

- 3 APR 1986

BRACHYSCOME/HELIPTERUM STUDY GROUP

ISSN 0729-543X

NEWSLETTER NO.14

MARCH, 1986

Dear Members,

You will all be pleased to learn that Lothian Books have agreed to publish our book on "Australian Daisies" as part of their gardening series. Provided we can produce the finished manuscript within the next few months, it will be on sale early next year. To finish our manuscript on time, more material support is needed from members.

Will you please help us by sending in any information that you may have on the growing or maintaining of any of the daisies from the list attached, as Page 2 of this Newsletter. From my last plea for help, out of 75 members, only five (5) responded. Very disheartening. Surely there must be more than five members in the group growing daisies. Many more members receive seed from the seed bank, results of which are never known. Maybe members need to be reminded what a Study Group is all about:-

"We share an interest in a special group of plants; we should be exchanging experiences, cuttings, seeds and engaging in projects aimed at the better understanding of the cultivation requirements of our special interest".

So that this shortcoming may be rectified, Joy Greig has gone to a lot of trouble to prepare new propagating sheets for your use. Members who have obtained seed or cutting material in the past are requested to complete these forms and return as soon as possible, so that progress on the book continues without hindrance.

.....

AUTUMN SOWING:

To all those members who have recently joined the group, I would recommend now as being the best time to start sowing your annuals and perennials, to take advantage, as I do, of the early autumn rains. I made an early start on the 2nd March and sowed over 50 containers of seed. I was surprised to find seedlings appearing after only four days and, seven days later, I was even more surprised to find I had 8 Calotis scabiosifolia, 2 Calotis multicaulis, 3 Helichrysum semi-papposum, 3 Helichrysum bracteatum (Cobar), 23 Minuria leptophylla, 8 Helipterum maryonii, 28 Podolepis canescens and 18 Craspedia chrysantha. I hope after this week-end's rain, my results will be doubled by next week.

I am still sowing my seeds by the same method as reported in earlier newsletters, coarse river sand with containers standing in water, out in the open in full sun. Containers are left out in the rain, but removed from their tray of water, to prevent seeds from washing out.

.....

NEW MEMBERS:

I would like to welcome the following new members to the group and delighted that you have all offered to play an 'ACTIVE'! part:-

Thelma & Bruce Wallace, Eaglehawk  
Lynne & Ian Evans, Eaglehawk  
Tom Chalkley, Bendigo

Gloria Thomlinson, Shepparton  
John Llewellyn, New Lambton Hts.  
Peter Vaughan, Newcastle.

SPECIES OF PARTICULAR INTEREST TO BOOK COMMITTEE.

<i>Ambrosium alatum</i>	<i>Helichrysum diosmifolium</i>	<i>Olearia adenophora</i>
	<i>diotophyllum</i>	<i>asterotricha</i>
<i>Brachyscome aculeata</i>	<i>elatum</i>	<i>ciliata</i>
<i>angustifolia</i>	<i>ledifolium</i>	<i>decurrens</i>
<i>basaltica</i>	<i>leucopsidium</i>	<i>elliptica</i>
<i>cardiocarpa</i>	<i>lindleyi</i>	<i>floribunda</i>
<i>ciliaris</i>	<i>obcordatum</i>	<i>frostii</i>
<i>ciliocarpa</i>	<i>obtusifolium</i>	<i>glutinosa</i>
<i>decipiens</i>	<i>rosamarinifolium</i>	<i>iodochroa</i>
<i>diversifolia</i>	<i>scorpioides</i>	<i>lirata</i>
<i>graminea</i>	<i>secundiflorum</i>	<i>pannosa</i>
<i>heterodonta</i>	<i>senipapposum</i>	<i>phlogopappa</i>
<i>iberidifolia</i>	<i>stirlingii</i>	<i>tomentosa</i>
<i>latisquamata</i>	<i>subulifolium</i>	<i>ramulosa</i>
<i>lineariloba</i>	<i>thyrsoideum</i>	<i>rugosa</i>
<i>melanocarpa</i>	<i>viscosum</i>	
<i>microcarpa</i>		<i>Podolepis canescens</i>
<i>multifida</i>	<i>Helipterum albicans</i>	<i>jaceoides</i>
<i>navalis</i>	<i>anthemoides</i>	<i>neglecta</i>
<i>obovata</i>	<i>chlorocephalum</i>	
<i>parvula</i>	<i>corymbiflorum</i>	<i>Rutidosia helichrysoidea</i>
<i>rididula</i>	<i>cotula</i>	<i>leptorhynchoides</i>
<i>scapigera</i>	<i>craspedioides</i>	
<i>segmentosa</i>	<i>fitzgeraldii</i>	<i>Senecio pectinatus</i>
<i>species (Pilliga)</i>	<i>floribundum</i>	<i>lautus</i>
<i>stolonifera</i>	<i>humboldtianum</i>	
<i>spathulata</i>	<i>jessenii</i>	<i>Waitzia acuminata</i>
	<i>manglesii</i>	<i>aurea</i>
<i>Calocephalus brownii</i>	<i>molle</i>	<i>citrina</i>
<i>citreaus</i>	<i>polygalifolium</i>	<i>suaveolens</i>
<i>sonderi</i>		
	<i>Helipterum praecox</i>	
<i>Calotis scabiosifolia</i>	<i>roseum</i>	
	<i>splendidum</i>	
<i>Cassinia aculeata</i>	<i>stipitatum</i>	
	<i>strictum</i>	
<i>Celmisia asteliifolia</i>	<i>venustum</i>	
<i>saxifraga</i>		
	<i>Ixodia achillaeoides</i>	
<i>Cephalopterum drummondii</i>		
	<i>Leptorhynchus squamatus</i>	
<i>Craspedia chrysantha</i>	<i>tenuifolius</i>	
<i>glauca</i>		
<i>globosa</i>	<i>Microseris scapigera</i>	
<i>pleiocephala</i>		
<i>Helichrysum acuminatum</i>		
<i>adenophorum</i>		
<i>alpinum</i>		
<i>ambiguum</i>		
<i>apiculatum</i>		
<i>baxteri</i>		
<i>blandowskianum</i>		
<i>bracteatum</i>		
<i>cassinianum</i>		
<i>davenportii</i>		
<i>dealbatum</i>		

