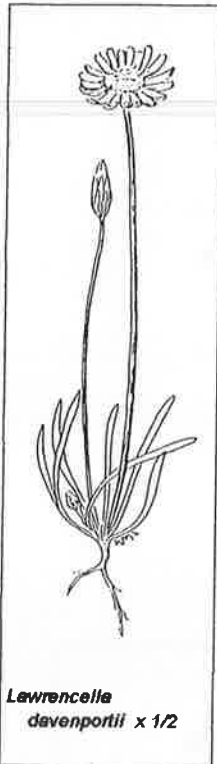


ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS**THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO.38**

Dear Members,

It is probably perverse of me, but I enjoyed the spell of cold blustery weather over the Christmas break. I ignored the hail, rain and temperatures down to 13 °C, I just turned on the heating, socialised with family, read, did some spinning and a leisurely reorganisation of the Seed Bank. During fine breaks I checked the plants, but gave the hand pollinating of recent cutting-grown plants a miss — too cold and probably too humid.



I'm pleased to report that we now have *Brachyscome angustifolia* var. *angustifolia* from three provenances. The first, collected by Bruce Wallace from Wernervale (NSW), is now a healthy little plant bedecked with about a dozen blooms. Thanks also to Lotte von Richter for sending seed of a population from the Castlereagh Forest. This has now germinated. And thanks to Alf who suggested that a rocky gully in the Yalwal Forest west of Nowra looked like a suitable habitat. We found a small population of about ten plants. We wouldn't have been in this area, however, without the assistance of Tim Morrow, who checked out access to a known population and had 'teed up' contact people for us. We were following up one of the access routes to the known site when we found the population. Thank God! It saved us a canoe trip over rapids and goodness knows what other hazards. We will now be able to go ahead with writing up this species, and illustrate the fruit and habit of the plants. Judy will also be able to investigate further the *B.angustifolia* complex and hopefully in the future we will have stock of seed and plants.

The pollination trials have confirmed that my unknown brachyscome from the 1992 Field Trip is *B.nova-anglica*, a suckering form with long trailing stems. This year's query already has a head of fruit and I'm just going to have to resist the temptation to look at fruit before they are fully mature.

NORTH-EASTERN VICTORIA FIELD TRIP

Fifteen Mile Camp, October 29th–November 1st. AD SG has at last broken the taboo — NO RAIN.

In fact we had glorious weather and displays of daisies to gladden the heart. There were beautiful rock gardens of *Brachyscome diversifolia* var. *diversifolia*, *Leucochrysum albicans* subsp. *albicans*, *Rhodanthe anthemoides* (Whitlands form) and a delicate display of *B.ptychocarpa* on an oozy slope.

Julie's and Barbara's hostessing was memorable. There were lovely touches — troughs of 'roseum' at the gate to greet us, posies of flowers on tables, homemade biscuits, morning teas and gardens with room to grow things that left us envious. We appreciated the catering for evening meals undertaken by the local Mothers' Club and indulged, sampling widely the pre-dinner savouries and then realising the meal was yet to come! We rounded off the weekend on Monday morning at Reef Hills State Park where *Brachyscome basaltica* var. *gracilis* and *Pycnosorus paludicola* were lush and in splendid style after recent rains.

Over recent weeks I've had visits from interstate 'Daisy' members. John Barrie of Coonalpyn (SA) and co-enthusiast came laden. We now have specimens of *Brachyscome cuneifolia* from Tintinara (SA) which fills another gap for us.

Esther and Graham Cook, on a Riceflower jaunt, called in and impressed us with samples and photos of their Riceflowers. Not to be outdone, I invited Judy and Maureen to bring along samples of their preserved daisies, and all these were greatly admired. Thanks Judy and Maureen for assisting at short notice.

Early in December Egon Demuth and his wife called in on their way home from the APNC Conference in Hobart. We had a happy hour, strolling around the garden and enthusing about 'natives'.

Unfortunately, when all these visitors arrived the daisies were beyond their best and visitors had to use a little imagination. Our garden is a working garden with numerous precious plants in pots for close surveillance.

A recent *Landscape* magazine featured an article on daisies and praised our book as a valuable resource for anyone interested in cultivating or identifying many of the popular daisies. We still have a few copies of our book *Australian Daisies for Gardens and Floral Art* available at \$16.00 plus postage from me. The book weighs 500gm packaged.

MAY MEETING Saturday 7th, 2.00–10.00 pm at 88 Pinewood Drive, Mount Waverley.

I was so impressed with a talk Judy gave to Maroondah SGAP in November I felt more should hear it. I've therefore decided on another Saturday meeting.

Tentative Program:

2.00 pm — Coffee, etc.

- Interesting Matters and Light Relief.
- *Craspedia* and *Pycnosorus*, sorting out the revision.
How about introducing us to your local species?
- Swaps.
- Imbibing and Eating.

7.00 pm — 'Pollination and Hybridization — Positive Aspects'

Esma — a novice in search of 'True Seed'

Judy — *B.angustifolia* complex, an all-consuming passion revealed in colour.

Buffet meal supplied. For accommodation please contact me, ph. (03) 802 6213.

SGAP. VIC PLANT SALE

Freshwater Creek via Geelong, April 30th-May 1st. Daisies for sale and, of course, other genera.

Seed sowing time is approaching. Successful sowing!

Regards,

Esma

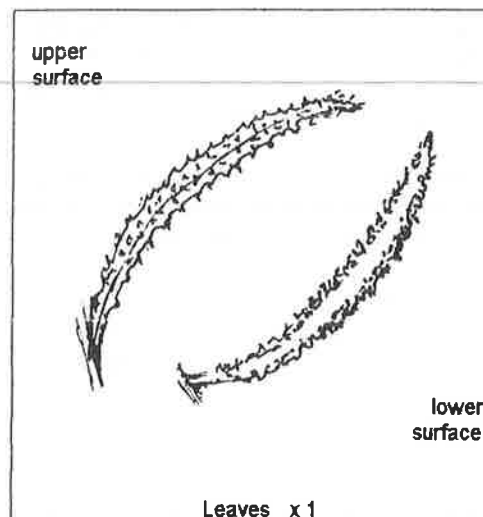
SPECIES OR FORMS NEW TO MEMBERS

Ozothamnus rosmarinifolius (NSW, Vic, Tas)

(syn. *Helichrysum rosmarinifolium*)

ROSEMARY EVERLASTING

O. rosmarinifolius is a tall shrub, 2–4m high, found scattered along creeks and in swampy heathlands. The branches are slender and erect. The narrow linear leaves, 1.5–4cm long and 3–4mm wide, have pointed tips. The upper surface is dark green, bristly and rough to the touch — muriculate-scabrid in botanical terms — while the lower surface is covered with white woolly hairs. The margins are wavy and rolled under. The young parts of the plants are covered with short white hairs which make them look greyish.





Numerous flower-heads are held in flat clusters, 3–6cm across, at the ends of branchlets. The outer bracts may be brown or a dull reddish colour. The inner bracts are white and radiate when the buds open. Plants flower in late spring and early summer.

I have only seen one shrub in its natural habitat. It was in the Anglesea area growing beside an underground spring. It was a most untidy plant, about 3m tall, but seed collected from it yielded two seedlings. In time they were planted out in the wettest part of our Fairhaven garden — the septic outfall — and they thrived in this position. I have to admit that they are inconspicuous until they flower, at which point they become noticeable, but still untidy. Christine Howells (SGAP. Tas. Seed Officer) reports that a plant in a friend's garden is a bush of a nice shape, but is heading in the direction of up.

Jeff Irons has sent us a coloured photograph of *O. rosmarinifolius* in beautiful red bud. The seed originated from Tasmania, but seedlings from the same source in my Hawthorn garden grew no taller than 1m after four years and never did flower. This summer they died.

Though a disappointing garden subject, the flower-heads dry well and could be useful as filler in floral art. The heads look like those of *O. cuneifolius* but the leaves dry better than that species when they are treated with our magic potion. Glycerining the branches for 24–36 hours will darken the leaves to brown-grey — quite a handsome result — although I prefer the more natural appearance.

I have asked for more seed from the Tasmanian seed bank. This time I will attempt to grow the species in large pots and will ensure that they do not dry out.

Gnephosis arachnoidea

(syn. *Gnephosis foliata*)

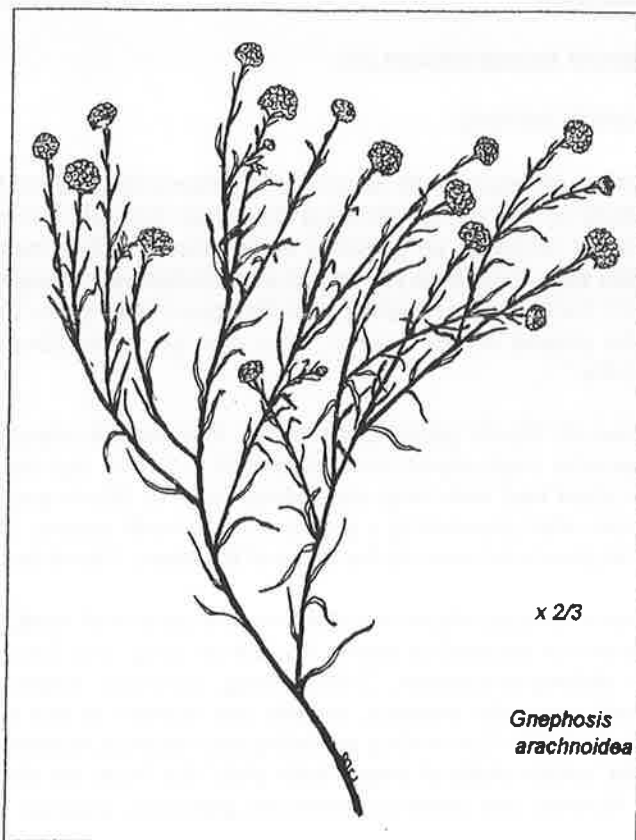
ERECT YELLOW-HEADS

(Q, NSW, SA, WA, NT)

I first saw this little annual in August '89 at the Henbury meteorite craters which lie about 100 Km south of Alice Springs. Open, stiffly upright herbs with yellow button heads, 8–14cm high and 8–12cm wide, were everywhere under my feet on the dry, stony, open plains of this district. Associated plants were *Rhodanthe charsleyae*, *R. floribunda*, a yellow *Calotis* sp., a tiny *podolepis*, *Cassia pleurocarpa* and a vast number of pricklies.

