East Gippsland in Victoria, usually as an understory plant on forested slopes but sometimes growing quite close to the sea.

It is a tall erect herb — the epithet *elatum* means tall or lofty — usually growing to about 1.5m, but it can be less than 50cm or more than 2m in height. It is usually branched at the top with many heads up to 4cm across on erect stems in spring and summer. The heads are hemispherical in shape and have numerous papery creamy-white bracts surrounding a mass of bright yellow florets. They are delicately fragrant. Sometimes the outer bracts are tinged with pink. The leaves are lanceolate, to about 10cm long, and are often clothed in white woolly hairs giving them a greyish appearance.

*H. elatum* is thought to be a perennial and have excellent potential as a garden plant but tends to be short-lived in cultivation. Plants should be pruned to encourage vigour and more branching — hence more flowers, but it is probably best treated as an annual or biennial. It may be used in medium to heavy well-drained moist soil in semi-shaded situations as a background plant. In the bush they are often found in patches of 100 or more individual plants. Gloria Thomlinson has grown it successfully as a tub specimen.

Flowers last well when used fresh, but the stems do not seem to dry very well when hung upside down. They could be wired if picked in bud.

Plants can be propagated from seed that germinates in 14 days, or from cuttings which strike fairly easily.

I understand there is also a species known as *Helichrysum* sp. aff. *elatum* that is prostrate, and has brown involucral bracts, and a variety known as var. *fraseri* that is more shrubby, has crowded leaves and occurs at higher altitudes (above 1200m).

by Joy Greig

### ***Helichrysum leucopsideum* DC.**

This little plant was once well known among the paper daisies, being widely distributed from the Great Dividing Range on the mainland to an elevation of about 1200m, to low lands in Tasmania, and across the continent in SA and WA — often in mallee communities. These days its occurrence has been reduced by land clearing, cool burning and competition with weeds.

It is known as 'Satin Everlasting' or 'Coast Everlasting' and is thought to be the first plant collected by Baron von Mueller when he arrived in Adelaide in 1847.

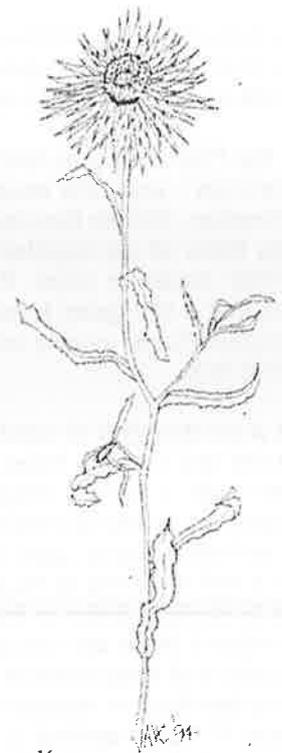
It grows from a perennial rootstock to a multi-stemmed greyish white woolly plant about 60cm high, usually dying back again after flowering. Solitary, pointed snow-white or pale pink (sometimes bronze) buds open to display white shiny bracts surrounding bright yellow tubular florets. The heads are about 3–4cm across. Flowering season is usually spring to summer.

An identifying feature of the plant is that it possesses 3 floral leaves subtending the involucre. It is distinguished from the similar species *H. adenophorum* var. *waddelliae* by the stems which are sparsely to densely woolly, with scattered inconspicuous glandular hairs. *H. adenophorum* var. *waddelliae* has stems bearing small glandular and septate hairs, not woolly hairs. Leaves are alternate, narrow, linear, usually acute, up to 6cm long, and woolly-white on the undersurface.

In the garden the plant is inconspicuous until the buds form and then open in the sunshine to make an attractive pink and white picture. In dull or wet weather the bracts close over the florets again. Something less attractive, however, is the habit of the outer bracts to reflex with age. This characteristic is also detrimental when attempting to dry or wire the flower-heads, which is only successful if the buds are picked early enough. Glycerine is also successful.

*H. leucopsideum* may be propagated fairly easily from seed or cuttings or by division, and it grows in moist well-drained soils in sun or semi-shade. It is best to cut it back after flowering and then it will shoot again in spring and spread by suckering.

by Joy Greig



x ½

*Helichrysum leucopsideum*

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### **ADDENDA TO DESCRIPTIONS IN NL 56**

#### ***Helichrysum calvertianum***

by Maureen Schaumann

A pleasing little daisy for a pot because of its long flowering period. Mine has flowered continually over several months (seven to be exact). Flowers are now (in May) becoming sparse and stems untidy. Lots of new green growth is starting to appear at the base, so now seems to be as good a time as any to prune hard and let it rest over the coming winter months. Seems to be quite happy growing in a partly shaded position. So far predators have left it alone. I decided to try sowing half the seed I collected on 29/1/00. As none had germinated by the end of February, I over-sowed with the remaining seed and had 11 seedlings by 21/3/00.

#### ***Ammobium craspedioides***

by Judy Barker

The three plants I had observed with interest over spring and early summer disappeared completely after the flowering stems withered. I hoped they might reappear some time but forgot about them and relocated *Pimelea sylvestris* (that had been labelled *Pimelea* sp.) from beside a path to a position almost on top of the lost *A. craspedioides*. (Peg McAllister had recognised the *Pimelea* sp. for what it really was and had suggested that I should move the plant or never use that path again.) It was a great pleasure to see three rosettes with side shoots appearing at the base of the pimelea in April. The rosettes have now been moved to a less congested position with two other rosettes given to me by Maureen. Both *Ammobium craspedioides*

and *Pimelea sylvestris* are still doing well. Maureen had also been delighted to see the rosettes of her plants reappearing, and Gloria has reported on the same situation on p. 32.

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## GERMINATING RICEFLOWER

by Esther Cook

It is interesting how problem and solution appear in different letters in the latest newsletter (NL 55). John and Julie Barrie's queries about germinating *Ozothamnus diosmifolius* are partly answered by the Growing Friends of the National Botanic Gardens.

Like the Friends, I sow riceflower seed into a coarse mix of anything from fine gravel to a sand and bark mix. Sometimes I soak the seed for a couple of days in detergent and water to remove the gum and speed up germination. Bonnie Reichelt (S.G.A.P., Brisbane) soaks the seed in diluted chlorine bleach, which she feels brings them all up together, rather than spreading germination over several weeks. The soaked seed are definitely easier to plant. If I plant them dry, Cook's First Law of Propagation invariably applies. This law states that a stiff gusty breeze will start immediately I begin to plant flyaway seeds. Like the Friends, I anchor the pappus hairs, usually with a sprinkle of dry sand, then water the seeds into the nooks and crannies of the seeding mix.

I use a combination of hand watering (to wash off any remaining gum) and bottom watering so the seed trays don't dry out. I sit the trays on benches in my airy potting shed (old cow bails where the end wall has fallen out as well). I keep a magnifying glass handy, and as soon as I can see a seedling I prick it on with a toothpick into a jiffy pot filled with fine propagating mix. I try to do this before the radicle develops into roots as they will immediately start circling around to weave their way down through the seed trash. Often the tiny plant is still attached to its jellied capitula which gives it an excellent chance of surviving this step but often leads to multiple births in the end. I have to remove the weaker siblings later, but in single large pots it might not matter if there are two or three plants. I stand the jiffies in a tray on a mix with extra kaolite (to hold the moisture) and keep them in our white shadehouse until they are well established. If the seedlings are left for even a few days in heavier shade they will bend over towards the light, even so far that their tips lie on the surface. If I only wanted a few plants, I could probably spread the seed directly in pots. I would still use bottom watering to make sure the mix didn't dry out.

Once the small plants are established they are kept in the sun for most of the day, perhaps shaded for a few hours if it is very hot and dry. Later, when the roots have come through the pot and the top has been pinched out several times to make a sturdy little bush, pot and all will be planted out in the field so there is minimum disturbance of the roots.

Their germination preferences have developed in their natural habitat. The gum coating (which may inhibit germination) would only be washed off in rain heavy enough to give the seedlings a good start. Heavy rain also knocks rice capitula, seeds, peduncles, and leaves to the ground, so the tiny seedlings need spiralling roots that can get through the trash into the soil before it dries out. Their natural stands are mostly in dry eucalypt forests where there is very little undergrowth and plenty of light, the sort of country where a goanna needs to take a cut lunch. They particularly like broken soil along the edges of roads or where underground wires have been laid and there is temporarily even less competition, more light and air, and impeccable drainage.

