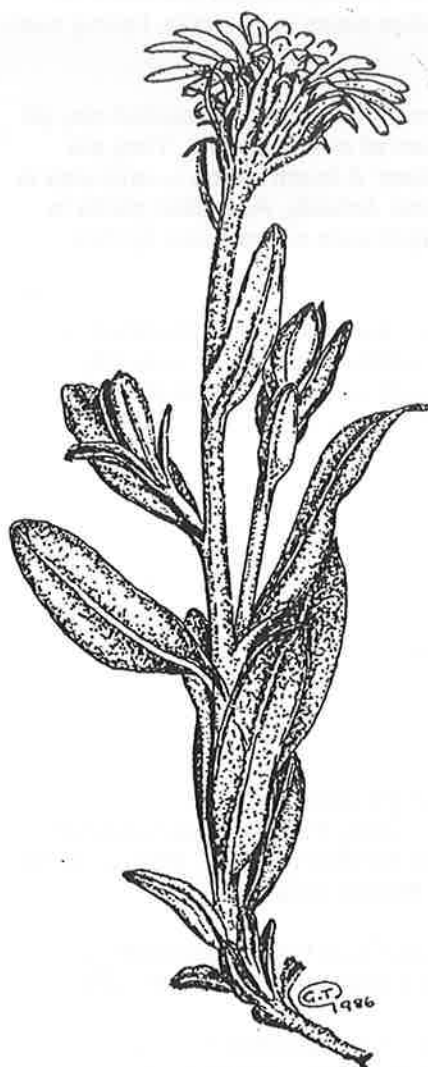


ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

ABN 56 654 053 676

THE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 69



Olearia frostii x 1
(illustrated by Gloria Thomlinson)

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WEB PAGE

<http://farrer.csu.edu.au/ASGAP/daisy.html>

LEADER'S LETTER

Hello again. It is great to be back in Australia after 3 months of travelling. At the time of writing we had not yet reached home and were anxious to see how (if) the garden had survived our absence.

Travelling in the northern hemisphere during the spring months I realized how lucky we are to have such a diversity of flora and understorey plants in Australia. Of course we were delighted by the daffodils, tulips and bluebells as they each came into prominence, but none of these equalled the sight of tracts of *Rhodanthe*, *Waitzia*, or *Cephalopterum* in bloom. Gardens were colourful, but again lacked the variety of species and form that our Australian natives offer.

Apart from one splendid specimen of *Olearia phloggopappa* in full flower and a few *Brachyscome multifida* in window boxes, we saw very little in the way of Australian daisies in gardens. Perhaps AD SG still has a lot more work to do, but then again perhaps it is more prudent to keep our native plants in Australia, having seen the damage exotic plants have done in this country!

A highlight of the trip was a visit to the Eden Project near St Austell in Cornwall, where an exhausted clay pit has been transformed into a stunning variety of flowers and crop plants from all over the world. They are housed in three main 'biomes' — humid tropics, warm temperate and outdoor. A fourth biome — arid area is under construction. Australian daisies would be good candidates for this one. Actually, Australian plants in general, with the exception of kangaroo paws, waratahs and the odd eucalypt were conspicuous by their absence.

However, the Eden Project is a place with serious ambitions to demonstrate the power of regeneration, the strength of working with nature to keep our environment rich and healthy, and how to manage everyday consumer products for a positive future for all. Further information is available on the Eden website www.edenproject.com

Looking forward to getting back into the garden.

Joy



COMING EVENTS

Tuesday, 27th July*	10.00–10.30 am	Meeting at Jenny Rejske's home 82 Bayview Ave, Tenby Point between Grantville and Coronella on Westernport Bay. (Map on p.35) Tel: 5678 0724, Mobile: 0408 037 275
Tuesday, 17th August	10.00 am	Meeting at Bev and Alan Courtney's home 9 Nirvana Close, Langwarrin. (03) 9789 2326
Tuesday, 21st September	10.00 am	Meeting at Maureen Schaumann's home 88 Albany Drive, Mulgrave. (03) 9547 3670
Sat/Sun, 9/10 October	10.00am to 4.00pm	Daisy Study Group members will have plants for sale at Peg's Open Garden Day. Peg would welcome help on the gate on either day.
Tuesday, 19th October	10.00 am	Meeting at Barbara and Roger Rook's home 1 Sunrise Hill Rd, Montrose. (03) 9728 5455
Tuesday, 16th November	10.00 am	Christmas Break-up. We will meet at the Cranbourne Botanic Gardens at the Depot Office. It is hoped that John Armstrong can arrange for a tour of the Australian Garden and for the Friends' Nursery to be opened for us. (To be advised.)

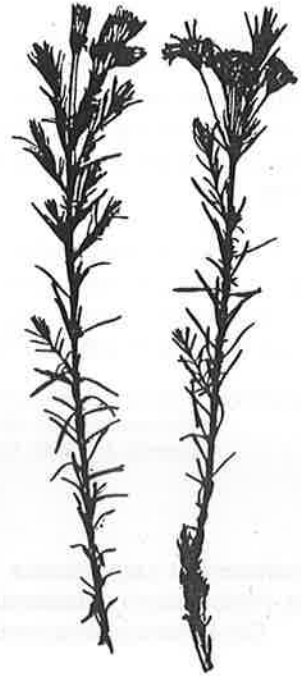
* Please note that the July meeting is on the fourth Tuesday.

SPECIES OR FORMS NEW TO MEMBERS

Olearia tenuifolia

A form of *Olearia tenuifolia* from the Burrinjuck Dam area has been described in NL 21, p. 17–18. Although I collected seed and tried to grow the resultant plants in the garden, I did not recognise the plants growing in David Shiells' beautiful young garden as the same species. In fact the word 'exotic' swam into my mind, but fortunately not from my tongue. After examining flowering stems under the microscope and looking at the illustrations in *Flora of New South Wales* I think it can only be *O. tenuifolia*. David said he had grown it for years and had originally received it from a knowledgeable grower in New South Wales. This introduction serves to underline the fact that we must take variation into account when we try to identify plants.

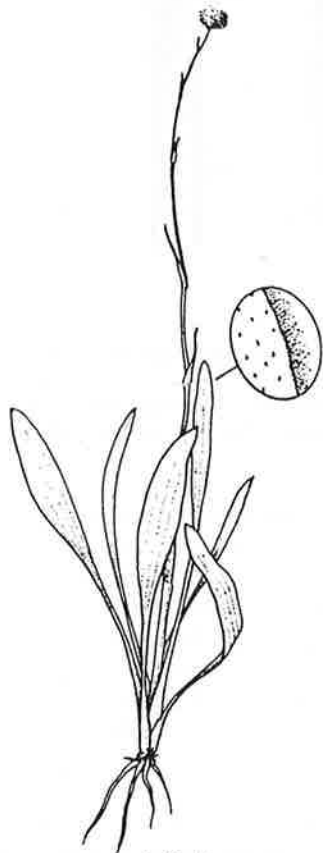
David's plants were robust and dense, about 2 x 1.5m, massed with lovely lilac flowers. The stems are stiff, yellow-green, densely covered with short glandular hairs and very sticky to the touch. Leaves are linear, 1.7–2cm x 1.5–2mm, mid-green both sides, sessile, with margins slightly rolled under and the midrib very prominent beneath. The lower leaves are probably longer. The flower-heads, 3.5–4cm across, are terminal on flowering stalks 3cm long, and are held singly or in loose clusters. This form has about 12 lilac ray florets and 18–20 disc florets with purplish corollas. The bracts are sticky, shining bright green, in five or so rows.



Olearia tenuifolia x ½
Pressed specimen from David
Shiells' garden, (2/6/04)

This is a very handsome shrub. David says it sells well. No wonder! It was still flowering profusely in Violet Town on 2nd June, but that doesn't mean it would be flowering in Melbourne for such a long period. He gave me specimens, not just for identification but also for propagating. I'm no good at cuttings and didn't have time to give them to one of our cutting experts before setting off to Fairhaven, so Peg McAllister gave me instructions over the phone. Luckily, David had one 3" (7.5cm) pot left for sale.

In NL 21 *O. tenuifolia* was recorded at Burrinjuck as being no taller than 50cm on dry, stony soil in fairly open areas. Three seedlings grew reasonably well in a large pots, but Jenny Rejske and I had trouble with it when we tried planting it in our gardens.



Craspedia paludicola x 0.25

Craspedia paludicola

paludicola — from *paludis*, a marsh, and *cola*, a dweller.

(NSW, Vic, Tas, SA)

Some Study Group members first saw this craspedia in the Reef Hills State Park near Benalla in a very wet spring. As we made our way towards Serpentine we passed along a road lapped by water. There, under the grey trunks of eucalypts, were hundreds of yellow compound heads and white daisies held on slender stems about 40–50cm above the flood water. It was a sight I will always remember. In November 1993 Julie Strudwick reintroduced us to this species along Indians Road in Reef Hills S.P. These plants were growing 45–60cm tall in pools or wet soil in open woodland. They were again abundant and the yellow spherical heads, 1.5–2.5cm across, mixed with heads full of seed generated much enthusiasm. Julie knew that this was *Craspedia paludicola*. There had been a recent paper on *Craspedia* sens. strict. in *Telopea* (1992) by J. Everett and A.N.L. Doust. They described 4 new species (excluding alpine and subalpine species): *C. paludicola*, *C. variabilis*, *C. canens* and *C. haplorrhiza*.