Mycorrhizal Associations in the Asteraceae

Judy Barker.

Every member would be aware of species that were difficult to grow in garden conditions. In my experience such species would include Helichrysum obtusifolium and H. blandowskianum, Helipterum stipitatum and H. fitzqibbonii.

I had thought the difficulty might be due to lack of (or overabundance of) some element in the growing medium, but a paper titled 'The Mycorrhizal Associations of some Australian Asteraceae' by J.H. Warcup and P.A. McGee indicates the possibility of a different reason. I recently wrote to Dr. Warcup to ask for more information. His reply helped to clarify matters for me, but he warned that not much is known about the mycorrhizas of Australian plants.

Here are some of the points he made: -

A mycorrhiza is an association of a fungus with the roots of a higher plant. It usually results in a nutrient exchange system which is of mutual benefit to the plant and to the fungus.

In soils of low nutrient availability (lacking phosphorus or sometimes nitrogen or both) these mycorrhizas are essential for the growth of plants that normally possess them. A few plants such as Proteaceae and sedges (and plants growing in water) are without mycorrhizas.

Two sorts of mycorrhizas may occur in association with species of the Asteraceae:-

1. - Where the fungus forms a sheath on the root surface and may penetrate between the root cells, but not into them - known as ectotrophic mycorrhizas.
2. - Where the fungus actually penetrates the root cells - known as VA mycorrhizas (vesicular-arbuscular mycorrhizas, to give them their dauntingly full title).

VA mycorrhizas occur on most plants, whereas ectomycorrhizas are thought to occur mainly on trees such as pines, oaks or eucalypts, but in Australia occur on many shrubs and herbs.

The paper referred to examined 80 species of Australian Asteraceae. All were found to form mycorrhizal associations, some being both ectomycorrhizal and VA mycorrhizal, and some being VA mycorrhizal only.

It is tempting to speculate that species like Helichrysum blandowskianum, which grow naturally in poor sandy soils, won't grow in our garden soils because they lack the appropriate fungus with which to form the mycorrhizas. Dr. Warcup says that in theory, if not in practice, such plants should grow satisfactorily with added fertilizers or in richer soils, but fertilizer balance might be highly important. "Standard" fertilizers might not satisfy the requirements of these plants.

Dr. Warcup suggested a method we could use to see whether mycorrhizal associations would help our difficult plants to grow. He also sent the results of his tests on the Helichrysum and Helipterum species he has been able to acquire so far. This list is necessary to enable us to choose which species to use in our tests, so it is reproduced here:-

MYCORRHIZAL ASSOCIATIONS OF SPECIES OF HELICHRYSUM AND HELIPTERUM

Ecto + VA

VA

Helichrysum

H. apiculatum  
H. baxteri  
H. blandowskianum

H. antenniferum  
H. ayersii  
H. cassinianum

H. davenportii  
H. dendroideum  
H. leucopsidium

Ecto + VA

H.bracteatum  
H.tepperi

VA

H.lindleyi  
H.obcordatum

H.scorpioides  
H.subulifolium

Helipterum

H.albicans  
H.australe  
H.cotula  
H.demissum  
H.hyalospermum  
H.pterochaetum  
H.stipitatum  
H.venustum