I prefer to pick seed when all insect activity has stopped and the opened capitulum starts to look fluffy (not a very scientific way of describing it, but easy to see!). Insects come in waves — starting with swarms of tiny predatory wasps. These are followed by mating pairs of Rutherglen bugs. We think these bugs may do the actual fertilising before the capitula open. Once the Rutherglen bugs leave, some seeds inside the still unopened capitula will germinate, though the rate appears to be better if the seeds are allowed more time on the bush to mature. The hypothesis is that the female Rutherglen bug sucks protein-rich nectar from the florets inside the unopened capitula before she mates and lays her eggs, fertilising the riceflower in the process. Once the capitula open, the European bees move in, but any fertilisation then would be a bonus. The seeds must have had ways of being fertilised long before these migrants arrived. Self-pollination is another possibility, but I feel it is not a first option for two reasons: firstly, there is so much variety within any batch of seedlings, including what appears to be characteristics of other neighbouring riceflower from different lines, and hybridisation with other *Ozothamnus* and *Cassinia* species; and secondly, because I have never scored a single seedling from heads I have bagged and kept insect free. Has anyone done any detailed work in this area?

Once I pick the half-opened heads I put them in the sun until they blow. The fluffy seeds and bracts are stripped off the heads and further dried in open brown paper bags. I usually plant some within a few weeks, reserving some for a second round if I get a poor strike. Seed stored in paper bags for a year or two still seems to germinate all right.

There is no doubt that different cultivars have different germination rates. Some (especially our favourites — Cook's Second Law of Propagation) produce hardly any seedlings at all. With others (especially the ones I debated about planting at all), the seeds come up like a lawn. I have not tried smoke treatment yet, but it could help, given that riceflower spring up quickly in the wild after the competition is burnt off.

The most fascinating thing about growing seedlings is their sheer variety, even where a couple of hundred seedlings are grown from a single bush. Our breeding program has monitored more than 5000 seedlings so far, and I have yet to find two identical plants. Most years we plant about 1000 new seedlings into field conditions where they can be compared on equal terms with our commercial varieties. Monitoring them individually is a big job at harvest time, but the only way to get the qualities we need for the cut flower export market. About 30 seedlings a year (3%) get into small clonal trials, and perhaps one or two might go on to become long-term commercial cultivars.

I am sure there are many other ways of germinating riceflower and I look forward to hearing tips from others.

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### LETTER from MT MAGNET

by Pat Fitzgerald

A long time ago you asked my opinion about the pollination of our everlastings — was it by wind or by insects? You may still be interested in my theories. I would say the very major factor is the wind. Although at various times of the year the bush is full of insects, especially flies, they are usually not abundant in spring — they arrive with the hot dry weather.

The everlastings grow in masses, usually single species masses, although sometimes they are mixed. Because the heads are usually large, on a fine, long stem, it takes very little wind to start the flowers nodding and brushing together. Even on a still day you see them ripple in the slightest movement of air. That is my sixpennorth, for what it is worth!

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### SUCCESSFUL PROPAGATION of ARGENTIPALLIUM OBTUSIFOLIUM

as told to Judy by Colin Turner

(Chris Larkin presented AD SG with a tray of ten 7.5cm pots of handsome well-grown plants from Colin. Accurate identification of the species was the only exchange he wanted. Although they looked like *Argentipallium obtusifolium* we were all very reluctant to identify the plants as such because we have had trouble in trying to grow it, and could not believe that these robust plants could possibly be Blunt Everlastings. This is the account given by generous Colin of the method he used.)

The propagating material was obtained from Margaret Guenzel last October when the Stringybarks Festival was held. At the end of the Festival the stems had been in a vase of water for several days. Colin used pieces of stem 5–7.5cm (2–3 inches) long with one or two basal leaves removed. The bases were dipped in a dilute liquid hormone. The propagating medium was open, gritty and friable, consisting of perlite, peat, sharp propagating sand and granulated polystyrene. Misting and bottom heat of 20°C were provided, and the pots were more or less forgotten.

The cuttings struck readily and were potted on in a couple of months, by which time they were almost over-rooted. The potting on medium was a soil-less Propine mix consisting of coarse gravel, pinebark components and low phosphorus osmocote.

The pots we received were very well-grown plants. Colin thought that Margaret had also propagated plants in her little igloo set-up, but without benefit of bottom heat or misting. Originally her plant was purchased at Kuranga Nursery. It may be that the form she has is particularly robust and possibly less dependent on a mycorrhizal association, the lack of which we blamed for our inability to get this beautiful species to grow. At Boronia, where Margaret lives on the side of the Dandenongs, very good drainage would be provided.

Colin has an excellent reputation as a propagator. Now we know him for a very generous man as well. With this information in mind we will have another go at propagating *Argentipallium obtusifolium* but this time we will have confidence to back us up.

**FLORABELLA FLOORS 'EM**by **Sandy Salmon**

Of all the Australian everlasting daisies *Bracteantha bracteata* is probably the best known and most widely cultivated, with seed and named varieties being available for many years. It can be seen listed in 19th century seed catalogues and certainly in 1997 breeders in WA and Europe were still keen on the species' broad colour range, large flowers and ease of cultivation, and they were developing it for bedding and cut flower use. At Florabella Australia we also saw the potential in this plant and in 1999 our Florabella Hybrids (x 4 clones in pink, white, gold and yellow) were released into the American market. In that trial year nearly 600,000 plants have been sold and our gold form has won the Society of American Florists award for best new pot plant. All of a sudden our small breeding business in Gapsted, Victoria, has been thrust into the spotlight as we watch with joy and surprise the great international response to this Australian-bred daisy.

The Florabella series was developed after 3 generations of breeding with prostrate variants from the NSW coast and taller coloured types. Our selections, all propagated by cutting, were based on colour, compact habit, a double inflorescence, non-reflexing heads and general health and vigour. Whilst these are all desirable features it appears that the most appealing characteristic is the ease of cultivation and broad adaptability of the series. In the USA it is grown both in greenhouses and outside (coping with temperatures down to -5°C) in a variety of pot sizes. The consumer is enjoying the plant both as a gift or colour line (like a *Chrysanthemum*) or a garden/landscape plant.

At Florabella we are still working with *Bracteantha* and have an even more compact, mini series due for release in 2001–2002. This group has been bred very much for the pot plant/gift market and probably won't appeal as much to true gardeners. (It doesn't to us!) Nevertheless, commercial realities prevail and it is better that an Australian company develops the product than one of the huge international breeding houses who are undoubtedly working on *Bracteantha* at this moment. It is certainly important for us to improve and introduce new features into our breeding lines and regularly release new plants to keep ahead of this daunting competition.

We are overjoyed at winning this prize with an Australian plant, especially as we are the first to do so. Even more pleasing for us is that the plants are popular on their own merit, not simply because they are Australian but because they are genuine and worthy alternatives to Petunias, Geraniums, patio roses, etc. It is a credit to groups like SGAP and AD SG (in particular) who are so often responsible for bringing new plants from obscurity into the mainstream. In doing so they help breeders like ourselves develop our ideas. Hopefully our small success overseas vindicates many of your long-held views that Australian plants deserve greater attention and broader use in the world of horticulture.

(Caption courtesy of the subeditor.)

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**Calotis scabiosifolia var. integrifolia**by **Jo Walker**

We saw *Calotis scabiosifolia var. integrifolia* the other day on an SGAP walk. This plant had spread over several metres along a roadside. It's my favourite *Calotis*— such a beautiful blue. Seems to grow best in grassy woodland where it gets some shade. There are extensive areas of it in Kowen Pound (now a reserve for remnant vegetation) near here. A few years ago, although the area had a controlled burn, it was an absolute picture. I have one small plant (about 30cm across now) growing in not very suitable soil, and intend trying to naturalize it on my block.

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**REPORT FROM YARRAWONGA**by **Jan Hall**

My seed raising continues to be haphazard and much of it sown in March was very slow to germinate. Is it too hot in my little glasshouse I wonder? You don't need a glasshouse I hear you say, but it has some shade, shelter from desiccating sun and wind, and a mister or hand watering from which to choose. Anywhere outside would not get the attention and would be in great danger of neglect.

*Rhodanthe stricta* AD SG — 1 plant from a 24 hour soak in SISP (possibly old solution) and none in the untreated punnet.

*Chrysocephalum puteale* and *C. eremaeum* — nothing from same treatment.

*R. polygalifolia* from the garden came up well.