Plants grow in swampy areas, often with their lower leaves submerged. They flower from spring to summer

The illustration is drawn by M. Moir, and is taken from *Flora of Victoria* Vol.4, p.761.

C. paludicola is a sturdy perennial which may grow to a height of 75cm. Each plant sends up one to three sparsely hairy flowering stems, which are sometimes dark red. The basal leaves are 10–30cm x 5–20mm, oblanceolate, veined, narrowed towards the base and stem-clasping. The stem leaves become smaller up the stem, and are stem-clasping. The leaves are dark green, often reddish at the base, and are sparsely hairy, mainly on the margins. The heads are globular, 1.5–3cm across, held singly at the tips of flowering stems.

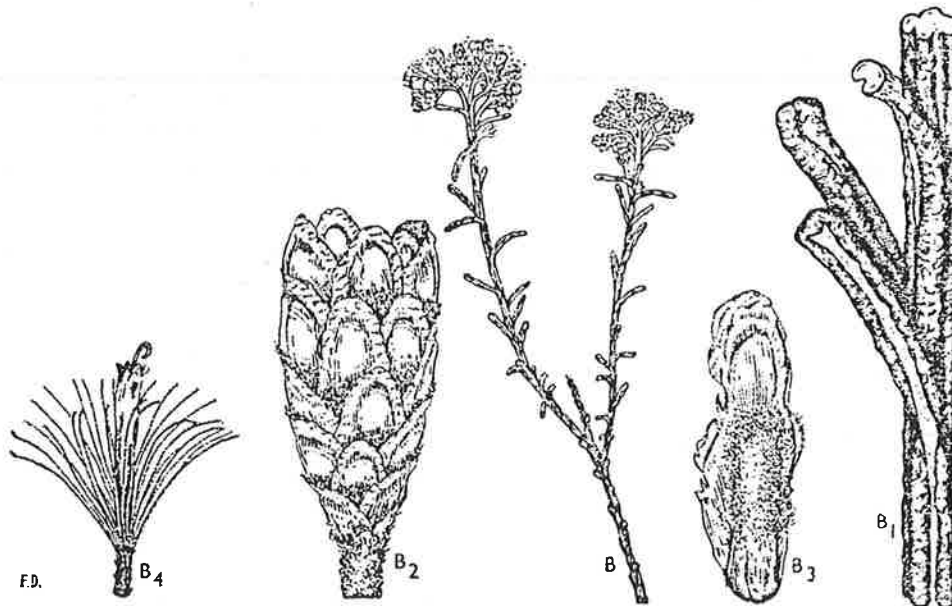
Seed collected from Indians Road was sown the day after collection and germinated moderately well in 60 days. Altogether there were 20 seedlings potted on but nothing else was recorded, so I assume that our garden conditions were too dry and the seedlings all died. This article was written for Linda Handscombe, who is growing *C. paludicola* from seed (p. X) and can't find it mentioned in any of her books.

References: Everett, J. and Doust, A.N.L. (1992). Four new Australian species of *Craspedia* sens. strict. (Asteraceae: Gnaphalieae). *Telopea* 5 (1): 35–38.
Everett, J. (1999). *Craspedia*. In Walsh, N.G. and Entwisle, T.E. (eds) *Flora of Victoria* Vol. 4, 760–1.

Ozothamnus catadromus

[syn. *Helichrysum catadromum* Wakefield, *Vict. Nat.* 68: 51. (1951),
Ozothamnus decurrens F. Muell., *Trans. Phil. Inst. Vict.* 3: 59 (1857).]

Ridged Everlasting



Helichrysum catadromum (now *Ozothamnus catadromus*)

B, small branch (natural size); B1, decurrent leaves on stem; B2, capitulum; B3, inner involucre bract; B4, floret.

Illustration drawn by Mr F. Dandridge of the Division of Plant Industry, C.S.I.R.O., Canberra, from Burbidge, Nancy, T. (1958) A monographic study of *Helichrysum* subgenus *Ozothamnus* (Compositae) and of two related genera formerly included therein. *Aust. J. Bot.* Vol. 6 (3): 258.

This is a species new to AD SG. Christina Leiblich sent seed which she described as "cassinia-type". There are only 3 species of *Cassinia* listed in *Flora of South Australia*, but no illustrations looked like the specimen Christina sent to accompany the seed collection. Could it be a small *Ozothamnus*? It looked somewhat like *Ozothamnus bilobum*, which gave a clue to its identity. The most obvious thing about the specimen is that the leaves are decurrent (even to the lens-implemented naked eye), making the short stems appear angular and relatively thick. Decurrent leaves are shared by *O. bilobum*, *O. catadromus* and *O. occidentale*. It is not the latter because the involucre bracts are straw-coloured while those of *O. occidentale* are milky white. It is not *O. bilobum* because the leaf tip is obtuse rather than bilobed, and the decurrent lines are broad rather than narrow with white-woolly strips between them. It must be *O. catadromus*.

O. catadromus is a much-branched, rounded shrub 50–75cm (sometimes to 1m). The stems are rigid and thick due to the broad decurrent leaf stems. The leaves are 3–6mm long, linear, and wrinkled. They are

glandular, green above, white-woolly below but the revolute margins almost hide the undersurface. The heads, 3mm long, are held on very short stalks in small, terminal clusters. The outer bracts are straw-coloured with an opaque hairy centre to the blade and a paler upper section which has torn margins. The cypsela is cylindrical, brown and sparsely hairy. The pappus has 22 white bristles which are not thickened at the apex.

Seed was taken at the April AD SG meeting, so it is to be hoped that members can report germination soon but, as it was collected on 21/3/04 from a semi-arid environment, the seed may still be dormant.

The species occurs in Vic and SA in sandy soil as an understory shrub in mallee communities. There are colour photos on p. 26 of *The Mallee in Flower* by I.R. McCann and on p.58 of *Wildflowers of the Millewa* by M. Kelly.

References: Burbidge, N.T. (1958). A monographic study of *Helichrysum* subgenus *Ozothamnus* (Compositae) and of two related genera formerly included therein. *Aust. J. Bot.*, 6 (3): 255–256.
Haegi, L. (1986). *Helichrysum* Miller. In Jessop, J.P. and Toelken, H.R. (eds). *Flora of South Australia*, part 3, edition 4, 1537–1538.

by Judy Barker

DAISIES — DELIGHTFUL and DURABLE

by Jo Walker

(This article appeared in the March 2004 issue of the Canberra Journal. Jo is the Leader of the Rhamnaceae Study Group and we are fortunate to number her also among our AD SG members. We thank Lesley Page for permission to use the drawing of *Leucochrysum albicans* which accompanied the article.)

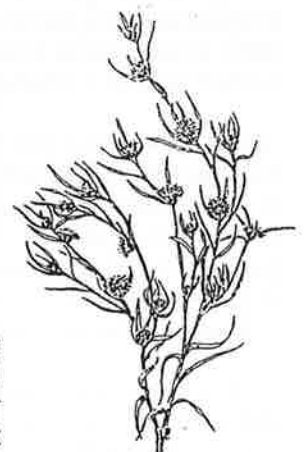
In mid-winter last year my piece of the countryside at Wamboin was a dismal sight. The drought still had us firmly in its grip, the dam had shrunk to a shallow muddy pond, and even the tough old eucalypts looked decidedly stressed and droopy. Every skerrick of grass, plus the peas, daisies, herbaceous plants — and anything in the garden that wasn't completely inedible — had been consumed by the desperate kangaroos. Looking around, and feeling much like the eucalypts looked, I wondered (momentarily) if I should just move back into town.

And then, in August, we had a bit of rain — and then a little more, enough to get the creek trickling. Better rain in September and October filled the dam and put the moisture back into the soil. The regeneration of the countryside was truly amazing, and I could go on forever about seemingly dead plants bursting back into life from dry clumps and stumps but, this is supposed to be about daisies! Billy Buttons (*Craspedia variabilis*) were the first daisies to appear after the rain. Little clusters of bright green, furry leaves came up everywhere — along the creek and in damp areas where you'd expect them to grow, but also scattered high on the drier hillsides, and just about every plant was adorned with flowers this year, swaying heads of lemon-yellow.

Later, Scaly Buttons (*Leptorhynchos squamatus*) put on a good show along the creek and in other moist areas, especially in swards of Weeping Grass (*Microlaena stipoides*). In a seepage area near my fenceline, there was a really good display — a miniature meadow of golden Scaly Buttons.

Another yellow daisy that came up everywhere this year was the tiny annual Austral Sunray (*Triptilodiscus pygmaeus*). This is the only *Triptilodiscus* species in the whole world, and we have it in abundance. (although a lot of people think it is a weed because it is so common!). It did a good job this year of holding the soil in the bare patches where the grass had died out. In the damper areas, it was in competition with the small, bright green, hairy rosettes of *Solenogyne gunnii*, a common but often unnoticed little daisy with small greenish flower heads.