H.anthemoides  
H.chlorocephalum  
H.corymbiflorum  
H.craspedioides  
H.humboldtianum  
H.manglesii  
H.margarethe  
H.maryonii  
H.microglossum

H.moschatum  
H.pygmaeum  
H.roseum  
H.spicatum  
H.splendidum  
H.strictum  
H.tenellum  
H.troedelii  
H.uniflorum

The mycorrhizal fungus chosen must be present in the soil mix of our tests. The roots of plants growing in natural soil will form the inoculum of fungus. So for a VA plant, such as H.davenportii, the inoculum used could be dried, fine roots of another species (growing naturally), such as H.scorpioides. In the case of an ecto plant, such as H.blandowskianum, the roots should be living and from a naturally growing species such as H.apiculatum.

The following points should be noted:-

1. The growing mix should consist of a base soil which is low in available nutrients.
2. The inoculum consists of a thin layer of the relevant roots placed 2 to 3cm below the surface so that the roots of the seedling grow through it soon after germination.
3. A control pot containing no fungus should be used for testing each species.
4. A control of "garden soil" could also be used.

Dr. Warcup, in a later letter, has added the following information:-

5. The inoculum (roots) does not need to be a thick layer and, if little is available, germinate the seedling (s) and put a small wad of inoculum beside (touching) the tap root.
6. In very poor soils mycorrhizas may not help plant growth. The fungus has to be able to extract more nutrients from soil than it needs for itself.

It is possible that mycorrhizal fungi present in the Cobar sands have helped Helipterum molle to be so much more impressive than it is in Hawthorn. The same goes for Helichrysum adenophorum var. waddelliae and many more of the Asteraceae we are trying to grow in cultivation for the first time. It may be that the species we find easy to grow have been selected over the years to be more independent of mycorrhizal associations. Dr. Warcup suggests that alternatively they may tolerate the higher nutrient levels that gardeners are prone to use better than other species. Or the poorly growing species may be more dependent on their mycorrhizas.

More work is being done on this subject which could be of great interest to us. Our Group is helping to supply seed of those species Dr. Warcup has not tested so far, and we are very grateful for the explanations and assistance he has given us. We also thank Dr. Philip Short for sending a copy of the paper to us.

Reference: Warcup, J.H. & McGee, P.A.(1983). The mycorrhizal associations of some Australian Asteraceae. New Phytologist, 95, 667 - 672.

TRIP TO BOGONG HIGH PLAINS - JOY COOK

Some would liken it to a religion, as members are often seen down on their hands and knees in high places. I would say it signifies a penchant for daisies that draws members of the B/H Study Group on their annual pilgrimage to the alps every summer, to prove their devotion to the daisies and help fulfil their aims in growing these spectacular plants.

This year witnessed a group of very active members out along the Bogong track, packs on backs, cameras in hand in the quest to spot and capture on film a new daisy.

Mt. Nelse was to be our first walk; how eagerly we stepped it out along the track to the summit. Just above the tree line, growing in spectacular tufts along the stream, Celmisia sericoophylla quickly captured our attention. The broad tomentose, silky silver leaves were massed in profusion to form large clumps. I thought this plant would make an ideal border plant, but having read on my return to Melbourne that this plant is deciduous in winter, I quickly changed my mind. Brachyscome decipiens was also found growing in this area, in company with Podolepis robusta, Olearia frostii, Phlogopappa, Leptorhynchos squamatus and Celmisia asteliifolia.

We were all a little disappointed with the floral display along the track, daisies were not as prolific as we had hoped, they occurred in solitary clumps or isolated pockets. The resident cattle looked extremely contented with their lot. Had these innocent looking animals eaten the daisies?

Despondency with having walked far and found little, soon disappeared when we reached the summit of Mt. Nelse and found Helipterum albicans, ssp. alpinum, flourishing on rocky terrain. (It must be noted - the absence of cattle here). We had found this species growing at Kosciusko last year, the bracts being a deeper cream than the form at Mt. Nelse. Brachyscome nivalis var. nivalis was also found in this area. Some members returned via the Heathy Spur track and reported numerous, showy plants of Helichrysum alpinum, most attractive with wine red buds.

Mt. Jim was the next area to feel the tread of boots from the feet of Study Group members; once again we were disappointed in the floral display. Approaching the summit, we were greeted by a raucous flock of crows. I was far from impressed with the notion of sharing my lunch with these ravenous raucous fellows, but fortunately, they left to allow us to eat in the solitude of the great open spaces. A blue form of Brachyscome rigidula was the prevalent daisy here, along with bright yellow craspedias. The return trip brought us upon Brachyscome nivalis var. alpinum growing in a boggy situation.