*Brachyscome ciliaris* — noted Esma's comments on number of germinants. Well, I just need to grow things from closer to home. My seed collected about December from the roadside near our home on the Murray

Valley Highway came up thickly when sown 10/3/00. Previous sowings were just as good and now we have little hardy survivors flowering in my "native grassland".

Last year we grew lots of *Bracteantha viscosa* from Wangaratta so why did it not germinate this year? Seed, also local but not from the same area gave similar results. Last year we grew lots of *Pycnosorus globosus* but again seed has not germinated. I will just have to find time to 'fiddle' with the Regen, etc. However, Regen liquid and R Germinator only work sometimes and I think they may retard some species. This included Ray Purches' seed for Wangaratta for our project of *Pycnosorus* sp. and *Podolepis jaceoides*, which come up much better with no treatment. We are keeping records (not my best suit) of this project and I await germination of *Leptorhynchos squamatus*, etc.

*Pycnosorus thompsonianus* — plants from last year's May meeting — were lovely. Two died late in summer (no wonder) but two still have flowers. I think it is a very worthwhile plant to grow here. I did try to keep them watered but it would have still been a challenge to do well here.

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## VEGETATIVE PROPAGATION

by Jeff Irons

(This article appeared in a recent newsletter of the Epacris Study Group. It is reproduced here with the kind permission of both Jeff Irons and Gwen Elliot.)

I wonder whether gardening has a patron saint? If it does not, then Saint Augustine must be one of the more favoured contenders for the title. Although known as a persecuting bishop, he did have softer and more humane moments. In one of them he wrote '*Is there any more wonderful sight, any moment when man's reason is nearer to some sort of contact with the nature of the world than the sowing of seeds and the planting of cuttings? It is as if you could question the vital force in each root or bud on what it can do, what it cannot and why.*'

There can be very few gardeners of long standing who do not follow Saint Augustine and plant their own cuttings. We tend to think that years of experience equates to quantity and quality of knowledge. That this is not so was brought home to me recently when an amateur gardener of my acquaintance commented that she always planted her cuttings as deeply as possible. My response caused her some surprise. I said that cuttings should never be stuck in deeper than 1cm, and that some plants needed to be stuck so shallowly that the cutting had to be supported! Quite plainly, the principles of vegetative propagation are not at all well understood.

In England (at least) the media personalities are to blame. They tell and show what to do, but never say why. Here I want to say why, and give a little of the what. The latter relates to my conditions and I realise that many Australians live in areas where sophisticated materials are not readily available. They should find it relatively easy to adapt things to their own conditions, using what is available.

Any piece removed from a plant is immediately put under stress, and to minimize that stress we need to make the strain as small as possible. In other words we apply Hooke's Law learnt in schoolday science to our horticulture.

In practice this means doing everything possible to keep a cutting turgid. If it is not going to be struck immediately the cutting should be placed in a plastic bag, together with a few drops of water. When the cutting is put into the cutting medium it should be kept in as constant a temperature as possible. The reason is that when the temperature rises the cutting's leaves transpire. The lost water has to be replaced, and doing that puts a strain on the cutting. Winter is a good time to take cuttings, because it is easy to keep the temperature, and hence humidity in the propagator fairly steady. If a cutting can be kept turgid then the time of year at which it was taken does not matter, for at some time during a 12 month period conditions must be suitable for rooting to take place.

The literature abounds with recipes for cutting mixes. The fact that there are so many is a good indication that the actual ingredients and composition are not very important.

In Britain one still hears people advising you to use clay pots for cuttings and to put them around the edge of the pot. A question asking '*why?*' might elicit the answer '*Because it works*'. That isn't very satisfactory, and the thinking gardener will reason further. Clay pots are porous and water will diffuse from the body of the pot through the walls of the pot. So, close to the pot wall the compost is fairly dry, and it is under those conditions that the cutting roots. Eureka! We have the answer. What we need is a fairly open medium, so that

the soil atmosphere is as similar as possible to the air. The portion of the stem in the medium must have an adequate supply of oxygen. It is necessary for respiration and root initiation.

The very wet, water-retentive composts often used lead to waterlogging of the underground portion of the cutting. Fungal infection follows and the base of the cutting rots. The more deeply the cutting has been inserted the more likely it is that inadequate aeration will result in the cutting rotting. All reactions proceed more quickly at higher temperatures (schoolboy science again), so the higher the temperature the more likely it is that the cutting will rot.

An acid medium around pH 4.5–5.5 is usually preferable, but for a few species liming is required because the roots will not grow in the usual acid medium. An alternative technique, which I have used successfully, is to include Vermiculite in the cutting mix. Vermiculite is alkaline whereas Perlite is acid.

In order for a cutting to make roots it must use energy. That energy is obtained from light by the leaves. So we need to retain as many leaves as possible on the cutting. Moreover, every time a leaf is removed a wound is made, and infection can enter through the wound. Since the young leaves on the softwood of our cuttings contain very little food, in theory the more light they are given the better they can photosynthesize the substances needed to make roots grow. However, with high light levels the temperature rises and humidity falls. The cuttings wilt, the stomata close and photosynthesis ceases. So in practice a relatively low light level is best. Ideally it should be the maximum which can be given without inducing wilting.

It is tempting to take nice thick material for cuttings, but experiments have shown that the thinnest cuttings root more readily. Often they are the thin, spindly growth at the base of a plant. A little thought will indicate that such cuttings have less stem in proportion to the leaf area. Consequently less food is required to maintain respiration in the stem, and a greater proportion is available for plant growth. However, thin cuttings rot more easily, so they need to be inserted more shallowly. All should be inserted only as far as is necessary for them to stay upright.

Usually we take cuttings with the cut just below a node. At such spots the plant is growing vigorously, there are plenty of growth chemicals (auxins) because they are needed for production of the new shoots. By cutting off at that point we ensure that the base of the cutting is at the spot most favourable for root production.

Most amateurs use a simple propagator and with them it is not very important to pot on cuttings as soon as they have rooted. Mist units tend to leach materials from the leaves, so rooted cuttings should be potted on as soon as they can be handled.

In general a nutrient-poor potting mix is desirable. I use the same one that was used to strike the cuttings. Once again that schoolboy science explains why. In a nutrient-rich potting compost there will be a high osmotic pressure, and the poorly developed roots will be less able to absorb moisture, and so find it difficult to supply the young plant with enough of it. Starting off with a nutrient-poor potting compost helps the young plant to absorb water. It is very important not to pot the rooted cutting too deeply. The uppermost roots should be just below soil level. If necessary the cutting should be supported with a small stick. It is very difficult to make the rooted cutting self supporting, but doing so by deep planting is one of the commonest causes of failure at potting on.

A new development which both improves the 'take' of cuttings and avoids problems when potting on is the rock wool plug. Rock wool ensures good aeration and even 'difficult' plants root well in them. Once rooted, cuttings can be potted without root disturbance, and by putting the top of the plug at soil level the correct depth is ensured.

Equipment has not been mentioned in these notes. If attention is given to the points made, even the simplest equipment will suffice. Good results are possible with nothing more elaborate than a flower pot and a cover made from a PET bottle with the base cut off.

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### ***Ozothamnus cuneifolius***

by Barrie Hadlow

I am sending a small quantity of seed of *Ozothamnus cuneifolius*, formerly *Helichrysum cuneifolium*, which the *Flora of New South Wales* lists for the South Coast and Victoria, and Leon Costermans (1981) calls 'Wedge Everlasting'. He provides a distribution map in his excellent book, showing that the species also inhabits the mountains of north-eastern Victoria, and a disjunct area further south.

My collection was made on private property at Yaouk (NSW), a few kilometres from Adaminaby in the Southern Tablelands. The site, is beside the Murrumbidgee River — here a young stream close to its source. Accompanying shrub species included *Leptospermum myrtifolium*, *Hakea microcarpa*, *Lomatia myricoides*, *Epacris paludosa*, *Pomaderris phyllicifolia* and *Prostanthera phyllicoides*. A surprise find here also by SGAP Wednesday Walker, Jo Walker, was *Discaria pubescens*. Tree species included *Eucalyptus stellulata*, the 'Black Sallee', with its dark persistent bark and olive-green gumbark. The population appeared small over the area visited on this 'Wednesday Walk'.

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## THE GENUS *HELICHRYSUM*

by Judy Barker

Under the generic name at this time there are about 600 species. They occur mainly in Africa but also in Europe, Asia and Australia.