And then there was *Leucochrysum albicans*, the Hoary Sunray. I had been naturalizing it on my place for several years and had some sizeable patches of it established. Although it is often treated as an annual in the garden, I had several large, clumpy plants that were three or more years old. I cared for these older plants tenderly as the drought took hold, but to no avail. Very soon every last *Leucochrysum* had disappeared. I thought I would have to start the whole process again when the drought broke. But when the rains finally came, little grey *Leucochrysum* seedlings popped up everywhere — big patches at the front of the house, a huge area near the water tank and along the creek, and a substantial number up on the drier hillsides. They grew very fast, and made a magnificent display of little white, papery



x ½
Triptilodiscus australis
Drawn by Betty Campbell



Leucochrysum albicans
Drawing by Lesley Page

flowers. It was a particularly beautiful sight where they were growing amongst bright patches of *Chrysocephalum apiculatum*. I have several of the local forms of *C. apiculatum* growing here, and all survived the drought and came back strongly.

Brachyscome spathulata, the Spoon Daisy, did likewise. This species grows in two places on my block, and seems to like a bit of dappled shade. It's doing best in an area of heavy clay soil (wet in a good season and rock-hard and dry at other times) amongst scattered *Kunzea ericoides*. Purple-green rosettes of leaves came up soon after the first rains, and soon the lovely blue flowers were swaying on their long stems in the breezes.

Perhaps the most spectacular daisy here this year was *Xerochrysum* (previously *Bracteantha*) *viscosum*. When I first came here, there were two small patches of *X. viscosum* at the top of the block, and a few equally small groups of plants on adjacent blocks. Then, suddenly, a few years ago, little *Xerochrysum* seedlings began coming up over my

whole twenty acres. Now some of the small patches have coalesced into very large patches, and this year there were large expanses of golden flowers on my place and over the fence. While the *X. viscosum* were in full flower, the *Cassinia longifolia* bushes began to bloom. With their big cauliflower-like heads of white flowers, they were the perfect backdrop to the bright yellow daisies. Cassinias seem to grow equally happily under trees and in the open, but are denser and more floriferous where they are growing in full sun.

One other local daisy that I'd seen only sporadically before made an appearance in three sizeable colonies this year. This was *Isoetopsis graminifolia* (Grass Cushion) which forms a small clump of tiny, cream, button-like flowers clustered at the base of bright green, soft, linear leaves. It is a tiny plant, less than 5cm tall, and not very common.

In addition to the *Leucochrysum albicans* mentioned earlier, I'm attempting to naturalize several other species of local daisies. One that is succeeding nicely is *Calotis lappulaceae* (Yellow Burr-daisy). I got my first one from Gwyn and Geoff (Clarke) who had it appear in their driveway gravel — it did quite well there, and obviously preferred it to the better quality flower beds. It is a small, round, spiky and bright green little plant, covered in small golden button flowers all summer. These ripen into small (but very friendly) burrs — so, if you have a long-haired cat or dog, it might not be for you! I tried to propagate it by putting its burrs into the garden, but with no success — that is, until it discovered my pavers. Three beautiful plants now grow there, in apparently minimal 'soil', and are distributing themselves, via animals and visitors, into an increasing area.

Another Burr-daisy, *Calotis glandulosa* (Mauve Burr-daisy) has been established in garden areas. This is a beautiful plant, forming a mat of bright green soft foliage. In a good spot, it is covered in mauve, pink or occasionally white daisies for a long period. It also has hooked burrs, and is spreading nicely, although to date, only in the garden. *Calotis scabiosifolia* var. *integrifolia* (Rough Burr-daisy) suckers to form a mat of dark green foliage, and has striking mauve-blue flowers. They are often found growing in heavy, dryish soils in what looks like harsh conditions, but mine disappeared through the drought and I assumed it had died. But, some considerable time after many of the other plants had shown signs of recovery, several tufts of leaves pushed up and it proved itself another survivor.

Larger daisies that I've planted around the block — where they are only watered for a few weeks initially and then have to rely on natural rainfall — are *Ozothamnus diosmifolius*, *Olearia phlogopappa*, *Olearia tenuifolia*, *O. microphylla* and *O. myrsinoides*. These have all proved hardy and made it through the drought. *Olearia tenuifolia*, in particular, has done very well. Although it often flowers rather sparsely, this year it has a really good display of blue flowers. Right now, little colonies of *Chrysocephalum semipapposum* are sporting heads of golden buttons and *Cassinia quinquefaria* is budding up well and will soon be covered with drooping racemes of silky brownish green flowers.

Daisies are really good value, whether you are planting a suburban garden, a larger property or doing revegetation work. They are fast-growing, propagate themselves readily, and add colour to the scenery over a longer period than most other plants. We are lucky to have so many local daisies, from ground covers to small trees, displaying a whole range of colours and forms. I will certainly be planting more of these delightful and durable daisies.

AN ADDENDUM ON OZOTHAMNUS LEDIFOLIUSby Jeff Irons

In the March Newsletter Pat Webb wrote glowingly about *Ozothamnus ledifolius* and added that Elliot and Jones state that it grows well on the south coast of England. It is more than that. The species has a Royal Horticultural Society Award of Garden Merit. This indicates that under British conditions it is an easy, trouble free plant that will grow almost anywhere.

While it is true that on exposed mountains the plant is usually (though not always) small, it will become much bigger in garden conditions. My first plant was purchased. In about 20 years it grew to be 1.3m x 1m. When removed it was replaced by seedlings grown from TSGAP seed. They grew quickly and reached 1m in 3 to 5 years. This happened in different situations, moist and dry. Now I clip them after flowering, to maintain their height at around 1m. Perhaps the British commercial clone is naturally slow growing, but my experience is that not all plants behave in that way.

Since Pat likes this species I recommend that she tries *O. ericifolius*. It is paler in bud and has a more upright habit. There is considerable variation in whiteness of indumentum and corresponding degree of contrast between leaves and indumentum. The AD SG seed list includes seed taken from my plants. They were grown from seed collected at Lake Mackenzie, Tasmania. Seedlings will flower in their third year.

TRIP TO THE SIMPSON DESERTby Margery Stutchbury

At last I am getting around to writing about our trip to the Simpson Desert in March/April 2003! The desert trip was a great experience tempered somewhat by time and not being able to pull over every time I saw a plant or tree of interest!

We flew to Adelaide and over-nighted with our host Bill Brinkworth of Outback Bush Adventures. One of the earliest desert trips for the season, we set off in a 4WD plus trailer on 22/3/03, just Bill, Graham and I and a lady from Sydney called Kate. Bill proved to be a very capable driver, guide and cook! As we had no back-up vehicle we were to attack the desert from both sides, but not make a complete crossing.

Bill was most obliging and we often stopped to look at and observe the plants and interesting historical sites. Knowing that I was a plant nut, he delighted in pointing out the creeping plants with pretty yellow flowers, which often grew on the sand dunes. These were later identified as *Tribulus* species and are described in the Santos Field Guide to Common Plants of the Cooper Basin as a troublesome weed! Some areas were lush after recent rains, but many were bare gibber plains with 360° of gibbers.

It would have been great to have a botanist on the trip. My diary is full of drawings of tree shapes and landscape vistas done as we were travelling at up to 100ks on the rough track and going over sand hills (not at 100ks!!). I hope to make something of them in the future. There was so much to see that it is hard to write a concise account.

Daisy-wise I was excited to find *Anemocarpa saxatile* flowering on a rocky rise in the Painted Desert on the way to Coober Pedy. (You and Joy identified it for me when I found plants closer to Coober Pedy on our 2001 trip.) Bill chastised me for scrambling around the ground looking at the daisies instead of looking at the magnificent views of the Painted Desert!! On the 'Moon Plain' going to Coober Pedy we found very tiny plants and a few very tiny flowers of *Rhodanthe floribunda* in round sinkholes called gilgai. These were circular areas about 3 metres wide, still greenish, but the earth was cracked and dry.

More excitement when we stopped at the Mt Gason rare wattle site. *Acacia pickardii* is a very unusual wattle that seldom sets seed (I think it suckers) and this area is fenced off. Here Graham wandered across the road and spied a daisy, a specimen of which is enclosed for ID please. I collected five more specimens which I think may be daisies and will enclose a pressing of each. Most of these were taken on the run and hastily pressed within the diary, sitting a bit cramped in the 4WD with lots of gear around us. At night we had only torchlight in our tent to work by, so am a bit confused about the exact location of some of these.

Other plants of special interest to me were the rare waddy trees, *Acacia peuce*, growing in a small stand just outside Birdsville. They are very slow-growing trees and the wood is very very hard. The wind sings beautifully through the foliage of these trees that look more like casuarinas than wattles. They grow only at two other locations, one being in the south-west of the desert at Old Andado Station where they are protected in the Mac Clarke *Acacia peuce* Reserve, and the other is located near Boulia. In the early days they were cut as fence posts because of their durability.

Other acacias seen included *A. aneura*, *A. cambagei*, *A. salicina*, *A. ligulata*, *A. murrayana*, *A. tetragonophylla* and *A. victoriae*. I was particularly thrilled to see many red mulga, *A. cyperophylla*, with peeling minnie ritchie red bark. Red river gums and coolabahs were particularly beautiful along the banks of Cooper Creek, and along the mostly dry creek lines.

