

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTSTHE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO. 26

Dear Members,

The less said about my garden this summer the better, other than to say that the daisy bed looks like the understorey in a dry sclerophyll forest. After a week at the ASGAP. Conference in Hobart we returned to find two jets in the watering system malfunctioning, and the back garden and 'Specials' area heavily cultivated by black-birds. Seedlings, seed labels and seed were scattered to all points of the compass, we just didn't have enough snares erected.

The last months of 1989 were busy ones for Melbourne members. On Cup weekend five members and their families visited the Little Desert. We wound up the year with visits to two commercial nurseries to see their selecting and breeding programs, where seed from our Seed Bank had been used in their programs. Both were large-scale and highly efficient operations - such a contrast to our backyard dabbling. On the wildflower farm seeds from many sources and various forms of species were sown in plots and left to perform 'au naturel'. They produced some magnificent recombinations. Of course you do not run a selection and breeding program on chance, but it demonstrates what can be done without expensive and labour-intensive procedures. Thanks to the proprietors of both establishments for sharing with us your enthusiasm for daisies.

For five members and families it was back to basics out in the field at the Little Desert. About 25 species of Asteraceae were observed, the most prevalent being Helichrysum apiculatum. Other common species were H. obtusifolium and H. baxteri (the buff form dominant). Haeckeria pholidota was a new one for me, and the brachyscomes showed some interesting variation. Thanks to Fred Rogers for information on location of species.



Helichrysum obtusifolium

(Anglesea form) x 1/3

The Open Weekend was voted a great success - a happy, relaxing time - with a rare opportunity to meet our lone Tasmanian member, a new country member (with wife and baby), not to forget three other country members and quite a few from the outer suburbs. Many thanks for coming. (Report on the Weekend appears later in this NL.)

This year I'm trying a Saturday meeting so that those who cannot make it on a Tuesday can attend. The format will be the same as our regular meetings, that is arrive from 10.00 am. onwards, and bring lunch. Tea or coffee is supplied. Let me know in advance what matters you would like to discuss so that I can warn the experts, get out references, etc.. DATE:- Saturday, April 7th. at 38 Pinewood Drive, Mount Waverley. Phone (03) 232 6213. Please note this replaces the normal meeting which would have been held on April 3rd..

Seed sowing time is here and the Seed Bank list is included in this newsletter. There is no need to remind you that the primary focus of the year is still the genus Brachyscome. We need information from all members, especially those interstate.

For a start, what grows in your area? Please give the exact location (a road map reference will do). How does it perform in cultivation? We would like seed, but information must be accurate. We need mature seed collected in paper packets, clearly labelled with name, date, location, flower colour, soil, plant association and at least a typical basal and stem leaf.

So heads down, bottoms up in undignified pose. Go to it!

Regards,

Esma.

SPECIES OR FORMS NEW TO THE GROUP

Hyalosperma simplex (WA.)

(syn. Helipterum simplex)

(simplex = of one piece or series)

We first grew this species as seed from John Colwill who had collected it from the edge of a swamp near Manjimup, WA.. He called it Helipterum sp. aff. cotula and indeed it looked very like Helipterum cotula (now Hyalosperma cotula, see article on p.9).

H.simplex from John's seed is an attractive annual, growing 15 - 20cm high, with white bracts and single, terminal heads to 24mm across (when they first open). The receptacle is rounded and pitted.

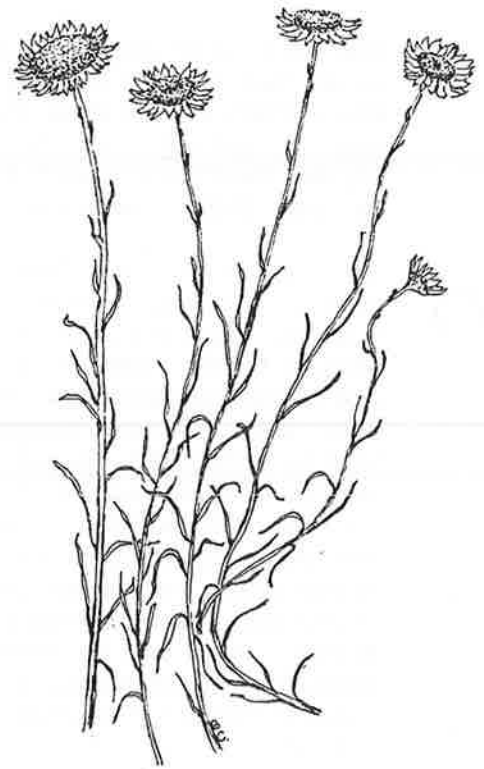
The leaves are narrow, linear, 5 - 16mm long and 0.3mm wide, with sparse, wispy, white hairs. The lower leaves are opposite, becoming alternate further up the stem. The tips are acute and there are papery appendages on the upper leaves. The stems are almost hairless, sometimes reddish-brown, and branch a bit above the base.

The achenes are dark brown, about 1.5 x 0.8 - 1mm, and warted. There are about 10 white pappus bristles, very plumose, becoming yellow at the apex. The pappus separates easily from the achene and the bristles are united in a ring at the base. The achenes, like all the achenes of the new genus Hyalosperma, are hard and rattle in the packet. When I first saw the seeds of Helipterum venustum (now Hyalosperma glutinosum ssp. venustum) I thought someone had made a terrible mistake.

Because the achenes were warted and the original habitat was a swamp our plants are H.simplex ssp. simplex. Subspecies graniticola has a smooth achene which is usually longer (1 - 2mm) and is often found on granite rocks.

The forms of H.cotula we have grown have come originally from the Perth sandplains, from Jarrah woodland and from Nindethana Seed Company. In the garden it is hard to tell the two species apart, but H.simplex is usually taller, the foliage appears greener, the heads are a little larger and there are not as many heads per plant. The central disc usually develops broader and flatter than that of H.cotula.

The two species can be more accurately separated because the lower and middle leaves of H.simplex have acute to acuminate tips and the innermost involucre bracts are shaped like the intermediate bracts and are about the same length. By contrast, H.cotula has leaves rounded at the apex and the innermost involucre bracts have short, rounded blades. H.cotula and H.simplex ssp. simplex have white or yellow inner involucre bracts.



