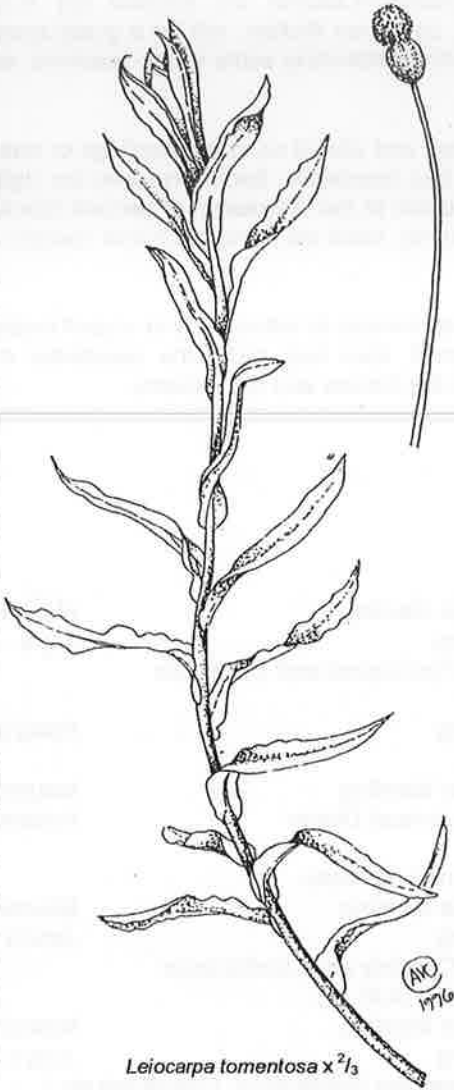


Region  
9/4/01

**ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS**

ABN 56 654 053 676.

**THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 59**

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## LEADER'S LETTER

2001 promises to be a busy year for ASDG. Hopefully the 'Everlastings' book will be in the hands of the publishers by Easter, with an anticipated launch in September to coincide with our plant sale. The 20<sup>th</sup> anniversary of the formation of the group occurs in June so we will celebrate that at our annual 'May Meeting' weekend when we host many of our country and interstate members. This is a great opportunity to meet old friends, make new ones, exchange plants, visit gardens and/or nurseries and go home loaded with plants, seed, ideas and enthusiasm. If you still have space in your garden, we will hold a plant sale (and book launch) in September where you can buy up, or recoup the cost of potting mix etc. by selling a few plants to the public. Again, you will go home loaded with plants and enthusiasm after enjoying Peg's delightful garden.

The ASGAP 21<sup>st</sup> Biennial Conference in Canberra in September/October will address the subject 'Australian Plants in a Changing World'. One of our members, Lotte von Richter, will be a guest speaker and her topic will be 'Commercial Growing of Cut Flowers'. I will be attending some of the sessions, and I hope other members can do the same.

In order for members to be able to organise their busy schedules and attend as many meetings or outings as possible, a program of the years' activities is published in this newsletter, but we reserve the right to make changes if the need arises. Please bring any material relevant to the discussion at general meetings (eg. herbarium specimens, fresh or dried specimens, potted plants, seed etc.) and of course 'swaps' and 'show and tell' if you have them. If not, just a smile will do!

My thanks to all the members who have written of their daisy experiences to either Judy or myself recently. I hope the flow of letters will continue because, however small, they help make the newsletter more interesting and give others an insight into the characters of both the daisies and the growers.

Regards,

*Joy*

## COMING EVENTS

|  |                  |   |           |
|--|------------------|---|-----------|
| Tue 20 <sup>th</sup> Mar                   | 9.30am – 12.30pm | Book Committee Meeting  | Maureen's |
| Tue 27 <sup>th</sup> Mar                   | 10.00am – 3.00pm | General Meeting   | Joy's     |
|  |                  | Distinguishing <i>Pycnosorus</i> and <i>Craspedia</i>             |           |
| 13 <sup>th</sup> -16 <sup>th</sup> Apr     |                  | EASTER  |           |
| Tue 24 <sup>th</sup> Apr                   | 10.00am – 3.00pm | General Meeting   | Esma's    |
|  |                  | <i>Leptorhynchus</i>  |           |
| Tue 15 <sup>th</sup> May                   | 9.30am – 12.30pm | Book Committee Meeting  | Maureen's |
| Sat 12 <sup>th</sup> May                   | 1.30pm – 10.00pm | May Meeting & Annual Dinner                                       | Natalie's |
|  |                  | <i>Leiocarpa</i>  |           |
| Sun 13 <sup>th</sup> May                   | 10.30am – 3.30pm | Garden and/or nursery visits.                                     |           |
| Tue 19 <sup>th</sup> June                  | 9.30am – 12.30pm | Book Committee Meeting  | Maureen's |
| Tue 26 <sup>th</sup> June                  | 10.00am – 3.00pm | General Meeting   | John's    |
|  |                  | Distinguishing <i>Cassinia</i> and <i>Ozothamnus</i>              |           |
|  |                  | SUBSCRIPTIONS DUE   |           |
| Tue 17 <sup>th</sup> July                  | 9.30am – 12.30pm | Book Committee Meeting  | Maureen's |
| Tue 24 <sup>th</sup> July                  | 10.00am – 3.00pm | General Meeting   | Judy's    |
|  |                  | Small headed species ( <i>Angianthus</i> , <i>Gnephosis</i> etc.) |           |
| Tue 21 <sup>st</sup> Aug                   | 9.30am – 12.30pm | Book Committee Meeting  | Maureen's |
| Tue 28 <sup>th</sup> Aug                   | 10.00am – 3.00pm | General Meeting   | Jenny's   |
|  |                  | <i>Calotis</i> & <i>Millotia</i>                                  |           |
| Sat 22 <sup>nd</sup> Sep                   | 9.00am – 4.00pm  | Plant Sale & Book Launch  | Peg's     |
| Tue 25 <sup>th</sup> Sep                   | 10.00am – 3.00pm | General Meeting   | Bev's     |
|  |                  | <i>Minuria</i> & <i>Kippistia</i>                                 |           |
| 29 <sup>th</sup> Sep – 5 <sup>th</sup> Oct |                  | ASGAP 21 <sup>st</sup> Biennial Conference                        | Canberra  |
| Tue 23 <sup>rd</sup> Oct                   | 10.00am – 3.00pm | General Meeting   | Joy's     |
|  |                  | <i>Podolepis</i> & <i>Podotheca</i>                               |           |
| Tue 27 <sup>th</sup> Nov                   | 10.30am – 3.30pm | Garden and/or nursery visits                                      |           |

### THANK YOU, from JUDY

To all the members, many thanks for the superb painting by John Armstrong to commemorate my retirement as leader of the Group. It is a sort of triptych of a *Gomphrena* sp. — in bud, in flower and in seed. You may ask why it is not a daisy? It happened to be the subject John was painting at the time, and it is an everlasting. It is hanging above the chiffonier in the dining room, looking extremely elegant. I love it (as does Lee) and look at it every day with great pleasure. It is a beautiful, totally unexpected present.

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### THANK YOU, to JOHN EMMS

The Study Group is indebted to John for his generous donation of an Olympus microscope complete with a set of lenses for magnification from 28x to 1500x. This will be put to very good use identifying a number of herbarium specimens hitherto un-named. The microscope will reside with the study group leader, but is available to other members on loan, upon request (assuming suitable transport arrangements can be made).

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### DAISIES IN BUNDABERG

by Margery Stutchbury

I have decided to leave the ungerminated seed and forget about it until next year, and see if any comes up then. *R. polygalifolia* was unsuccessful too. Already there is the feel of summer in the air and this afternoon there is a thunderstorm rattling around, but it has missed us so far. It is very dry and windy, and already there have been some fires about.

My front garden is a picture with massed *R. chlorocephala* ssp. *rosea* (mostly pink but quite a lot of white ones this year). They stand 102cm high (including the flower stalk) and are taller than I've grown before. Maybe the chook manure and new soil? However, there is one corner of the garden where I've lost a lot of plants with the dreaded "wilt". The local TAFE horticultural section is analysing my soil for me. No results yet, but they think it is a fungus in the soil. So maybe next year I'll be better able to deal with it. I also have *R. anthemoides* (unbranched), mostly self-sown — it's like a weed!, and many self-sown *Bracteantha bracteata*.

A sowing of *R. chlorocephala* ssp. *splendida* (9/5/00) has yielded nice blooms (in long tubs), and a later sowing (4/6/00) direct into a raised bed is also producing good blooms now. A sowing of ssp. *rosea* at the same time at the back of this garden is in bud. *R. manglesii* (sown 4/6 and planted out 7/7) has buds (17/8) and *Schoenia filifolia* ssp. *subulifolia* (Mark Saxon) is just starting to flower. Also from sowings on 4/6/00 I have plants of *Chrysocephalum semipapposum* (narrow leaf), *C. baxteri*, *Ammobium alatum* and Erica Vale's *Helipterum* 'Pierrot' — none of them at the flowering stage yet. *Brachyscome nodosa* and *B. ciliaris* (Charleville) are flowering nicely, and *Helichrysum calvertianum* and *Brachyscome parvula* var. *parvula* are yet to flower.