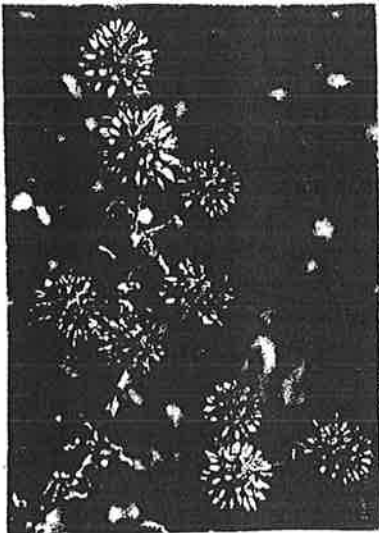
Other trees and plants we saw included *Atalaya hemiglauca*, *Grevillea striata*, *Hakea eyreana*, *H. leucoptera*, *Lysiphyllum gilvum* (Bauhinia), minnie daisies (*Minuria*), *Crotalaria* sp., *Ptilotus* sp., *Goodenia* sp., *Atriplex vesicaria*, *A. nummularia*, *Triodia* sp., *Zygochloa paradoxa*, and at Poeppel Corner where Queensland, South Australia and the Northern Territory meet, a beautiful bush of *Lechenaultia divaricata* in full bloom with delicate lilac flowers.

Pterocaulon sphacelatum

Editor's note: As you see on p.29 Maureen became inspired by Barrie Hadlow's article titled *Pterocaulon sphacelatum* which appeared in NL 68, p. 10. She told me she was sowing seed she'd found in the Provenance seed bank and wanted to know more about its preferred growing conditions. I found colour photos of *Pterocaulon sphacelatum* and *Pterocaulon serrulatum* in *Wildflowers & Plants of Inland Australia* by Anne Urban. While it didn't shed any light on where she was going to plant her seedlings we spent some time studying the pictures and the names beneath. I wrote to Barrie to ask what he thought about the problem and this is his reply:

PTEROCAULON SERRULATUM

by Barrie Hadlow



Pterocaulon sphacelatum

You are right. Both *P. serrulatum* and *P. sphacelatum* occur at Lawn Hill my 'flora check list' informs me, however, my photo is clearly the former with its dense woolly appearance and serrate leaves decurrent with the stem. The terminal compound flower heads are solitary and ovoid (sometimes globular) with florets pink to red. The species also grows in shallow soil over sandstone in the central area of the Dampier Peninsula near Broome (WA), a long way from Lawn Hill N.P. I know. The substrate has similarities, however, (the N.P. has magnificent sandstone cliffs and 'tufa' limestone terraces) and perhaps helps determine the distribution of the species which is found also in NT, SA, Qld and New Caledonia.

It appears that *P. sphacelatum* has a wider distribution, occurring in WA, NT, SA and Qld and it extends into Indonesia, New Guinea and New Caledonia.

This is the photograph of *P. sphacelatum* taken by Anne Urban and photocopied from p. 222 of her book *Wildflowers & Plants of Inland Australia* (1993), Portside Editions, Fishermens Bend, Victoria.

THE ROYAL BOTANIC GARDENS, CRANBOURNE

by Pat Webb

(This article was originally written for *Eucryphia*, the quarterly journal of APS Tasmania. When Pat offered it also to ADSG it was received with great delight.)

Today (March 16th) was a lovely sunny autumn day and six members of the Australian Daisy Study Group were lucky to be taken on a special tour of the new Australian Garden. We were decked out in lurid safety jackets as there were large pieces of earthmoving equipment working, and along with two Gardens apprentices our guide was Warren Warboys. Who better? Warren is the Horticultural Development Officer who has been a member of staff since the Gardens first started. In fact he lived in a house on the site of the new Australian Garden. Warren has a deep knowledge and love of the local flora in the Cranbourne property. His excitement when showing us the progress with the landscape was palpable.

In September 1989, Melva Truchanas, Jill Roberts and Jeanette Closs visited us at Balnarring after visiting the Gardens with Alf Salkin. At this stage the gardens were not open to the general public but all three were excited at the prospect of an Australian Native Plant garden in this area of Melbourne's south east suburbs

(40km from the city). Sadly, most of these original gardens succumbed to phytophthora. Oh! What a change today — I would love to have had each of you with us.

The construction area is closed to visitors but John and I have walked up for a Bird's Eye view to Trig Point in the natural bush area several times since November 2003 when the official commencement of works was celebrated. John Thwaites, Minister for the Environment, and various other local State and Federal members were present. The first stage under construction is 11 hectares; the second stage, not yet funded, will be 26 acres.

The whole site is a scene of great activity; graders, excavators and many pieces of large equipment everywhere "Looking more like a desert scientific outpost" *, but today, the design and plans, previously only seen on paper, are all coming together. The pebbles of the River Walk are in place, as are the large red mudstone rocks along the Eucalyptus Walk. The Rockpool Waterway is developing — at the moment it is all concrete channels, but fitting into the landscape if you can imagine the planting in place. The transformation in just over four months is quite amazing. The contract is expected to be finished by August this year but some areas will be ready for planting in June. As "Growing Friends" we are so looking forward to being involved in a small way.

As well as the dramatic landscaping works, we were taken into the propagating/growing areas to see the work being done by the Garden staff themselves. Many plants are now approaching readiness for planting. Much work is being done with germination trials — looking at various pretreatments, temperature and humidity. Some of the seed has been supplied by AD SG. Two species they are still trying to germinate are *Rhodanthe floribunda* and *Waitzia acuminata*. I enjoyed the interchange discussion between staff and members of our Group — Judy Barker, Joy Greig, John Armstrong and Bev Courtney. It was interesting to see the Humidifier in use — a new piece of equipment bought by the "Growing Friends" last year (\$13,000!) This is being used for some of the more difficult seeds, with lighting, heating and humidity all carefully controlled.

This is a tremendously exciting time in the history of the Royal Botanic Gardens — the transformation of an old sand mine into a world class garden. (Wouldn't Baron von Mueller be pleased?) Visiting it all in progress today was a big thrill and with the 'borrowed landscape' of the Dandenongs and the West Gippsland hills was quite moving. I was thrilled to see the excitement of the staff. What a wonderful time to start an apprenticeship in these Gardens. These are two local boys who will work four days a week here and one day at Cranbourne TAFE.

* Chris Russell, Divisional Director — quoted from *Naturelink*.

SEEDS FOR RBG CRANBOURNE

by Judy Barker

ADSG has been delighted to donate seed to the Nursery staff at RBG Cranbourne. When we visited on 15th March we were taken into the glass house to see how our seeds were germinating. The perennial species of *Brachyscome* were appearing in the punnets after quite a short time, some sedately but others with enthusiasm. It had been decided that the annual species will be sown after winter. This cooperation helps AD SG in that we will be told of the results and will benefit from Frith Jarrad's germination experiments conducted on the species which are proving hard to germinate. As Pat indicated above, Frith was concentrating on *Waitzia acuminata* and *Rhodanthe floribunda*. Pat was entertained by Joy asking why we had described the latter as easy to germinate in our first book and had changed our minds by our third book. It took me half an hour to recall that we had great success with Harpers Seeds (owned by John Colwill) when AD SG first began. We could germinate any species we bought from that company without any pretreatment and thought it was all a piece of cake. Then Harpers closed and we found life much more difficult. It is possible that John grew and harvested the species he offered. He certainly told us that he stored seed of his arid species just beneath the tin roof of his shed. (Maureen was not present at this meeting but later had no hesitation in immediately producing the same answer to Joy's question, thus furnishing a comparison in the speed at which minds work.)

Frith also asked how we germinated *Podolepis jaceoides*. We usually find it germinates easily but our success differs with the seed batch sown. For instance, seed collected from pots (ex Anglesea) in 12/96 and stored at 4°C germinated well when sown last March, but seed from a commercial source has not germinated.

When Josie Valencian (the Nursery Manager) read Jeff Irons' article in NL 68 she was moved to ask if we could spare some seed of *Calomeria amaranthoides*. We could and we will be interested in the outcome.

As Pat has described, our tour of the Australian Garden thus far constructed was fascinating. It was much more illuminating to actually see the development of the features we had been shown on the plan some time ago. The dry river bed and the Eucalyptus Walk looked particularly exciting.

Addendum: Since our last visit we have been pleased to donate seed of three *Rhodanthe* species and two *Waitzia* species for a third year Burnley Horticultural student, Amelia Downey, who is working on a seed germination project under the supervision of the staff at the nursery at Cranbourne. Frith has thanked ADSG and will apprise us of Amelia's results later in the year.

EXCERPT from OUR DESERT EXPERIENCE

by Margery and Graham Stutchbury

DAY 6 27/3/03

After lunch at the Pub we set out to travel 40ks to Big Red, the biggest sand hill in the desert.

The country is flat and sandy coloured with odd green areas, some grass but not much. We are on the edge of the Simpson Desert and seeing some good mirages, passing through Adria Downs. The dunes are light orange and the swales in between the dunes are covered with shiny brown gibber stones. It was a very hot day — over 35° C — and about 3.30pm we set up camp near the Big Red.