Hyalosperma simplex x 2/3

Hyalosperma simplex is an excellent small annual for a container and for floral art. It wires and dries well and the heads are of such a strong constitution that they will last a long time.

Spilanthus grandiflora

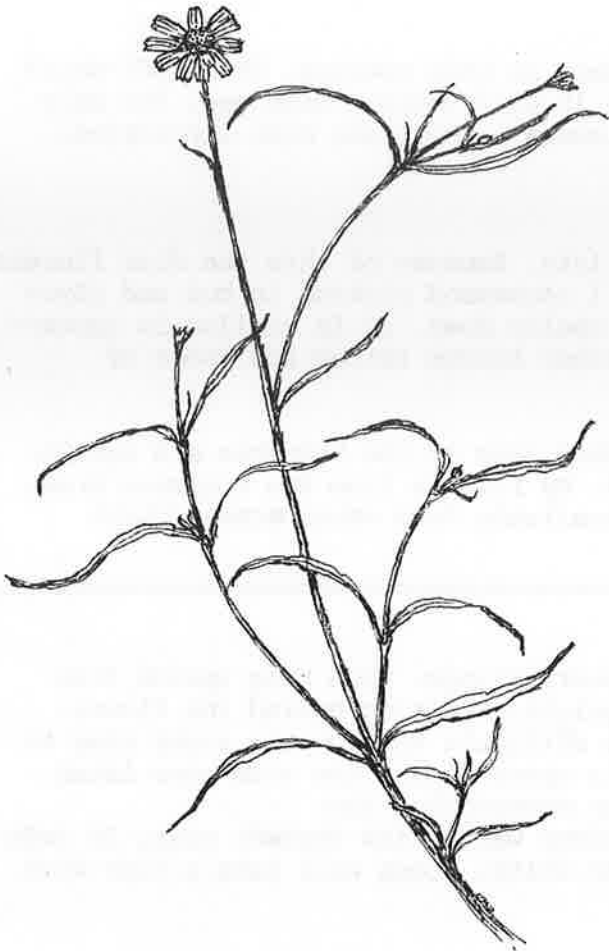
This is an addendum to Pat Shaw's article (see NL 25, p.39) to accompany Betty Campbell's drawing.

The cuttings Pat sent were put in 3 parts perlite : 1 part peat moss in February '89. Two months later they had rooted and three were planted in a large terracotta pot. They flowered from early May until August then died back. I thought, "I've lost them!" But in early October the plants started shooting again from the base and were beginning to flower later that month. Maureen took four cuttings in November and revealed with delight that they had struck in four weeks.

In late January it is still flowering profusely.

The heads are mustard yellow, 20 - 22mm across, on flowering stems 15 - 20cm long. There are 12 to 13 broad rays (4mm across) with 3 lobes at the apex. At the beginning of the season Betty pointed out that many heads seemed to produce one short ray. By January this characteristic was absent.

As the heads develop the disc centre elongates surprisingly into a cone and browns off. The receptacle is relatively long and conical or even cylindrical.



Spilanthus grandiflora x ½

The leaves are long (10cm x 3 - 4mm), soft and thin-textured, and sparsely lobed. The stems are reddish-purple at the base, branching and rather weak.

I have been collecting seed since early January and will test it in autumn.

When Pat said her plants needed water I put a terracotta saucer under my pot. It has been kept watered, but does not look too finicky. I have taken more cuttings and will try plants in various positions in the garden in due course.

Although it is no good as a cut flower I can thoroughly recommend this species for a container. I am grateful to Pat for adding this goody to our repertoire.

Judy Barker.

DRYING MORE DAISIES

by Maureen Schaumann.

Helichrysum cuneifolium

I left picking the flowers on this shrub until too late, with the result that the disc centres turned a brownish colour when dried. This detracted from the whitish appearance, so I recommend picking early (when the flowers begin to open).

An unusual feature of the clusters is that when in tight bud they are brown, tipped white. Picked at this stage they provide a nice colour contrast to the fully opened flower-heads.

It dries well by hanging upside down, but needs to be glycerined first to prevent loss of leaves. This species shows great potential as a dried flower.

Helichrysum lepidophyllum

I was disappointed in the small cluster of flowers on this species. Their off-white colour doesn't impress me at all. Here's hoping it will improve with age. Its only redeeming features are the minute, scale-like leaves - these are most attractive.

Helichrysum rosmarinifolium

Another shrubby daisy I left picking until too late. Because of this the disc florets matured and dropped while hanging upside down. I recommend picking in bud and glycerining to prevent foliage loss before hanging upside down. It is similar in appearance to a cassinia, but the tips of the white inner bracts reflex and those of cassinias do not.

A disadvantage of this shrub while growing is that many of the branches are continually browning off - giving it a half-dead look. My form is from the Anglesea area, but I believe that there are much nicer forms available from other areas. Worth persevering with as the flowers show promise.

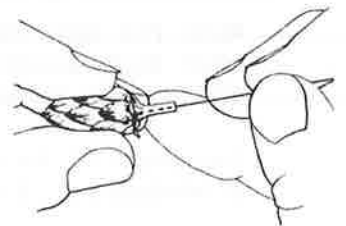
Schoenia cassiniana

A very pretty annual bearing clusters of pink everlastings. When hung upside down to dry the stems usually droop when returned upright. Painting behind the flower-heads with laquer helped to prevent this. It is difficult to know the right time to pick because the top flower in the bunch usually opens first, the side ones later. I solved this problem by picking and each flower separately, just as they partially opened and when the flower colour was at its deepest pink. If left until fully opened the colour generally fades to white. Stems will take a fine wire easily.

Waitzia aurea

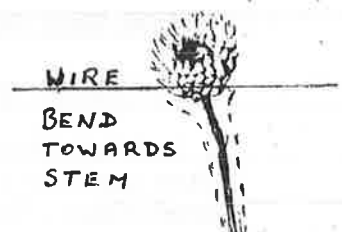
I have tried many different ways of preserving this beautiful species, none of which seem to me to be very successful. First I tried the usual method of hanging upside down, but the heads drooped when reverted. Next I laquered the many stems behind the multiple heads. These dried well, but became very brittle and the side branchlets broke off easily. Other ways in which a flower-head can be wired are as illustrated:-

If the stem is hollow the easiest method is to push a wire up the stem. In this case it is too soft so you have to try something different.