I have a couple of hundred blooms (*R. chlorocephala* ssp. *rosea* and ssp. *splendida* and some *Bracteantha* sp.) wired for Cathy's wedding flowers. The florist will make the arrangements and possibly use some *Banksia* blooms and maybe some *R. anthemoides* (also wired). So I hope it all works out OK!

I enclose the Erica Vale packet (see NL 58, p. 52) for you. My plants haven't flowered yet but from their picture they look like some of the white ones appearing in my *R. chlorocephala* patch. Most of the white ones have yellow centres like the pink ones, but some have black centres. Last year I failed to germinate them but a Soil Wetter soak this year was very successful.

Please extend an invitation to any of the daisy people to visit us if they are travelling north.

**DAISIES OBSERVED ON RECENT TRIPS**

by Judy Barker

Since I retired from leadership I have been accompanying Lee on work trips as part-time driver. We have twice been to Oberon (near Bathurst) and once to Creswick and then on to Mt Gambier. To please me we have followed different routes on these occasions so that I could observe the daisies as we sped past. By far the most abundant species seen in November and December was *Bracteantha viscosa*. In Victoria there were many plants around Chiltern. In NSW they were en masse at Galore Hill near Lockhart, at Coolamon and all the way from there to Temora, along the road from Temora to Monangarell, around Wagga Wagga, around Grenfell, and in large patches between Young and Cowra. They were also probably lining roads that I slept along. I have never seen so many of this species before. At the Pink Lakes in the Mallee there were small patches of *Rhodanthe moshata* and *Polycalymma stuartii*, and outside the Lakes area I found a dear little form of *Angianthus tomentosus*.

On a trip to Creswick in early January I found *Helichrysum scorpioides* still flowering. From Streatham to Hamilton there are many roadside areas that have been designated as significant areas. The most widespread daisy in these situations was *Chrysocephalum apiculatum*, often growing with *Calocephalus citreus*. It has been a most pleasant time for me to explore bush other than the district around Anglesea, which tends to be my home ground.

by Joy Greig

Last December Neal and I took the coastal route from Mallacoota to Sydney, then over the Blue Mountains to Mt Victoria, south to Oberon and Goulburn and down the Hume Hwy to Melbourne. In the forests on the NSW south coast *Ozothamnus diosmifolius* was in good display as was *Bracteantha viscosa*. In the Royal National Park we encountered *Cassinia aureonitens* and more *O. diosmifolius*. There was very little in the way of daisies in flower in the Blue Mountains except for *Olearia lirata*, but south of Oberon we came across *Olearia chrysophylla*, a handsome shrub with reddish-pink undersides to the leaves. There were at least two cassinias along this road - *C. uncata* and *C. compacta* - and lots of *B. viscosa* again.

In one patch of the latter we found a few strange plants which resembled a cross between *B. viscosa* and *Chrysocephalum apiculatum*. The bright yellow, button-like flower-heads were on stems about 15-25cm high (three or four per plant) and approx. 1.5-2cm across with prominent, radiating, pointed, papery, yellow bracts to an overall diameter of about 3cm. The greyish-green linear leaves (without petioles) graded in size from 5cm x 4mm near the base to about half-way up the stems, and were acuminate at the tips and clothed in woolly hairs on the undersides. Of course it turned out to be *Helichrysum collinum* (see NL No.57 p.20), which I should have immediately recognised from Maureen's article.

Patches of *Chrysocephalum apiculatum* and *C. semipapposum* were common along the roadside and *Brachyscome spathulata* could be found scattered among the cassinias.

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**Myriocephalus suffruticosus**

by Judy Barker

Shrubby Myriocephalus

In March 2000 Paul Wilson told Esma and I that a population of the very rare *Myriocephalus suffruticosus* had been found about 200km north of Perth, and some seed had been collected in January. The botanist in charge of the threatened species collection at the Western Australian Herbarium, Anne Cochrane, sowed 100 seeds but only 2 seedlings germinated and those died later. Paul has a particular interest in this species because he believes it does not belong in *Myriocephalus*.

Paul sent some seed to Edward Cross whose research (reported in NL 58) includes *Myriocephalus*. Edward wrote to me in July that 5 seedlings had germinated from 50 seeds sown after soaking in SISP and SW. In September the seedlings were still doing well under his guidance and he was awaiting the emergence of large secondary heads.

In July Paul sent me some seed from Anne Cochrane. Paul later said that Anne had had considerable success with germination of the species and that she thought the early failures were due to the seed not having passed through the dormant phase. Paul added that the plants are perennials about 50cm high with white flower-heads about 4cm across. They sounded very interesting.

With Edward's success in mind about 50 seeds were soaked in SISP plus SW and sown on 1/8/00. Two seedlings appeared 25 days later and gradually 21 seedlings germinated. On a cool day in December they were potted on. The thick white roots took my eye, and gave me confidence that they might survive. Two later died but the rest look robust although they are only 3–5cm high, and show no sign of flower-head production. The seed may have been sown too late for flowers this year.

I knew very little about this species and set to work to look it up. *How to know Western Australian Wildflowers* Part 4 by Grieve and Blackall describes it as 'Shrubby; branches with white cottony tomentum; flowering stems  $\pm$  30cm long; pappus of several fine bristles with glandular heads; achenes glabrous.' They advise that it occurs in the Irwin Botanical District and flowers in December in its native habitat. There is a much fuller description in Bentham's *Flora Australiensis*, which mentions that it was first collected 'between Moore and Murchison rivers, Drummond, 6th coll.' Bentham notes that the hemispherical flower-heads have very conspicuous white radiating blades on the bracts. The largest leaves may be more than 2.5cm long, and are linear or linear-lanceolate, slightly leathery, half stem-clasping, with revolute margins.

The form of the pappus bristles is very unusual. Bentham says 'Pappus of exceedingly fine bristles, nearly as long as the corolla, simple but bearing usually at their tips 1 to 4 little globular transparent bodies (glands?).'

I have kept a few seeds as an insurance, so will have another go at germinating them in early autumn, and will concentrate on potting on the seedlings in good time.

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## ACHENE or CYPSELA?

by Joy Greig

Achene is a term that has been generally used by this Study Group when describing the fruits of daisies. There is nothing wrong with this as the term means – a dry one-seeded fruit that does not open to disperse its contents (indehiscent) – and it is used by a number of well-respected botanists. But the term cypsela is a little more specific – a dry one-seeded fruit formed from an inferior ovary, that does not open to disperse its contents. This is the case with Asteraceae.

In other words, a cypsela is an achene, but not all achenes are cypselas. Therefore I propose that the term cypsela should be the one the Study Group uses in future, in the interests of botanical correctness.

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## CHRISTMAS BREAKUP

It promised to be a hot sticky day on 27<sup>th</sup> November as we drove into the hills at Wandin for our end of year round of garden visits. As luck would have it, by the time we had partaken of a delicious morning tea (thanks to Maureen) under the shade of Bob O'Neill's verandah, the skies had clouded over somewhat and the cooler air in the hills made it more pleasant. We spent a couple of hours wandering in Bob & Dot's extensive garden and inspecting the new plantings around the large dam and wetland. Bob's method is to kill off a small area of weeds, plant, water once, and leave except for mowing the grass between plants.

Lunch was enjoyed under the verandah before we proceeded a short distance to Shirley Cam's. Shirley has demonstrated how well chosen natives will blend with selected exotics and how to make the most of a steep slope by tiering the garden beds. Rejuvenated by a cool lemonade, we then made our way to the delightful garden of Evan and Leanne Clucas who were kind enough to provide a lavish afternoon tea. A large bed of various colours and forms of *Bracteantha bracteata* were a highlight. So too was a small stream which was beautifully landscaped and planted with carefully chosen small shrubs and featured *Bracteantha palustris*.

Our thanks again to Bob, Dot, Shirley, Evan and Leanne for a lovely day.

## **SPECIES or FORMS NEW to MEMBERS**

***Lagenophora gracilis* Steetz.**

by Joy Greig

Slender Bottle Daisy

(Vic, Qld, NSW, Tas. also SE Asia)

It is not strictly new to members because it has been mentioned in previous newsletters, but it is probably not often grown.

I came across this 'dear little thing' while walking along a bush track in far East Gippsland in April last year, and noticed a tiny bit of seed on one of the flower-heads – in fact 6 cypselas. I sowed them in August and to my surprise all six germinated within three weeks and survived to potting up in November. They all flowered over the Christmas period while I was away but I have managed to find a little more seed, and I am hopeful that flowering is not yet finished. I took the plunge and planted four of them in the garden where I hoped they would self-sow. I need not have bothered too much as they are now coming up elsewhere in the river-sand mulch I am using.