*Helichrysum s. str.* (meaning 'in the strict sense') does not occur in Australasia. There are no alternative names for the Australian taxa that remain in *Helichrysum* until they have been revised, and so they are still described as *Helichrysum* species. The *Flora of Victoria* Vol. 4, eds. Walsh, N.G. and Entwisle, T.J. (1999) states that there are about 30 spp. endemic in Australia, and they occur in all states. They include the following:

- |  |                                 |
|--|---------------------------------|
| 1. <i>H. adenophorum</i><br>and <i>H. adenophorum</i> var. <i>waddelliae</i> | 11. <i>H. milliganii</i>        |
| 2. <i>H. boormanii</i>   | 12. <i>H. newcastlianum</i>     |
| 3. <i>H. calvertianum</i>  | 13. <i>H. oligochaetum</i>      |
| 4. <i>H. collinum</i>  | 14. <i>H. oxylepis</i>          |
| 5. <i>H. elatum</i>  | 15. <i>H. pumilum</i>           |
| 6. <i>H. sp. aff. elatum</i>   | 16. <i>H. ramosum</i>           |
| 7. <i>H. glutinosum</i>  | 17. <i>H. rupicola</i>          |
| 8. <i>H. lanuginosum</i>   | 18. <i>H. rutidolepis</i>       |
| 9. <i>H. leucopsideum</i>  | 19. <i>H. scorpioides</i>       |
| 10. <i>H. lindsayanum</i>  | 20. <i>H. sp.</i> Point Lookout |

There must be another 10 spp. as yet undescribed.

At the May meeting we decided to concentrate on the genus *Helichrysum*. Descriptions of three species we have not studied recently were given by Maureen Schaumann and Joy Greig, and are reproduced on pp.19–20. Esma gave a talk on *H. adenophorum* var. *adenophorum* and var. *waddelliae*, *H. rupicola*, *H. rutidolepis* and *H. scorpioides*. Her talk on the first three species will be reproduced in NL 58. Natalie gave a talk on the species from Point Lookout (NSW) that she saw growing at the National Botanic Gardens in Canberra recently. My thanks to the members who gave us such excellent presentations.

The remaining species' descriptions are included here:

### ***Helichrysum boormanii***

*boormanii* — in honour of J.L. Boorman

A woody perennial, 0.5–1.5m high. My one plant grew to 70cm x 30cm, and produced handsome white flower-heads, 3–5cm across, singly at the tips of branchlets or in loose terminal corymbs. The bracts are narrow and pointed. The leaves are soft, pale green and furry, 4–10 x 1–2cm, sessile and lanceolate. Leaves and stems are densely covered in short glandular hairs, and a few long woolly hairs appear in leaf axils and along margins. The original plants were described by the collectors as having old, untidy growth at the base, but new growth and flowers at the top. Not looking at the label until too late, I put my plant in full sun because

it looked like *Bracteantha bracteata*. It flowered from late November to February and then died, probably because the position was too hot. Before it died, however, it produced many flowers and plenty of mature-looking seed — which was a surprise since it was the only plant of its species. This seed germinated well in 10–20 days when sown the following February but most of the seedlings died in a hot spell in March. I kept eight, the remainder were given away or were not very robust and died. As my plants developed, only one had white bracts, the rest had yellow bracts that reflexed quickly. Two of the yellow-bracted plants formed an upright clump 1 x 1m. Their sessile leaves were clothed with numerous short glandular hairs as well as long woolly hairs, and some leaves had slightly wavy margins. The seedlings were surrounded by about six plants of *Bracteantha bracteata*, five of which were low-growing forms from Hat Head (NSW) with yellow bracts and one was a *B. bracteata* with pink bracts. I concluded that my original plant had crossed with the nearby *B. bracteata* plants.

The original *H. boormanii* flowers lasted at least a week in water. The heads wired easily but the result was not very attractive. Flowering stems were not air-dried.

**Cultivation:** The *Encyclopaedia of Australian Plants* tells us that this species has been grown in a range of soils but drainage must be very good as the roots are prone to attack by root-rotting fungi. It prefers protected situations rather than exposure to hot sun. Tolerates light frosts. It may be propagated from seed or cuttings of firm young growth taken from basal shoots. Pruning would probably benefit plants.

**Distribution and habitat:** Qld, NSW, NT. Occurs north of Tenterfield in NSW and in the Burnett District of southern Qld. It has been collected along the Bruxner Highway from Bald Rock N.P. towards Tenterfield in an open situation and on the Boonoo Boonoo Falls road in dappled sun under widely spaced tall trees. The *Flora of S-E Queensland* says it grows in woodland and forest, usually on skeletal granite-derived soils.

**Similar species:** *H. lanuginosum* has woolly hairs on the flowering stems, whereas *H. boormanii* has short glandular hairs. Plants are usually shorter (to 60cm).  
*H. glutinosum* has sticky stems.

**Special notes:** Specimens between *H. lanuginosum* and *H. boormanii* have been observed (*Flora of South-eastern Queensland*, Vol. 2, [1986], p. 538).

### *Helichrysum glutinosum*

*glutinosum* — covered with a sticky exudation

**Description:** A woody perennial or subshrub, 0.3–1m, aromatic when crushed. The lower part of the stems is often woolly-hairy and the upper part is glandular-hairy and sticky. Flower-heads are white, 2–4cm across, held singly at the tips of branches. The buds are sticky, often pink or rose-red. The radiating bracts are white, sometimes edged with pink. The leaves are sessile, 2–6cm x 2–6mm, narrow-ovate to linear, and vary in hair type and margin. The lower leaves are white-woolly on both sides and have flat margins; the upper leaves have glandular hairs above and a mixture of woolly and glandular hairs below and the margins are recurved. In the wild it flowers from late winter–spring, sometimes again in autumn. I have had three goes at growing this species. Seed collected 9/85 and sown in 5/87 germinated poorly in 25–35 days. Seed donated from ANBG (Canberra) and sown in 10/96 yielded about 50 seedlings but, as with the first two attempts, the seedlings perished. It might be better to sow in early spring (say late August) or it might be impossible to grow *H. glutinosum* in Melbourne.

**Cultivation:** The *Encyclopaedia* suggests that it is a good container plant, excellent for subtropical and warm temperate areas but averse to drizzling rain and high humidity. Perhaps this is why members have not reported on the growing of *H. glutinosum*. It is said to prefer open, sunny spots with excellent drainage. Propagate from seed or cuttings.

**Distribution and habitat:** Qld. It has been recorded as occurring at Busthinia (west of the 'top' of the Great Dividing Range between Jericho and Barcardine), and halfway between Alpha and Jericho in red, sandy soil. Pat Shaw collected seed at Blackdown Tablelands where the plants were growing in very stony soil on a hillside. It was also seen at the Isla Gorge N.P. in 9/85.

### *Helichrysum lanuginosum*

*lanuginosum* — with long cottony hairs

Cottony Everlasting

Woody perennial or subshrub, 30–60cm high, with an erect or straggling habit. Stems are woolly. Leaves are elliptic to obovate, 3–8 x 1–2cm, the apices often acuminate and apiculate. The bases are narrowed but

stalkless. The upper surfaces bear short glandular hairs, sometimes also having woolly hairs, the lower surfaces are densely woolly hairy. Single white heads (2.5–4cm across) are borne on stalks (3–6cm long) in spring and autumn. Maureen had one growing in a pot with a very pretty cupped white head in 12/92. I had reared one lone seedling from Pat Shaw's seed sown in '86. It grew very slowly and was 20cm high with one white bud in May '87. I pruned it in June because it was top-heavy, and 'that was all she wrote'. Presumably it perished! Seed germinates in 6–15 days in reasonable numbers but does not survive the potting on very well. It might be more successful if it was potted into a mix of seed mix and light potting mix. As with *H. glutinosum* it might be better to sow in September in Melbourne. The one good plant I have resulted from seed sown in early spring. When I sowed the same seed again at the end of December the germination was good. In early April I potted on very healthy seedlings, and by late April they have been attacked by something and look terrible. Most have died. The remainder have been sprayed with pyrethrum.

**Cultivation:** This species looks beautiful in the wild but has been disappointing in cultivation in cool temperate climates. It is probably more suitable for warm temperate or subtropical areas. It withstands light frosts and probably prefers an open sunny position in well-drained soils. It may grow better in containers. Propagate from seed or cuttings.