The reddish, slightly hairy main stems were erect and then branched about halfway up. Each branchlet was about 7cm long and tipped with a yellow head, 2–6mm across. The leaves were narrow lanceolate, green, stalkless, 0.5–3cm long and no more than 1mm wide in this form. The width can be up to 4mm in some South Australian forms.

I loved it, but could find no seed at the time.



Fortunately Maureen Schaumann, equally struck with this species, collected seed between Eulo and Cunnamulla in August '90. It was sown in September '91 and germinated in 18 days, but only four seedlings appeared. Being cautious, I put the entire margarine container into a 14cm pot of Propine BC321 to which some cow manure, peat moss, perlite and zeolite had been added — everything I thought its heart might desire. In February '92 there were only two plants left. The pair measured 27cm by 15cm. The rich mix had produced too many heads to allow the plants to be upright as they are in nature and, although the open habit was retained, the soldier-like posture was lost. Numerous green heads dragged the stems down. These later matured to yellow, at which time the leaves also turned yellow, and the pretty effect was lost. When this yellow growth was cut off new growth soon appeared.

I had put some of the same seed in a small jar just under the tin roof of our workshop for twelve months in the hope that it would lose its dormancy. It didn't seem to do so. Three months after I sowed this lot of seed (in March '93) one seedling came up. Now my plant is in a forestry tube of a much lighter mix — no zeolite, no cow manure, no peat moss — and it looks as it did at the Henbury craters, except that it has yellow-green, almost iridescent heads, 9mm in diameter. It is early January and I will now cut the stem and hang it up to dry. It looks very pretty indeed so I hope it will dry that way. If we could get it to germinate more freely I think *Gnephosis arachnoidea* could be an excellent species for floral art.

Does anyone have some more seed?

by Judy Barker.

POSTSCRIPT on OLEARIA ASTROLOBA

by Esma Salkin.

Three or four plants transplanted in my garden against westerly brick walls began blooming on about November 16th 1993, after just twelve months in the garden. Plants are still blooming (in late January) and more buds are appearing. No mature seed has developed despite two plants growing in close proximity. Maybe this plant has a specific pollinator. I've now tried hand pollinating flowerheads on one plant.

FORMS OF HELICHRYSUM LEUCOPSIDEUM

MALLEE FORM

by Corinne Hampel.

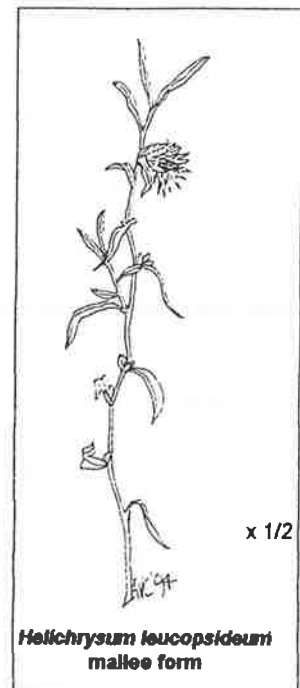
Helichrysum leucopsideum DC.

SATIN EVERLASTING

Helichrysum leucopsideum is one of my favourite mallee flowers. I have found a great colony of the plants climbing their way through *Enchylaena* sp., Nitre-bush and *Dianella revoluta*, all growing at the base of the mallee form of *Eucalyptus leucoxyloides* ssp. *megalocarpa*, and in association with *Melaleuca uncinata*, *Baeckea behrii* and *Callistemon rugulosus*. In the open they grow to about 25cm high and carpet the ground in late spring. They can be up to 50cm high growing through undershrubs.

Seed sown in March germinated within four weeks resulting in many seedlings. These became multi-stemmed and upright to 30cm, but did not flower this season. An older plant had one long ascending stem to 50cm and flowered with a single white bloom after presenting a pink bud for several weeks. The younger plants have dried off to perennial eyes at the base of the stem. I have these growing in pots.

Helichrysum leucopsideum is a deep-rooted perennial herb, with a woody rhizome or rootstock. It may have several erect or ascending stems 15–50mm long, and usually grows in the shelter of shrubs. Leaves are linear or oblong-lanceolate, 2–6cm long, sparsely scabrous-pubescent above, usually grey-tomentose below, with recurved margins. Heads are solitary at the end of the long, leafy stems. The involucre is hemispherical, 15–20mm long including the laminae, surrounded by a few linear floral leaves, all the bracts lanceolate, snow white or tinged with pink, the inner on short woolly claws, with erect laminae 10–25mm long. All flowers are bisexual, achenes glabrous; pappus bristles about 80, barbellate only towards the summit.



Helichrysum adenophorum is close to *H.leucopsideum* with a similar involucre, but instead of being woolly or tomentose, it is scabrous with minute glandular hairs. Leaves are mostly narrower, with dilated half-clasping base and revolute margins. Achenes are glabrous; pappus bristles about 25, barbellate from the base.

REFERENCES: *Flora of South Australia*, J.M. Black, 2nd. Edition, and *Flora of South Australia* Jessop and Tolkien, 4th Edition.

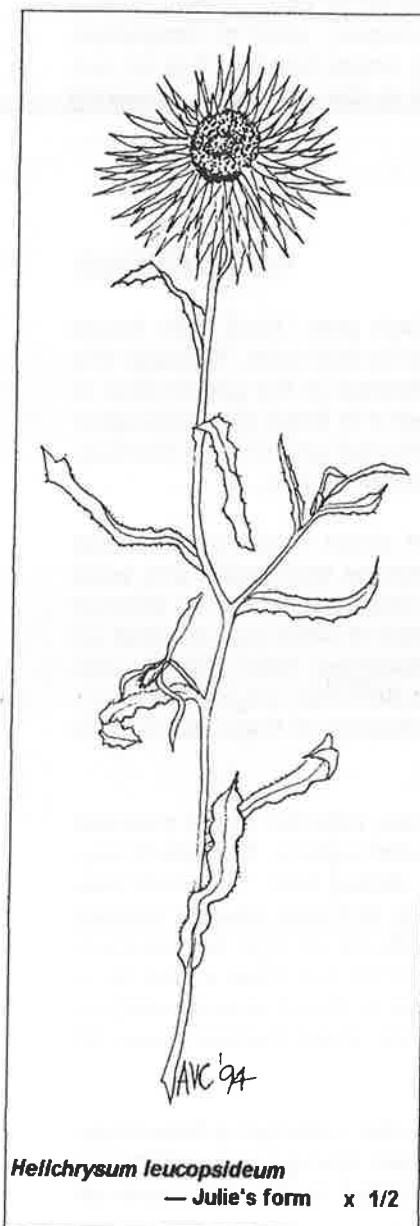
ANGLESEA FORM AND OTHERS

by Judy Barker.

The Anglesea form of *H.leucopsideum* has moderately stiff leaves, 1.4-3.5cm long and 0.1—0.6cm broad, with a rough, dark green upper surface, white cottony lower surface and sinuate margins. The margins roll under slightly. Pointed pink buds open to glistening white flower-heads, 2.5—3cm across.

This variable perennial has many attractive features. I wish it was easy to grow in my garden. I have several large pots at Hawthorn in which plants have persisted for two to three years. They sucker (even appearing from the holes at the base) and can be easily divided when the pots look crowded. The Anglesea form will grow in our Fairhaven garden provided I plant it in soil which has not been disturbed. It is very likely that it is forming a mycorrhizal association because the soil in which it grows naturally is nutrient-poor sand.

Plants flower from mid-December to February in my Hawthorn pots, but the flowering period in its natural habitat is confusing. Where it grows on the coastal cliffs and sands behind the dunes it seems to flower in November and December, but on the ridge behind Fairhaven I have only seen flowers in April and May. Mary White, a local naturalist whose knowledge of this area is unsurpassed, says *Satin Everlasting* flowers mainly in late spring, but also intermittently throughout the year.



Long ago Esma gave me a form from Sorrento (which has since perished). At the time I noted that the Anglesea form was hairier, tougher, larger and prettier. I now have another form which was grown from seed purchased from Nindethana. The leaves of this form are softer and greyer, 3—6cm long and 3—8mm broad, and the margins are entire. The apiculate point at the apex is much more noticeable than it is in the Anglesea form, and the margins are not revolute. Pink buds form in early August, but there is no sign of buds on the Anglesea plants at that time. The Nindethana form has always finished flowering before the first Anglesea bud opens, which it usually does in mid-December.

In our book, *Australian Daisies*, we declared that seed had never germinated for us. That was true for the seed we tried in the early days, but since then at least Corinne Hampel, Julie Strudwick and Colleen Simpson have germinated seed, and so have I. Seed collected from the Fairhaven Ridge in late April and sown in early May germinated in 28 days, but germination was poor — only 8 seedlings had appeared by mid-July. Last year, however, seed collected from the large pot yielded very good germination and Colleen reported in NL26, p.14 that germination of *H.leucopsideum* was "excellent". Esma also reported excellent germination of what turned out to be *H.leucopsideum* following fire in the Kosciusko National Park (NL24, p.26 and NL25, p.38). I wonder if we need fresh seed and perhaps even a whiff of smoke.