In my opinion this species would make an interesting, although not spectacular, subject for pot culture or a small rockery. It is widespread across south-eastern Victoria and in coastal districts of NSW, mainly growing in moist gullies (although the population I found was not in a particularly moist situation). It has radical leaves to about 8cm long and white to purple daisy heads on slender stems about 10-20 cm high.

**Description:** Small, rosette forming, rhizomatous, perennial herb. Roots thick, somewhat fleshy. Radical leaves are 15-80mm x 10-15mm, obovate to spatulate and sparsely hairy, sometimes tinged purple. The margins have 3-5 pairs of teeth or rounded lobes. The heads are 3-4mm in diameter on glabrous stems up to 35cm tall (more usually less than 20 cm). The female ray florets are white to purple and the ligules are up to 2mm long. The few tubular disc florets are bisexual, sterile and yellow. Herbaceous involucre bracts are numerous with scarious margins. Cypselas are oblanceolate, 2-4mm long, with a curved neck.



Herbarium Specimen x ½

*Lagenophora gracilis*

***Senecio amygdalifolius* F. Muell.**

by Kym Sparshott

We have two plants growing in a garden at Towoomba. They are soft-wooded shrubs, the larger of the two being about 1m x 1m. We keep them pruned so that they don't become too straggly (usually around late October when the seed has set) and cut them back by about a third. For the last couple of years I have cut off most of the buds in about August, leaving only the smallest buds at the bottom of the inflorescences. This was to delay the flowering until the 'Carnival of Flowers' in late September, otherwise they would flower a few weeks earlier. I have managed to get the timing right each time so far!

The plants originated from seed I collected on a trip towards the top of Mt. Perry (SW of Bundaberg), in about 1995. They get full to filtered sunlight for a large part of the day, but seem to miss out on the very hottest sun, and have a cool root run. They tend to droop readily on hot days, but pick up again when it cools off in the afternoon.

They have been a picture for the last few years, and have caught the eye of many visitors during the 'Carnival of Flowers'. The year before last almost every second Carnival visitor wanted to know what it was called and whether we had any for sale. Of course we didn't! So I made sure we collected seed and we also put in some cuttings for the following year. The cuttings were more successful than the seed which seemed to have poor viability that year. In the end it was lucky that we didn't have more plants, as last years' Carnival was relatively quiet in terms of visitor numbers, and the senecios didn't attract as much interest. In fact we only sold one plant and that was to a lady who had visited the previous year. She had spent the year chasing the species in nurseries etc. and surprise, surprise – had no luck!

I have only come across the species on several occasions in the wild – it is usually in the understorey in wet sclerophyll forests. We were thrilled to find it growing on our place at Ravensbourne. We have one very small rocky (basalt) hillside on a southern slope which has lots of maidenhair fern and a few greenhoods and the *Senecio amygdalifolius* is growing in this spot. They are upright shrubs with only a few branches, as opposed to the nice bushy shrubs that are growing in the garden.

**Description:** A glabrous, perennial herb or shrub 80-150cm high. Leaves are glabrous, narrow-ovate to narrow-elliptic and 5-12 cm long by 10-30 mm wide, with an acute to acuminate apex and a rounded base (sometimes asymmetric). The margins are toothed, and the petiole is 5-20mm long. The flower-heads are bell-shaped, about 10mm across and occur in corymbs. Ray florets are usually 4-8 with ligules about 12mm long. Achenes are glabrous, about 4-6mm long with a pinkish pappus. It occurs in NSW and Qld in wet sclerophyll forest or rainforest regrowth.

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## **SMALL ASTERACEAE IN WYPERFIELD NATIONAL PARK, VIC**

by Esma Salkin

From the platform at Eastern Lookout in the park in early September, I gazed on a seemingly unbroken forest of mallee, westwards to the SA border and northwards to the Murray River. At ground level in the interstices between mallees the scene was different. Here there was an unexpected diversity of species from 2-3 to 15cm high. Some of the species had produced maturing 'heads' of seed, some had flower-heads approaching maturity and others not far beyond the first seed stage.

I had come to the northwest to renew an acquaintance with the area and whilst there, to look for a small hyalospermum, *Hyalosperma stovae*. This species was last collected in 1978. I was unsuccessful in this quest, but was fascinated by the diversity of miniature plants covering the ground. These species were not noteworthy in flower, but their essential function as ground cover was to protect the light soils.

In arid areas such as Wyperfield, plants have evolved strategies for survival. The main strategy is a short life cycle and the ability to maximise the use of water in areas of low and unreliable rainfall. I looked at these plant associations in mallee, *Leptospermum/Triodia* and *Callitris/Casuarina* communities. A number of these taxa conserved energy by evolution of florets with 3-4 (normally 5) lobes and less developed and less prominent anthers and stigmas, which avoids the need to attract pollinators. They could 'self' and were termed inbreeders. Pollen production was low – that is, the pollen grains per ovule (P/O value) was in the range 40 – 350. It is hypothesized that inbreeding in arid environments can be a beneficial arrangement, and furthermore, that it is also a flexible one that allows these species to occupy specific niches. Despite this apparent rigidity, inbreeders retain the ability to adapt to changes in the environment. Outbreeders on the other hand are less adaptive as they have to rely on cross-fertilisation and need a much larger population of individuals with a range of genotypes (Short, 1981).

Those of us who have worked with brachyscomes will have noticed that some species appear to produce less pollen. It is usually those that sucker. We are also aware that fertilisation can occur if pollinators are not present. This occurs when the tips of mature stigmas reflex in a bisexual floret. The receptive inner surface is then able to pick up residual pollen from the anther in the same flower.

Descriptions of taxa observed is given below, and the measurements quoted were taken in the field. The P/O values quoted are reproduced from articles by P.S. Short, but values at Wyperfield may be different.

*Brachyscome lineariloba* Hard-headed Daisy

An ascending branching brachyscome 3-5cm high, the woolly hard 'heads' of seed (cypsela) being a conspicuous feature. White rays are barely discernible but some varieties do have longer rays. In the *Leptospermum/Triodia* association the plants were larger (8-10cm).

*Brachyscome perpusilla* Rayless Daisy

A small daisy 3-5cm high with white rays 1mm long. The cypsela is distinctive. There is no pappus and the wide wing is broadly lobed. Each lobe is tipped with an in-rolled hair.

*Actinobole uliginosa* Flannel Cudweed

This was the most widespread of the daisies observed, and dominant in the *Callitris/Casuarina* woodland in the northern section of the park. It has a clump of grey-cottony leaves enclosing a composite 'head'. Flower-heads are single or 2-12 on radiating stems. The cypsela is obovoid, 0.8mm long with a slightly plumose pappus, united at the base. P/O = 110.9

*Blennospora drummondii* Dwarf Beauty-heads

An erect or ascending cottony herb 5cm high x 1.5cm wide. Fine dark green leaves encircle and extend beyond the flower-heads. There are 2-30 flower-heads on branching stems. The 1-3 florets per head are tipped with purple. The cypsela, 1.1-1.4mm long x 0.8-1.1mm wide is covered with mucilage producing cells. The pappus has 7-8 bristles, shorter than the corolla. P/O = 200

*Hyalosperma demissum* Moss Sunray (formerly *Helipterum demissum*)

A dwarf herb 1.5 – 3cm high with a flower-head nestling among narrow leaves. Outer involucral bracts are green, the inner white. There are 15-25 florets per flower-head and the cypsela is warty with a feathery pappus. P/O = 77- 92

*Isoetopsis gramminifolia* Grass Cushion

A small prostrate herb with long, fine leaves surrounding and extending beyond the flower-head, which has 5-30 florets. The cypsela is flattened, top-shaped and covered with silky hairs.

*Millotia myosotidifolia* Broad-leafed Millotia

An ascending to erect floriferous herb 4-5cm high x 5cm wide, that has lanceolate – spatulate leaves. Terminal flower-heads on slender stems and the mass of pale yellow florets are an attractive feature. The cypsela is covered in papillae and tapers to a long beak. The pappus has 15 – 30 barbellate bristles. P/O = 2790 (therefore an outbreeder)

*Millotia muelleri* Common Bow-flower (formerly *Toxanthes muelleni*)

An ascending branching herb with a terminal flower-head. There are 3 – 15 florets with 3 – 4 lobes. The cypsela tapers to a beak, but has a broadened apex. The bottom two thirds of the cypsela is papillose. There is no pappus. P/O = 86

*Podotheca angustifolia* Sticky Longheads

This erect, cottony and glandular herb is 7 – 8cm high and distinguished by an elongated involucre. Yellow florets are barely visible beyond the tip of the involucre. A pubescent cypsela, as long as the involucre, has barbellate bristles, plumose at the tip. P/O = 184

*Pogonolepis muelleriana* Stiff Pogonolepis (formerly *Angianthus strictus*)

An insignificant herb with prostrate to ascending stems 2 – 3cm long and a compound 'head' 2 – 5mm wide which is surrounded by long fine bracts. The cypsela is 1mm long and covered with mucilage hairs. P/O = 160 – 270

*Rhodanthe pygmaea* Pygmy Sunray (formerly *Helipterum pygmaeum*)

An ascending to erect herb, 3 x 8cm (8 x 18cm on roadside verges) has cottony, glandular leaves less than 5mm long and 0.25 – 0.5mm wide. Cylindrical flower-heads among leafy clusters have brown outer involucral bracts and inner ones tipped with white. There are 3 – 6 florets. The silky-hairy cypsela is broad when compared with the narrow flower-head.