Crossing the dunes is an art in itself and Bill proved to be a professional! Take a run in the swales and go full belt at it and if you are lucky you reach the top, almost stop, decide which way you will go down on the other side, and proceed down, then across the swales to the next dune. As we were one of the first parties for the season we did not need to worry too much about meeting another vehicle at the top of the dune, although we carried the regulation safety flag high on our rig. We took turns sitting in the front of the 4WD.

It took two attempts to get up onto Big Red. It was exciting as it was our first attempt at straddling a big dune. We went up to the top and stopped, walked around and took photos — an awesome experience of space and red sand! It was very amazing that actually on top of Big Red there were little plants a few inches long (I've no idea what they were) with a few leaves and a long, fine, white root that was exposed for quite a long way before going into the sand. After coming back on the same side of the dune we crossed Little Red nearby which was not as big (obviously) but still needed about 200 metres run done twice before we got to the top!! Perched on the top and then over! It was very exciting and exhilarating!! That night we had happy hour and the Rangers from Birdsville visited our camp for tea and promised to check up on us the next night after our proposed trip into the desert to Poeppel Corner and hopefully, our return to the Big Red campsite.

DAY 7 28. 3. 03.

..... Dune riding is alarming at first but becomes a great adventure. Tyre pressure down, red flag on HF aerial to warn any oncoming traffic of our presence below the dune crest. We did not expect anyone but who knows who is out there. Charge at the dune from the swale in 3rd, 2nd gear, 1st as the crest approaches, all in 4WD and keeping to the freshest tyre marks until only the sky appears ahead. By this time momentum had been replaced solely by 4W traction and power. Drive right to the crest until the truck is nearly horizontal. Sometimes straight ahead is a 3 or 4 metre vertical drop to be avoided. Then, still in 4WD, gracefully descend the far side of the dune, avoiding eroded gullies on the side of the narrow track — they can be a metre deep and would take some time to get out of! Descend into the swale, possibly crossing a dry saltpan, follow the tracks or get out and check first. The crest is continually sculptured by the wind, and this early in the season (only a couple of vehicles since December) nature has done much work on her art pieces. In the cooler months when traffic becomes continuous the wheel ruts break down the crests into a well-defined highway in the sand.

We crossed 110 dunes in this fashion, mostly with some vegetation on them. Big Red sits on clay plain and has a covering below the crest of spinifex clumps and on the swale where we are camped are coolabahs. Into the desert the swales are often clay and salt pans with acacias and scattered coolabahs. In the series of dunes over the Eyre creek flood plain Coolabahs are common and river red gums grow along the banks. The creek at present is a rough depression in a swale about 30 mins from our camp, but in flood times apparently spreads out to 18 ks wide to engulf several lines of dunes in its flood plain, all supporting good growth of plants, including acacias, hakeas, grevilleas, eremophilas and spinifex.

PROPAGATION PAGES

- **Joy Greig** reported that Randall Johnson (from the SA Dept. of Environment and Heritage) had information on the germination of *Olearia pannosa*. He said Manfred Jusaitis (from Black Hill Flora Reserve) had success when he treated seed with GA3.

(In April the Angair Propagation Group recorded that *O. pannosa* seed collected and sown on the same day [with a light sprinkling of smoked vermiculite over the seed] had germinated in about a month. Perhaps the members collecting the seed had done so before the predators had attacked. Judy.)

- **Maureen Schaumann** reported that the seed from one head of *Polycalymma stuartii* was sown on 5th February, germinated in 7 days and was growing vigorously. Smoked vermiculite had been used to cover the seed sparsely. Maureen hopes to gather seed for the seed bank from these seedlings in the fullness of time. Freshly collected seed of *Podolepis* sp. 1 also germinated very quickly.

On 13/5/04 Maureen sent the following observations: 'Just before reading Barrie Hadlow's article on *Pterocaulon sphacelatum*, I sowed this species on a whim after finding it came from the Desert Park, Alice Springs. Seed sown on 21st February was quick to germinate — 6 days, but after a heavy downpour of rain later in the year, all of the seedlings died. Surprisingly, my seedlings of *Olearia ciliata* went the same way, even though this *Olearia* grows in the higher rainfall areas in the Otways. However, all is not doom and gloom. Other provenance seeds which have germinated well, been potted on and are thriving are:- *Cassinia subtropica* and *C. leptcephala* — 15 days, *Leucochrysum albicans* from Theodore — 6 days, *Craspedia paludicola* — 11 days and *Xerochrysum bicolor* Tas — 16 days. Fresh seed of *Cassinia quinquefaria* would be welcome as our present stock has failed to germinate.'

(ADSG members saw *O. ciliata* growing at Carlisle River in the Otways when Maureen was Leader, but the seed we sowed this year was from Kimba, SA, which is a very low rainfall area (25–30mm). Kimba seedlings probably can't cope with Melbourne downpours. Judy)

- **Judy Barker** reported that fresh seed of *Brachyscome cardiocarpa* was collected from Faye Candy's garden on 3rd February, sown on 7th and germinated in 5 days without pretreatment. *Helichrysum rutidolepis* collected in the wild by Barrie Hadlow has germinated very well, which is a great surprise. It doesn't usually germinate at all when we collect it from gardens.

With some embarrassment she further reports that seedlings in the '*Leptorhynchos nitidulus*' punnet described on p. 10 of NL 68 grew like Topsy. In time they began to resemble *Olearia lirata* to such a degree that it became impossible to maintain that no error had occurred. Add to that information the fact that there was no germination in the *O. lirata* punnet that was sown simultaneously and light begins to dawn. The wrong labels must have been stuck in the punnets. It happens! No wonder I thought the *Leptorhynchos nitidulus* seed was "germinating better than usual". However, after 38 days there are some seedlings appearing in the second punnet of *L. nitidulus* sown on 20/2/04. They have linear cotyledons and the leaves shooting from the base are linear. By 19/5/04 there were 15 seedlings in the punnet, all looking like *L. nitidulus*.

- **Matt Hurst** reported on 6/4/04: 'I don't remember if I mentioned anything about the success of the last batch of seeds you sent me, so I'll give you a quick rundown on the species. Only *Schoenia cassiniana* gave good results (75%) with *Rhodanthe chlorocephala* and *R. manglesii* (forms) the next best at 30%. *Chrysocephalum apiculatum* (Mt William), *Hyalosperma cotula*, *H. simplex* and *R. stuartiana* produced one or a few seedlings, but *Brachyscome iberidifolia* and *Xerochrysum bracteatum* (dwarf form) none. Esma's provenance seed only had *Leptorhynchos squamatus*, *Podolepis rugata* and *P. jaceoides* produce seed out of 10 different species that I tried. I believe that my lack of success was a combination of poor season, trays drying out occasionally and high winter temperatures. While I think the season here may not be the best, I can't resist trying a few more things from the seed bank.'
- **Margery Stutchbury** sent a report on her germination results on 27/5/04: '*R. chlorocephala* ssp. *rosea* were sown en masse on Anzac Day (25th April) and are now about 6 inches (15cm) high, Have also sown *R. manglesii* and *Schoenia filifolia* ssp. *filifolia* and ssp. *subulifolia*, just emerging. Last year I had many failures including *Ixodia achillaeoides*, *Bellida graminea*, *Chrysocephalum semipapposum*, *Leucochrysum albicans* ssp. *albicans*, *Hyalosperma cotula*, *Rhodanthe citrina* and *R. stuartiana*, but my mass plantings of *R. chlorocephala* ssp. *rosea* were outstanding. I was also pleased to have a large pot of *R. oppositifolia* ssp. *ornata* and have just sown some seed collected from these. I have one small *Chrysocephalum baxteri* surviving from last year, only 2 inches high but looks as though it might be growing, and a sad-looking *Calocephalus citreus* only just surviving in a pot. Seedlings from *Rhodanthe*

anthemoides (unbranched) did not grow well, did not flower and I lost them all, while I have no trouble growing the branched form in the garden.'

- **Linda Handscombe** wrote on 27/5/04: 'I'm writing to report to you the progress of my last order of seeds. I planted a few varieties in spring and got quite a few *Xerochrysum bracteatum* (purple), *Calocephalus citreus*, and one *Chrysocephalum baxteri* up and successfully potted. The rest were sown in autumn in a pine frame with a poly fruit lid up on an old bed frame. This was to keep the seeds/seedlings away from (1) earwigs, (2) slugs and (3) mice — all of which made a meal of many seeds in spring. A fine layer of very old and probably expired, smoke-treated perlite was added to the top of each pot. The following seeds have germinated in squat pots of seedling mix in extra large saucers of water:

Ammobium alatum 'Bikini'

Pycnosorus globosus (only 2)

Chrysocephalum baxteri

Calocephalus citreus (2 packets)

Helichrysum leucopsidium, Esma's collection from Tiges Road (lots and lots)

Helichrysum elatum (lots but none from Esma's seed)

Leucochrysum albicans ssp. *albicans* var. *albicans* (lots)

None of the following have germinated yet: *L. albicans* var. *tricolor*, *Bracteantha macrantha*, *Leucochrysum molle*, *Xerochrysum viscosum*, *Pycnosorus thompsonianus*, *Helichrysum adenophorum*.