JULIE STRUDWICK'S FORM

Julie sent details of a robust *H.leucopsideum* she has been growing for six years. She believes it is not the Anglesea coastal form because she has had no success with that form in the garden.

This plant of unknown origin was bought in a 6" (15cm) pot in 1987 and is growing happily in Julie's hilltop garden near Benalla in north-eastern Victoria. It is in good soil, but has a tough time of it. It almost disappears each year after flowering, but shoots up again in spring

looking as fresh as ever. In 1991 it was 50cm in diameter, quite densely packed, with suckers emerging between rocks and extending another 50cm or so in a narrow line beyond the main body of the plant. It is in a rockery at the front of the house — a northerly aspect but a south-facing slope which has been built up with stone walls to hold soil in terraces. It is in full sun most of the day in summer and gets little, if any, summer water. It is also on a corner where the wallabies jump on top of it. The plant probably benefits from the root protection of a rock slab.

Julie has only tried to raise it from seed once as it is infested with tiny grubs each year and seed is eaten or damaged. She did collect some seed in the summer of 90/91 and sowed it on 25/5/91. Two seeds germinated and both grew on well.

Julie gave me a division of her plant last May. Before I knew where I was it had sent large, strong suckers from the base of the pot, so I transferred it to a 30cm pot. It sits on a solid upturned log together with pots of my other forms (including a pot of Corinne's Murray Bridge seedlings) and is looking dangerously fit. I intend to try a division of it in the garden in autumn.

The leaves are deep green, rough to the touch, 2–5cm x 0.3–0.9cm, with wavy margins. The upper surface is covered with simple hairs like bristles. They don't have glands on the tips and they are not septate. Under x 25 magnification they look like blackberry thorns. The lower surface is white with long, tangled hairs. The stems are reddish, stiff and beset (I like that word!) with the same hairs held at right angles. Long tangled hairs just below the head almost hide these bristles. The heads are 4.5cm across and very handsome.

Under magnification the Anglesea form is like Julie's except that it is smaller in all its parts. It may be that coastal forms can't cope with inland, quite elevated conditions. They are, however, used to kangaroos. What I am wondering is how Julie got fertile seeds from one plant. Those big bracts hint that it is an out-crosser. Perhaps it was demonstrating its ability to become self-compatible at the end of its flowering season, when it was beginning to feel disappointed.

GERMINATION TRIALS WITH RHODANTHE DIFFUSA

by Sandy Salmon.

My efforts to germinate *Rhodanthe diffusa* have been particularly frustrating. Each year I have been forced to sow large quantities of seed in an attempt to get the 30 or so plants I required for trial work. Although this is generally a difficult species to germinate, sometimes there is a marked difference in the germination of different seed batches. These results immediately raise the question of whether it is seed age, population source, seed storage conditions, germination environment, physical or physiological germination barriers, or a combination of some or all of these factors that is responsible for low germination rates.

In 1993 I conducted a number of small trials with this species, the results of which I have summarised below. These experiments were tests of a number of germination and seed storage techniques and were not aimed at addressing the complex physiology of seed germination. The first experiment was an attempt to germinate the seed *in vitro* or in a tissue culture system and to test the influence of seed coat removal on germination. The seed was collected from plants grown in the nursery in November 1992 and the trial commenced in April 1993. Unfortunately, this seed failed to germinate at all, even under standard nursery conditions, and as a result it is difficult to draw any conclusions regarding the influence of these techniques and conditions on seed germination.

Dr. Kerry Sharman, formerly of the Queensland Department of Primary Industries, reported some success with high temperature seed storage of some species, particularly species from arid regions. The effect may be related to the very high temperatures and prolonged exposure of seed on the desert floor. This work was part of a project funded by the Australian Flora Foundation entitled The collection and evaluation of daisies (Tribe Inuleae) with horticultural potential. A preliminary attempt to test the effects of high temperature storage was conducted simultaneously by myself and Judy Barker using seed which had been stored for a prolonged period under a galvanised iron roof. Again this seed failed to germinate or did so very sparsely in comparison with seed which had been stored in the refrigerator, although the seed batches were of different origins.

The most recent trial, conducted in the autumn of 1993, used garden harvested seed collected in November 1992 and aimed to assess the influence of gibberellic acid, high temperature seed storage and cold/moist stratification on germination. Gibberellic acid is a plant hormone directly implicated in the processes of

seed germination and is known to break many types of seed dormancy. Cold/moist stratification is often a requirement for breaking dormancy of the embryo.

Fifteen seeds were placed on the surface of two sheets of filter paper in a covered 9cm petri dish and a total of ten petri dishes were used per treatment. In the GA treatment the seeds were watered in with 500mg/litre GA₃. The cold/moist stratification was carried out by placing petri dishes in the refrigerator at 4°C for 4 weeks, watering the seeds regularly to maintain moisture. The high temperature storage was conducted by placing dry seeds in an oven maintained at 55°C for 4 weeks prior to sowing in the petri dishes. The control consisted of seed sown normally on petri dishes and watered with distilled water. All petri dishes were ultimately held in a growth cabinet with 12 hour daylengths and 'day' temperatures of 20°C and 'night' temperatures of 10°C. They were assessed and watered every two days.

Mean Germination % of *R.diffusa* after seven weeks

	Control	GA	Cold/moist	High Temp.Storage
Mean Germination %	3.3	19.3	0	22

These results show, as Kerry Sharman has done previously, that high temperature storage may be a useful and relatively easy treatment to facilitate germination in some of the more difficult species. Indeed, it is possible that more extended periods of storage may increase the germination rate beyond the 22% level which is still fairly low. Gibberellic acid is also a useful tool and should be tested more extensively.

It is interesting to note that seed stored at high temperatures retains its viability for some time. The seed treated for 4 weeks at 55°C in 1993 germinated very well (in excess of 30%) when I sowed it in early January 1994.

TWO NEW SPECIES OF *BRACHYSCOME* (Asteraceae: Astereae) from EASTERN AUSTRALIA

by Esma Salkin.

In their paper in *Muelleria*, 7, 457–471 (1992) Watanabe and Short allude to a number of new species of brachyscomes for Eastern Australia. Two species, *Brachyscome nodosa* P.S. Short & K. Watanabe, sp. nov. and *Brachyscome smithwhitei* P.S. Short & K. Watanabe, sp. nov., have been described in *Aust. Syst. Bot.*, 6, 335–42 (1993).

The Study Group has been growing both species for a number of years. *B.smithwhitei* was known to us as *B.campylocarpa* C or *B. sp. aff. campylocarpa* (see NL30, p.32), and was earlier mistakenly referred to as *B.campylocarpa* (see NL16, p.25). We knew *B.nodosa* as *B. sp. aff. goniocarpa* or more frequently as 'Knobby Fruit'.

Seed of these two species was collected by the Salkins in 1989 in north-west New South Wales and south-west Queensland. During an enforced stay in Cunnamulla we were intrigued by a number of depauperate white daisies, about 3cm high and 8–10cm across, growing in and around the Caravan Park. We collected two small plants from either side of a street tree. As these matured back in Melbourne we realised we had two species, not one (see NL25, p.5). We also collected *B.smithwhitei* on flood plains west of Cunnamulla, at Eulo, on the flood plains of the Paroo River, at Enngonia and near Mossgiel in New South Wales.

In August 1993 we returned to Cunnamulla to check if the species *B.nodosa* was still growing in the vicinity of the Caravan Park, but we abandoned plans to travel west of Cunnamulla as regrowth after a long drought was too sparse. We travelled east, and *B.nodosa* was a constant roadside companion for a couple of hundred kilometres. It was also found on disturbed roadsides and fallow agricultural land between Inglewood and Milmerran. Our last glimpse of this species was gained as we crossed into New South Wales south of Texas.

These plants were only a few centimetres high and spreading to ca 10cm across. We did, however, observe the odd lush plant where moisture was plentiful or, in the case of the population on agricultural land, a deviant form. These plants were 20–30cm high, with leaf segments at least 3mm broad, Plants under cultivation in ideal conditions — part shade and moisture — grow lushly and are ideal for a hanging basket. Regeneration has been constant in the original pot, however, by F₄ it had been hybridised by *B.diversifolia* var. *maritima*.

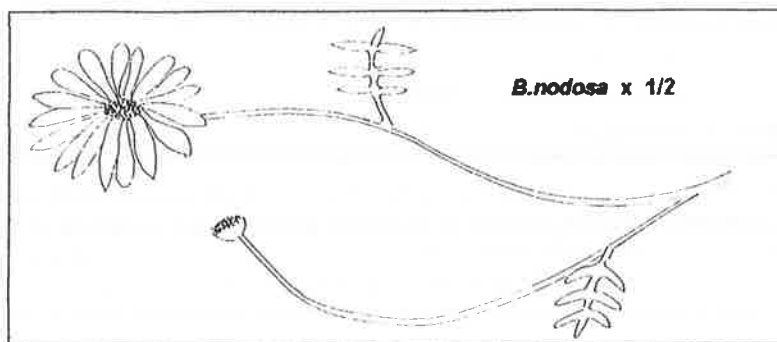
A little fresh provenance seed has been collected and isolation techniques will be undertaken to obtain a larger seed supply.