*Podolepis capillaris* Wiry Podolepis

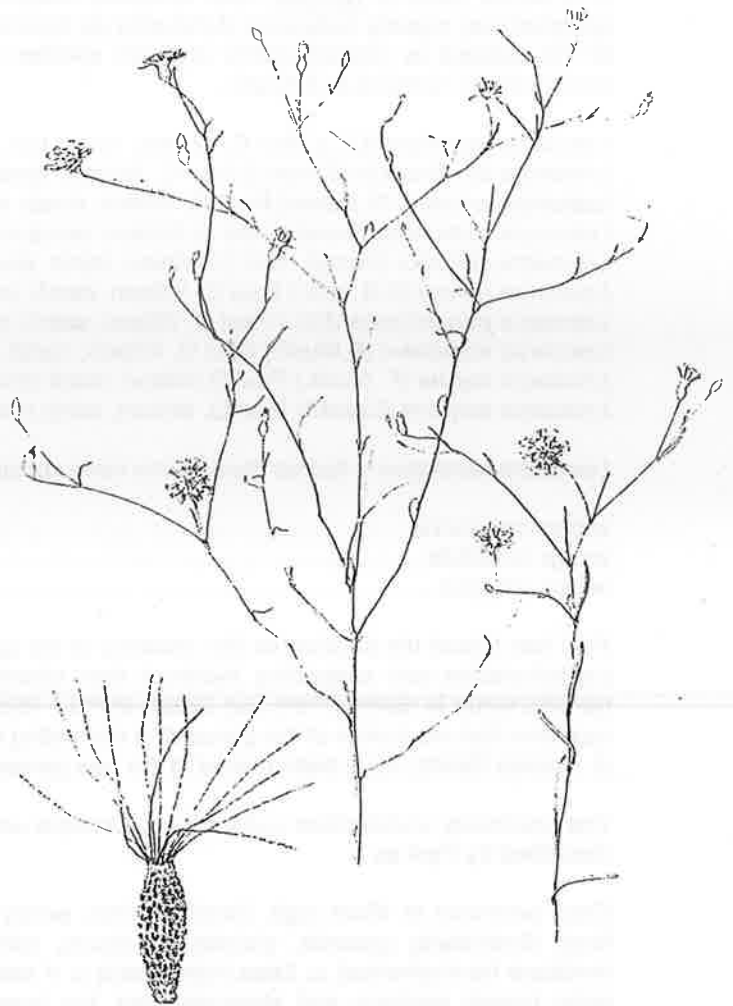
A wiry, branching annual with white rays forming a tiny open flower. Brown seed is 1mm long with pappus bristles 1 – 2mm long. In sites observed this species was identified by the whorl of almost triangular basal leaves that wither when the plant matures. The seed is tedious to collect, but one is rewarded by blooms for 12 – 18 months when growing it in a pot. This species self-sows.

*Calandrina eremaea* Small Purslane

A small succulent ephemeral 5 – 8cm high with a flowering stem rising from a basal rosette of leaves. A bright pink flower contrasted with the tiny Asteraceae and their insignificant flowers.

Not all Asteraceae species observed were tiny. *Hyalosperma glutinosum* ssp. *glutinosum* about 10cm high was growing in large populations among *Stipa* sp. *Rhodanthe stuartiana* 20 x 20cm was battling for space with rape and oats. In nearby Pink Lakes National Park *R. moshata* and *R. polygalifolia* were prevalent.

Among mallee adjacent to taxa favouring saline conditions was a large population of *Brachyscome debilis*. *B. debilis* incorporates two morphologically identical entities, the former *Brachyscome debilis* whose cypsela has a wide wing and *Brachyscome leptocarpa* whose cypsela does not have a wing. These two entities are commonly found in the same populations, for example at Mt. Arapiles, Vic and at Lake Cargelligo, NSW. It is suggested that the differences in cypsela morphology may be genetic. At the Pink Lakes site no cypselas with a wing were observed.



*Podolepis capillaris* x<sup>3</sup>/3

## References:

Flora of Victoria Vols 3 & 4

Short P.S. (1981), Pollen-ovule ratios, breeding systems and distribution patterns of some Australian Gnaphaliinae (Compositae: Inuleae) *Muelleria* 4: 395-417

Short P.S. (1985), A Revision of *Actinobole* Fenzl ex Endl. (Compositae: Inulae: Gnaphaliinae) *Muelleria* 6: 9-22

Short P.S. (1986), A Revision of *Pogonolepis* Steetz (Compositae: Inulae: Gnaphaliinae) *Muelleria* 6: 237-253

Short P.S. (1989), A Revision of *Podotrochea* Cass. (Asteraceae: Inulae: Gnaphaliinae) *Muelleria*:7: 39-56

Short P.S. (1995), A Revision of *Millotia* (Gnaphaleae: Compositae) *Australian Systematic Botany* 8: 1-47

## NEW GENUS, *Leiocarpa*, DESCRIBED

In a recent issue of *Nuytsia*, Paul G. Wilson describes a new Australian genus of the Asteraceae tribe Gnaphalieae, namely *Leiocarpa*. It includes six species which have until now been placed in *Ixiolaena*, two of the species in *Leptorhynchus* and two species currently in *Chrysocephalum*. The new genus now comprises ten species as follows :-

|  |   |
|--|---|
| <i>Leiocarpa leptolepis</i> (DC.) Paul G. Wilson, <i>comb. nov.</i> .....      | previously <i>Ixiolaena chloroleuca</i> |
| <i>Leiocarpa brevicompta</i> (Fmuell.) Paul G. Wilson, <i>comb. nov.</i> ..... | <i>Ixiolaena brevicompta</i>            |
| <i>Leiocarpa websteri</i> (S. Moore) Paul G. Wilson, <i>comb. nov.</i> .....   | <i>Ixiolaena websteri</i>               |
| <i>Leiocarpa tomentosa</i> (Sond.) Paul G. Wilson, <i>comb. nov.</i> .....     | <i>Ixiolaena tomentosa</i>              |
| <i>Leiocarpa pluriseta</i> (Haegi) Paul G. Wilson, <i>comb. nov.</i> .....     | <i>Ixiolaena pluriseta</i>              |
| <i>Leiocarpa gatesii</i> (H.B. Will.) Paul G. Wilson, <i>comb. nov.</i> .....  | <i>Leptorhynchus gatesii</i>            |
| <i>Leiocarpa panaetioides</i> (DC.) Paul G. Wilson, <i>comb. nov.</i> .....    | <i>Leptorhynchus panaetioides</i>       |
| <i>Leiocarpa semicalva</i> (F. Muell.) Paul G. Wilson, <i>comb. nov.</i> ..... | <i>Chrysocephalum semicalvum</i>        |
| <i>Leiocarpa supina</i> (F. Muell.) Paul G. Wilson, <i>comb. nov.</i> .....    | <i>Ixiolaena supina</i>                 |
| <i>Leiocarpa serpens</i> (Everett) Paul G. Wilson, <i>comb. nov.</i> .....     | <i>Chrysocephalum serpens</i>           |

*Leiocarpa semicalva* is further divided into three subspecies:-

|                                |   |
|--------------------------------|---|
| subsp. <i>semicalva</i> .....  | previously <i>Chrysocephalum semicalvum</i>             |
| subsp. <i>tenuifolia</i> ..... | <i>Ixiolaena</i> sp. 1 S.E. Qld.                        |
| subsp. <i>vinacea</i> .....    | <i>Chrysocephalum semicalvum</i> subsp. <i>vinaceum</i> |

Paul has based his revision on the anatomy of the cypselas in *Chrysocephalum*, *Ixiolaena*, *Leiocarpa* and *Leptorhynchus* with supporting evidence from chromosome numbers and mycorrhizal associations. The generic name is derived from two Greek words – *leios*, smooth and *carpos* – fruit; referring to the smooth cypselas that are typical of the genus. It is interesting to note that all except the type of *Ixiolaena*, (*I. viscosa* Benth.) have been placed in the new genus which is an Australian endemic.