Using a fine wire (about 20cm long) bend into a small hook at the end and push it gently down through the centre of the disc florets until the hook is out of sight. This does damage the disc centre and leaves a small hole in which the wire is often visible.

Another way is to push about 3cm of a 20cm length of fine wire through the involucre from side to side. Gently straighten the two pieces of wire down beside the stem and twist one around the other. Tape with Stentex. This is quite easy to do and is the best method tried so far, although not the neatest from behind the flower-head.



Waitzia aurea shows great potential as a cut or dried flower.

Hopefully an easier method of preserving it will be found.

THE NATURE STRIP ASTERACEAE FLORA OF CUNNAMULLA

by Alf Salkin.

During our enforced nine day stay in Cunnamulla, while we waited for VW diff. bearings, Esma and I had ample time to explore this outback town. It is located on the eastern side of the Warrego River, 900km west of Brisbane. As the town is on the ancient flood plain of the river the soils are mainly river sands. In some places these have built up into dunes about 10 metres high. The camping ground backed on to these dunes and Helichrysum apiculatum could be seen from the self-contained unit we had hired. Within the camping ground there were other daisies and one that quickly received our attention was a small brachyscome with white flowers and narrow pinnate foliage. We hoped we might be able to collect seed from it, but on our return from the Wilson River trip seed was not ripe.

During my perambulations exploring the nature strips of Cunnamulla I had come across what appeared to be the same daisy, if somewhat more depauperate, close to the main highway. These were not the only nature strip species as will be seen from the appended nature strip flora. As we wanted specimens to get achenes I dug up two groups of white daisy plants; one group from one side of the tree, the other from the other side. To all intents and purposes the plants were identical.

The plants were collected in August, 1989, and in January I was able to collect achenes. One group of plants had achenes that bore some resemblance to B.gracilis, but I think are B.goniocarpa. The other group had achenes like B.erigona. We had thought that we had collected B.erigona on the Eulo-Cunnamulla road, where it was a dominant component in some parts of the landscape, but frustratingly the achenes were immature. One thing is sure however, and that is that brachyscomes with white flowers and pinnatisect leaves could be any one of three species in the area - B.campylocarpa, B.erigona or B.goniocarpa.

Nature Strip Flora - Cunnamulla

- | | |
|--|---|
| <u>Brachyscome ciliaris</u> var. <u>ciliaris</u> | <u>Craspedia chrysantha</u> |
| <u>B. ciliaris</u> var. <u>lanuginosa</u> | <u>Helichrysum apiculatum</u> |
| <u>B. erigona</u> | <u>Helipterum moschatum</u> |
| <u>B. goniocarpa</u> | <u>H. strictum</u> |
| <u>B. heterodonta</u> | <u>Ixiolaena leptolepis</u> |
| <u>B. melanocarpa</u> | <u>Millotia greevesii</u> ssp. <u>greevesii</u> (dunes) |
| <u>B. whitei</u> (pink and white forms) | <u>Minuria leptophylla</u> |
| <u>Calotis erinaceae</u> | <u>Vittadinia</u> sp. |

SPECIAL PROJECTS REPORT

OPEN WEEKEND, OCTOBER '89

Helichrysum scorpioides / H.rutidolepis complex

Where I'm at.

by Esma Salkin.

In NL 23 p.5 I reported on my Special Project and avoided any discussion on taxonomic differences in this complex, merely noting the number of plants collected and preliminary observations of the relationship between leaf colour, nature of leaf hairs on the upper surface and altitude.

0 to 1,000m - leaves green, septate hairs.

1,000 to 2,000m - grey leaf, density of vestiture increases with altitude.

Intermediates - one at 100m, majority at 500 to 1,000m.

At this stage I had not seen a confirmed plant of H.rutidolepis, nor did I have access to herbarium specimens. I did have one small piece of a specimen collected at Bryce's Gorge, Vic., identified by Judy as H.rutidolepis, however, this specimen

also fitted H. scorpioides (alpine form, Costin et al.). Given these parameters all I could hope for when speaking to the Group at the Open Weekend was that everyone would be soporific after a good meal.

Before migrating from Melbourne for the winter, I spent one cold July day examining leaf surfaces on all plants in my collection, and I divided them into groups according to the nature of the hairs on the upper surface. To ensure that I and other members knew what a septate hair was, I made a phytoglyph of a leaf. The leaf was immersed in household bleach to remove the cuticle layer. Cell structure and hairs remain on the cuticle and were stained with Gentian Violet to show septa in the hairs with great clarity. The unstained septa refract light when examined under the microscope, so the foregoing is not necessary. Septate hairs were found on the upper surfaces of the leaves of all specimens except one at 2,000m, although distribution of hairs was sparse, with hairs present primarily on the margins and along the midrib, and were easily observed in cross-section. Re-examination of leaves of the 1,000 to 2,000m group this January failed to show septate hairs on the upper surfaces, so repeat again next July!