Brachyscome nodosa:

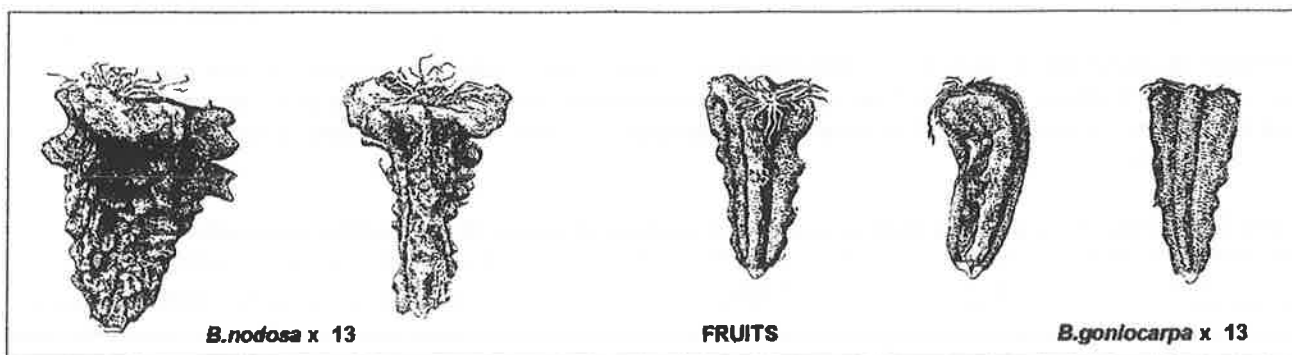
B.nodosa is referred to as *B. sp. aff. goniocarpa* in K. Watanabe & P.S. Short, *Muelleria* 7: 460,469 (1992), as *B. sp. A*, A.J. Everett in G. Harden, in *Flora of NSW*, 3: 156, 162, (1992) ('*Brachycome*'), as *B.goniocarpa* in G.L.R. Davis, *Proc. Linn. Soc., New South Wales*, 73: 203, (1948) ('*Brachycome*'), as *B.goniocarpa* in Smith-White *et al.*, *Aust. J. Bot.*, 18: 104, 116, figs 56, 66 (1970) ('*Brachycome*'), and as *B.goniocarpa*, Stanley in T.D. Stanley & E.M. Ross, *Flora of S-E Queensland*, 2: 511, fig. 711 (1986)

The name *B.goniocarpa* has been misapplied to *B.nodosa* by various workers. *B.goniocarpa* applies to a different species (see below).

B.nodosa is an annual herb, pale green, erect to procumbent with long septate hairs and some short, glandular hairs. Basal and stem leaves are pinnatisect, 4cm long, upper leaves often linear. Leaves are dilated and sheathing at the base with septate and scattered short glandular hairs. Scapes are longer than leaves, glabrous or with scattered eglandular hairs. The flowerhead is solitary, terminal, with 10–19 white or mauve rays. The involucre is 4–8mm wide with 9–20 overlapping obovate to elliptical or sometimes ovate bracts, scarious and minutely toothed on the margins and at the tip. The fruits can be more than one shape and are black or brown, 1.3–2.2mm long and 0.6–1.7mm wide. The outermost or ray fruits have a horn or crest at the top. All fruits are covered with large tubercles on the surfaces. Fruit is glabrous or some inrolled hairs may be seen. The pappus is white, star-shaped with 20 or more bristles and obliquely placed. Chromosome number is $n=3$.



The fruits can be more than one shape and are black or brown, 1.3–2.2mm long and 0.6–1.7mm wide. The outermost or ray fruits have a horn or crest at the top. All fruits are covered with large tubercles on the surfaces. Fruit is glabrous or some inrolled hairs may be seen. The pappus is white, star-shaped with 20 or more bristles and obliquely placed. Chromosome number is $n=3$.



The name 'nodosa' is derived from the knobby appearance of the fruit.

The fruit of *B.goniocarpa* is similar in having horned fruit distally, but rays are much shorter and the species is confined to WA, SA and western Victoria. The chromosome number is $n=4$.

B.gracilis is vegetatively similar to *B.nodosa* but fruit of ray florets are different. The fruit does not develop a horn at the apex and the tubercles on fruit surfaces are much smaller. The chromosome number is $n=4$.

B.nodosa ranges from south-west to south central Qld and northern NSW, e.g. Pilliga to Coonabarabran.

Brachyscome smithwhitei

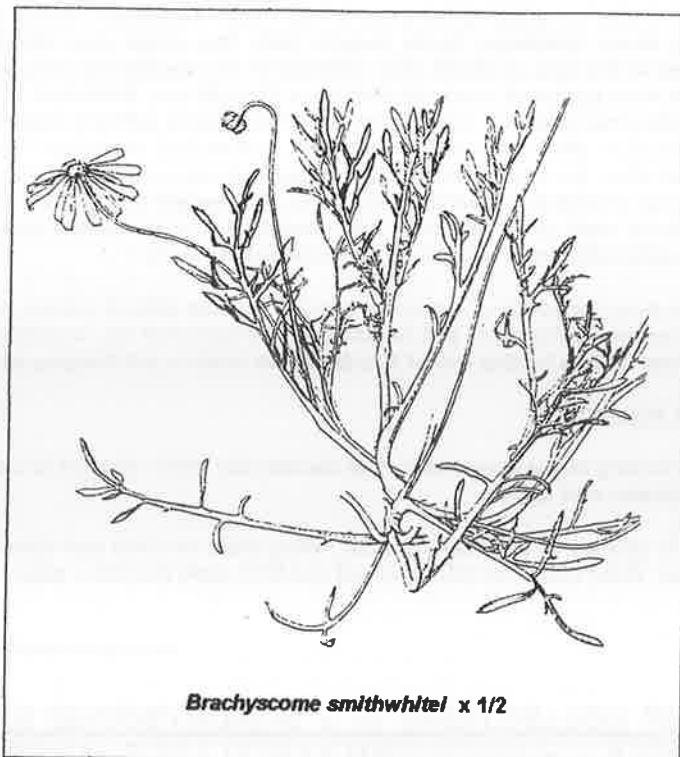
B.smithwhitei is referred to as *B.campylocarpa* (sp. C) in Smith-White *et al.*, *Aust. J. Bot.* 18: 103, fig. 25 (1970) ('*Brachycome*'), as *B.sp. aff. campylocarpa*, in K. Watanabe & P.S. Short, *Muelleria* 7: 458, 465, 466, fig. 1F (1992), as *B.sp. B*, J. Everett in G. Harden, in *Flora of NSW*, 3: 157, 165, (1992) ('*Brachycome*'), and as *B.campylocarpa* in G.L.R. Davis, *Proc. Linn. Soc. New South Wales* 73: 171, (1948) ('*Brachycome*').

The name *B. campylocarpa* has been misapplied to *B. smithwhitei* by Davis (1948). *B. campylocarpa* s. str. (meaning 'in the strict sense') occurs in south-west Queensland and north-east South Australia, and has a chromosome number of $n=5$.

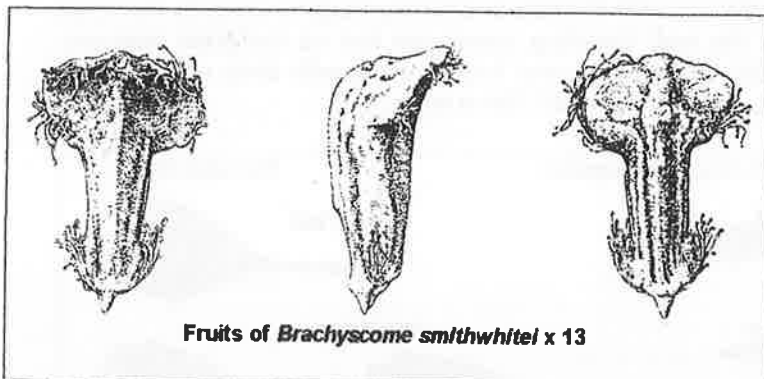
Brachyscome smithwhitei is an annual herb, ascending to erect, green or purplish. Basal and stem leaves to 15cm are pinnatisect, sheathing at the base. Leaves are glabrous or with scattered short septate hairs and long septate cottony hairs at the base. Leaf segments are oblanceolate or linear, the scape longer than the leaves, glabrous, green or purplish. Flowerheads are terminal, solitary and have 13–27 white ray florets. Involucre is 5.5–15mm across with elliptic or obovate, sometimes ovate, bracts, glabrous with scarious tips or margins. Tips sometimes red or purplish.

Fruits are more than one shape, 2.1–2.3mm long. In ray fruits the upper part is winged from 1/2–1/3 the length of the fruit. Wings are shorter in the disc fruit. The wings have hairy margins, the hairs inrolled at the apex with some short glandular hairs, no wings on lower part of fruit, glabrous except for two basal tufts of hairs.

Mature fruits are dark brown-black, minutely tuberculate. The pappus is white and scale-like. Chromosome number is $n=3, 6$.



The name 'smithwhitei' honours Emeritus Professor Spencer Smith-White, who carried out pioneering work on chromosome studies. The species is confined to inland NSW and southern Qld.



B. smithwhitei is close to *B. campylocarpa* and *B. eriogona*. All species have curved fruits. For *B. eriogona* the margins are entire and ciliate over their whole length. *B. campylocarpa* has mature black fruit with prominently lobed margins. Both *B. campylocarpa* and *B. eriogona* occur further inland to the west. *B. smithwhitei* also has affinities with *B. lineariloba* but the fruits, although they have a wing-like shoulder and hairs on the margin, are **not** curved. Leaves are usually basal which

makes it readily distinguishable from *B. smithwhitei*.

The descriptions of these two new species of *Brachyscome* have been simplified and abridged for AD SG members. For a full description and discussion of these two species please consult P.S. Short and K. Watanabe, *Aust. Syst. Bot.*, 6: 335–42, Nov. 1993.