The previously undescribed subspecies *Leiocarpa semicalva* subsp. *tenuifolia* Paul G. Wilson *sp. nov.*, is described by Paul as :-

Erect perennial to 45cm high. Stems slender, woolly. Leaves linear-acuminate, margins revolute, c. 5cm long, diminishing upwards, glabrescent above, cottony below. Capitula terminal to slender peducles. Involucre hemispherical, c. 6mm high; bracts c. 4 seriate, narrowly oblong to linear, somewhat woolly, the outer largely scarious and straw-coloured, the inner with herbaceous claw and weak, acuminate and somewhat lacerate scarious lamina. Outer florets female with slender corolla; pappus absent. Bisexual florets numerous; corolla c. 5mm long, narrowly campanulate above, almost glabrous. Cypselas c. 1.5mm long, smooth. Pappus bristles numerous, capillary, almost equal to corolla, barbellate, the barbs longer at apex."

The epithet is derived from the Latin - *tenuis*, slender and *folium* – leaf; referring to the slender leaves of this subspecies.

### References:

Paul G. Wilson (2001), *Leiocarpa*, a new Australian genus of the Asteraceae tribe Gnaphalieae *Nuytsia* 13(3): 595-605

Paul G. Wilson, P.S. Short and A.E. Orchard (1992), Some Nomenclatural Changes in the Angianthinae and Cassiniinae (Asteraceae: Gnaphalieae) *Muelleria* 7: 519

*Leiocarpa semicalvum* ssp *semicalvum* x 1



## TWO NEW SPECIES OF *Leptorhynchus* DESCRIBED

Paul G. Wilson has also recently described two new species of *Leptorhynchus* Less. namely *L. orientalis* found in SA, NSW and Vic. and *L. melanocarpus*, endemic in SA, bringing the total number of species recognised in the genus to ten.

*Leptorhynchus orientalis* Paul G. Wilson, *sp. nov.* is described as :-

"Erect single to multi-stemmed annual to 30cm high. Branches slender, minutely puberulous with gland-tipped and septate hairs. Peduncle slender, densely glandular puberulous beneath the capitulum, otherwise glabrescent, bearing a few scattered hyaline bracts. Leaves linear, 1-2cm long, acute, margins recurved, with scattered minute gland-tipped hairs and short (to 0.2mm) whitish septate hairs. Involucre broadly turbinate, c. 8mm high multiseriate, eciliate; outer and intermediate bracts very narrowly triangular, hyaline, smooth, with reddish brown glandular stereome at base; inner bracts c. 7mm long with linear green cartilaginous glandular stereome and narrow hyaline margins; lamina absent or represented by a hyaline erose apiculum to 0.5mm long. Florets bisexual. Corolla c. 6mm long, sparsely glandular-puberulous, narrowly turbinate above, very narrowly tubular below. Cypsela compressed-ellipsoid, c. 1.8mm long, densely papillose, reddish brown, abruptly narrowed upwards into a slender almost smooth persistent beak 3-4mm long. Pappus bristles numerous, filiform, shorter than corolla, minutely denticulate."

It has rare occurrence from the Eyre Peninsular in SA to southern NSW and central Victoria, usually in woodland or grassland. The epithet *orientalis* (from the Latin- eastern) was chosen because the species is found in eastern Australia. The species has similarities with *Leptorhynchus scaber* with which it has been confused in the past.

*Leptorhynchus melanocarpus* Paul G. Wilson, *sp. nov.* is described as :-

"Erect multi-stemmed annual to 30cm high; branches woolly; peduncle slender, glabrescent. Leaves slender terete, 1-2.5cm long, obtuse, revolute, densely woolly. Involucre broadly turbinate, c. 10mm high, bracts multiseriate, eciliate; outer and intermediate bracts linear-acuminate, with broad hyaline scabridulous denticulate margins and narrow brown glandular stereome; inner bracts with a narrow linear green cartilaginous glandular stereome, broad hyaline margins, and scarious pale brown acuminate lamina c. 2mm long. Florets bisexual. Corolla c. 5mm long, glandular-puberulous. Cypsela narrowly ellipsoid, c. 1.8mm long, densely papillose, black, abruptly narrowed into a slender smooth caducous beak 3-6mm long. Pappus bristles numerous, filiform, shorter than corolla, dentate."

This species is only known from islands in Lake Acraman in the Gawler Range, SA. The epithet is derived from the Greek *melano* – black, and *carpos* – fruit, and refers to the black cypselas.

Two former species of *Leptorhynchus*, the species now chosen as the lectotype *L. squamatus* (Labill.) Less and *L. linearis* are accepted as being conspecific (Wilson 1998). Thus the remaining eight species in the genus are :- *Leptorhynchus baileyi*, *L. elongatus*, *L. nitidulus*, *L. scabrus*, *L. squamatus*, *L. tenuifolius*, *L. tetrachaetus* and *L. waitzia*.

### References:

- Paul G. Wilson (1998), The name *Leptorhynchus linearis* and the type of *Leptorhynchus* (Asteraceae). *Nuytsia* 12:303-305  
 Paul G. Wilson (2001), *Leptorhynchus* (Asteraceae: Gnaphalieae), notes, new taxa, and a lectotypification *Nuytsia* 13(3):607-611

## SNIPPET

Have you noticed that *Bracteantha bracteata* Sandy Beach form does not seem to set much seed in the garden? It is, however, easy to propagate from cuttings.

## DAISIES FEATURE ON TV

Two members' gardens have appeared in television reports in recent months. Matt Hurst who lives at Wagga Wagga, NSW held an Open Garden weekend on October 21 –22 and says that it went very well, with TV, radio and newspaper articles and over 200 visitors. He says people displayed a huge interest in *Ozothamnus diosmifolius*, *Bracteantha viscosa*, *Rhodanthe chlorocephala* ssp. *manglesii* and *Bracteantha* hybrids.

Peg McAllister's garden was featured on the ABC program 'Gardening Australia' on 10<sup>th</sup> February and her daisies were highlighted, showing close-up shots of *Brachyscome multifida* forms, *Rhodanthe* species, *Bracteantha bracteata* forms, *Leucochrysum albicans* and *Pycnosorus globosus* among others – enough to enthuse any gardener!

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## MEMBERS' REPORTS

**Julie Strudwick** of Upper Lurg (via Benalla, Vic) writes on 27/8/2000: 'I've been working hard in the garden on some major alterations and improvements to tiering, and find myself now with lots of empty spaces — I have a feeling I know where my takings from the plant sales will be going!

I again had very poor germination from *R. polygalifolia*. The *R. chlorocephala* ssp. *rosea* from Ray's 1999 seed started to come up after 24 hours! If they grow enough in the next month I'll also have quite a few tubes of Flannel Flowers. I've been given some Lucasorb powder — it's actually used for mixing in the soil to retain moisture. Joy Gambriel at the local nursery dipped her F.F. seedling roots in a Lucasorb mixed with water solution, and they transplanted perfectly. I tried it on some seedlings I pricked out on 29th June and have had only about 1% loss.

Nothing else is happening on the daisy front at present — new growth on perennials but no flowers anywhere yet except on *Olearia iodochroa* (always a winter joy) and *O. teretifolia* and *O. ramulosa* var. *ramulosa*.'

(And on 7/11/00) 'The Break-up programme sounds interesting as usual. I've long wanted to see Bob O'Neill's garden and like the sound of plants for sale at Shirley Cam's. I've been busy removing several things that have grown too large and find that, while I've got scads of plants waiting for a home, I don't have anything for those particular spots — always the way! *Rhodanthe anthemoides* - Liverpool Range and Whitlands forms - are getting close to maturity so I should have some seed by 28th. *Calotis glandulosa* is looking beautiful but I haven't had any great success with *C. cuneifolia*. A couple of plants are surviving but not thriving.'

**Pat Clarke** reported by telephone in October 2000: 'She is growing several forms of *Bracteantha bracteata*. The form from Morton Island has no hairs and grows very close to the sea, within 150m (50 feet) at high tide. The form from Fraser Island does not grow as close to the water, has many more hairs and the flower-heads are superior. A form from 20–25km from Goondiwindi towards Mooni appears to be an annual. It has narrow leaves and flowers profusely. *Bracteantha* "Lemon Queen" has pale yellow heads which wire well.'

**Ray Purches** from Wangaratta (Vic) writes on 31/10/00: 'Just completed reading the newsletter with at least as much delight as I did at the age of eight with my Kit Carson Cowboy albums. Thoroughly absorbing. It is strangely refreshing to read all the remarkable musings on daisies, even though Rose and I are on the second-last batch of riceflower (*Ozothamnus diosmifolius*) for the export market.

Since the commencement of harvest on 11th October we have picked, graded, bunched and boxed some 3000 bunches for travel to our exporter by refrigerated truck. This could not have been achieved without the fantastic family participation, as well as Julie Strudwick's twelve hour days at a crucial time.