I have had success with our own seed of the following: *Ammobium*, *Helichrysum obcordatum* (heaps and heaps, but only after the smoke treated perlite was added) and *Pycnosorus chrysanthus*. None of the above are potted on yet. We also got some seed from our friend Adam Merrick who is growing wetland species. We have potted on quite a few *Craspedia paludicola* from Streatham but I haven't found them in a book yet.

We have been striking lots of cuttings too. Amongst them were quite a few *Chrysocephalum baxteri* — the original plant I had bought from a nursery. It was a picture in a wine barrel by the front door. David has struck two lovely plants of a local *Olearia asterotricha* and quite a lot of *Helichrysum ledifolium* have also struck.

- **Syl Oats** wrote of their germination experiences on 3/6/04: 'I managed to get an early start on sowing (for me, anyway). I had seeds in by 17/3 and had completed by mid-April. I really started out very enthusiastically but one thing and another led to disappointment. I'm afraid all the seeds I received from AD SG were a challenge. It was a good job I also put seed in from our garden and a couple of other sources otherwise I would have thought our conditions were not right, but got 100% germination in some of the daisies.'

There was poor or no germination from the following AD SG seed: *C. apiculatum* (Pine Ck, 3/99; Carpie Puntha Hill, 1/99), *semipapposum* (pine Ck, 1/98; Anglesea form ex Mulgrave, 11/04), *Helichrysum rutidolepis* (Dunkeld ex Mt Waverley, 12/95), *Olearia astroloba*, *Podolepis jaceoides* (Tas Wildseed), *Rhodanthe floribunda* (Oodnadatta, 10/97), *manglesii* (Saxon, 3/99), *Waitzia nitida* (Bencubbin, 10/96).

Very good germination resulted from Oats' garden seed or that of relations (collected late last year or early this year) of the following: *Brachyscome iberidifolia* (75%), *Helichrysum elatum* (100% from 33), *Rhodanthe anthemoides* — *chlorocephala* ssp. *rosea* (100% from 250), *humboldtianum* (100%), *Schoenia filifolia* ssp. *subulifolia* (100% from 20), *Xerochrysum bracteatum* (100% from 320). From *Myriocephalus* sp. collected near Morgan (SA) 3/04 there was 100% from 26. One seedling only resulted from seed sown from one plant of *Craspedia variabilis* and none from one plant of *Olearia rudis*.

(As usual, the Oats' seed from the garden has proved to be excellent. The poor result from the last two species was probably due to lack of cross-pollination ... Judy.)

NEW PROJECT

At the May meeting it was decided that AD SG needed a focus and that the next project to be tackled will be on *Olearia* species with a view to having the information available for whatever purpose should arise. Would members advise Joy about which species you are growing, please? Country members might be able to collect seed we can't buy or acquire from other sources.

It is envisaged that Joy will assemble the information in a loose leaf folder in much the same format as the Everlastings book was set out. Please collect seed from your plants as it becomes available and send it to Judy or Maureen. We think that germination in this genus is best achieved if fresh seed is sown. It may be easier for some members to collect cuttings, but more thought will have to be given about where they should be sent. As this idea only occurred to the Melbourne members on 15th June, it needs more exact planning before too much effort is expended, but we thought a preliminary start could be made, eg. noting flowering times, size of plants and growing conditions.

Christina Leiblich sent a small amount of seed of a small, blue-flowered plant from near Richies Hill in the Kimba area (SA). It is probably *Olearia adenolasia*, but the seed has not germinated as yet. Natalie brought two very appropriate plants from Jo Walker to the June meeting for Show and Tell — *Olearia aglossa* and *Olearia montana*. Both were very pleasant looking, interesting plants to set us on our way.

Abstract of a Paper on *Brachyscome muelleri*

[The following is an extract of a paper on *B. muelleri* from the October 2003 Journal of A.P.E.S. (the Australasian Pollination Ecologists Society).]

Jusaitis, M; Sorensen, B; Polomka, L. (2003). Reproductive biology of the endangered *Brachyscome muelleri* (Asteraceae), an endemic herb of Eyre Peninsula, South Australia. *Australian Journal of Botany*. 51 (2): 179–188.

The reproductive biology of *Brachyscome muelleri* Sonder (Asteraceae) was studied from 1995 to 1997 by using nursery and field experiments. Reproductive development and seed dispersal occupied approximately half of the 4-month growth cycle. Flowers of *B. muelleri* did not have any obvious self-incompatibility systems and were readily selfed to produce viable seed. It appeared that *B. muelleri* may be preferentially cross-pollinated under ideal conditions of pollinator visitation, but could revert to self-pollination in the event of outcross failure. Seed dispersal was assisted by the epinastic curvature of peduncles as fruit matured, bringing capitula into contact with the soil a short distance away from the parent plant. Slight wind-stimulated movement of the capitulum was sufficient to dislodge seed directly on to the soil surface. Seed was shed in the immediate vicinity of parent plants and although some short-range movement facilitated by rain splash, water flow and gravity was observed, no long-distance dispersal mechanisms were apparent. Annual seed production of the single extant population of *B. muelleri* plants contained, on average, over 1700 germinable seeds m⁻². Many of these seeds germinated or died within a year, the remainder persisting into a second or third year. Seed viability under field-burial conditions declined to less than 10% over that time. Population size did not appear to be limited by seed production, but rather by seed dispersal syndrome.

The Penguin Dictionary of Botany defines 'epinasty' as a movement in which the resultant bending of the plant part is downwards, due to increased growth on the upper side of an organ.

MEMBERS' REPORTS

Doreen Sabien of Malanda (Qld) writes on 20/3/04: 'As a new member and in an entirely different climate from most members, I am more or less stabbing in the dark with my request for seeds. However, I am thinking of a trial and error situation maybe facing a few challenges. In the hinterland here behind Cairns (Northern Qld) with an elevation of 700m we don't have a lot of local daisy flora. I have only encountered *Xerochrysum bracteatum* (I think annual form), *Helichrysum newcastleianum*, *Helichrysum rupicola* and one with the old name I know as *Spilanthes**. Have grown *Ozothamnus diosmifolius* and *Xerochrysum* 'Dargan Hill white' successfully, so perhaps there is hope of expanding my plantings.'

* Pat Clarke has told us that *Spilanthes grandiflora* had its name changed to *Acmella grandiflora* var. *brachyglossa*.

Jo Walker of Wamboin (NSW) writes on 29/3/04: 'I have quite a few species of daisies in the shadehouse waiting for better conditions before I put them in the ground. One of these is *Brachyscome angustifolia* var. *heterophylla*. We found it growing, while on one of our Wednesday walks, at Ginnindelle Falls (a private reserve in Canberra). It was growing in what looked like deep sandy soil a little way from the Murrumbidgee River. It didn't appear to be stoloniferous, growing in small, scattered clumps. I collected some rather green-looking seed, but it germinated and I now have about a dozen healthy little plants. They have pale blue, pale

pink and almost white flowers. We haven't seen it anywhere else, and it's not mentioned in Burbidge and Gray's *Flora of the ACT*.'

Matt Hurst of Wagga Wagga (NSW) writes on 6/4/04: 'Had the first rain today for nearly two months. Everyone here hopes that the drought will break now and local farmers can get their first decent crop in four years.'

The garden, as you can imagine, is very tired with many plants only surviving due to drip irrigation. Seed production is minimal and bugs are eating virtually everything. You will find in the post pack some seed from the Ardlethan form of *Xerochrysum bracteatum*. Plants are to 30cm in the wild in alkaline red sand. Seed viability seems high as I sowed a little at Jayfields in January and had a 90% success rate.

I can recommend Thredbo as a summer destination. It certainly was a picture at the start of March, with lots of daisy species out in flower. Evidence of the fires was plain to see but another twelve months of growth and you would never know there had been a fire.'

Trish Tratt of Emerald (Vic) reports on 14/4/04: I am enclosing a little seed of *Brachyscome cardiocarpa* collected from plants Esma gave me. Esma wrote in a letter to me "even miserable looking seed of this species does germinate" so I hope plants can be raised from this seed as some certainly look "miserable". The plants are still thriving here in the garden.

The garden is starting to take shape — still much to do. Many new seedlings of *Rhodanthe chlorocephala* ssp. *rosea* and *B. iberidifolia* are popping up since we had a little rain. The plants you gave me have all done well, apart from *B. aff. Maureen* which died off shortly after planting it out. Particularly successful have been *Kennedia prostrata*, *Craspedia variabilis* Anglesea, and *Podolepis* species 1. They started flowering early December and are still very showy. It will be interesting to see how they go over winter. I will try growing more from seed, if they winter well they are certainly gems. I was looking through a little book I bought a few years ago — *Australia's Most Threatened Ecosystems of South Eastern Lowland Native Grasslands* — when I saw a beautiful colour picture of this lovely plant. It was "An undescribed species of *Podolepis* (*Podolepis* sp. aff. *jaceoides*) found in Western Victorian grassland. This species is probably endangered (Keith McDougall)."