Wednesday found us attempting to climb Mt. Bogong via the staircase. Some found that they were not as fit as they had surmised, many a sit down stop was taken, and I had to admit that the summit, via the staircase, was outside my physical ability. I was only too pleased to admit defeat and languish amongst the stylidiums, under the shade of magnificent snow gums at Bivouac Hut and breathe in that lovely mountain air. On our return, the children were the only ones with enough energy left to turn cart-wheels and handstands. It was all I could do to lift the coffee cup to my lips. Many an aching body was nursed off to bed early that evening.

Thursday at Mt. Buffalo, found sunshine and daisies, daisies everywhere, the panacea to help forget those aches and pains. Bodies that had hobbled home yesterday, were instantly rejuvenated, and skipped along the roadside like spring lambs extolling the exquisite beauty of Helipterum albicans, ssp. albicans, var. buffaloensis. These we found growing rampant along the roadside and on rocky terrain. The spectacular yellow heads and the soft silvery green foliage make this a delightful plant for the suburban garden. It was a real crowd pleaser in my garden last year and I got great pleasure in showing it off to any passer-by.

Alas every plant has its hour and Helipterum albicans var. buffaloensis was soon forgotten when someone spotted Helichrysum adenophorum var. waddelliae growing further along the way. Like a plague of locusts we converged on the plant, to admire with much glorification the beauty of this species, enough in fact to make it blush, those deep pink buds were sublime, opening into elegant pale pink flowers.

TRIP TO BOGONG HIGH PLAINS CONT'D.

Helichrysum adenophorum var. waddelliae is an erect branching plant with each leafy branch bearing a single flower head. The leaves are narrow with a distinct perfume. H. adenophorum var. waddelliae is a close relation to Helichrysum leucopsidium, which we found pink forms of, on the Bungalow Spur.

Cattle haven't been allowed to graze on Mt. Buffalo for many years, hence the abundance of daisies. Helichrysum acuminatum, adenophorum, hookeri, scorpioides, secundiflorum, semi-papposum (grey leaf form), thyrsoides, Helipterum albicans var. buffaloensis, Brachyscome spathulata, Olearia erubescens, Celmisia asteliifolia, Senecio lautus, Leptorhynchus squamatus, Microseris scaoigera. What a contrast to the isolated and solitary plants we found growing out along the Bogong track, here the plants had colonized and spread into flourishing healthy communities.

Tracking across the Razor Back from Hotham and down the Bungalow Spur to Harrietville was the endurance test we had all been waiting for. Did completing this walk, 22 kms in 6 hours, qualify one as an active member? A cracking pace was set as time didn't allow for any idle malingering, looking at daisies we had previously perused. Fleetingly we admire the many coloured forms of Olearia frostii that grew alongside the track. Helipterum albicans ssp. albicans var. albicans had a strong hold amongst the rocks, turning its yellow heads towards the sun. Helichrysum scorpioides, although not in flower, formed thick matted borders edging the narrow path across the ridges. Helichrysum acuminatum was in bud, apparently we were just a week or two early to capture their full floristic beauty. Herbfields of Craspedias were a pleasant sight of which I never tire. On the lee side of the ridges, glades of snow gums threw beautifully intricate shadows across the track and Boronia algida nestled amongst the rocks pertly showing its tiny pink flowers.

A sense of euphoria overcame me as I turned and looked back. Away in the distance Hotham Ski Village could just be seen through the azure blue atmosphere. On again, with Mt. Buffalo on the left and Mt. Loch to the right and here was I, high on a ridge in the middle, with blue-green waves of valleys and ridges in between. The exhilarating feeling from being there was fantastic.

Lunch was eaten in a copse of snow gums just north of High Knob. From here the track sloped steadily downwards. (I noticed as we passed the track to Feathertop Summit that no-one volunteered to do a quick dash to the top.)

Federation Hut marked a change in the vegetation, the alpine herbfields were left behind and so too the gnarled and twisted snow gums. Dry sclerophyll forest now bordered the track which descended quickly. I could smell the coffee awaiting me in the car park below and like a horse to water, I bolted home. (Frankly, I was too scared to stop, for fear of not being able to re-start). Harrietville must be the most elusive town in Victoria. It seemed just when I felt I could reach out and touch it, it disappeared on the next bend. As my legs ached and my craving for coffee became more acute, I wondered if it was a mythical place like Brigadoon. Fortunately it does exist, and as I stumbled out of the forest into the car-park at Harrietville, reaching for the thermos flask I asked Maureen "Does this qualify me as an active member?" She didn't answer, she was too involved in removing her boots, all I heard was A-A-A-H. Was that a sigh of relief, or had she spotted a new daisy! I was too tired to find out.