TWO RECIPES FOR CONSIDERATION

Magical Stylium Potion

Cynthia Beasley, a member of Shepparton SGAP, has kindly sent us her recipe for a yeast mixture which has proved to be an asset for her styliums, leschenaultias, terrestrial orchids and small herbaceous plants from Western Australia. Cynthia's styliums are reputed to be huge and healthy.

Ingredients:- 1 teaspoon granular yeast
2 teaspoons sugar
½ cup hot water

Shake all together in a jar then leave 1 hour until it foams. Cynthia uses 1 to 3 teaspoons of this mixture around the base of each plant and applies it about every three months, when plants show signs of growth.

There is also an article about yeast in the *SGAP Tasmanian Region Newsletter*, December 1993 taken from the *Verticordia Study Group Newsletter*, No.20, August, 1993. This recipe uses lukewarm water and suggests that one teaspoon of mix be applied at the base of plants after watering or at transplanting time, and again in a few days. The article states that difficult plants need treatment every six months or they die out. Placement of rocks around each plant to shade the roots and help keep the yeast alive was also suggested. The original author's reasons for using the yeast mix are as follows:- "While trying to transplant plants from the gravelly hills, I noted that all of them had a "white spidery web fungus" at the base and in the topsoil litter. On reading about this I found that many fungi live with plants, supplying them with nourishment. In another reference I noted that plants like vitamin B, so I thought this "webby stuff" may be like yeast supplying vitamin B. I then gave my plants some yeast and have had considerable success with many plants I could not get to grow before. I have been successful with about 100 species with this method so far."

I have given the potion to my stylidioms and to some difficult daisies, e.g. to *Argentipallium obtusifolium*, *A.blandowskianum*, *Brachyscome latisquamea* and *Helichrysum adenophorum var. waddelliae*. It is too early to evaluate the results, but they are all alive and looking healthy except *B.latisquamea* which is just hanging on.

CURE FOR APHIDS

The following recipe appeared in *Your Garden* July 1969. I found it in a desk drawer and will try it on my brachyscomes to see if it eradicates root aphids.

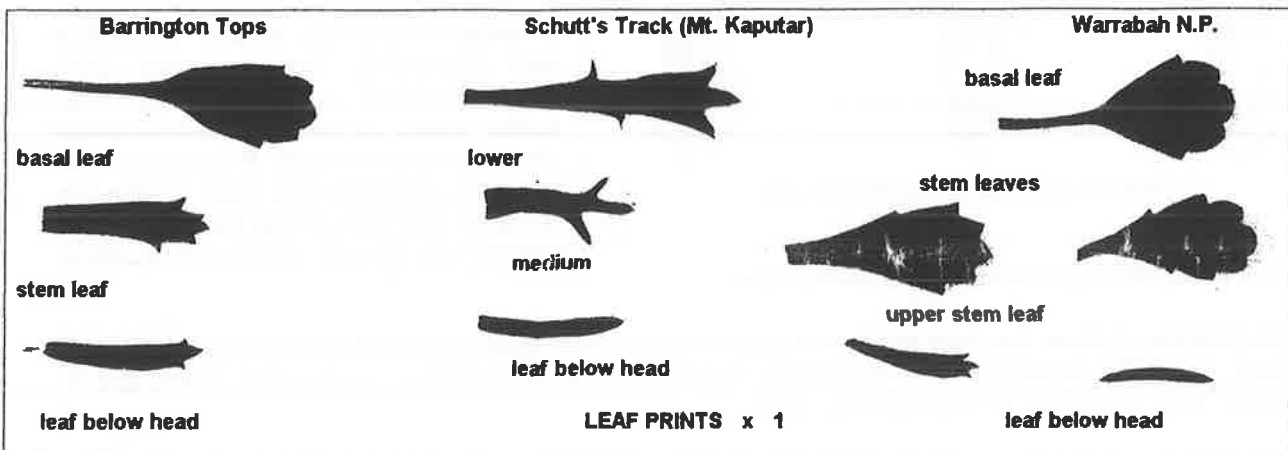
Cut 1lb onions into small pieces, pour boiling water on them and allow to stand for 10 hours. Add cold water to make up to 2 gallons. Water round the affected plant and then apply the onion water.

by Judy Barker.

FOUR COLLECTIONS of a BRACHYSCOME SPECIES from the NORTH-WESTERN SLOPES and NORTHERN TABLELANDS of NEW SOUTH WALES by Esmá Salkin

Specimens were collected from two sites at Mt. Kaputar, one on rocky slopes near the Namoi River in the Warrabah National Park and the fourth in the Barrington Tops forest.

The brachyscomes are erect to procumbent with trailers to 40cm, and are rhizomatous to stoloniferous. Leaves are glabrous, seedling or basal leaves spatulate with dentate or crenate margins towards the apex are 3-5cm long, the petiole 1/2-2/3 the length of the leaf. Seedling leaves are lost as the plant matures. Stem leaves partially sheathe the stem, are slender, 2-5cm long and 1-2cm wide, with deep acute lobes. Some upper leaves are slender, lanceolate, entire, c. 2cm long and 1.5mm wide.



Flowering stems are 10-15cm long with terminal flowerheads with bright pink rays, buff reverse (12-20 rays). The Barrington Tops populations have mauve-pink rays and this species tends to be stoloniferous. The basal leaves of the Warrabah and Barrington Tops populations are more rounded (see leaf pressings).

Fruit of the four populations is 2mm x 0.7-1mm, flat, light brown to greenish. The fruit tapers slightly basally. Faces are tuberculate — each tubercle bearing short bristly hairs. There are marginal folds superimposed on a thickened margin. The pappus is short, white and centrally placed. It is larger in the Namoi River and Barrington Tops populations.

Cultivation: This brachyscome is suited to a hanging basket or could be grown where the procumbent branchlets can be seen to advantage. Pot culture only has been tried. Plants need some shade and shelter. It blooms for some months and, although it is not densely floriferous, the bright pink flowerheads attract attention. It produces seed profusely when isolated and hand pollinated. Whether it hybridises readily is not known.

Material was collected with permission under a Collector's Licence. Populations consisted of a few isolated individuals. The Namoi River populations were the largest, a maximum of 20 individuals, a response to good winter-spring rains in 1993.

Whilst we await the determination of these entities, germination and cultivation studies are proceeding.

TRIAL ON THE GERMINATION OF *IXODIA ACHILLAEOIDES*

by Beth Armstrong.

— the method based on Colleen Simpson's experiences (NL34, p.52)

We (Judy and Beth) decided on an experiment to determine which steps are critical in the germination of "a little lawn" of ixodia seedlings.

The seed was collected at Anglesea on 24.4.93 and left in a paper bag for 15 days. Litter was collected from under the plants at the same time.

- Judy's Method:-**
1. Mix the seed with the litter and divide in half.
 2. Fill two 13cm terracotta pots with a mix of 3 parts perlite : 1 part peat. Sprinkle with seed.
 3. Cover with a fine layer of granite chips.

	POT A		POT B
1.	Room temperature 24 hours.	1.	Place in plastic bag in freezer 24 hours.
2.	—	2.	Place in preheated oven at 150°C for 15 mins.
3.	Light fire over pot for 20 mins. approx.	3.	Light fire over pot for 20 mins. approx.
4.	Soak in water 1-2 hours.	4.	Soak in water 1-2 hours.
5.	Pot placed outside under automatic sprinkler — watered 5 mins/day + rain.	5.	Pot placed outside under automatic sprinkler — watered 5 mins/day + rain.

Results:-

Date	No. seedlings Pot A	No. seedlings Pot B
Sown 10.5.93	0	0
14.6.93	1	3
17.6.93	2	5
11.7.93	20	40
31.7.93	41	51

Good result without freezing and oven, but better with freezing and oven. Fire is a constant.

- Beth's Method:-**
1. Divide the seed into five parts. Add litter to four only.
 2. Sprinkle seed on top of 3 sand : 1 peat in small pots.
 3. Cover with a little coarse sand.

	Pot A	Pot B	Pot C	Pot D	Pot E
1	Seed + litter	Seed only	Seed + litter	Seed + litter	Seed + litter
2	Freezer 12 hours	Freezer 12 hours	—	Freezer 12 hours	—
3	Oven @ 150°C for 15'	Oven @ 150° for 15'	—	Oven @ 150° for 15'	—
4	Fire 2-3'	Fire 2-3'	Fire 2-3'	—	—
5	Soak in water 2hrs	Soak in water 2 hrs	Soak in water 2 hrs	Soak in water 2 hrs	—

All pots were placed in a polyhouse and hand watered every day. Finally they were placed outside in a sunny spot.

Results:-

Date	No. seedlings Pot A	No. seedlings Pot B	No. seedlings Pot C	No. seedlings Pot D	No. seedlings Pot E
Sown 11.5.93					
19.6.93	—	4	1	—	—
26.6.93	2	10	3	—	1
6.7.93	4	17	3	—	1
28.8.93	18	40+	3	—	1

Litter mixed with the seed may not be necessary. The freezer/oven step may not be as important. However, we both achieved very good germination — in fact we achieved the desired little green lawns.

Seed was still germinating after two months when we had begun to prick out the larger seedlings for growing on.

Further thoughts:- If the litter is providing mycorrhizal fungi, would it be better applied at the pricking out stage? Does heat affect the mycorrhiza? The fire should be kept burning longer than Beth's 2–3 minutes. Compare Judy's Pot A with Beth's Pot C — ? conclusion.