**Distribution and habitat:** Qld. Occurs from the northern Wide Bay and Burnett districts. Usually grows in stony soils. It was seen in Red Rocks Reserve Byfield Forest north of Yeppoon in 8/86, and on Newry Island on cliffs in 8/87. More recently Margery and Graham Stutchbury have found it near the Town of 1770.

### *Helichrysum lindsayanum*

*lindsayanum* — for Lindsay Smith, a Queensland botanist

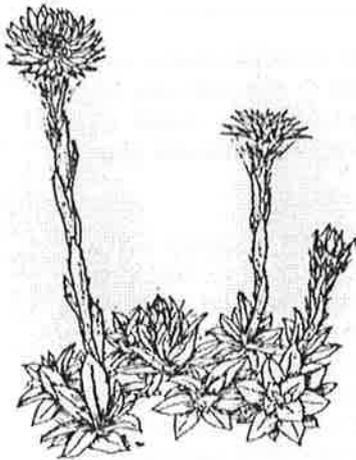
**Description:** A woody perennial or subshrub, 10–30cm high, with a woody base. Leaves are elliptic, 2–4.5cm x 4–10mm, with narrowed bases and stalks to 5mm. The margins are recurved, upper surfaces are glabrous, lower surfaces are densely woolly. Flower-heads are white or pink, 3–5cm across, single and terminal or sometimes in the upper leaf axils. It flowers in late winter–spring.

**Cultivation:** The *Encyclopaedia* says it has had limited cultivation but the Study Group members do not seem to have grown it. Excellent drainage in part sun, and planting in rockeries or containers is suggested. It may never grow well in Melbourne but sounds lovely.

**Distribution and habitat:** Qld. Occurs in the southern Moreton district, usually above 500m. Grows in crevices in rocky cliff faces.

### *Helichrysum milliganii*

*milliganii* — named for Dr Joseph Milligan, (1807–1883), a Scottish surgeon and naturalist in Tasmania



*Helichrysum milliganii* x 1/3

A beautiful and unusual everlasting perennial. The rootstock usually branches, which allows the formation of a dense low cushion. Lanceolate leaves are thick and stiff, 1.5–2.5 x 1cm, forming rosettes at the base. When buds begin to form, the rosettes thicken and a fine web of hairs appears at the tip, like a spider's web. As the red buds enlarge, thick white stems are formed and elongate to 8–15cm. Stem-clasping leaves, similar to the basal leaves but longer and narrower, are pressed against the stems. The buds open to glistening white heads 3–4cm across, sometimes with touches of crimson at the tips of the bracts. It flowers from October–February.

**Cultivation:** A moist, gritty soil with peat in it is recommended. It prefers good root protection and a part shaded position in summer. Suitable for cool temperate climates where it would probably grow best in containers. Propagate from seed, cuttings or division of the rootstock.

**Distribution and habitat:** Tas. Occurs on exposed mountain summits where it grows on peaty soils.

**Experience:** Beth Armstrong collected seed in 87/88 and generously gave me some. Six mature seeds were put in the freezer for two nights and sown in 2/88 on a seed mix of 3 parts perlite to 1 part peat moss. They germinated in 25–36 days — all six of them — and were potted on the following November as a clump from the margarine container. This holus-bolus approach was also suggested by Beth. They were quite large plants by this time so they went into a 25cm pot of 1 part of Propine BC321 potting mix to 1 part of perlite. In

hindsight I should have included a generous dollop of peat moss to the pot. There were no flowers until '89 when I was rewarded with four heads but in 10/90 the surface of the pot was covered with rosettes and about fifteen heads opened between that time and mid-December. Betty Campbell drew it for us in January but the sojourn inside was not to its liking and it died soon afterwards. We think that the Plants of Tasmania Nursery and Gardens (see Snippets) may stock this species, and we have bought seed from Orriell's Seed Co.

(This series is to be concluded in NL 58.)

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## USE OF REGEN IN GERMINATING DAISIES

by Judy Barker

Since Keith Johnson of Technica Pty Ltd donated some of the Regen products to AD SG we have been trialling the various products. The Regen Seed Starter Direct (RSSD) is a smoke-impregnated vermiculite product which was given to us later than the green solution, and so not so many tests have been done with it. Here are the results to 18/6/00:

Species	Origin		Percentage germination							
			H <sub>2</sub> O	H <sub>2</sub> O + SW	SISP	SISP + SW	Regen soln.	Regen soln. + SW	RSSD	H <sub>2</sub> O + SW + RSSD
<i>R. chlorocephala</i> ssp. <i>splendida</i>	NP, JG	18/5/99	2%	6%	14%	82%	22% (1:10)	16% (1:10)	n.d.	n.d.
	10/96,				20%	70%	22% (1:10)	12% (1:10)		
	WP 019	29/7/99	2%	12%	8%	64%	8% (1:5)	10% (1:5)	12%	n.d.
	" "	28/3/00	0	n.d.	28%	68%	20% (1:5)	16% (1:5)	8%	
	JH '97	28/3/00	2%	n.d.	16%	80%	n.d.	n.d.	2%	n.d.
	Gasc. Jn						n.d.	n.d.	18%	n.d.
	JB pots	6/4/00	36%	n.d.	74%	68%	n.d.	n.d.	66%	n.d.
	'97					84%				
	JB pots	6/4/00	10%	22%	20%	22%	n.d.	n.d.	22%	n.d.
	'98									
JB pots	6/4/00	0	0	0	0	n.d.	n.d.	0	0	
'99								0	0	
<i>R. polygalifolia</i>	WP 067	20/4/00	0	2%	6%	18%	n.d.	n.d.	6%	6%
	10/96									
	Corlilnye	23/5/98	22%	24%	60%	82%	n.d.	n.d.	n.d.	n.d.
	10/96									
	JB pots	20/4/00	0	0	8%		n.d.	n.d.	2%	2%
	'96									
JB pots	20/4/00	8%	2%	10%	8%	n.d.	n.d.	28%	26%	
'98										
Oats'	20/4/00	14%	4%	32%	30%	n.d.	n.d.	26%	18%	
gdn '99										

These results are a bit of a mixed bag. As we have found SISP + Soil Wetter (SW) produces better results than SISP alone for the very hairy species such as *R. chlorocephala* ssp. *splendida*, it seemed only fair to soak seed in water with SW for 24 hours before sprinkling with RSSD. It didn't seem to make much difference to the results, but I would like to repeat these trials with ssp. *splendida* using that particular test. By the time I thought of it I had almost finished sowing the seed I had counted out.

In general the percentage germination of seed collected from pots or in gardens does not compare well with that of seed collected from the wild. This may be due to a general reduction of pollinators in metropolitan areas, or to the absence of the right pollinators. In the case of *R. polygalifolia* I have often started my trials by sowing this particular species because seed is easy to count and I like the flowers. This means that such plants as I do manage to grow are in flower sometimes as early as July, and I collect viable-looking seed in September or October. This is not a period when pollinators abound, and so perhaps the percentage viability of seed collected at this time is low. The results from Syd Oats' seed are surprisingly good considering that the seed was sown only about 3 months after collection. Syd called it 'sun-burned' because he had hung it in clear plastic bags (perforated with many tiny holes) on the clothes line from 11/99-2/00. This treatment may have had a bearing on the result but we had no untreated seed to use as a control. I question the result of the SISP + SW treatment of JB '98 pots. It should have outstripped the other results.

It appears to me that the time of storage has a bearing on the result of the type of pretreatment used. It could be that different factors in the pretreatments are triggering different metabolic pathways inside the seed as it ages. Obviously more work should be undertaken. Regen Seed Starter Direct is easier to use and cheaper than SISP as a pretreatment. If it produces results that are almost as good it should be recommended despite the decrease in percentage germination.