Many thanks to Neil & Joy for their guidance over the week.

.....

DONATIONS:

Thank you to the following members for their donations:-

S.G.A.P. (Vic.) Inc.	-	\$7.00	Bev. Courtney	\$4.00
Beth Armstrong	-	2.00	Tom Chalkley	\$2.00
Gwenda Macdonald	-	2.00	Esma & Alf Salkin	\$3.00
Pat Treacy	-	1.00		

HELIPTERUM PRAECOX:

Refer to Page 4, para 5, Newsletter No.13 - Helipterum praecox. We have now received the following clarification of specimens of Helipterum praecox and Helipterum cotula from Dr. Paul G. Wilson, Senior Botanist of the W.A. Herbarium, together with a tentative key to the species:-

"Helipterum praecox is found in Victoria and New South Wales. J.H. Willis, in his Handbook to Plants in Victoria vol.2, incorrectly referred this plant to H. cotula but the latter does not occur in the Eastern States.

Helipterum cotula is restricted to Western Australia, therefore the seed from which your specimen no.2 was grown must have originated in Western Australia. Your specimen matches plants found in the hills east of Perth.

Apart from floral characters the two species may be readily distinguished by the leaf tips; in H. cotula the lower and middle leaves always have blunt tips; in H. praecox all the leaves have acuminate tips (they end in a slender point)."

Helipterum cotula group

- 1. Leaves (middle and lower) blunt; innermost involucre bracts with very short rounded or truncate limb.
- 2. Receptacle rounded; innermost involucre bracts with short rounded limb; pappus tips yellow (W.A., Geraldton southwards) H. cotula
- 2. Receptacle conical; innermost involucre bracts with extremely short truncate white limb; pappus tips white, clavate (W.A., Bunbury southwards) H. pusillum
- 1. Leaves (middle and lower) acuminate; innermost involucre bracts with radiating limb.
- 3. Achene smooth, c. 2 mm long; stem usually simple; receptacle rounded (W.A., Pemberton-Walpole area) H. sp.
- 3. Achene verrucose, to 1 mm long; stem mostly branched; receptacle rounded or conical.
- 4. Stem usually branched at and above base; receptacle rounded (W.A., Perth southwards) H. simplex
- 4. Stem branching at base; receptacle conical (south eastern Australia) H. praecox

.....

If any members have seed from the seed bank marked Helipterum cotula "Wedderburn Junction" please alter name to read Helipterum praecox "Wedderburn Junction", white form.

On Page 2 in Newsletter No.13, under the heading of "Small Daisies for Posies" amend "Helipterum cotula - Mayweed Sunray - All States except Tas." to "Helipterum cotula - Mayweed Sunray - restricted to W.A. only". Please note also the typographical error in Mayweek - should be Mayweed.

.....

BOOK COMMITTEE will meet in future on a THURSDAY at 9.30 a.m.

MONTHLY MEETINGS FOR MEMBERS first Tuesday of each month. Because of Easter, next meeting will be 8th April, 1986.

## OUTINGS:

It was late October before I was able to arrange our first outing for 1985, then four more came in quick succession. From this, it can be seen, that I desperately need an "Outings Organiser". These outings are usually lots of fun, although occasionally, unexpected incidents occur. A few long walks through the year wouldn't go amiss either, just to keep members fit and active for their annual mountain sojourn. Who is going to volunteer to look after this group activity?

### HILDA CROUCH'S ALPINE GARDEN - BERYL BIRCH

Being in Geelong after attending a wedding, Frank and I set out on the morning of Sunday, 27th October for Ballarat and Hilda Crouch's garden at Mt. Helen. Plenty of Asteraceae along the road. Dandelions and cape-weed.

Hilda's garden is sheer joy. Introduced plants predominate, furnishing the ground between the pillared trunks of local eucalypts. Hilda prefers low-growing flowery things and she joined SCAP for the purpose of adding Australian species to her already impressive collection of species plants from other parts of the world, but she has not found it entirely easy to acquire seeds or plants of the types she requires. At any rate - some little pots of daisies were finding a new home that morning.

It was beaut to meet Hilda and another Ballarat member, Bill Owen. Bill was our guide to some local forested areas, but alas, the forest daisies were still too shy to come out and meet us. Helichrysum scorpioides was just peeping, but the only wide awake daisies were tousle-headed Yams with graceful buds dipping swan-like necks to preen green feathers.