AUSTRALIAN DAISY STUDY GROUP FINANCIAL REPORT July 1992 — June 1993

Cash Receipts**Cash Payments**

Cash at Bank 1.7.92

Cash at Bank 30.6.93

Term Deposit
Term Deposit
Cheque Account
Cash in hand

\$706.44
\$1,607.35
\$1,091.61
\$65.67

Term Deposit
Term Deposit
Cheque Account
Cash in hand

\$734.06
\$1,678.81
\$1,280.07
\$34.50

Subscriptions
Seed Sales
Donations
Interest
Sundries
Book

\$615.00
\$603.30
\$102.00
\$99.14
\$37.25
\$32.00

Postage/ Phone
Newsletter
Seeds/ Packets
Computer
FID
Stationery
Herbarium
Artists' Materials
Sundries
Petrol
Labels
Book
Australian Flora Foundation
Flora NSW
PEG
N/E Weekend

\$90.05
\$319.73
\$122.35
\$60.90
\$2.39
\$14.80
\$157.78
\$38.00
\$98.27
\$60.00
\$24.05
\$32.00
\$25.00
\$67.00
\$70.00
\$50.00

\$4,959.76

\$4,959.76

MORE GAPS FILLED

We think that two more of our missing *Brachyscome* species have been found for us by our valuable interstate members.

Pat Shaw, one of our Queensland members, has found *B. ascendens* and will send us cutting material as soon as the weather cools down. Her plants have been identified as *B. ascendens* and the seed she sent looks right.

Bob Magnus, a Tasmanian member, has found *B.sieberi* var. *gunnii* and has already sent seed and cutting material. The speed with which he and son Nick responded to a plea for help has impressed AD SG beyond measure.

We are very grateful to both members. It is a tremendous help to those of us who are trying to write about brachyscomes from experience. Of course, we could have sent Esma and Alf off again, but they may not have been willing and are needed here in any case.

by Judy Barker.

MEMBERS' REPORTS

John Barrie (from Coonalpyn, SA) writes on 10/5/93:- "*Brachyscome graminea*, the specimen to which I think you refer, was bought from Neil Marriott as *B.parvula*. I have many seedlings which seem to be true, but the colour varies from almost purple to the occasional white one. It seems a better form than plants Brian Walker gave me as *B.parvula* var. *parvula* from DSG seed. I do have some difficulty keeping it looking good in pots, but pruning rejuvenates it most times. I have a *B.graminea* from an SGAP plant sale — strappier leaves and pale flowers, although a few pink flowers appeared after about six months. I am not sure if it was a sport or another seedling amongst the tangle, but it is delightful and of similar habit to the original.

I managed to collect a few more seeds from *B. aff. readeri*. This year's plants seem identical to those grown last year. The original plant was grown from DSG seed (B. Walker).

We have a lot of seedlings of *B.spathulata* and the first flowers seem to be true to the parents. They have had plenty of chances to cross. The same holds for *B.tadgellii*, but it has not flowered yet.

I met Kath Alcock from Naracoorte last year — a real enthusiast and very encouraging. Friends of Kath's showed me a group of "Tintinara Daisies". I think they are *B.cuneifolia*; they retain rosettes of basal leaves and have white flowers, occasionally pink. I collected seed. Some was sown in summer, some in autumn, but it all seems to be germinating freely now. I had no luck with cuttings — one rooted but I lost it later, so I hope the seeds keep going.

Four seedlings of *Olearia frostii* grew to 200mm or so high and then two died. Number 3 was looking dicky so I cut it back hard and have managed to strike a few cuttings. Number 4 is actually looking happier now. Winter may suit it.

The following results were obtained from seed provided by DSG on 12/7/92:-

- *Brachyscome aculeata* (Hamilton Gorge, 3/3/91) — good germination and cuttings have since struck.
- *B. aff. aculeata* (Natimuk Golf Links, 11/89) — two plants only.
- *B.dentata* (Wail, 11/89) — good germination, but most lost. (Snails I think.)
- *B.scapigera* (CA 18, Snowy River, 8/3/91) — three plants with white flowers, clumping well.
- *B.scapigera* (Three Mile Dam, 9/3/91) — five plants with mauve flowers, clumping well.
- *B.whitei* (Enngonia, NSW, 7/89) — three seedlings. One has survived the summer and is growing on. It is now 16 months old. I thought it was an annual.
- *Rhodanthe anthemoides* (Whitlands) — several plants, some quite good clumping.
- *Rhodanthe diffusa* (white form, 70km south of Cunnamulla) — seven or so plants, one with pink buds. A lovely annual. Seed saved for this year."

Corinne Hampel (from Murray Bridge, SA) writes on 30/5/93:- "*Helichrysum elatum* is touchy. I have it in a pot, but will have to add a lot more peat to the mix to keep the moisture there. It dries out quicker than my balsam plants which are my 'water meters'. I think the pot still heats up too much, even in these cooler days. I'm looking forward to seeing it flower.

I love my *Olearia ramulosa* — mauve/blue — as it flowers off and on all year. I've struck some more to place around, as I have also done with *O.passerinoides* which is local here. I have planted them in a 'hedgerow' on the edge of our scrub. The rain in December and January kept them flowering until recently.

I didn't know what to expect with *Ozothamnus obcordatus* (syn. *Helichrysum obcordatum*) and was delighted with the colour changes the clusters of heads went through. *Olearia magniflora* produced a few flowers last year, as did *O. ciliata* so I hope for more prolific flowering this year.

I have the local *Brachyscome ciliaris* popping up everywhere since I raised a few plants from local seeds. They are a delight to see — in the middle of a path competing with mallee roots and my feet."

(19/7/93) "I love *O. passerinoides*. It flowers during the heat of summer (40°C plus some days) for three months — always some flowers on it. Once established it seems to go like mad here. *O. tenuifolia* (seed from AD SG) is another that does well. I cut one back quite severely, hoping I did not overdo it, and it is shooting away quite vigorously now.

Ozothamnus obcordatus is growing in my raised rubble mound very well. The only thing going for this mound is the fact that it is extremely well drained — it is excavation rubble (limestone and sandy clay) from a pool.

My *B. ciliaris* appears completely different from the plant which came via Colleen from AD SG last year. That one is flowering now, a soft lavender, and the soft 'feathery' foliage is attractive, but quite different. My form is bright mauve and the leaves are sparse. It pops up in pots everywhere."

Gloria Thomlinson (from Shepparton, Vic) writes on 1/6/93 :- "Our first good shower of rain has prompted self-sown seedlings of *Brachyscome bellidioides*, *B. iberidifolia*, *Rhodanthe anthemoides*, *R. chlorocephala* subsp. *rosea*, *R. corymbiflora*, *R. diffusa*, *R. manglesii*, *Schoenia cassiniana* and *S. filifolia* subsp. *subulifolia*.

Rhodanthe anthemoides (Liverpool Range), two second year plants, looked a terrible mess because I had neglected to cut them back. They were pulled out and any good material prepared as heel cuttings on 2/5/93. I checked yesterday and some have roots. I use Debco propagating mix in communal pots (polystyrene coffee mugs recycled from SGAP meetings). They were placed on wood shavings in a poly box on the floor of the glass house. No hormone powder was used on the above. They were watered on demand, not every day. All look healthy.

One *Podolepis capillaris* remains of the plants I have reported on before. A pot specimen, it is seemingly invisible until it produces a flower. It has grown to a height of 17cm by 14cm across. The leaves are much smaller, 4mm. *P. jaceoides* has shot again and the clump is a little larger.

Most of the *Chrysocephalum apiculatum* and *C. semipapposum* forms are reshooting — some enough to be cut back, but others I'm waiting a bit longer (just in case).

Casualties of the summer — *Olearia lirata* (2.2m high), two plants of *O. phlogopappa* (each 1m high), *O. tomentosa* (0.6m high) and both *Ozothamnus cuneifolius* (1.6m high). All had flowered beautifully before their demise.

My pot of *Brachyscome graminea* (Judy's garden division) has no nodules on the roots, just the usual infestation of root aphids. It has had a soaking in pyrethrum solution. "

Meredith Farley (from Murrabit near Kerang in Victoria) on 9/6/93 writes:- "I was very interested to read in the June newsletter an article on *Calocephalus sonderi*. My husband and I purchased a farm near Murrabit a year and a half ago. It consists of the heavy grey clays found near the Murray and floodplain areas. Walking across our back paddocks I have noticed a plant growing there which sounds very much like *C. sonderi*.

I have also had the Bush Minuria growing quite happily in the garden. It has established itself and begun spreading. It has most of its flowers in spring and autumn, but even now has the odd flower on it. I have two other indigenous daisies in the garden, but have yet to find their correct botanical names.

Amongst our planned treebelts for the farm I hope to include a lot of indigenous groundcovers, and to include plants such as *C. sonderi*. As I learn about our native 'daisies' I hope also to incorporate them into our cottage garden. Our home is an old cottage over a hundred years old and I would like eventually to have a predominantly native garden in which to feature some of these daisies.

Colin Jones (from Orange, NSW) writes on 13/9/93 and 24/10/93:- "I have always been fascinated with *Chrysocephalum apiculatum* and *C. semipapposum*, and *Ixiolaena*. Am continuing to collect them. I think there is horticultural potential in *C. semipapposum* which can be treated like an Easter Daisy (except that it

is a summer flower). There is a very pleasant texture and colour in the material remaining between flowering seasons.

Maureen gave me three plants of *Brachyscome procumbens* which I put in the garden, but they did not survive — perhaps due to the soil, the moisture or the slugs. I collected some material and seed last October and am nurturing rooted cuttings and seedlings in the fibreglass house. Some of the seedlings have succumbed to fungal attack. Time will tell whether they will survive in this area.

I have twenty or so 2" tubes with *B. obovata* still struggling on. I noticed today that four plants in the fernery are pushing out new leaves. When I plant out more *B. tadgellii* I must plant them adjacent to each other. I think Esma said that they grow close together.