At present we are in commercial production with 11 selections of riceflower — 4 whites and 7 pinks. There is a stronger market for good whites at present. Strongly upright clones are highly desirable, for stem lengths of up to 80cm are needed. Other daisies in production include a form of *O. diosmifolius* with nice long stems and large flower-heads to 10cm diameter but a muddy pink/white colour, *Cassinia leptcephala*

— clear bright yellow flower-heads to 15cm diameter and stems to 80cm, and *Cassinia aureo-nitens* — recently planted but thriving thus far.'

**Jeff Irons** of Heswall (England) writes on 29/11/00: 'Here I am back in England after my travels in a very wet NSW. ... *Ozothamnus stirlingii* seemed to be in bloom everywhere. ...there was the odd Yam daisy, and memory fails me over the *Brachyscome* seen. I did see lots of *Craspedia variabilis* — a species about which I know nothing. The latest newsletter included a very interesting piece by Edward Cross. Could he write a follow on? I'm especially interested in the relationships between *Olearia* and *Celmisia* and their origin. Could you mention that my disjointed article on *Olearia* was in fact part of a piece written for POMS?'

**Irene Cullen** of Robertson (Qld) writes (in part) in December 2000: 'I have recently acquired a little gem. It is as far as we can ascertain a natural cross between *Bracteantha bracteata* and *B. viscosa*. The plant is being promoted by Nielsen's Native Nursery as *Bracteantha* "Lemon Princess". It is certainly hardy and showy on the hottest of days. The nursery label states the following — "Lemon Princess" is a small, compact perennial *Bracteantha* hybrid growing to around 30cm in height x 40cm wide. "Lemon Princess" produces small bright lemon 2cm diameter, button flowers on short stems throughout the year which can be used in small flower arrangements. Use "Lemon Princess" in rockeries or as a border plant in mass plantings for an all year round splash of colour. "Lemon Princess" prefers a full sun position and is hardy in moist but free draining soils.'

**Barrie Hadlow** of Theodore (ACT) reports on 13/12/00: 'The "Sandy Beach" *Bracteantha* didn't survive my pruning (see Members reports N/L No. 58). So in fact it only made it through 2 years/growing seasons not my exaggerated 3 heading for its fourth.... as I had bragged!'

**Gloria Thomlinson** of Shepparton (Vic) writes in December 2000: 'Thank goodness I mulched well. Some new growth spurts caused by the last rains are looking very stressed though. The annuals and kangaroo paws faded within a week of the first burst of scorches, and to think it had all looked so pretty that I imagined it lasting up to the festive season. Good old *Bracteantha bracteata* and *Hibiscus trionum* have self sown in quantities so there will be something coming on.'

**Max McDowall** advised by phone on 2<sup>nd</sup> January that he will have a few plants of *Ozothamnus purpurascens* to give away at the May Meeting.

**Beth McRobert** of Jamboree Heights, Qld, reports on 11<sup>th</sup> January: 'I am thrilled to be able to tell you that I have some *Rutidosis leucantha* flowering in my garden. The seeds came up readily, but I had a bit of trouble transplanting them into the garden. I suspect that, because we had such a dry year, and my care of the seedlings was not great, the poor little things just died. Anyway I got some going - and now, flowers! Lorna Murray and I went west again this year - same time (September) but very different season - and not a sign of a *Rutidosis* anywhere.'

On the 14<sup>th</sup> January she writes: 'While I had a nice display of daisies last spring, they were limited in range. I sent off to buy seed....but was very disappointed with the results despite trying to make my own smoked water. I remembered the recommendation that gravel was good to help germination, so I raided a nearby ants' nest for gravel. It was probably a bad move — who ever saw seedlings come up on top of the gravel on an ants' nest? Anyway that's what I blamed for the non-appearance of the seedlings.'

[There is nothing wrong with the idea of germination under gravel (or granite chips, or sand etc.) but the reason it doesn't happen naturally on an ants nest is probably that the ants would take the seeds and store them for food. An article on this subject from NL No. 18 is reprinted on page 14 - ED]

**John Emms** of Loch, Vic, gives the following germination report: '*Myriocephalus guerinae* sown on 14<sup>th</sup> November did not germinate whether SISP, Regen 1000, or no treatment occurred. *Leucochrysum albicans* ssp. *albicans* var *albicans* gave approx. 70% germination after 18 days when sown with Regen 1000 treatment on 7<sup>th</sup> November. *Minuria leptophylla* (Wail Forest '96) gave approx. 40% germination after 9 days from 7<sup>th</sup> November with Regen treatment, while *Rutidosis leptorhynchoides* gave approx 60% germination with the same conditions, and *Minuria leptophylla* from western Qld did not germinate.'

**Philip Wilson** a new member of Woodend, Vic, writes on 10/01/01: 'I have enclosed a small amount of seed from *Microseris lanceolata* as well as *Ozothamnus obcordatus*. *M. lanceolata* still occurs in reasonable numbers on ungrazed areas in the district, and I hope to use it as part of the ground flora in a revegetation project on our property at Hanging Rock. I am yet to test the culinary attributes of this species but may well sacrifice a few "captive bred" specimens into the cooking pot! I'll let you know what I think.'

**Maureen Schaumann** of Mulgrave, Vic. comments on 26/01/01: 'Pots of seed sown last spring were emptied into a large pot in the potting shed, when they hadn't germinated by Christmas. Unintentionally, the pot was covered with a large plastic tray, as this seed raising mix was to be recycled at a later date. In the middle of January the tray was removed and underneath, much to my amazement, were 15 little seedlings which had germinated in a matter of weeks without any water or light. I have since emptied out another four pots of seeds, this time remembering to place a label with each. This dry storage method seems to work, and I have since recalled it was reported in NL No. 49, page 46 by Barrie Hadlow, followed by an article on "Successful Germination", NL No. 51, page 26 by Judy Barker.'

**Margery Stutchbury** of Bundaberg, Qld., writes on 1/02/01 about using daisies for her daughter's wedding: 'I grew *Rhodanthe chlorocephala* ssp. *rosea*, *R. chlorocephala* ssp. *splendida*, *R. chlorocephala* ssp. *manglesii* (pink), *R. anthemoides* (unbranched) and *Bracteantha bracteata* in various colours, also a *Rhodanthe* called *Helipterum* 'Ebony White' bought through Erica Vale Seeds.

Seed was sown over a few days from 15/04/00 and one garden was sown about a month later. The wedding was in mid October and I started picking and wiring in late July. Blooms were mostly picked in the morning or late afternoon. I endeavoured to pick the flowers and put them straight into water, then spray each bloom with Mat Spray (a permanent mat finish used for art work etc.). At first I tried Yates Leaf Shine on the *R. anthemoides* but later found that they seemed OK without any treatment. I tried to wire the flowers on the same day as they were picked (usually at night). A local florist took all the flowers before the wedding and made the bride's and four maids' bouquets, plus two flower girls, plus small corsages for immediate family. Flowers were also used in the girls' hair. Daisies were scattered on the tables at the reception and the bouquets used to decorate the bridal table. Many people admired them. I also glued daisy heads on a roll of adding machine paper to make a floral edge for the path the bridal party used to walk to the wedding site.

After the wedding there were quite a few flowers left, so, now addicted, I am making basket arrangements with just daisies using *Rhodanthe anthemoides* and small tight buds of *Bracteantha bracteata* as a filler.'

[Margery's photos are testament to the success of this ambitious enterprise with everlasting daises. - Ed]

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## **HERE'S MY EXCUSE, WHERE'S YOURS?**

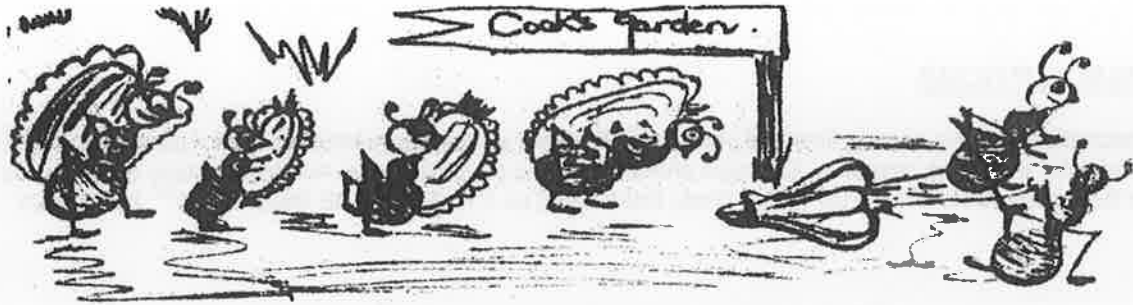
[This humorous article written and illustrated by former member Joy Cook is reproduced from NL No.18, March 1987, for the benefit of newer members - Ed]

The onset of Autumn 1987 once again saw my garden sadly denuded of the bright annuals that had graced its contours over spring and summer. Instinct once again told me that to experience the liveliness of colour again this spring, I must plant numerous trays of seed and hopefully report the results to Maureen. Previous years I had been remiss in providing reports, (dare I commit it in writing) and I had become one of those members who planted numerous trays of seeds every year without ever handing in results. This year I felt confident of not only having the best garden in the street, (which isn't hard in our area) but also carrying through all aspects of being a diligent, active member and snowing Maureen under reams of paper filled with the results of my hard work.