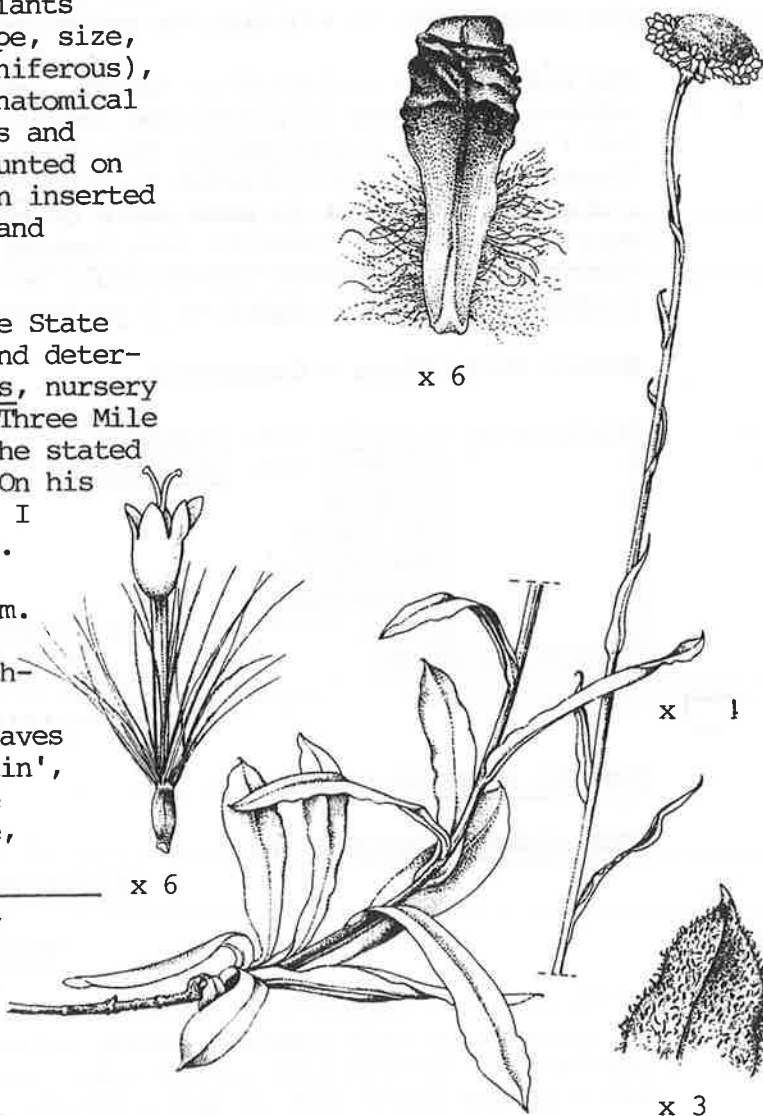
I also looked at other characters of the plants - habit in cultivation, flower colour, shape, size, branching, rootstock (rhizomatous or stoloniferous), time of flowering, etc.. I also compared anatomical details; upper and lower surfaces of leaves and dissected parts of the flower-head were mounted on small cards for comparison. These were then inserted in cellophane packets, sorted into groups and mounted on a board.

I am grateful to Dr. Laurie Haegi, from the State Herbarium of South Australia, for advice and determination of three specimens - H. rutidolepis, nursery plant (confirmed), and H. scorpioides, sp. Three Mile Dam at 1,500m and sp. at 2,000m, however, he stated he was not familiar with eastern species. On his advice I have arranged plants into groups. I am solely responsible for this arrangement.

Group 1. Helichrysum rutidolepis. 0 to 200m.

Rhizomatous, suckers, stems branching low and ascending, flowering stems branching in upper half; leaves green above, pale below, feel 'thin', upper surface, glabrous to sparse longitudinal hairs, lower surface, dense cobwebby.

Helichrysum scorpioides, drawn by Anita Barley and reproduced with the kind permission of Anita and the National Herbarium of Victoria.
(Reduced to 75% original.)



Flowerheads small, 1 - 1.5cm diam., outer involucral bracts pale, intermediate pale yellow, barely extending beyond florets at maturity, noticeable when pressed. Flowering late spring to autumn.

Habitat: Grassland and grassland/Eucalyptus camaldulensis community.

Specimens: Nursery purchase, Werribee, Ulupna Island, Vic..

Group 2. Helichrysum scorpioides. 0 to 1,000m.

New growth from rhizomes, stems not branched, ascending from base; leaves scabrous pubescent, upper surface, glandular septate hairs - clearly visible without magnification, lower surface, hairs loose woolly.

Flower-head large, 2 - 3cm diam., outer involucre bracts brown to yellow (tinged brown at apex), wrinkled, laminae of intermediate bracts (lemon to gold) extend beyond florets by 3 - 5mm. Flowering spring.

Habitat: Open forests, shrubland coast to alps.

Specimens: Coastal - Fairhaven (Vic.), Bruny Island (Tas.).

500 to 1,000m - Creswick, Courtney's Road, Mt. Dandenong, Beaufort, Ballarat (Vic.), Neville-Trunkey, Lithgow (NSW.), Celthana (Tas.).

1,000m - Tanjil Bren, Victoria River via Omeo (Vic.).

Group 2a. An intermediate group.

100m - Valley Reserve, Mt. Waverley, (Vic.).

500m - Boundary Creek, Gippsland (Vic.), King William Creek and East King William Creek, Lyell Highway (Tas.).

Group 3a. Helichrysum scorpioides (alpine form). 1,000 to 1,500m.

Rhizomatous, stems branching, spreading 0.5 - 1m and height 20 - 30cm, leaves grey-green to silvery grey, thick, upper surface, woolly-cobwebby septate hairs sparse, lower surface, hairs dense cobwebby, septate hairs on midrib sometimes.

Flower-head small, c. 2cm, outer involucre bracts pale or tan, intermediate to inner orange (infrequently yellow), laminae extending 2mm beyond florets. Flowers summer.

Habitat: Subalpine to alpine.

Specimens: North of Omeo on Highway, Barry Way, Dargo High Plains (orange and lemon forms), Hotham (Vic.), Mt. Wilson, Three Mile Dam, Adaminaby (NSW.), Mt. Barrow at 1,400m (Tas.).

Group 3b. Helichrysum scorpioides. 1,500 to 2,000m.

Prostrate plants, leaves clustered close on stems are more obovate than lanceolate, silvery grey, vestiture dense cobwebby on both surfaces. Septate hairs infrequent.

Flower-heads, 2 - 3cm diam., outer bracts pale, intermediate/inner bracts lemon. Not floriferous in cultivation and possibly not in its natural habitat. Flowers late summer.

Habitat: Exposed rocky sites in herbfield, occasionally with scattered snow gum.

Specimens: Happy Jack's Road, Central Plateau, Kosciusko, Cradle Valley (Tas.).