We all had a lovely relaxing day among the other plants - both wild and cultivated - and were not put off by the unseasonable 'dis-Aster'. Hilda and Bill are both prolific and inventive propagators, so we eagerly await reports off their assembly lines.

.....

### THE VISIT TO "BUSH GEMS" - BARBARA BUCHANAN

At "Bush Gems" in Old Emerald Road, Monbulk, the Turner family, Merv., Ngaire and Colin, provide an inspiration for all S.G.A.P. members and for "Daisies" in particular. Here is active progress in pursuit of some of the main aims of the society and study group:-

" The introduction of new plants to horticulture, through careful selection of the best forms and new species, allied to rigorous culling of disease prone or unsatisfactory plants;

a range of trials to improve propagation success and improve general management of the plant material;

opening up new markets for, and increasing public appreciation of, our native plants".

"Bush Gems" is an apt title and it is also a successful commercial operation, producing a variety of plants for the cut-flower trade. Ngaire has a special responsibility for the daisies, but it is a family team effort.

When we visited in November, the ornamental areas were suffering in places from the rampant weeds, which revel in the rich Monbulk soil. The work effort, when weather permitted, had been directed to a large planting-up operation of an extra three acres, a further stage in the overall development plan. However, the amenity and commercial aspects of the garden, are not necessarily in conflict - a long row of Paws and a long border of Helichrysum apiculatum (a special long stemmed form) are very effective parts of the overall garden design.

The unusually wet season had delayed the soil preparation so that on our visit there were pots and tubes everywhere; in the tunnel and the glasshouse and taking over the verandahs. We were particularly interested in a trial of Helipterum roseum,



THE VISIT TO "BUSH GEMS" CONT'D.

subjected to a range of treatment by a growth regulator. There is a hope that this will enable manipulation of the plants to produce a large crop for cutting in our late summer, early autumn, as there is a great potential in the U.S. for flowers at that time. There were also many pots of other daisies waiting there for planting out. Daisies that had been germinated in the glass house on the hot bed, were pricked out and left in the unheated area of the glass house, to try and produce plants earlier and more reliable than outdoor sowing would produce. This is a development following the trials reported by Ngaire in an earlier newsletter. Another corner of the verandah is fitted to hold rows of drying flowers, as the market accepts both fresh and dried flowers. The main annual species used are Helipterum roseum, manqlesii and Helichrysum bracteatum var. viscosum.

Varied and numerous as the daisy projects are, they are by no means the limit of the work and interest at "Bush Gems". Merv's Paws are now quite well known and his projects have been a major influence in breeding and selecting both for appearance, hardiness and mould resistance. It is fascinating that different shades sell better in different countries. The U.S. taking the light and bright colours and Asia the reds. Then there is the gorgeous Darwinia whose propagation secrets have been cracked. This, we can possibly look forward to buying shortly, together with Chamelauciums and many others.

The meeting was rounded off by afternoon tea, material sustenance after so much stimulation of the spirit. Our thanks to the Turners for the chance to share their vision.

.....

INDEXING:

I have been requested and have agreed, to number the pages of the newsletter consecutively throughout the year, so a quick reference index may be compiled and issued after the last newsletter.

.....

ORGAN PIPES NATIONAL PARK:

A letter has been received from the National Parks Service, asking for our assistance in propagating a variety of composites, for use in the National Parks revegetation scheme for the Organ Pipes National Park. This is in conformity with one of the aims of our group - regeneration of depleted areas.

Although seeds supplied are not Brachyscomes or Helipterums, they are nevertheless daisies, and any members who are willing to assist, will be re-imbursed by the National Parks for their efforts.

Please contact me for seeds if you would like to help. Species available to date are:-

*Olearia decurrens*, *Calotis scapigera*, *Craspedia chrysantha*, *Podolepis jaceoides*.

.....

A PLEA FOR OLEARIA CUTTINGS:

Peter Vaughan of 66 Ridgeway Road, New Lambton Hts., N.S.W. 2305, one of our new members, has been asked by the New South Wales S.G.A.P., to put on a display of Olearias for their four shows in 1988. If there are any members who could supply Peter with cutting material, he will be happy to refund all postage and exchange cuttings with interested persons. Peter is already growing the following species:-

*Olearia axillaris*, *elliptica*, *microphylla*, *myrsinioides*, *nernstii*, *phlogopappa*, *quercifolia*, *ramulosa*, *tomentosa*.

WERRIBEE OUTING

by Judy Barker.