Numerous packets of seed were religiously planted and followed through with the ritual of seed worshipping every day. This activity had precedence overall matters and persons, including husband and children, although the cat was still fed. The first green shoots of life appeared after several days in the containers holding *Helipterum* and *Helichrysum* seeds, but the *Brachyscome* seed refused to move, that is until I was completely astounded to see them literally up stakes and walk out of the seed trays.

It was at midday worship, when the sun was at its highest, that I witnessed this phenomenon. I was down on my hands and knees paying homage to these seed trays, when there before my very eyes, the *Brachyscome* seeds were seen to slowly stand on end and head in the direction of the lip of the seed trays. There they precariously balanced on the edge, tilting first to the right then to the left, before they abseiled down to ground level. On reaching firm terrain, they moved at a 90° angle across the patio before disappearing completely down a deep dark hole.

I had read 'The day of the Triffids' but this was ridiculous. This phenomenon in my suburban backyard warranted closer investigation. The kneeling position usually adopted for seed worship was promptly changed to nose to the ground, completely prostrate position. It was in this position that I finally discovered the truth behind the enigma of the walking *Brachysome* seeds. Each seed was being carried along by an assiduous ant, the seeds twice their size proved no deterrent to these diligent fellows intent on harvesting them.



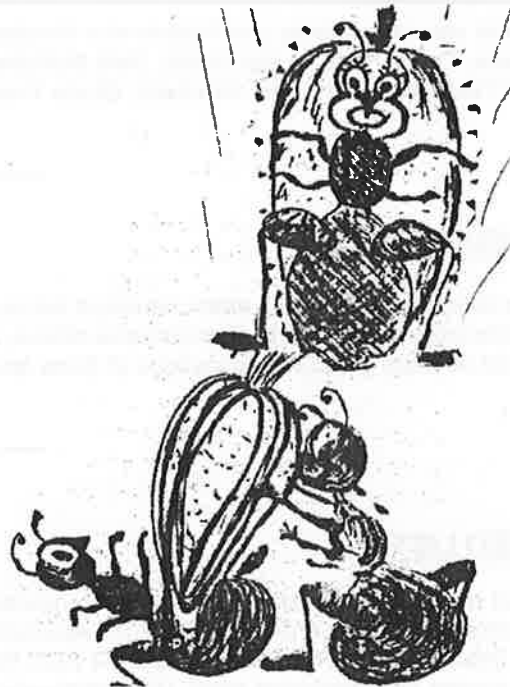
Closer inspection proved that *Brachyscome cardiocarpa* and *B. aculeata* achenes were the most prized. Their flat shape made them easy to balance and the wings of the achenes assisted in the abseiling exercise.

*B. diversifolia* was quickly dropped, as its obovate shape, although appearing succulent and tempting, proved too cumbersome to carry.

As much as I was fascinated by this circus being conducted on my patio, all good things had to come to an end, and a kettle of boiling water was hastily poured down the deep dark hole.

Now, Maureen has always been able to rely on me never to hand in results, but this year I feel I have a bona fide excuse.

There ant any!



Diversifolia's great to eat,  
But makes one stumble on the feet!

**NEW MEMBERS**

Welcome and happy daisy growing to the following new members:-

Philip Wilson 23 Lavender Farm Rd. Woodend, Vic, 3442  
 Cheryl O'Brien PO Box 80 Coolamon, NSW, 2701  
 Roger Kitchen 15 Swansea Place Neranwood, Qld, 4213  
 Tam Kendall PO Box 256, Mitcham, Vic, 3132

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**SUBSCRIPTIONS**

Subscriptions for the coming financial year are \$10.00 per person for members within Australia and \$20.00 per year for overseas members. Cheques should be made payable to the 'Australian Daisy Study Group', and forwarded to Bev Courtney or Joy Greig (addresses on P1.) **FEES ARE DUE ON 30<sup>TH</sup> JUNE 2001.**

**DEADLINE FOR JULY NEWSLETTER IS 1<sup>ST</sup> JUNE 2001**

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**SEED DONORS**

Thank you to members and friends who donated seed to the Study Group: Judy Barker, Tony Bean, Pat Clarke, Barrie Hadlow, Val Hando, Beth McRobert, Jenny Rejske, Esma Salkin, Maureen Schaumann, Kym and Peter Sparshott, Julie Strudwick, Gloria Thomlinson, Ngaire Turner and Philip Wilson.

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**SEED WANTED**

The following species are often requested but our stocks have run out: *Brachyscome multifida*, *Bracteantha subundulata*, *Calocephalus citreus*, *Erodiohyllum elderi*, and *Schoenia cassiniana*. AD SG would be most grateful for donations of these species.

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**SEED LIST**

A full seed list is published in each March newsletter. Please keep this list for reference; only additions and deletions will be recorded in other 2001 newsletters. A STAMPED, SELF-ADDRESSED ENVELOPE MUST BE ENCLOSED WITH EACH REQUEST FOR SEED. Please write to Esma for provenance seed or to Judy for garden or commercial seed. (The addresses are on the front page.) If members require both types of seed a letter to either Esma or Judy will suffice.

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

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



**GARDEN or COMMERCIAL SEED**

*Ammobium alatum*, *alatum* 'Bikini', *craspedioides*.

*Angianthus tomentosus*.

*Bellida graminea* (11/97).

*Brachyscome aculeata*, *angustifolia*, *angustifolia* complex, *basaltica* var. *gracilis*, *ciliaris* (Enngonia, SA), *ciliocarpa*, *chrysoglossa*, aff. *cuneifolia*, aff. *curvicarpa*, *dentata*, *dissectifolia*, *exilis*, *formosa* (mauve form), aff. *formosa*, *goniocarpa*, *gracilis*, aff. *gracilis*, *graminea*, *halophila*, *iberidifolia*, *latisquamea*, *lineariloba*, *melanocarpa*, *microcarpa*, *muelleri*, *nivalis*, *nodosa*, *nova-anglica*, *oncocarpa*, *parvula*, *petrophila*, *procumbens*, *ptychocarpa*, *readeri*, *rigidula*, *riparia*, *sieberi* var. *gunnii*, *smithwhitei*, *spathulata* var. *spathulata*, *stuartii*, *stuartii* complex, *tadgellii* (orig. Falls Ck), *trachycarpa*, sp. (Darling Downs).

*Bracteantha bracteata* — (Ebor, Pambula, Sandy Beach, dwarf mixed form, mixed garden form, orange, pink, lemon-yellow, yellow, white forms, tall red form, tall form [Tenterfield], *macrantha*, *viscosa*.

*Calocephalus lacteus*, *sonderi*.

*Calomeria amaranthoides*.

*Calotis cuneifolia*, *dentex*, *lappulacea*, *plumulifera*.

*Cassinia leptoccephala*.

*Cephalopterum drummondii*.

*Chrysocephalum apiculatum* (ex Murray-Sunset NP), *baxteri* (orig. Wilsons Prom), *semipapposum* (alpine form, Anglesea, Frankston, Lara, Licola).

*Craspedia variabilis*

*Haptotrichion conicum*.

*Helichrysum adenophorum* var. *adenophorum* and var. *waddelliae*, *calvertianum*, *elatum*, *rutidolepis* (Blackheath), *scorpioides*.

*Hyalosperma cotula*, *praecox*, *simplex*.

*Lagenifera huegelii*.

*Leiocarpa brevicompta*, *leptolepis*.

*Leptorhynchos elongatus*, *squamatus*.

*Leucochrysum albicans* ssp. *albicans* var. *albicans* (orig. Longwood, orig. ACT).

*Leucophyta brownii*.

*Minuria leptophylla*.

*Olearia lirata*, *pannosa*, *phlogopappa* (white), *pimelioides* (orig. Broken Hill).

*Ozothamnus cordatus*, *hookeri*, *obcordatus*, *secundiflorus*, *thyrsoideus*.

*Picris evae*.

*Podolepis auriculata*, *canescens*, *gracilis*, *jaceoides*, *lessonii*, *neglecta*, *nutans*, *rugata*.

*Podotheca gnaphaloides*.

*Pterocaulon glandulosum*.

*Pycnosorus chrysanthes*, *globosus*, *thompsonianus*.

*Rhodanthe anthemoides* (unbranched form, Liverpool Range, Whitlands), *anthemoides* (branching, red-bud), *charsleyae*, *citrina*, *chlorocephala* ssp. *rosea* (pink and white red with yellow centre, red with black centre), ssp. *rosea* (Balladonia form), ssp. *rosea* x ssp. *rosea* (Balladonia form), ssp. *splendida*, *corymbiflora*, *corymbosa*, *diffusa* ssp. *diffusa* and ssp. *leucactina*, *humboldtiana*, *manglesii* and *manglesii* (white form), *polygallifolia*, *polyphylla*, *propinqua*, *pygmaea*, *spicata*, *stricta*,

*Schoenia cassiniana*, *filifolia* subsp. *filifolia* (038), subsp. *subulifolia*.