Propagation: Primarily from seed. Cuttings root or the hardened stem at the base can be used. Seed production in the complex (except for H. scorpioides (Mt. Wilson)) is low and variable in the natural habitat. Regeneration occurs from rhizomatous roots

<u>cotula</u>	<u>Helipterum cotula</u>
<u>demissum</u>	<u>Helipterum demissum</u>
<u>glutinosum</u>	
<u>tiniosum</u>	<u>Helipterum hyalospermum</u>
<u>ustum</u>	<u>Helipterum venustum</u>
<u>praecox</u>	<u>Helipterum praecox</u>
<u>pusillum</u>	<u>Helipterum pusillum</u>
<u>semisterile</u>	<u>Helipterum jessenii</u>
<u>simplex</u>	
<u>plex</u>	<u>Helipterum simplex</u>
<u>niticola</u>	
<u>stoveae</u>	<u>Helipterum stoveae</u>
<u>zacchaeus</u>	<u>Helipterum zacchaeus</u>

s growth appear-

a series of corpioides (Mt. tion rates were flowers are anching stems to plants are adjacent prize - large, septate hairs dark green leaves.

ek - Gp.2a. The hairs sparse on ng - more in the about 20cm long.

rt garden during of Mt. Wellington. rge, soft and de. 'High Tech' y of conserv-

nts of special interest to us. The first is that three of the ma demissum, H.stoveae and H.zacchaeus) are small, to 5cm high, radiating bracts. They are assumed to be inbreeders.

idolepis in the mination, however, [find the illustration

s that Hyalosperma cotula has been confused in the past with simplex and with H.praecox. It is now established that the first in WA. while H.praecox occurs only in Victoria and NSW..

pis] and the he group is culties. Whether ors warrant Tasmanian forms and alpine forms.

pecies is reproduced here with permission.

al bracts without a radiating lamina or the lamina long; plants 2-4cm high, much branched; bed.

. 5mm long; inner involucre bracts with a small brown lamina 0.5-1mm long (W.A.) 1. H.zacchaeus

lia ct 111 and iusko Alpine .., Rotherham, E.R. ifred M. (1963), to Plants in

o 3mm long; inner involucre bracts entirely with a very short erect opaque apex. tender terete; plant very sparsely pilose 2. H.demissum

eshy, elliptic to obovate; plant moderately 3. H.stoveae

lkin. cup. Our book nstitutions. In n a study group,

l bracts with a prominent white or yellow a over 2mm long; plants mostly 10-20cm high; branched; corolla 5-lobed.

new Co-ordinator,

rbinate to cup-shaped, glossy, glabrous; bracts with yellow lamina; achene warty.

ld Naturalists'

(excluding ray) turbinate to broadly cup- reddish brown; lower leaves with rounded apex; istles broad towards base and variably united

missed. It likes Mt.Elizabeth' by

- into a sheath; achene broad-oblong, flattened, hyaline on margin (W.A. and Eastern States) 4. H.glutinatum
- 5. Involucre (excluding ray) broadly cup-shaped, silvery to pale brown; lower leaves obtuse to acute or acuminate; pappus bristles narrow in lower half and united only at base; achene narrow-obovoid, not hyaline on margin (Eastern States) 5. H.semisterile
- 4. Involucre spreading from base, somewhat woolly to subglabrous; radiating bracts with white or yellow lamina; achene warty or smooth.
- 6. Leaves (middle and lower) blunt; innermost involucre bracts with very short rounded or truncate lamina 0.25-1.5mm long.
- 7. Receptacle conical; innermost involucre bracts with extremely short (c. 0.25mm) truncate white limb; pappus tips white, clavate (W.A., Bunbury southwards) 9. H.pusillum
- 7. Receptacle rounded; innermost involucre bracts with short (0.5-1.5mm) white or yellow rounded lamina; pappus tips yellow, clavate (W.A., Geraldton southwards) 6. H.cotula
- 6. Leaves (middle and lower) acuminate; innermost involucre bracts with prominent (c. 5mm) radiating lamina.
- 8. Stem usually branched at and above base; receptacle rounded (W.A., Perth southwards) 7. H.simplex
- 8. Stem branching at base; receptacle conical (southeastern Australia) 8. H.praecox

In the second article the new genus Erymophyllum is described. There are five species in it, three of which are new species from Western Australia. They are Erymophyllum compactum, E.glossanthus and E.hemisphaericum. The other two species have previously been recognised and placed in Helipterum. They are:-

1. Erymophyllum ramosum

ssp. ramosum Helipterum tenellum

(Helipterum tenellum auct. non Turcz.: Benth., Fl.Austral. 3:646 (1867); B.J.Grieve & W.E.Blackall, How to Know Western Australian Wildflowers, 830 (1975).)

ssp. involucratum .. Helipterum involucratum

2. Erymophyllum tenellum .. Helipterum tenellum

(Helipterum tenellum Turcz., Bull. Soc. Nat. Moscou 24 (1): 198 (1851).)

.. Helipterum gracile

(Helipterum gracile (A.Gray) Benth., Fl. Austral. 3: 646 (1867); B.J.Grieve & W.E.Blackall, How to Know Western Australian Wildflowers, 831 (1975).)

.. Helipterum intermedium

(Helipterum intermedium S.Moore, J. Linn. Soc. 45: 181 (1920); Grieve and Blackall, op. cit. 830 (1975).)

Erymophyllum ramosum ssp. ramosum is the correct name for the plant previously known as Helipterum tenellum. On p.115 of this article Paul explains as follows:-

"Typification. The type sheet of Helipterum tenellum (KW) consists of five specimens. Two of these specimens (those on the left-hand side of the sheet), including the largest and most complete, are of glabrous plants with slender appendages to the outer bracts and short, yellow laminae to the inner bracts. The other three specimens are minutely glandular-puberulous with shorter outer-bracts appendages and with white laminae to the inner bracts. Turczaninow in his original description referred to the plant as glaberrimum (i.e. perfectly glabrous) and as having slender appendages to the outer bracts and golden yellow appendages to the inner bracts. This description obviously applies only to the two specimens on the left-hand side of the sheet. I have therefore lectotypified the name on the larger of those two specimens. The name Helipterum tenellum therefore corresponds to the plant previously referred to as Helipterum gracile. The three remaining specimens on the sheet belong to Erymophyllum ramosum."