## SNIPPETS

- Congratulations to Gloria Thomlinson for the beautiful cover for the APS Vic Newsletter, March issue. Gloria has undertaken to design the covers for the year. Another of our members, John Armstrong, has delighted us with his designs for these covers for a previous year. How lucky we are to have them both in ADSG.
- Congratulations to Sandy Salmon and Bernie Thomas for winning the award for best new pot plant (vegetative) in the Society of American Florists' 1999 competition. It is the first time in the history of the competition that an Australian plant or an Australian breeder has won this prize, and it is for a DAISY! The prize went to a gold form of *Bracteantha bracteata* bred by this young pair. Sandy has written about it on p. 24 of this newsletter.
- The March 2000 issue of *Australian Horticulture* reports on a joint venture by Yarralumla Nursery, the Australian National Botanic Gardens, the Australian Network for Plant Conservation (ANPC) and Eurobodalla Botanic Gardens. They are identifying rare and endangered species in their region with a view to producing those species with sales potential. Royalties from sales go to ANPC for further research. One of the recent promotions is Button Wrinklewort, *Rutidosis leptorhynchoides*, of which Ros Cornish has written often for our newsletters.
- Congratulations to Jeff Irons who recently won 1st prize at the Southport Show for 3 plants in flower from one continent, 19cm pots. The plants were *Celmisia costiniana*, *Aciphylla glacialis* and *Mirbelia oxyloboides*. The *Celmisia* also won the prize for best plant in Section C. Jeff explained that Section C is the lowest. He says that 'in B and C the judges start looking at silly things like symmetry of plant, "appropriateness" of top dressing, pristine nature of pot and so on. In any show a plant which opens its flowers in succession, ie. a good garden plant, does not stand a chance against one which makes a brief spectacle.'
- Maureen has reported on a nursery new to us which stocks some very interesting daisies, such as *Helichrysum milliganii* and *Ozothamnus* spp. It also stocks Button Grass. It is Plants of Tasmania Nursery and Gardens, 65 Hull St, Ridgeway, Tasmania, 7054. FAX: (03) 6239 1106. Plants are \$24.00 for a weight of 5kg — 21 plants in square tubes or 16 plants in round tubes. ADSG has asked for a catalogue and current newsletter.
- John Emms, while searching for Yates New Seed Raising Mix, has come across another seed raising mix put out by Yates called Yates Black Magic Seed Raising Mix. John sent me a pamphlet in it which says that it is blended from peat moss and fine pumice. It also contains 8–10 week controlled release fertilizer and a soil fungicide to protect against common seedling diseases. If I can find it I will try it.
- Paul Wilson has recently written to Esma and me and has mentioned that a population of the very rare and attractive perennial, *Myriocephalus suffruticosus*, has been found approximately 200km N of Perth. It is about 50cm high, has white obovate radiating bracts and the common name is Shrubby Myriocephalus. Paul said seed was sown but only 2 out of 100 germinated and those 2 seedlings have since died. He is hoping that some of the remaining 98 seeds will germinate later but is happy to know that the species still exists.
- Congratulations to Syd Oats whose beautiful handmade thimbles of sterling silver can be seen on the Internet at ><http://www.powerup.com.au/~thimbles/buy.htm><. The outer surface has a pattern of tiny daisies and the top is of various materials such as malachite and quandong. I fully expect these enchanting collectible items to rival Fabergé eggs in the near future. All ADSG members hope that Syd's second knee operation will soon leave him free of pain and infection so that he can combine growing daisies with making thimbles.
- Congratulations to Julie Strudwick who has collected in her garden at Upper Lurg a spider which has been placed in a new genus, *Diasterea*. The description of *D. lactea* by Jennifer Shield and Julie appears in *Proc. Roy. Soc. Victoria* 111(2): 271–281, (1999). Females and males were collected from daisy spp. — *Brachyscome multifida*, *Bracteantha bracteata*, *B. viscosa-bracteata* hybrid, *Chrysocephalum apiculatum*, and *C. semipapposum*. Males were collected on *Ixiolaena* sp., *Olearia tomentosa* and *Rhodanthe anthemoides*. This Daisy Spider was formerly known as *Diaea lactea* but differs from species in that genus in several characters.

## MEMBERS' REPORTS

**Gloria Thomlinson** of Shepparton (Vic) reports on 3/3/00: '*Pycnosorus thompsonianus* was a wonderful addition to the front garden this summer. The lovely silver foliage and neat yellow bobble flowers are surrounded by green patches of *Conostylis aculeata* and/or clumps of *Lomandra confertifolia*, and this looks particularly appealing to my eye.'

I had three specimens — two planted 25cm apart cover the ground 60 x 80cm with the most upright of stems to 50cm. The lone plant measures 40 x 40cm but is not so dense. All are mulched with a 5cm layer of crushed rock as they receive sun all day. New flowers are still forming after the summer-long display. I'm watching for seed with the hope of more plants to play with next year.

A rather compact form of *Leucophyta brownii* I have been propagating over the last two seasons is not as tough as I had hoped and some plants look very dry. They may reshoot so I'm being patient.'

On 11/5/00: 'All my plants from Bushland Flora are in the ground. A couple of old plants have been ruthlessly pulled and mulched to make room. Looks different already, tidier anyway. The *Chrysocephalum semipapposum* are starting to shoot, so they have had their annual cut back this week. While doing the rounds of the garden I found that *Ammobium craspedioides* did not die. A rosette has appeared. A case of leave and see with that one, unlike the 'dead' *Epacris impressa* I pulled up yesterday, only to find very healthy roots protruding from the original pot shape. I've shoved it back but I don't like its chances. I don't usually expect that species to live long here unless they are in pots.'

**Jan Hall** of Yarrawonga (Vic) writes on 9/3/00: 'I am still doing plant propagation etc. for the nursery, which means growing the known reliable daisies but hope to get some seed in soon. We have been asked to grow *Bracteantha viscosa* (seed supplied) and already offer *B. bracteantha*, *Pycnosorus globosus*, *Brachyscome ciliata*, *B. basaltica* var. *gracilis* — all locals. With the interest in grasslands and revegetation with indigenous ground cover now gathering momentum, we need to become more efficient at producing plants as needed. City based groups may have this in hand already, but the climate and cost restrictions are a bit of a barrier inland.'

Our garden would have been very colourless this summer (dry again) without the daisies. During Jan–Feb there was a yellow vista along a path — *Bracteantha bracteata* (some cream as well), *Chrysocephalum apiculatum*, *Pycnosorus globosus* and *P. thompsonianus*, *Leucochrysum albicans* from Charlton, *Ixiolaena brevicompta* and *Brachyscome basaltica* var. *gracilis*. The latter is growing in gravel over clay in a wet in winter and dry in summer spot, and is therefore quite useful here.'

**Sylvia Oats** of Elizabeth East (SA) writes on 11/3/00: 'After having such a beautiful spring and summer display of daisies, the envy of the neighbourhood, the very hot temperatures we have endured this past two months have ruined them. We have had many days of high 30s and 40 and no rainfall. It is very hard to keep water up to them, so we have pulled them all up. The *Brachyscome* aff. *curvicarpa* seemed to stand up to the heat best of all and *Brachyscome formosa* has done very well too. In February we had 50ml of glorious rain — the first in months apart from a few 5ml drops, and now hundreds of daisies are coming up. I shall have to water frequently otherwise they will perish. We have *B. aff. curvicarpa* and *B. iberidifolia*, only about 3 inches (7.5cm) high and flowering already.'

**Matt Hurst** of Wagga Wagga (NSW) writes in 4/00: 'The seed I have sent is a mixture of *Bracteantha* 'Bright Bikini' and *Bracteantha viscosa*. The *B. viscosa* is probably impure as it and the 'Bright Bikini' all came up from seed this year, and I can't find any that look like our local form in respect to the flowers. You will find different colours, mostly cream, with some of what I call "doubles" plus some variation in habit.'

Here's some info on species currently in my garden.

*Bracteantha viscosa* germinates readily anywhere it gets the chance. Plants grow to 1.5m with about fifteen main flowering stems, and last about two years, even with pruning.

*Ozothamnus diosmifolius* — only have one plant, and think it's a local form. It's about 1.2m high with bright white heads, 8cm across, with a compact shape. Nice when in flower and people comment on it when they visit. Well-drained spot with a light sandy soil.

*Senecio garlandii* — cannot keep this one alive. Strikes well but no luck with seed. A foliage plant which needs very good drainage. A threatened species.

*Ammobium alatum* lived three years in a well-drained, partly shaded spot. Died after a hair cut and lack of water. Flowers for at least six months if treated right, ie. pruned as flowering dies down or good rains occur.

*Brachyscome ciliaris* likes water when grown in full sun, but prefers shade and a well-drained spot. Not a spectacular plant. Strikes well.

*Olearia* spp. — I grow three local species and must identify them. They are probably *O. tenuifolia*, *O. floribunda* and *O. phlogopappa*. All plants need no water after establishment, just pruning to keep fresh. They are not fussy as to soil type, drainage is a different matter though. All forms are attractive in flower.