Beth McRobert of Jamboree Heights (Qld) writes on 25/4/04: 'It is daisy planting time again, and I have a few pots of plants from commercially available seed (*Brachyscome iberidifolia*, *Schoenia filifolia* and *Rhodanthe chlorocephala* subsp. *rosea*) for our SGAP Autumn Plant Sale next Saturday.'

But I must tell you about something else. One day I reached into a far corner of my fridge and wondered what was in that little jar. Well, in the jar were numerous packets of seed that had been kept from the Everlasting Daisy Project — I think we had to keep some seed in case of the need to repeat something. So on 27/3/04 I planted (in ordinary potting mix without any other treatment) 10 seeds of *Rhodanthe humboldtianum* from a packet marked "Mt Magnet (collected 10/95 by P.V. Fitzgerald)" and on 1/4/04, 3 plants came up; 10 seeds of *Rhodanthe manglesii* from one packet marked "NS114 50 Nindethana cultivated 4° since 1/96 (4 plants up on 31/3/04) and 22 seeds from another packet of *R. manglesii* with similar details (6 plants up 31/3/04). I am really pleased that the seeds that have been kept for so long in the refrigerator will still come up, even if at a fairly low rate, and am looking forward to seeing them grow in the garden, though I hope I can do the right thing by them in maintaining them.'

Linda Handscombe of Pomonal (Vic) writes on 27/5/04: 'We have just had 1 inch of rain over the week which has saved many things from certain death. We have lost most of our boronias, quite a few big, established correas, a couple of grevilleas AND the entire vegetable garden except the silverbeet. On the whole the garden looks surprisingly good despite the ghastly summer.'

I will endeavour to tube up all my seedlings but need to arrange a similar system for the tubes as I have for the seedlings. The slugs are running riot in the igloo despite loads of snail bait (which the rats eat). They have eaten 80% of my Kangaroo Paw seedlings!!

I have enclosed three photos, one of our seedling box and two of our wine barrels showing my favourite daisy, *Pycnosorus chrysanthus*, flowering away. I bought the plants from Phil and Jane Williams' Wildflower Nursery in Pomonal. I pick the flowers to dry for dried posies.'

Peg McAllister of Croydon (Vic) rang in early June to say that *R. chlorocephala* ssp. *rosea* collected in great quantity by Ray Purches in 1998 and stored at room temperature was coming up well, but had taken much longer to germinate than usual.

Syl Oats of Elizabeth East (SA) wrote on 3/6/04 of her trouble with pine peat: 'We had a problem with our potting soil that we make up with pine peat and sand. The pine peat was left over from last year, stored in a 40 gallon drum with a lid. The peat had a blue-grey mould on it, 100% all through it. We thought that when the sand and nutrients were mixed in it it would disappear, but sadly it got worse. The smell was incredible, a bit like mushrooms but I noticed it made my lips and tongue tingle. All the seedlings planted out in this potting soil stayed small and yellowed. On turning out the pots you could tell that the potting soil had become water repellent. I had noticed that when I watered the pots the water sat on top for ages, so I lost a few seedlings that way.

Syd tried soaking the pots in permanganate of potash. It hasn't cured the problem and the seedlings are still stunted and yellow. Syd poured some of the potting soil on to the garden and treated it first with sulphur and later tried lime. It still remains grey and waterproof. Any ideas what we could do to restore the soil?

(I have suggested that Wettasoil might help with the hydrophobic structure of the soil, but I don't like the sound of the fungus and think it should be totally removed if possible. Natalie says that potting soil should never be tightly covered but should be allowed to breathe. Any other suggestions? Judy)

Ros Cornish of Carwoola (NSW) reports on 12/6/04: 'There is no real daisy news as I haven't done anything in the garden. I have noticed that the *Craspedia variabilis* are popping up again as are the *Ammobium craspedioides*. We haven't had any rain to speak of — 9mm for May and 4mm so far in June. I hope to spend some time tidying up the garden over the next few weeks and I'll send some seed of *Calocephalus citreus* and *C. lacteus*.

Have had news of the Hadlows. They're having a great time in outback Queensland and say that things are quite green. They were at Winton according to the last card.

Jenny Rejske of Tenby Point (Vic) rang on 15/6/04 to report that *Cassinia aculeata* comes up naturally on her block and she looks forward to them becoming a screen.

SHOW and TELL

(February Meeting) *Podolepis* sp. 1. Maureen had collected seed from her clumps of this species, cut back the stems and now has a new clump of basal leaves. She regards this species as far superior to *P. jaceoides* for garden cultivation. *Calocephalus citreus* with bright yellow heads 4cm long had been grown by Faye Candy and borrowed by Maureen for Show and Tell. Plants have been grown in wet conditions, which may cause the heads to grow at least four times as long as Maureen (or I) can achieve.

Other species in flower were *Xerochrysum papillosum* (a plant to 60cm with a narrow habit and lovely pink buds opening white), *Calotis glandulosa* (prostrate, with mauve flowers over a long period), *Leucochrysum albicans* ssp. *albicans* var. *albicans* (in flower since September but with flowers much reduced in size), *Helichrysum rutidolepis* probably of alpine or subalpine origin (cut back to the base and now growing up again), *H. rutidolepis* (Oberon) and *Chrysocephalum apiculatum* John Emms' form (also cut back hard and now coming into flower again).

Brachyscomes in flower were *B. angustifolia* (pink form), *B. basaltica* var. *gracilis*, *B. melanocarpa*, *B. multifida* 'Alba', 'Amethyst', *B.* Maureen's hybrid (a round clump with mauve heads), and *B.* 'Gloria Thomlinson'. Other species on display were *Calocephalus lacteus*, *Podolepis neglecta*, *Pycnosorus chrysanthes*, *P. thompsonianus*.

(March Meeting) Joy was the only one of us who remembered to bring specimens. There were wired specimens of the local *Helichrysum leucopsideum* compared with the beautiful Tasmanian form many of us are trying to grow. Both specimens were pleasing but the heads of the local form were mainly white and quite a lot smaller. The Tasmanian form's stunning heads were large and suffused with pink, looking remarkably similar to the colour print of *Helichrysum lindsayanum* on the back cover of Australian Plants Vol. 22, No. 177. Joy observed that her Tasmanian plant flowered beautifully, and some time later it looked dead. She left it while she decided what to do about it, and now it has a tiny new shoot.

The other specimen was of a fresh hybrid brachyscome with light green foliage and lilac heads about 2cm across. We tentatively identified it as *Brachyscome* 'Happy Face'. The heads were probably smaller because the plant had been flowering for a long time.

(April Meeting) *Brachyscome nova-anglica* and *B. procumbens*, and *Helichrysum leucopsidium* (from Tasmania, looking beautiful as usual). *Podolepis* sp. 1 made a great impression. Maureen said her clumps had flowered from September to January when she had cut them back hard. They were in flower again.

In the Hawthorn garden the daisies pointed out were *Brachyscome riparia*, *B. segmentosa* cross, Maureen's blue hybrid, *Xerochrysum bracteatum* (Sandy Beach) and various germinating and non-germinating pots.

NEW MEMBERS

ADSG warmly welcomes the following new members:

Jennifer Johnson, PO Box 192, Creswick, Vic, 3363.

Peter and Gail Lette, 162 High Street, Hillston, NSW, 2675.

Doreen Sabien, Box 51, Malanda, Qld, 4885.

EDITOR'S LETTER

New member, Jennifer Johnson, runs an indigenous nursery in Creswick and would be pleased to see members if they ring her first. (Mobile: 0417 594 225). Jennifer will probably need quite a bit of notice because she has a new baby and that can be very time consuming.

Beth McRobert has now published her book for children, *Come and Meet Us*, and it is lovely. It is published by Copyright Publishing Co. and was printed in 2003. Beth has drawn and painted all the illustrations and the colours are beautifully reproduced. It is an abc for children using Australian plants as examples of each letter. Yes, z is for *Zornia dyctiocarpa*.

During the May meeting Natalie took us to view the Plant Growers Australia set-up at Brushy Park. The propagation area seems vast, being composed of three interconnecting shade houses with separate attached rooms for cutting preparation and potting on. It works so efficiently that Natalie says it could have been half the size. The walls and roof of the shade houses are a double skin of plastic, the roof can be opened at the eaves if necessary. The temperature is controlled by computer and shades some distance below the roof may be drawn across and are also controlled by computer. The plant tables are of flat, heavy black plastic over hot water coils. The cleanliness and space of the preparation rooms would make the onlooker green with envy. They even had a machine for cutting back all the rooted cuttings to the same size. Trays were placed obliquely on the machine and an electric saw pruned them to a preset height. It was very impressive and most educational.