The Study Group has had little experience with these species. In 1986 I grew a few plants from seed labelled Helipterum tenellum sent to me by Jack Warcup. The plants were glabrous with short, yellow laminae to the inner bracts. This year some of us have grown Helipterum gracile from King's Park and the plants looked the same. What we have been growing is now Erymophyllum tenellum.

Key to species (reproduced with permission)

- 1. Capitula with white or yellow lamina to inner involucre bracts
 - 2. Upper leaves and branches somewhat glandular puberulous
 - 3. Pappus bristles firm, shaft linear-lanceolate, outwardly curved and elastic in fruit; corolla somewhat zygomorphic, the abaxial side more deeply lobed; achenial hairs rounded at apex 1. E.glossanthus
 - 3. Pappus bristles very slender, neither curved nor elastic in fruit; corolla actinomorphic; achenial hairs bidentate at apex 2. E.ramosum
 - 2. Upper leaves and branches glabrous
 - 4. Lamina of inner involucre bracts obovate, c. 5mm long 4. E.hemisphaericum
 - 4. Lamina of inner involucre bracts linear to narrow oblong, 2mm long 5. E.tenellum
- 1. Capitula without lamina to involucre bracts 3. E.compactum

Key to the subspecies of Erymophyllum ramosum

- 1. Involucre narrow-campanulate c. 5mm long; outer bracts sparsely ciliate or eciliate a. ssp. ramosum
- 2. Involucre narrow cylindrical c. 7mm long; outer bracts long arachnoid-ciliate b. ssp. involucratum

These two articles are available from the Study Group Library for any member who wishes to study them in detail.

Introducing OPERATION —

by Bill Owen

S... T.. E..... W..... P..... P.....

Save The Endangered Western Plains Plants

The Central Highlands Group of S.G.A.P. has offered to help Neville Scarlett (of Latrobe University and the World Wildlife Fund) and our own member Lawrie Lees (the ranger at the National Trust property "Mooramong" near Skipton) with their project of preserving the rare and endangered plants of Victoria, especially those of the Western Plains.

The project will continue for many years and will proceed in these stages:-

1. 1989 — Plant seedlings supplied by Latrobe University.
2. 1989 — Plant seeds supplied by Latrobe University, and pot on the seedlings.
3. 1990 — Collect seed from the plants, keep some for our own use, and give the bulk quantity to Lawrie Lees.
4. 1990 — Grow more plants from our own seeds, and give to our members for planting and to Lawrie Lees for distribution.
5. 1991 — Continue to grow more endangered varieties each year until the species are safe.

Neville Scarlett brought two varieties of seedlings to our last meeting:-

Helipterum anthemoides, Chamomile Sunray, from Barfold Gorge, north of Kyneton.

Senecio macrocarpus, Fireweed, from Dobie's Bridge, near Ararat.

The seedlings have been potted on, and some of them were ready for distribution at the November '89 meeting. Potting mixture is supplied free to members participating in the potting work.

We hope most of our members will participate in this worthwhile project. It only involves planting colonies of these plants in your garden, collecting seeds, and later planting seeds and growing species for distribution throughout the Western Plains.

MEMBERS' REPORTS

Colleen Simpson from Hope Valley, SA., writes about her germination results (Aug.'89).

Her seeds were sown directly into large pots in autumn in the hope that they would be flowering for the Show in September. The mix consisted of 3 parts sand to 1 part peat covered with 1/8th. gravel. Pots were put out in the open just before the opening rains in autumn. Colleen does not water at all when sowing — it is all left to nature.

Results of autumn sowing:-

Helichrysum bracteatum 'Dargan Hill Monarch' — high germination. Growing on well.

H.davenportii — no germination.

H.subulifolium — excellent germination. Two large pots doing well.

Helichrysum leucopsideum - excellent germination, but growing slowly during the cold winter.

Helichrysum monochaetum - no germination.

Helipterum roseum - excellent germination. Beginning to flower.

Cephalopterum drummondii - average germination. Two pots with about twelve plants.

Waitzia aurea - no germination.

Brachyscome cheilocarpa - sown 1st. August, beginning to germinate (10/8/89).

Olearia ciliata - " " " " " " " "

O. microdisca - " " " " " " " "

O. magniflora - sown late autumn, now pricked into tubes and standing up to the winter well.

Mary McKay from Fitzroy, SA., (June '89) writes:-

"I have grown Senecio magnificus for three or four years. After the first year it was a lovely plant and flowered well. The next year it drooped over and started to die back from the tips, although new growth appeared from the base. This last year it gradually died back completely, but fortunately I had taken a cutting, which is doing well in a large pot, so I imagine it would be wise to keep striking cuttings. I have not tried seed yet.

My Brachyscome diversifolia var. maritima (Deal Island) plants flower well and then die, so I presume they should be treated as annuals. I have found Brachyscome formosa the best of the few daisies I have tried in hanging baskets - attractive foliage and lovely flowers. Also B. graminea is very attractive foliage-wise, but not many flowers. I will have to fertilize it more. The foliage is cascading down about 70cm all round the basket and new growth appearing in the centre."

Joe Stephens from Lucknow near Bairnsdale (Vic.) directs our attention to a succulent daisy, Gynura drymophila, from Queensland. This biennial has succulent leaves and stems, and often occurs with other succulent species such as Hoya australis and Plectranthus parviflorus. Two varieties have been described; var. drymophila and var. glabrifolia.