B. aff. formosa (Neville) gives you a fright the way it disappears. Earlier this year I was about to write it off when I discovered it popping up about 25cm away. Very nice, as you say.

B. microcarpa and *B. multifida* var. *dilatata* live on the same hillside at Hat Head National Park without any apparent hybridising. *B. multifida* was cut back severely by the frost, but is taking off again with the spring growth. Frosts were not so severe this year — only about - 4°C. *B. microphylla* was similarly affected, but hasn't shown any surge of growth yet."

Jeff Irons (of Wirral, England) writes on 13/10/93:- "There has been virtually no daisy seed this year. *Leucochrysum albicans* var. *tricolor* (ex Orange) died after flowering, without setting any viable seed.

Having experienced the Blue Mountains and the Oberon Plateau in winter I think it is almost certainly true that Orange in winter does not parallel the U.K. The nights may be cold, but the days will be warm and the ground will never freeze in the way it does here. Cold tolerance in plants will be a characteristic inherited from the times when Australia was colder than it is now.

I saw two Asteraceae in Aussie. One was a 6ft high *Calomeria amaranthoides* growing in *Eucalyptus oreades* forest on Mt. Wilson. The species does not occur on the mountain, so it must have been a garden escape. *Euc. oreades* forest must be on the upper limit of open canopy forest. I would have called it closed. The soil on which it grows is basalt derived and fertile. So the calomeria was growing in moist rich soil, in light shade, not in competition with other plants, even though 2/3 of the way down a gully.

Gardens everywhere in the Blue Mountains had mats of *Rhodanthe anthemoides* in flower. It was a red-budded form."

Esther Cook (of Helidon, Queensland) writes after a visit to Victoria recently:- "We spent some time (and money!) at Kuranga Nursery on our way out, and dropped in on James Frew as well. It was interesting to see how many different plants he is growing commercially, including a very tall *Chrysocephalum semipapposum*. He has a local riceflower which is off-white and not very tall, but which comes in after everyone else's are finished. It smells like marigolds, and makes people ill — light-headed, nauseous and irritable. James was affected quite badly when we were looking at and smelling it in the field. Graham was nearly too light-headed to walk at our first stop. It didn't affect me at all that I could notice.

We have one type that gives some people a tickly cough, but that one of Frew's could be dangerous. A second type James has seems O.K., though he is not growing it in quantity yet.

We have had a busy week since we got home. We have planted out 400 marigolds as companions for the types of riceflower most susceptible to nematodes, which are reappearing (or multiplying) in our fumigated patch. We are also clearing out the old cow bails to make a propagating shed. Great fun, especially with an 8 foot carpet snake supervising every move.

Judy Barker (of East Hawthorn, Vic) reports that *Schoenia filifolia*, *Podolepis lessonii*, *Bracteantha viscosa* and *Rhodanthe diffusa* (yellow) performed beautifully in the garden this season. *Calocephalus sonderi* was a disappointment, but *Brachyscome* 'Maureen' {*B. angustifolia* (mauve-pink) x *B. formosa* 'Pilliga Posy'} grew well in the garden in all but the hottest spots. Its very bright pink enlivens the duller corner.

If James Frew's 'local riceflower' (mentioned in Esther Cook's report above) is indeed local it probably isn't *Ozothamnus diosmifolius* because that species only occurs in New South Wales and Queensland. The Frews live a few kilometres out of Sale in Victoria. I wonder if it could be a *Cassinia* species. They have been known to make people sick and they usually flower in late spring and summer.

STUDY GROUP MATTERS

The Study Group meets on the first Tuesday of every month, unless Esma decides to hold a meeting at the weekend in the hope that country or interstate members will be able to attend. These meetings are usually at Esma's, but are held elsewhere if Esma is away. Please ring Esma (03 802 6213) or Judy (03 813 2916) to make sure of the venue. Meetings begin at 10.00 am. and usually extend to about 2.00 pm. We take our own lunch, but morning tea is provided.

Everyone is welcome. Although we get through a lot of work there is also much laughter. We learn a great deal at these meetings, swap ideas and plants, and go home happy and stimulated.

"New rice flower cultivars"

This is the heading of an article in *Australian Horticulture*, July 1993, describing two cultivars of *Ozothamnus diosmifolius* (syn. *Helichrysum diosmifolium*) which have been PVR'd by Graham and Esther Cook (see NL37, p.40). They are 'Cooks Snow White' and 'Cooks Tall Pink'. The article describes them as follows: "The shrubs reach about two metres in height with long, strong stems. Each flattish flower head contains dozens of tiny buds which open into papery-textured daisy flowers. ... The plants are frost hardy and drought resistant when mature. Tip-pruning forms a bushy plant."

Morris and Helen Wood Memorial Scholarship

Sandy Salmon has been awarded the first of these scholarships offered by Woodlyn Nurseries to graduates of the Victorian College of Agriculture and Horticulture at Burnley who are working in nursery industries. Financial assistance is provided for three months study overseas. In this case Sandy will spend time in Europe and perhaps U.S.A. to visit people involved in plant breeding — seed companies, nurseries, breeding houses and universities.

Sandy has been of great assistance to ADSG in the past. He has written articles for our newsletter, lent us reference material, propagated difficult species from seed or cuttings, and given us seed and plants. We are also very grateful for the time he has spent in giving us explanations to solve our problems.

We wish to offer congratulations to Sandy. We hope he and Bernadette, his wife who is also involved in horticulture, have a great trip and return bursting with information.

BETTY CAMPBELL

Betty Campbell died on January 11th after a short illness.

She had been a member of ADSG for ten years. She loved flowers, daisies in particular, and her garden was a haven of peace. Each plant seemed to know it was valued and it performed accordingly.

Betty drew many of the illustrations for the newsletter. Her perceptive observations taught me much about the character of each species she portrayed. We are fortunate that her daughter, Ailsa, is eager to undertake her mother's task in the future. In this issue we have Betty's *Gnephosis arachnoidea* and *Ozothamnus rosmarinifolius* and Ailsa's forms of *Helichrysum leucopsidium*.

Betty loved our Tuesday meetings. She was good company, a good listener and a good friend. We will miss her.

NEW MEMBERS

We wish to welcome the following new members:

Mrs. Margaret Hamilton, 171 Kissing Point Road, Turrumurra, NSW, 2074. Ph.(02) 44 2316

Mrs Pat Kerrison, 1 Tiwi Court, Acton, Tasmania, 7170.

Pauline Croft, 127 Holt Street, Mt. Gravatt, Qld, 4122.

Jen Johnston, 4 Brewster Place, Duffy, ACT, 2611.

Lorna Murray, P.O. Box 571, Mt. Ommaney, Qld, 4074.

Klaus Querengasser, P.O. Box 73, St. Lucia, Qld, 4067.

Miss A. Stevenson and Mr. R. Miller, Bankstown City Council, 7 Sylvan Grove, Picnic Point, NSW, 2213.

FACTS GLEANED FROM THE CENSUS OF VICTORIAN PLANTS

(Julie Strudwick has kindly sent us the name changes and additions of the members of the Asteraceae appearing in *A Census of the Vascular Plants of Victoria* Fourth Edition, (1993) edited by J.H. Ross. The changes listed in previous newsletters have not been included. Introduced taxa which have become naturalized in Victoria and changes to the genus *Senecio* have been omitted. The new names are in bold print.)