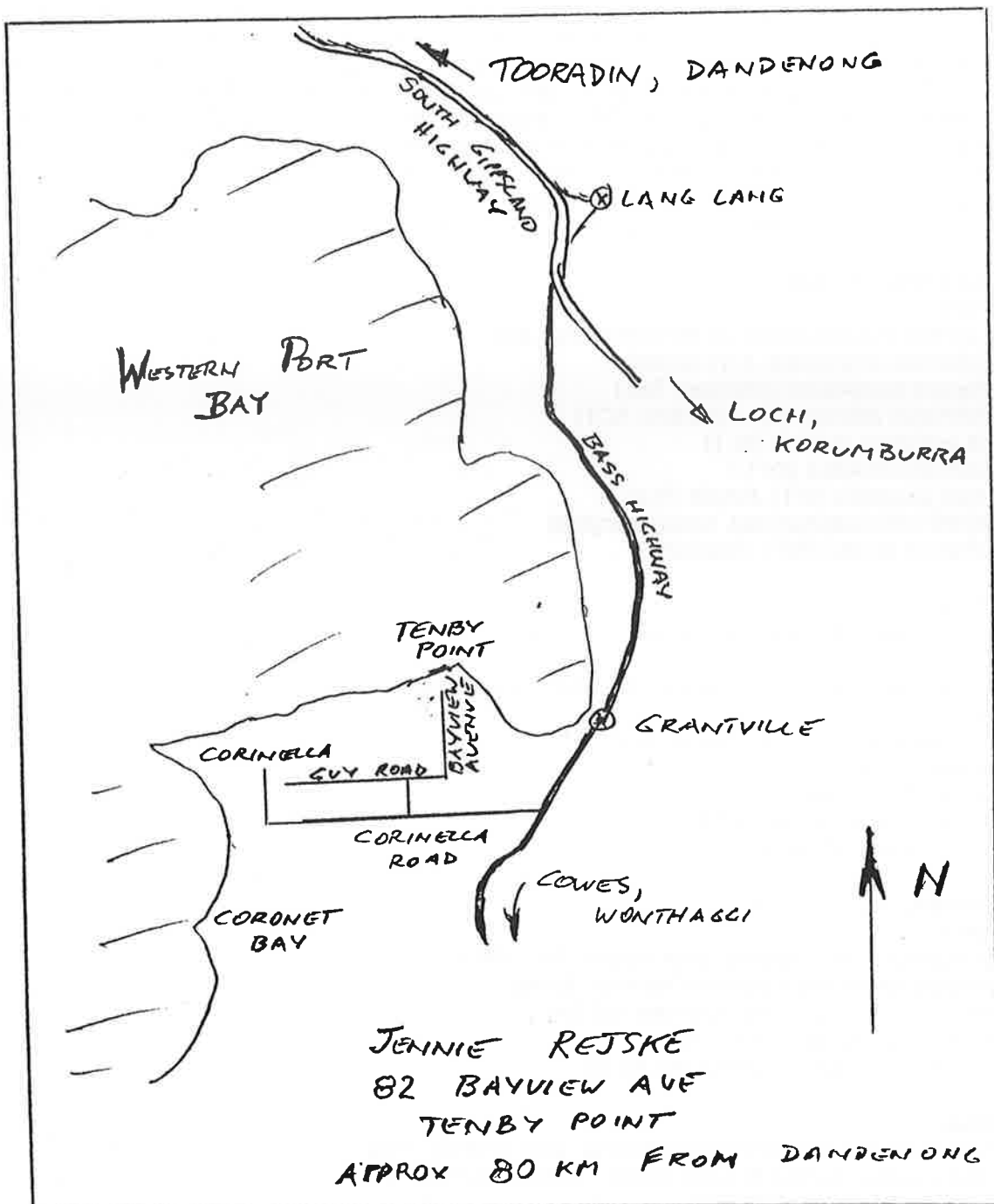
Margery Stutchbury has sent a marvellous diary of the Stutchbury's travels in the Simpson Desert. She and Graham combined both their diaries and produced a fascinating and educational document, complete with marvellous colour photos. Their trip took in Innaminka, Birdsville, Poeppel Corner, Marree, William Creek, Oodnadatta, Dalhousie Springs and Purnie Bore. They also entered the Tirari Desert, Simpson Desert, Sturts Stoney Desert, Strzelecki Desert, the Painted Desert and Lake Eyre Basin. As Margery says (p. 25) there were not many daisies to be seen, but the account of the trip is so entertaining that an excerpt is included in this newsletter and others will appear in the newsletters from time to time. Any of the members may borrow it.

Although Bev is still the treasurer as I write this, she will have retired by the time you receive NL 69. She took over as keeper of the finances when Esma became leader after Maureen retired. That was early in 1988. So for more than sixteen years Bev has handled the money with accuracy and confidence, and every year the books have balanced. When Esma retired as leader Bev took pity on my inability to add up more than single figures and agreed to retain the job. She has handled my scraps of paper and memory lapses with her usual calm, and still the books balanced. She has devoted much time and energy to the task, as well as growing and reporting on daisies and how to propagate them. Many thanks, Bev, for a task very well done indeed. John Webb will be our new treasurer and is already wondering if his kind offer to do so was a rash one.

It's great to have Joy at home again, and to know that she and Neal enjoyed their overseas trip very much.

Keep the letters coming. Best wishes from





SEED DONORS

ADSG is very grateful to the following seed donors: Judy Barker, Ros Cornish, Betty Denton, Barrie Hadlow, Matt Hurst, Jeff Irons, Christina Leiblich, Maureen Schaumann, Margery Stutchbury and Trish Tratt. Special thanks to Christina Leiblich who has continued to collect seed for ADSG although she has now retired from the Group. Over the years we have received many parcels of excellent seed, beautifully cleaned. It has been a most valuable contribution. Margery Stutchbury has replenished our supplies of *Rhodanthe chlorocephala* ssp. *rosea* and *R. manglesii*, both of which were very low.

SEED BANK ADDITIONS and DELETIONS

A full seed list is published in each March newsletter. Only additions and deletions are recorded in other newsletters. **A stamped, self-addressed envelope (111 x 220mm) must be enclosed with each request for seed. (Postage required is usually \$1 due to the bulkiness of some seed.)** Please write to Maureen Schaumann for provenance seed or to Judy Barker for garden or commercial seed. (The addresses are on the front page.) If both types of seed are required a letter to either Maureen or Judy will suffice.

Thank you to all those members who sent reports of their germinations. Maureen and I keep lists of the actual seed sent out (or rather we intend to do so on every occasion but the pressure of time may catch us out sometimes). This information is extremely valuable. We apologise for sending seed that has not germinated, but it is impossible to test all the seed we hold in stock every year (as we would have to do for complete confidence in the viability). When there are two or more reports that a certain seed is not germinating we can throw it out and cross it off the seed lists. This saves us space and other members the frustration and costs of lack of germination. We can also ask the seed suppliers to replace it. There are two daisy species supplied by Wildseed Tasmania that have not germinated for at least two members — *Helichrysum scorpioides* and *Podolepis jaceoides*. These two species are normally easy to germinate.

Garden and Commercial

Additions

Brachyglottis brunonis (cultd. ex Mt Wellington, Tas.)
Brachyscome cardiocarpa, nova-anglica
Helichrysum scorpioides (Wildseed Tas.)
Leucochrysum albicans (ex. Theodore, ACT)
Olearia astroloba, ledifolia (W.T.)
Ozothamnus ericifolius (W.T.)
Podolepis jaceoides (WT), *nutans* (?), sp. 1
Rhodanthe chlorocephala ssp. *rosea, manglesii*
Xerochrysum bicolor (WT), *viscosum*

Deletions

Bellida graminea, Brachyscome parvula
Cassinia quinquefaria
Helichrysum adenophorum, rutidolepis (Dunkeld ex Mt Waverley, 12/95)
Ixodia achillaeoides
Leucochrysum albicans var. *tricolor, molle*
Ozothamnus diosmifolius
Pycnosorus thompsonianus
Rhodanthe manglesii (Sax, 3/99)
Xerochrysum macranthum

Provenance

Additions

Chrysocephalum apiculatum (Carpie Puntha, SA, 11/03)
Helichrysum rutidolepis (Lithgow to Newnes, NSW)
Ozothamnus catadromus (near Richies Hill, SA)
Rhodanthe polygalifolia (Kimba District)
Xerochrysum bracteatum (Ardlethan, NSW)

Deletions

Chrysocephalum apiculatum (Carpie Puntha, 1/99; Pine Ck, 3/99)
Rhodanthe citrina, floribunda (Oodnadatta, 10/97), *stuartiana*
Waitzia nitida (Bencubbin, 10/96)

(Please note that NL 68 included an error in the 'Garden or Commercial' list. The '*hieracioides*' listed under *Leptorhynchos* should have been listed under *Podolepis*. The editor apologises.)

SEED WANTED, PLEASE

We would be very grateful for seed of the follow species: *Brachyscome parvula*, *Cassinia quinquefaria*, *Ixodia achillaeoides*, *Leucochrysum albicans* ssp. *albicans* var. *tricolor*, *Ozothamnus diosmifolius*, *Pycnosorus thompsonianus*.

SUBSCRIPTIONS NOW DUE 2003/2004

Subscriptions are \$10.00 per year for members within Australia and \$20.00 per year for overseas members. Please send subscriptions to our new treasurer, John Webb, 99 Fiddlers Green, 57 Gloucester Ave, Berwick, Victoria, 3806. Cheques should be made payable to the 'Australian Daisy Study Group'.

SUBSCRIPTIONS WERE DUE ON JUNE 30th.