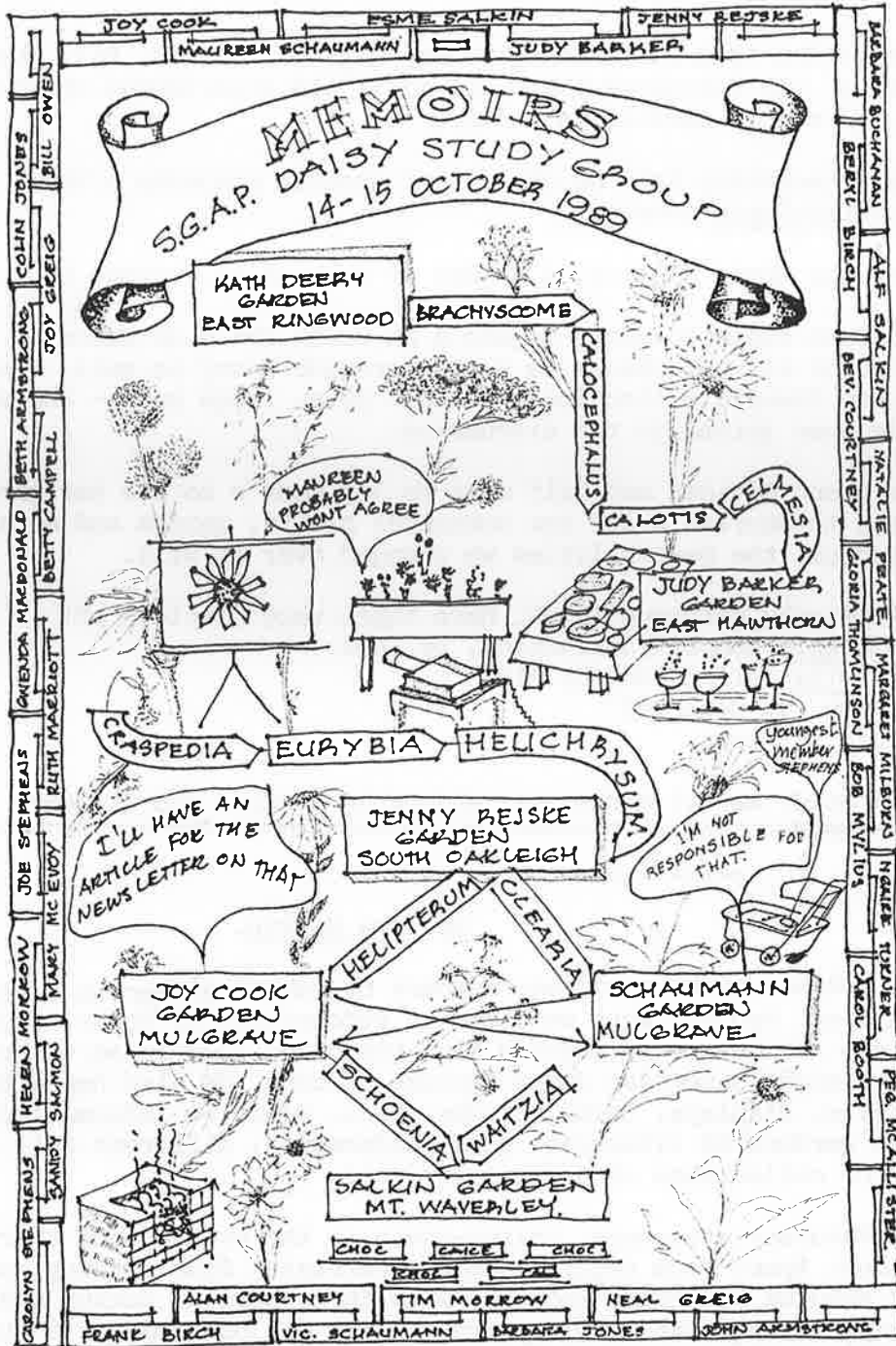
References:-

Forster, P.I. (1989). Gynura drymophila (Asteraceae: Senecioneae), a Succulent Daisy from Australia. Anacampseros Vol.5 (3): 52-54.

Forster, P.I. & Thongpukdee, A. (1988). Variation in Gynura drymophila (F. Muell.) F.G. Davies (Astereae: Senecioneae). Austrobaileya 2 (5): 557-566.

Barbara Buchanan from Myrree near Whitlands (Vic.) in August '89 writes about cutting back - with particular reference to Helipterum anthemoides (Whitlands). She says, "I was weeding in a very desultory way, depressed by all the frost losses, when I found one of my plants more or less out of the soil, the top leafy part and longer roots all dead looking, but with a lovely group of new rootlets coming from the crown. Last Sunday we were at Alan Gibb's garden. He has a new raised bed (eighteen months) for all the Western Australian plants he has had trouble with, but has put almost everything else into since, including Helipterum anthemoides. At the moment it is a rather ugly cluster of dead stems, but it did the same thing last year before growing away again in the spring. He said he might try burning off the top. As I grew it years ago at Canterbury in bush conditions it kept green all year, although looking tired at times. It suggests to me it is almost a herbaceous plant in nature.

... The calomerias that were to give a quick screen to the tank are ugly, black blotches, but I think the plants in the gully survived. It has been so dispiriting going around finding frost damage that I tend not to look too closely these days. For a lot of young plants split bark near soil level has been the killer."



by John Armstrong.

REPORT ON THE ADSG SEMINAR, OCTOBER 14th and 15th.

by Beth Armstrong.

The aims were to exchange ideas, information and, not least, hospitality and friendship with country members and those city members unable to come to our monthly meetings.

Saturday 14th. Afternoon visit to Kath Deery's garden in East Ringwood. Kath is an enthusiastic and able grower of a wide range of native plants, including many daisies.

After refreshments we moved on to Judy and Lee Barker's in Hawthorn, where Judy had her potted collection of Helichrysum apiculatum on display, plus the many other daisies in the garden. Inside the house -

1. Gloria Thomlinson's original drawings for the Daisy Book were hung around the walls and were eagerly purchased,
2. A display of dyed wools using Australian plants as the dyeing agent, by Esma,
3. Floral art displays all around the house, by Maureen, and
4. A table of dried daisy flowers supplied by Maureen and Judy.

Dinner was a co-operative effort - buffet style - with Joy Cook in charge, helped by Betty Campbell and assorted spouses. Vic Schaumann was an excellent, attentive barman.

After dinner we had short talks from Colin Jones, Jenny Rejske, Maureen, Bill Owen, Alf Salkin and Bev Courtney, who discussed their own ideas and experiences on seed germination, soil mixes, cuttings, fertilising, etc..

Next Esma gave us a most interesting talk on one of her special projects - the Helichrysum scorpioides/rutidolepis complex.

The evening finished with Joy Greig showing us slides of daisies in various habitats.