*Rhodanthe chlorocephala* ssp. *rosea* and *R. manglesii* packet seed germinates in 4–5 days with bottom heat and smoke. Do not like my soils for some reason, but prefer large pot culture with a little liquid fertilizer and not too much water. Must be careful of frosts. *Schoenia filifolia* is the same as above.'

**John Emms** of Loch (Vic) writes on 30/4/00: 'Just a note to let you know that I have achieved reasonable success with my first daisy seeds and the help of Yates Seed Raising Mix.

The seeds which you sent me were:

<i>B. aculeata</i> — Captains Flat Road, ACT	<i>Ammobium alatum</i> 'Bikini' — Maureen Schaumann, gdn
<i>B. tenuiscapa</i> var. <i>pubescens</i> — JB9	<i>Ammobium alatum</i> 'Bikini' — Orriell Seed Co.
<i>B. iberidifolia</i> — WS 1327–3	<i>H. calvertianum</i> — JB gdn

All germinated outdoors in a period between six and fourteen days. *B. iberidifolia* had a particularly high germination rate.'

**Margery Stutchbury** of Bundaberg (Qld) writes on 6/5/00: 'This year my *Rhodanthe chlorocephala* ssp. *rosea* was sown on 15 April (a few weeks earlier than usual) and the first seed germinated 4 days later. I enlarged the garden a bit and put in new soil, compost, and a mixture of old straw and chook manure from our chook house. Half the garden is planted with seed from Wild Australia Nurseries, Mt Lawley, WA (bought on our trip), and the rest is from our garden last year. They are now about 2½ inches (6.25cm) high and others are still germinating. *R. anthemoides* is coming up all over the garden too, from last year's plants, so I will have to weed some out and pot others to give away.

I will take your advice and try the *R. chlorocephala* ssp. *splendida* in pots this year — IF I can get them to germinate. Can report a little bit of success!! From sowings on 15/4/00 have germinated 9 *Helichrysum lanuginosum* (from Rosedale Road Via Bundy) and 2 *Helichrysum collinum* (from the Town of 1770). We have had rain over Easter and since, and although we really need the rain, it is nice to see the sun again. I was getting worried that the seeds would die from too much wet.'

**Sandy Salmon** of Gapsted (Vic) writes on 12/5/00: 'We have had great success from your seed and I will be pricking seedlings out into tubes this week. I am very hopeful that we'll have some useful plants to incorporate into our *Brachyscome* breeding which we are starting again in spring. We are mostly looking at large-flowered types on compact habits, etc., and some of the species you have sent we have probably overlooked on previous occasions.

**Christina Leiblich** of Kimba (SA) writes in June 2000: 'In April I went on a two week tour of Tasmania with five other locals on Bute Buses. I found the vegetation decidedly different to that growing here. I must admit the rainforests were really something to remember. On top of Mt Wellington I saw everlastings at seed stage. Too bad!! Not to be collected!\*

This year is so far shaping up to be a better season rain-wise. We are just hoping the grasshoppers come too late in the spring. There have been plenty about so we need some frosty nights.'

(\*ADSG has bought some seed of everlastings occurring in Tasmania from Orriell's Seed Co, so don't worry, Christina. .... Judy)

## MAY MEETING REPORT

On Saturday, 6th May we had nineteen members foregathering at Widford Street. The plant swapping was greatly enjoyed as usual, and we all had treasures of various kinds (not all daisies) to plant in our gardens later. Alf's segment is probably enjoyed most of all because he has a history that goes with each of his swaps — where it originated, how far he and Esma had to walk, which Salkin actually found it or whether Esma refused to go the full distance, how they found their way back to the car — and most of the histories are hilarious. Esma sometimes disputes them but this only adds to our enjoyment.

We had a delicious afternoon tea around the extended table, while we discussed the Show and Tell specimens. Members had brought the following species:

Maureen Schaumann presented — *Brachyscome basaltica* var. *gracilis* which grows very well in her soak.

- *Leptorhynchos squamatus* which she loves for its bright, cheery appearance. She observed that it had not died back this year as it has in the past. It grows on the side of the soak and was reshooting in early May.
- *Brachyscome angustifolia*, pink and mauve forms, flowering all through the summer.
- *Brachyscome aculeata* (Captains Flat form) was a bit floppy and should be clumped to be seen at its best.
- *Ammobium alatum* 'Bikini', a neat grower.
- *Cassinia subtropica*. Maureen likes the green shining leaves, and the flower clusters dry beautifully.
- *Ozothamnus rufescens*. This had been picked in tight bud for drying.
- *Cassinia arcuata*. This colonizing plant can go berserk after fires but Maureen likes it when dried and likes the various colours of the buds.
- *Leucophyta brownii* var. *candidissima* has foliage which dries very well.
- *L. brownii* 'Silver Nugget' in a pot was a superb small dense plant. The label said 'This very compact form of the Silver Cushion Bush from the West Coast Of Tasmania is extremely hardy in most garden situations, growing only to 50cm x 50cm.'
- *Olearia* sp. aff. *lanuginosa* has lovely blue-green foliage but the flower-heads are insignificant.
- *Chrysocephalum semipapposum* (Frankston form) has nice silver foliage and large heads.

Julie Strudwick presented — *Olearia astroloba*, a darker colour than usual, but all her plants are that shade.

- *Calotis glandulosa*, a deep mauve alpine which spills over her rock wall.
- *Pluchea dentex* flowers for 10 months. It grows on the south side of the house and has part sun in winter.
- *Brachyscome* 'Judy Barker', a handsome, dark mauve seedling that arose in Julie's garden. It appears to be related to 'Maureen', 'Betty Campbell', 'Colin Jones', hybrids with *B. angustifolia* and *B. formosa* as parents. Judy was delighted to be recognised in such a nice way.

Gloria Thomlinson and Julie praised *Pycnosorus thompsonianus* for its bushy habit, for tolerating quite long dry periods and for being very good over summer. They claimed it flowered from September to June. They grow it from cuttings, merely taking off side pieces and sticking them in the ground.

Max McDowall planted *Ozothamnus purpurascens* in a dry sunny spot two months before and it was doing very well.

Esmā had tested old seed of *Rhodanthe diffusa* ssp. *leucactina*, *R. stuartiana* and *S. filifolia* ssp. *subulifolia*. She sprayed Regen Smoke Water diluted 1 : 10 over the seeds and they had germinated in 4 days.

Judy showed *Brachyscome multifida* with the white, mauve and mauve-and-white heads which had originated from Helen Morrow. Sometimes the heads are all mauve, and you think it has lost the knack, but wait a while and it starts to perform again.

— *R. citrina* sown in a 30cm bowl in flower. It had begun to flower in April and is still flowering in mid-June. Stems are 25–35cm high. This seed had been sown in early March. It does not germinate outside if sown in mid-April in Melbourne, and so appears to need higher temperatures than normal for triggering germination.

Natalie Peate reported that seed of *Ptilotus exaltatus* and *P. macrocephalus*, kept in the fridge for at least 3 months, were 'up' in 4 days when treated with a 24 hour soak in GA<sub>3</sub>.

Before dinner Max McDowall treated us to some lovely slides of the trip he and Regina made to Western Australia last year. He finished off with some mouth-watering slides of alpine daisies.

Some of our missing spouses joined us for another delicious dinner. Thank you to all the Melbourne members who cooked such delicacies, and to our catering daughter who slaved in the kitchen to get all the casseroles heated. This year she had the help of her father, the 'non-member', and seemed prepared to give him a glowing reference. Special thanks also to Vic Schaumann who ensures that our glasses are never empty.

After dinner we crossed the Great Victoria Desert with Maree and Graham Goods, who joined a few other intrepid travellers (including Jan and Alan Hall) to explore the Anne Beadell Highway. Their special interests were daisies and eremophilas, and so the progress was slow, the slides testifying to the presence of many species of both genera. It was a very entertaining talk. The vegetation was surprisingly lush, and we learned some history and topography as well as botany as our hosts drew us along. Jan had sent some excellent slides of the trip also but was unable to be present. Many of us were left thinking about how exciting it would be to follow in their footsteps. It was one of our most enjoyable talks, and we are very grateful to Maree and Graham for the time spent in preparing for it. We finished the evening with a few slides of *Helichrysum* and *Argentipallium* species.