*Senecio amygdalifolius*, *pinnatifolius*.

*Waitzia suaveolens*

*Vittadinia muelleri*, sp. (white)

**PROVENANCE SEED**

Freshly collected seed is thoroughly dried and treated for insect infestation. Seed storage procedures are constantly under review. Most seed is stored in sealed foil packets at 4°C. Seed of arid and semi-arid origin is now stored at room temperature. The species stored at room temperature are delineated with the symbol #. There are a few species stored at both 4°C and room temperature (delineated with a +). (nd = no date) If members would like to undertake a comparison of the results from both temperatures, Judy and I would be pleased.

**Esma Salkin** (Provenance Seed Bank Co-ordinator).

- Actinobole uliginosa* — SA; 10/95.  
*Allopterigeron* sp. — N. Qld; 7/98.  
*Ammobium craspedioides* — per ANBG.  
*Anemocarpa podolepidium* — SA; Marree 8/96.  
*Asteridea athrixioides* — WA; 97 #. *nivea* — WA; Cape Arid 9/97 #.  
*Brachyscome aculeata* — ACT; 3/95, Vic; Gippsland Alps 3/99. *basaltica* var. *gracilis* — NSW; Menindee Lakes 9/94, ? *bellidioides* — WA; Kings Park, 10/94. *blackii* — NT +. *cardiocarpa* — 6/96. *ciliaris* — NSW; Bundarra, Gunnedah 1992, Tibooburra 8/96, Wilcannia 8/95, SA; Iron Knob 9/97 #, Nullarbor, 9/97 #, Penong, '97 #, Wirrulla, 8/97 #, Flinders Range 8/95, NT; 8/96, Alice Springs '99. *cuneifolia* — SA; Tintinara, 10/95.  
*aff. curvicarpa* — Qld; 9/98, *dentata* — Qld; 3/97, NSW; 9/95, SA; Blinman 8/96. *exilis* — SA; 9/94 +, 9/96 #, Yorke Peninsula nd, Gawler Range 10/97 #. *aff. exilis* — NSW; 8/93. *aff. formosa* — NSW; Neville 11/96.  
*oncocarpa* — SA; Keith 0/91, WA; Esperance region, 10/97 #. *gracilis* — Vic; 10/93, *iberidifolia* complex — WA; Peak Charles, 10/94. *leptocarpa* — Vic; 9/2000. *lineariloba* complex — SA; 10/94, Gawler Range, 10/97, Yorke Peninsula, 9/96. *melanocarpa* — Qld; Charleville, 9/98 #, NSW; Cobar, 9/98 #. *nivalis* variants — Vic; Falls Creek 1/94. *nivalis* — Vic; Mt Nelse, 1/97, Mt McKay 2/99. *nodosa* — Qld; Cunnamulla, 8/98 and 9/98 #, Quilpie 8/98. *parvula* — Vic; Momington Peninsula, 1/94, Otways 11/95. *ptychocarpa* — NSW; nd, Vic; nd. *rigidula* — NSW; Snowy Mts 9/94, 1/97, 2/97, 2/92 #, Vic; Mt Selwyn 1/97, Falls Ck 2/99.  
*sieberi* var. *gunnii* — Tas; nd. *spathulata* subsp. *spathulata* — NSW; Mt Selwyn, 2/97, Three Mile Dam, 2/97, Snowy Mts, 2/97 #, Vic; Dargo HP, 3/97, Falls Ck 2/99. *tadgellii* — Falls Ck 2/99. *whitei* — Qld; Quilpie, 8/95.  
*xanthocarpa* — SA; Eyre Peninsula, 9/91, Streaky Bay, 10/95.  
*Bracteantha bracteata* — Qld; Eulo, 9/98 #, Fraser Island 10/00, Goondiwindi 10/00. *viscosa* — NSW; Coolamon 12/00, Temora 12/00, Young-Cowra, Vic; Chiltern 12/00.  
*Calotis scabiosifolia* var. *scabiosifolia* — Qld; 9/98 #. var. *integrifolia* — Vic; Alps 2/99.  
*Campactra barbata* — Qld; 5/96.  
*Cassinia aculeata* — Vic; Gobur 3/99, Gippsland Alps 3/99, — SA; Blinman 8/96 #. *compacta* — NSW; 5/97. *quinquefaria* — NSW; 5/97. *subtropica* — Qld, Nerang, 7/97 #, NSW; Mt Warning, 7/97.  
*Cassinia* sp. *aff. uncatata* — Vic; 1/97 #. *Cassinia* sp. — SA; 9/99, Mosely Knobs, 11/95.  
*Celmisia* sp. — Vic; Gipps. Alps 4/97 and 3/99.  
*Chrysocephalum apiculatum* — NSW; Gunnedah 6/97, SA; Pine Ck 6/99, Carpie Punthe. *semipapposum* — Vic; Mt Hotham 2/99, Gipps. Alps 3/99.  
*Craspedia variabilis* — SA; Yorke Peninsula, 9/94,  
*Erigeron bellidioides* — Falls Ck 1/97 and 2/99. *nitidulus* — Falls Creek, 2/99.  
*Erymophyllum glossanthus* — WA; Mt Magnet, 11/97.  
*Helichrysum elatum* — Qld; Childers 7/96, NSW; Barrington Tops, 10/95, Tura Beach 10/96. *leucopsidium* — SA; Tiges Rd, 12/96.  
*Leiocarpa brevicompta* — Qld; 3/96 #, *panaetioides* — NSW, *supina* — SA; 3/93 Gilgandra, 3/93.  
*Leptorhynchos baileyi* — Qld;  
*Leucophyta brownii* — Vic; Sorrento, 3/96.  
*Microseris lanceolata* — Vic; Woodend 1/2001 *Microseris* *aff. lanceolata* — Vic; Alps, 2/97, 2/99 + .  
*Minuria cunninghamii* — WA; 7/97.  
*Myriocephalus guerinae* — WA; 10/96 #, *helichrysoides* — nd, *rudallii* — nd.  
*Olearia asterotricha* — Vic; '95. *axillaris* — Vic; 5/99. *decurrens* — SA; 8/95. *frostii* — Vic; Falls Ck 2/99. *imbricata* — WA; 9/97. *lanuginosa* — Vic; Ouyen 5/96. *megalophylla* — Vic; Dargo 3/95. *muelleri* — SA; Lake Gilles 10/95. *phlogopappa* — Vic; Mt Cope 1/97, NSW; Snowy Mts, 1/97. *pimelioides* — Qld; 9/95, NSW; Hungerford, 9/95. *stuartii* — NT; 8/96. *subspicata* — Qld; Charleville 9/00, Cunnamulla 9/00. *tenuifolia* — ACT; 6/00. *Othonna gregorii* — NT; 8/96.  
*Ozothamnus cuneifolius* — NSW; 3/00. *diotophyllus* — Qld, '95. *ericifolius* — Tas; nd. *hookeri* — Tas; nd. sp. (previously thought to be *O. hookeri*) — NSW; 5/98, Vic; Alps 4/96, 3/99. *obcordatus* — Vic; Woodend 1/2001 *retusus* — SA; 11/95. *rosmarinifolius* — Tas; nd. *scutellifolius* — Tas; nd. *secundiflorus* — NSW; Snowy Mts. 97 *thyrsoides* — Vic; Gippsland Alps. *turbinatus* — SA; nd.  
*Picris evae* — Qld; nd.  
*Podolepis jaceoides* — SA; 10/95 #. *kendallii* — WA; 10/96 #. *monticola* — ANBG. *rugata* — SA; Murray Bridge, '92  
*Podotheca wilsonii* — WA; PS 4437 10/95.  
*Polycalymma stuartii* — NT; Alice Springs 9/96 #.  
*Pterocaulon sphaceolatum* — NT; 9/96.  
*Pycnosorus pleiocephalus* — SA; Gawler Range 10/95 #.  
*Rutidosia leptorrhynchoides* — Vic; '96, *leucantha* — Qld; Augathella '98. *multiflorus* — WA; 9/97 #.  
*Senecio anethifolius* — SA; 9/99.  
*Stemmacantha australis* — Qld; nd.  
*Streptoglossa adscendens* — SA; 2/99, *liatrioides* — Qld; '89.  
*Tricanthodium skirrophora* — SA; 9/97 #.  
*Vittadinia cuneata* — ACT; 6/00. *decora* — Qld; 3/96, ? *muelleri* — NSW, *Vittadinia* sp. — NSW; Cocoparra.  
*Waitzia nitida*.  
*Wedelia spilanthisoides* — 3/96.