- Angianthus burkittii* (Benth.) J. Black = ***Lemooria burkittii***
Angianthus pusillus (Benth.) Benth. = ***Gnephosis tenuissima***
Angianthus strictus (Steetz) Benth. = ***Pogonolepis muelleriana***
Angianthus tenellus (F. Muell.) Benth. = ***Gnephosis drummondii***
Athrixia athrixoides (Sonder & F. Muell.) = ***Asteridea athrixoides***
Bedfordia salicina sensu J.H. Willis non (Labill.) DC. = ***Bedfordia arborescens***
Calocephalus drummondii (A. Gray) Benth. = ***Blennospora drummondii***
Celmisia asteliifolia sensu J.H. Willis = ***Celmisia* spp.**
Celmisia longifolia var. *latifolia* F. Muell. ex Benth. = ***Celmisia* sp. 1**
***Celmisia* sp. 1**
***Celmisia* sp. 2**
***Celmisia* sp. 3**
***Celmisia* sp. 4**
Centaurea australis (Gaudich.) Benth. & J.D. Hook. = ***Stemmacantha australis***
Chrysocoryne drummondii A. Gray = ***Gnephosis drummondii***
Chrysocoryne pusilla (Benth.) Endl. = ***Gnephosis tenuissima***
Cotula fillicula (J.D. Hook.) Benth. = ***Leptinella fillicula***
Cotula reptans (Benth.) Benth. = ***Leptinella reptans***
Craspedia glauca sensu J.H. Willis = ***Craspedia* spp.**
Epates tatei F. Muell. = ***Haegfela tatei***
Glossogyne tenuifolia Cass. ex Less. = ***Glossocardia bldens***
Gnaphalium argentifolium Wakef. = ***Euchiton argentifolius***
Gnaphalium collinum Labill. = ***Euchiton gymnocephalus***
Gnaphalium ensifer sensu Census Vasc. Pl. Victoria 3rd edn = ***Euchiton gymnocephalus***
Gnaphalium fordianum M. Gray = ***Euchiton fordianus***
Gnaphalium gymnocephalum DC. = ***Euchiton gymnocephalus***
Gnaphalium indicum auct. non L. = ***Gnaphallium polycaulon***
Gnaphalium involucreatum G. Forster = ***Euchiton involucreatum***
Gnaphalium japonicum sensu J.H. Willis = ***Euchiton gymnocephalus***
Gnaphalium luteoalbum L. = ***Pseudognaphallium luteoalbum***
Gnaphalium nitidulum J.D. Hook. = ***Euchiton nitidulum***
Gnaphalium sphaericum Willd. = ***Euchiton sphaericus***
Gnaphalium traversii J.D. Hook. = ***Euchiton traversii***
Gnaphalium umbricola J.H. Willis = ***Euchiton umbricola***
Gnephosis baracchiana Ewart & J. White = ***Tricanthodium baracchianum***
Gnephosis skirrophora (F. Muell. & Sonder ex Sonder) Benth. = ***Tricanthodium skirrophorum***
Helichrysum* aff. *rutidolepis (Lowland Swamps)
Helichrysum* aff. *rutidolepis (Alps)
Helichrysum apiculatum (Labill.) D. Don = ***Chrysocephalum apiculatum*** & ***Chrysocephalum* aff. *apiculatum***
Helichrysum tepperi F. Muell. = ***Podolepis tepperi***
Lagenifera montana J.D. Hook. = ***Lagenifera stipitata***
Leptorhynchus medius Cunn. ex DC. = ***Leptorhynchus scabrus***
Leptorhynchus panaetioides sensu J.H. Willis = ***Ixiolaena* sp.**
Microseris* aff. *lanceolata (Basalt Plain)
Microseris* aff. *lanceolata (Alps)
Microseris* aff. *lanceolata (Foothills)
Microseris scapigera sensu J.H. Willis = ***Microseris* aff. *lanceolata***
Minuria suaedifolia (F. Muell.) Benth. = ***Kippistia suaedifolia***
Olearia dentata Moench = ***Olearia tomentosa***
Olearia floribunda sensu J.H. Willis partly = ***Olearia minor***
***Olearia* sp.** (North West)
Olearia* sp. aff. *axillaris (Wimmera)
Olearia* sp. aff. *lanuginosa (Mornington Peninsula)
Picris hieracioides sensu J.H. Willis = ***Picris* sp.** (Coastal) and ***Picris* sp.** (Eastern Highlands)
Picris hieracioides var. *squarrosa* (Steetz) Benth. = ***Picris squarrosa***
Podosperma angustifolium Labill. = ***Podotheca angustifolia***
Solenogyne bellioides var. *gunnii* (J.D. Hook.) G. Davis = ***Solenogyne gunnii***
Sonchus megalocarpus (J.D. Hook.) J. Black = ***Actites megalocarpa***
Toxanthes muelleri (Sonder) Benth. = ***Millotia muelleri***
Toxanthes perpusilla Turcz. = ***Millotia perpusilla***
Vittadinia cuneata sensu J.H. Willis = ***Vittadinia gracilis***
Vittadinia triloba sensu J.H. Willis = ***Vittadinia cuneata***
Vittadinia triloba var. *dissecta* (Benth.) J. Black = ***Vittadinia dissecta***

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 1994 newsletters. A STAMPED, SELF-ADDRESSED ENVELOPE MUST BE ENCLOSED WITH EACH REQUEST FOR SEED. Please write to Esmá Salkin, 38 Pinewood Drive, Mount Waverley, 3149.

Most seed for sale comes from cultivated plants or from commercial sources. Please note that much of the seed listed below has come from members' gardens and may have crossed with other species. One parent only is guaranteed.

- Ammobium alatum*. *Anemocarpa podolepidium*. *Angianthus tomentosus* (Nindethana). *Asteridea athrixoides*.
Brachyscome angustifolia var. *angustifolia* (complex, hybrid), *basaltica* var. *gracilis*, *bellidoides*, *chrysoglossa*, *ciliaris* var. *lanuginosa*, *clilocarpa*, aff. *cuneifolia*, aff. *curvicarpa*, *dissectifolia*, *diversifolia* var. *diversifolia* (Mt. Samaria, Beechworth), *diversifolia* x *gracilis*, *exilis*, aff. *formosa* (Neville), *gracilis* (Warrabah), aff. *gracilis* (Kings Billabong), *graminea*, *halophilla*, *iberidifolia*, *lineariloba*, *melanocarpa*, *multifida* var. *dilatata* (Blackwood garden), *nova-anglica*, *oncocarpa*, *parvula* var. *parvula* (Huntly Vic), *ptychocarpa* (Vic, Mt. Canobolus NSW), *radicans*, *scapigera* (NSW), *segmentosa*, *spathulata* (Mornington Peninsula, New England), *stuartii* (N NSW), aff. *stuartii* (Tingha NSW), *tadgellii*, *tatei*.
Bracteantha bracteata (Ebor NSW), mixed colours, orange, yellow, white, *papillosa* and hybrid forms, *subundulata*, *viscosa* and *viscosa* crosses.
Calocephalus citreus, *lacteus*. *Cassinia aureonitens*, *quinquefaria*. *Cephalopterum drummondii* (garden, WA).
Chrysocephalum apiculatum (Connemara NSW, small leaf — Maldon, Mosley Knobs SA, Yanakie Vic), *baxteri*, *semicarpum* (Tibooburra), *sempapposum* (Kingower, Maldon — fine leaf, Mt. Slide, Stanley Vic).
Erigeron pappocromus. *Erymophyllum tenellum*.
Helichrysum adenophorum var. *waddelliae*, *elatum*, *scorpioides*.
Hyalosperma cotula, *praecox*, *semisterile*, *simplex*.
Lagenifera huegellii. *Lawrencella davenportii*, *rosea*. *Leptorhynchus squamatus*.
Leucochrysum albicans ssp. *albicans* var. *albicans* (Dargo, Hovell's Creek), ssp. *albicans* var. *tricolor*, ssp. *alpinum*, *fitzgiibbonii*, *molle*. *Leucophyta brownii*.
Myriocephalus gueriniae, *stuartii*.
Olearia grandiflora, *lirata*, *phlogopappa* (mixed colours), *tenuifolia*, *tomentosa*.
Ozothamnus diosmifolius, *hookeri*, *obcordatus*, *secundiflorus*, *stirlingii*, *thyrsoides*.
Podolepis canescens, *gracilis*, *jaceoides*, *lessonii*, *neglecta*.
Podotheca gnaphaloides. *Pterocaulon glandulosum*. *Pycnosorus chrysanthes*, *globosus*.
Rhodanthe anthemoides (alpine, Qld. Whittlands, unbranched), *chlorocephala* subsp. *chlorocephala* and subsp. *rosea*, *charleyae*, *citrina*, *corymbiflora*, *diffusa* subsp. *diffusa* (yellow) and subsp. *leucactina* (white), *floribunda*, *humboldtiana*, *manglesii*, *polygallifolia* (Vic, SA, commercial), *sterilescens*, *stuartiana*.
Schoenia cassiniana, *cassiniana* 'Gabriele', *filifolia*, *filifolia* subsp. *subulifolia*.

PROVENANCE SEED SPECIES

- Brachyscome basaltica* var. *gracilis* (Narrabri NSW), *dentata* (Rankins Springs NSW, Moree (assoc. with *B. melanocarpa*)), aff. *formosa* (Neville), *melanocarpa* ? x *dentata* (Moree), *nivalis* (Mt. Loch), *obovata* (Lake Mountain, Mt. Baw Baw Vic).
Bracteantha bracteata (dwarf Crescent Head NSW, 10/92), *viscosa* (Mandurang Vic). *Calocephalus sonderi* (Kerang).
Hyalosperma glutinosum subsp. *venustum* (Paynes Find, Perenjori WA, 10/91). *Lawrencella davenportii* (Cleary WA, 9/91).
Myriocephalus gueriniae (Paynes Find WA, 9/91), *stuartii* (Lake Eyre, 10/80).
Olearia calcarea (Yardea SA, 10/91), *ciliata* — white (Scaddan WA, 9/91), *ledifolia* (Mt. Wellington Tas), *muelleri* (Gawler Ranges SA, 10/91), *picridifolia* (Kyancutta SA, 10/91), *pimeleoides* (Kimba SA, 10/91), *rudis* (Eneabba WA, 10/91, Loch SA, 10/91), *tasmanica* (Tas).
Othonna gregorii. *Ozothamnus diosmifolius* (Woolgoolga), *ledifolius*, *obcordatus* (Mandurang Vic, 1/92).
Podotheca gnaphaloides (Yarra Yarra Lakes WA, 9/91). *Podolepis lessonii* (WA pooled, 10/91).
Pycnosorus globosus (Jerilderie NSW, 2/91), *paludicola* (Reel Hills Vic, 11/93), ? *thompsonianus* (Narrabri).
Rhodanthe chlorocephala subsp. *chlorocephala* (Paynes Find WA, 9/91), *moschata* (Wirruella SA, 10/91), *pygmaea* (Kimba SA, 10/91), *stuartiana* (Gawler Ranges SA, 10/91).
Rutidosia helichrysoidea (N NSW). *Vittadinia* sp. (Adaminaby), *cuneata* complex (S-W Qld).
Waltzia acuminata var. *acuminata* (Gawler Ranges SA 10/91).

SEED DONORS

Many thanks to Judy Barker, Betty Campbell, Colin Jones, Bob Magnus, Bob Mylius, Nindethana Seeds, Jenny Rejske, Lotte von Richter, Alf Salkin, Esmá Salkin, Pat Shaw, Julie Strudwick.

SUBSCRIPTIONS

Subscriptions are now \$7.00 per year (\$14.00 for overseas members). Cheques should be made payable to the Australian Daisy Study Group and forwarded to the Leader, Esmá Salkin (address above) or to the Treasurer, Bev Courtney, 3 Burswood Close, Frankston, Victoria, 3199. **FEES ARE DUE ON 30th JUNE 1994. THIS IS THE FIRST OF TWO WARNINGS.**