Our daisy hunt at Werribee on 17th. November, led by Laurie Gilmore, could not have been more full of incident. In just one day Laurie led us at breakneck speed to more daisies, some completely new to us, than we normally expect to see in a long weekend. In the process the wind blew a gale, the showers were frequent, some of us became bogged, and we found snakes, but it was a day to remember with great pleasure. Anyway, it would be hard to forget it!

The Schaumanns and the Birches set the pattern by waiting punctually outside some building which was not the Post Office. By the time they realised this fact we had gathered a mother and son into our entourage who had been waiting vainly to be taken on a bush walk.

Our first target was the Truganina cemetery. Laurie had not visited it for eighteen months and had temporarily mislaid it. After several sorties we asked a local farmer the way. He thought we constituted a cortege, though it must have struck him that we were a cheerful-looking lot of mourners. When we finally arrived we were delighted by a sea of surprisingly robust Rutidosis leptorrhynchoides, the Button Wrinkwort. This is what we had especially come to see as it is listed as an endangered species, in serious danger of disappearing from the wild state (Leigh, Boden and Briggs, 1984). It looks like a sturdy leptorhynchos, as its name implies. In this habitat it is a small, bushy herb, about 30 x 30cm, with many bright yellow, terminal flower heads, 1.5 - 2cm in diameter, all looking like convex buttons. In Victoria it is now found only in a few railway reserves and a couple of cemeteries on the Keilor basalt plains. Apparently grazing, growing of pasture with the use of superphosphate and weed growth, have caused its disappearance. It has not been able to compete with other herbaceous species. It has been found in small populations in the A.C.T. and near Queenbeyan in N.S.W.. This species can be grown from seed and probably from cuttings so we should try to get it into cultivation. It would be a bright little subject if its habit in the bush can be maintained in the garden.

Other daisies in the cemetery were a tough-looking form of Helichrysum apiculatum with blue-green foliage and a white brachyscome, which caused some excitement as we didn't recognise it at first. It was a dainty, slender plant, 25cm tall, with a solitary, terminal head, 2.5cm in diameter.

At our next stop, beside the railway just out of Werribee, Frank Birch nearly stepped on a snake. Treading gingerly we were able to find Podolepis jaceoides and more of the little white Brachyscome sp. which Maureen suddenly, and with great acumen, identified as B. heterodonta. It was much smaller than the plants we have grown in cultivation, but the conditions with which it contends in Werribee are very hard indeed.

Other daisies in this area were Vittadinia cuneata and Calocephalus citreus. Laurie showed us Ptilotus macrocephalus and we were most impressed.

Next we made our way along a railway service road hardly wide enough to take one car. You would swear no one ever used this track, but in fact it turned out to be as busy as Bourke Street on Christmas Eve. At one time three cars were bogged simultaneously - only one of them belonging to our cortege. The glory of this stop, apart from more snakes, was Helichrysum semipapposum, looking very like the form we had seen in the Bendigo Whipstick. It is lovely - tall, erect of habit, with bright lemon-yellow heads and silvery foliage.

This area was a goldmine as farther along we came upon Minuria leptophylla, Leptorhynchos squamatus and L. panaetioides. Seed of L. squamatus from various areas has produced most pleasing small plants in my garden, so I'm hoping we can also tame L. panaetioides which has silver foliage, attractive light yellow flower heads and grows to about 50cm. At this spot Laurie introduced us to his favourite grass, Stipa elegantissima, and very elegant it is too.

We were cold, wet and hungry so Laurie led us to the Little River Cricket Ground where we had the pleasure of seeing a few wickets fall before we sped off to another spot by the railway where Craspedia chrysantha grew in abundance. Although it was past its prime we could see it made a pleasant clump with globular yellow heads at the tips of the stems. I have one at home, grown from seed, which is flowering now (at Christmas time) and giving me quiet satisfaction.

Many other stops were made along the railway tracks and Laurie would guide us unerringly to a number of treasures. He has walked right along these lines and seems to know exactly where every plant is to be found. At Lara he showed us his garden. He has landscaped his nature strip with the plants of the area and has a delightful result. We envied his success with all the local daisies - even Helichrysum obtusifolium.

Our last visit was to Kevin Hoffman's streetscape at Lara. He has received an award for this landscaping - and no wonder! Between the road and the creek near his home he has moulded his soil into hills and valleys, built pools and cunningly placed boulders. His plantings are mainly of unusual forms of native plants seen to great advantage so that the beholder is enticed along the path - almost spell-bound. It was a lovely way to finish a day packed with adventure.

Our grateful thanks to Laurie who shared his extensive knowledge of the plants in his area with us and who introduced us to many species new to us. We had a great time and a most memorable day.

.....