On our Sunday excursion sixteen members accompanied us on our garden visits. We travelled first to see Chris Larkin's garden on a steep hillside at Lysterfield. Roger Stone and Colin Turner had both had a hand in this garden but Chris was obviously developing her own philosophy for what she wished to achieve. Her two pools were delights, and the plantings were colourful and interesting. Many prostrate acacias were in evidence, necessarily so because the block is large and the terrain precipitous. One of the newest beds accomodates correas of all kinds. It will be interesting to see it in a couple of years. We thank Chris for the timely morning tea with fresh buttered buns, and for taking time out of her busy life to show us the garden.

Our next stop was Elspeth and Gary Jacobs' garden. Since this was previously owned by the Elliots there were many unusual plants in it when the Jacobs took over, but old plants have been replaced and Elspeth is extending an area to include eucalypts from many different regions. We admired the optimistic outlook that could expect *E. papuana* and species from Western Australia to find the Dandenongs to their taste, but Elspeth will probably prevail. We learned to our surprise that the gentle Elspeth is a ruthless pruner, and this trait may have been responsible for the effect the garden has on the beholder. It is lovely and has a serene feeling to it. We had lunch in the sun on the wedding lawn where the Jacobs' daughters are married. We thank Elspeth and Gary for allowing us to visit them and for sharing lunch with us.

Both the gardens we visited were extensive and had the most beautiful views. Many of us were envious until we thought about the difficulties experienced in keeping our quarter acres in some semblance of tidyness.

Our last visit was to a wholesale nursery, Bushland Flora at Mt Evelyn, where we managed to find even more plants at very reasonable prices for our gardens. We thank Ian Shimmen who was away on holidays but had arranged for Anne to open the nursery especially for us. Thus ended a happy weekend.

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### LEADER'S LETTER

All good things come to an end, and after the agreed five years in the job I will be retiring as Leader of ADSG at the end of October. Joy Greig will take over at that time. For those of you who do not know Joy, she has an impressive CV as a member of the Society. She joined SGAP in 1979, and has been a member of SGAP Waverley for all of that time. She has a degree in industrial chemistry, and in about 1988 went back to work in that field, thus up-dating her scientific knowledge. In 1996 Joy retired from work. Joy is married to Neal who was a most successful teacher of chemistry at Camberwell Grammar and has recently retired. They have two daughters, one of whom is married and has two children.

For SGAP Waverley Joy has held the following offices over the years: secretary, treasurer, librarian, tea lady. All her work is logical, well set out and she has been a most dependable, hard-working member of that group.

Joy joined ADSG (then the Brachyscome/Helipterum Study Group) in 1981, the year Maureen founded it. She has been one of the active core of Melbourne members ever since that time. Joy was one of the three designated authors of the first book produced by the Group — *Australian Daisies for gardens and floral art*. Not only was she a member of the Book Committee but she also formatted the drafts and the final copy on the Greig computer. She was working through most of the years in which *Australian Brachyscomes* was being written but she trialled species and wrote reports for us during that period, and has taken a major part in the sales and distribution of the book. When she retired from work she rejoined the Book Committee and agreed to become one of the co-ordinators for our current project. Already her particular set of genera have been trialled, written up and corrected, and she is now ready to get on with the remainder of the chapters.

Joy is calm in all circumstances, totally reliable, has a good sense of humour, a tolerant attitude to her fellows, and a wealth of knowledge on the subject of daisies. She is perfect for the job of leader. In recent months Joy and Neal have extended their holiday house at Mallacoota, and it has proved such a paradise that they have semi-retired to it, with a unit at Boronia which they will share with one of their daughters. (The new addresses are on p. 19.) To help them to arrange their appearances at daisy meetings we have changed the general meeting to the fourth Tuesday from the first Tuesday in the month. This enables Joy to be present at Book Committee meetings (third Tuesday), APS Waverley meetings (third Tuesday) and ADSG general meetings before fleeing the city.

My five years as leader have been most enjoyable. Quite the nicest part of it has been corresponding with the members. You have informed, entertained, amused and sympathised with me in the various trials met with over those five years. You have become friends and I hope you will continue to write to me.

I could not have managed without the help of the Melbourne core. The two previous leaders, Maureen and Esma, are always quick to shoulder tasks for me and to help with advice. Our Treasurer, Bev, has made sense of the pieces of paper passed to her, and has kept us solvent without complaint. Joy, Natalie, John and Peg are always active in their offers to help and advise. The store of information of all sorts afforded by the backgrounds of these members, and their ability to lighten the atmosphere with hearty laughter has been of inestimable value.

The Everlastings Book has been hard work but the meetings have been good fun for all but the co-ordinator for the day who is in the spotlight. I am grateful to all the co-ordinators and the Book Committee members, especially to the dedicated proof readers. In my opinion it would be almost impossible for a study group leader to write a book without

assistance. It has been marvellous to have the artistic contributions of our botanical artists, Gloria, Ailsa and John. The newsletter is so much more informative if there are illustrations to accompany articles, and the overall appearance is improved beyond measure. Gloria is working now on drawings for the 'Book' ~~now~~. We are very fortunate indeed to have work of such high quality to illustrate our words.

We have received help from many non-members, and it has all been greatly appreciated, but I would like to single out two in particular. Paul Wilson has been unflinching in identifying plants, answering questions, giving us articles, seed, specimens and information, and his encouragement has been invaluable to our Group. Rodger Elliot is our other great source of help and information.

It has been marvellous to have Ailsa Campbell's drawings to illustrate the newsletter articles, and to have Betty Campbell's portfolio and Gloria's previous drawings to call upon. Finally, please keep the letters coming as Joy has asked me to remain editor and seed bank curator (garden and commercial) until she settles into the leadership and works out where she will store AD SG material and how much time she has to spend moving between her two abodes. Esma also has agreed to hold the provenance seed bank.

Best wishes to all members.

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### NEW MEMBERS

A very warm welcome to the following new members:

Randall Bayer, CSIRO, Plant Industry, Australian National Herbarium, GPO Box 1600, Canberra, ACT, 2601.  
Sandy Salmon and Bernadette Thomas, RMB 3210, Gapsted, Victoria, 3737.

Randall is Principal Research Scientist at ANU. Sandy and Bernie have been working in the horticultural field for some years and their knowledge will be of great benefit to AD SG. We hope that we may be of some assistance to all of them.

### SEED DONORS

Our thanks to the following members for collecting seed for AD SG: John Emms, Barrie Hadlow, Matt Hurst, Christina Leiblich, Syd and Sylvia Oats, Ruth Payne, Maureen Schaumann.

### Commercial and Garden Seed Bank

#### Additions

*Bracteantha* 'Bright Bikini', *viscosa*  
*Chrysocephalum apiculatum* (John Emms' spathulate silver leaf and spathulate green leaf forms)  
*Helichrysum milliganii*  
*Ozothamnus ericifolia*, *hookeri*, *rosmarinifolius*, *scutellifolius*

#### Deletions

*Brachyscome ciliaris*, *goniocarpa*

### Provenance Seed Bank

#### Additions

*Angianthus tomentosus* (Kimba, SA, 1/00)  
*Bracteantha bracteata* (W of Bundaberg, Qld, 10/99; Town of 1770, Qld, 10/99, Bendemeer, NSW)  
*Cassinia* sp. (SA, 12/99), *Chrysocephalum apiculatum* (Coonabarabran, NSW, Carpie Punthe, SA; 12/99)  
*Leucochrysum albicans* ssp. *albicans* (Blue Water Holes, NSW)  
*Olearia decurrens* (Kimba, SA), *tenuifolia* (NSW),  
*Ozothamnus cuneifolius* (Yaouk, NSW)  
*Vittadinia cuneata* (ACT), sp. (NSW)

#### Deletions

*Brachyscome aculeata* (Snowy Mtns, NSW, 2/97), *basaltica* var. *gracilis* (Snowy Mtns, 2/97),  
*ciliaris* (Quilpie, Qld, 7/96; Bundarra, NSW, '92; Gunnedah, NSW, '92; Iron Knob, SA, 9/97; Nullarbor, SA, 9/97;  
Penong, SA, '97; Wirrulla, SA, 8/97), *curvicarpa* (Louth-Tilpa, NSW, 10/97)

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### SUBSCRIPTIONS.

Subscriptions are \$10.00 per year for Australian members and \$20.00 per year for overseas members.

### FEES WERE DUE ON 30th JUNE 2000.

For the members who have not yet paid their 2000/2001 subscriptions, a red cross in the box is the second and final reminder. Cheques should be made payable to the Australian Daisy Study Group and forwarded to Judy Barker or Bev Courtney (addresses on p. 19).



NEWSLETTER DEADLINE for NL 58 is 15th OCTOBER 2000