SUBSCRIPTIONS - \$3.00 PER YEAR \$6.00 OVERSEAS:

X SOME 1985 SUBSCRIPTIONS ARE STILL OUTSTANDING. A LARGE RED CROSS means you are an unfinancial member and this will be your LAST NEWSLETTER unless payment is received. Cheques to be made payable to the Brachyscome/Helipterum Study Group.

Receipt is acknowledged of the following subscriptions for 1985, 1986, 1987:-

Pat Treacy	S.G.A.P. Vic. Inc.	Shirley Dixon '86 and '87
Jenny Kelso	" Geelong	Gloria Thomlinson '86 and '87
Beth Armstrong	Esmā & Alf Salkin	Lyn Millington 1986
Burrendong Arboretum	Stefanie Rennick	Jeff Irons '86 and '87

.....

SEED DONORS:

My grateful thanks to the many seed donors listed below. A special thanks to Bill Mulham, Dr. P. Short and Dr. J. Warcup for their noteworthy donations of many unusual species, some of which, I am pleased to say, have already germinated.

Dr. P. Short, Dr. J. Warcup, Bill Mulham, Inez Armitage, Betty Turk, Cynthia & Ted Beasley, Peter Vaughan, Pat Shaw, Jeff Irons, Bev. Courtney, Louise Gilfedder, Gloria Thomlinson, Barbara Buchanan, Lyn Millington, Bill Owen, Esmā & Alf Salkin. Plants - Paul Barnett.

.....

Hope you all have an enjoyable Easter.

All correspondence and requests for seed, enclosing stamped self-addressed envelope to leader:-

*Maureen*  
Mrs. M. Schaumann  
88 Albany Drive,  
MULGRAVE. 3170

SEED LIST:

Hereunder is a list of seed at present in our Seed Bank. Please keep this list as only additions and deletions will be included in future Newsletters. A full list will be published in each March Newsletter.

Ammobium	alaturn
Angianthus	tomentosus
Brachyscome	basaltica var. gracilis, campylocarpa, cardiocarpa, ciliaris, ciliaris var. lanuginosa, sub-integrifolia, ciliocarpa?, decipiens, diversifolia (King Island), (Mt. Samaria), (Urquharts Bluff), exilis, heterodonta, heterodonta var. chrysoglossa, iberidifolia, lineariloba, melanocarpa, multifida var. dilatata, multifida var. multifida, multifida (Rushworth), nivalis var. nivalis, obovata, readeri, scapigera, segmentosa, spatulata.
Calocephalus	citreus
Calotis	cuneifolia, inermis, multicaulis, scabiosifolia, scapigera
Cassinia	sp. (Mt. Buller), aureonitens
Cephalipterum	drummondii
Craspedia	chrysantha, glauca, globosa, sp. (Mt. Cobbler)
Erigeron	pappocroma
Helichrysum	acuminatum, adenophorum var. waddelliae, alpinum, ambiguum, apiculatum, argophyllum, backhousii, baxteri, bracteatum (Cobar), (Gilgandra), (Grampians), "Dargan Hill Monarch", "Hastings Gold", hybrids - gold, large & small flowers, orange, pink, white, cassinianum, davenportii, diosmifolium, elatum, glutinosum, hookeri, ledifolium, leucopsidium, lindleyii, paralium, rutidolepis, scorpioides, semi-papposum, subulifolium, thyrsoideum, viscosum.
Helipterum	albicans ssp. albicans var. albicans, var. incanum, var. buffaloensis, anthemoides (Qld.), chlorocephalum, corymbiflorum, cotula, humboldtianum, jessenii, manglesii, molle, moschatum, polygalifolium, praecox, pygmaeum, roseum, splendidum, stipitatum, strictum, uniflorum.
Ixodia	achillaeoides
Ixiolaena	leptolepis
Leptorhynchos	squamatus, tenuifolius
Minuria	cunninghamii, denticulata, integerrima, leptophylla
Myriocephalus	stuartii
Olearia	algida, axillaris, decurrens, elliptica, erubescens, glandulosa, glutinosa, gravis, lirata, microphylla, phlogopappa var. subrepanda, pinifolia, ramulosa.
Podolepis	jaceoides, neglecta, sp.(S.A.)
Rutidosia	helichrysoides, leptorhynchoides, murchisonii, sp. (Qld.)
Senecio	gregorii
Vittadinia	bicolor, sp. Nathalia, triloba, Wanilla (S.A.)
Waitzia	acuminata, aurea, citrina

PLEASE NOTE: Only active members who are willing to record and report results back to leader are entitled to free seeds. Passive members are charged 30 cents per packet. Seed from the wild is only collected in very small quantities and not sold. It is kept for study purposes only.

A stamped self-addressed envelope must accompany each request for seed.