Sunday 15th. Morning garden visit to Jenny Rejske's at South Oakleigh where we admired the garden and bought all the plants we could persuade Jenny to sell. Finally we were shown the Victorian Olearia collection - also in pots, large pots - and some more knowledgeable people even joined in the discussion.

On to Mulgrave where the group divided and half went to Joy Cook's to see her garden and baskets, and half went to Maureen's for her container plants, garden and morning tea. When we had exhausted all the possibilities we changed over at will.

Back to Salkin's for a leisurely barbecue lunch. Here there were displays of:

1. H. scorpioides/rutidolepis complex collection, by Esma,
2. Brachyscome diversifolia collection, by Alf,
3. Calotis sp. collection, by Beth, and
4. Daisy photos, by Ruth Marriott.

Thanks to all who participated. We all had a very enjoyable weekend and at least some of our aims were achieved.

OPEN WEEKEND.

by Esma Salkin.

Our aim in running this weekend was to encourage members to come together in a relaxed atmosphere to discuss daisies. Spouses were welcomed in recognition of their support and tolerance of 'Asteraceae addiction'. We offered free board and food in an effort to entice members to come who might otherwise demur because of cost. We also hoped that the program of garden visits, displays, talks, slides, etc., would be informative and stimulating. We chose gardens to illustrate good landscaping, different soil types and aspects and some of the collections of Special Projects.

Thirty-three attended on Saturday afternoon, thirty-seven in the evening and thirty-two for the Sunday sessions. Apart from regulars, one interstate, four country and seven members from outer suburbs attended, together with three special guests and nine spouses. It was disappointing that more country members did not come as there are seventeen members within a 2½ hour run of Melbourne.

The catering was 'spot on' with little left over other than sausages from the barbecue. Special thanks to Joy Cook and Co. for efficient organisation in the kitchen to serve a vast array of dishes on time. Thanks to Helen Morrow for delicious sweets, to Barbara for all those chocolate cakes, to Lee for vacating the premises, to Jack (the dog) who really didn't know what was going on (but who didn't bite anyone), to Judy for reorganising the house and putting up guests, to Joy Cook, Jenny and Maureen for opening gardens, to Kath Deery for inspiration, to John for souvenir graphics, to Gloria for her drawings for display, to Joy Greig for slides, to Alf for tidying up the backyard, erecting shelter against the rain and rescuing it before it headed for the Bay, for coping with my 'panics' and to all who made it a great weekend.

Assessment: Socially excellent, botanically and horticulturally not so sure.

Expenses: \$218.30. Melbourne members did the cooking and preparation and were reimbursed for the cost of the major ingredients.

DEADLINE FOR JUNE NL ... 1st MAY, 1990. Please send to Judy Barker, 9 Widford St., East Hawthorn, 3123. My thanks to artists Betty, Gloria, John and Anita Barley.

REPORT ON PROPAGATING MATERIALS (A TALK DELIVERED AT OUR OPEN WEEKEND) by Colin Jones

Cuttings: 3 parts coarse sand (flywire sieved) to 1 part vermiculite and Lane's Cutting Powder. Prepare plant material and keep moist. Half fill tube with dry mix. Apply cutting powder. Hold cuttings to centre and fill tube with dry mix. Stand tube on gravel soak. Pour water over plant material and into tube. Maintain water level in gravel soak. (This method is also used on extended travels to bring back plant material.

Seedlings: **Seeds** - 2 parts perlite (wet) to 1 part peat moss (Bev C's mix). Keep in container with lid, ready for use. Two inch (5cm) tubes or 4 inch (10cm) squat pots are used as they allow longer root runs than trays. Spring to autumn tubes are placed on the gravel soak and in winter a heated box is used. Tubes are sprayed daily if possible.

Seedlings: - 3 parts potting mix (Propine) to 1 part perlite (wet). Fertiliser is added at a rate of 140ml nine month Osmocote etc. and 60ml IBDU to 80L of mix. Keep in a plastic bag for ready use. Three-quarters fill tube and then (with finger or 18mm stick) press mix against one side of tube. Drop plant's roots into hole, fill tube with mix and firm.

NEW MEMBERS

ADSG extends a warm welcome to the following new members:-

Peter and Lenine Bailey, 969 Ferntree Gully Road, Wheeler's Hill, Vic., 3150.

Julie Strudwick, RMB 2551, Benalla, Vic., 3673.

Trevor Symons, 31 South Road, Airport West, Vic., 3042.

Elise Walker, Kundari Gardens, Neals Road, Swan Reach, Vic., 3903.

Kathie Strickland, Kareelah Bush Nursery, Lot 7, Luxton Drive, Balnarring, Vic., 3926.

The Australian Daisy Study Group restricts membership to 75 members. The Group is now fully subscribed and we have six on the waiting list.

MORE REPORTS FROM MEMBERS

Ngairé Turner from Monbulk, Vic., suggests that a "Sanford Sharpie" - extra fine permanent marker is an excellent, long lasting marking pen for plant labels.

Elise Walker, a new member from Swan Reach, Vic., (Jan.'90), writes that she is growing a variety of daisies in pots and would like to offer (donate) them to the Group if anyone is interested. This is the list:-

- | | | |
|--|--|---------------------------|
| <u>Brachyscome formosa</u> | <u>Helichrysum ledifolium</u> | <u>Helipterum roseum</u> |
| <u>B. multifida</u> | <u>H. scorpioides</u> | <u>Ixiolaena</u> sp. |
| <u>B. parvula</u> | <u>H. semipapposum</u> | <u>Olearia floribunda</u> |
| <u>Calocephalus brownii</u> | <u>H. rogersianum</u> | |
| <u>Helichrysum apiculatum</u> (3 forms) | <u>H. viscosum</u> | |
| <u>H. bracteatum</u> 'Dargan Hill Monarch' | <u>Helipterum albicans</u> ssp. <u>albicans</u> var. <u>albicans</u> | |
| <u>H. bracteatum</u> 'Diamond Head' | <u>H. anthemoides</u> (2 forms) | |
| <u>H. cuneifolium</u> | <u>H. cotula</u> | |
| <u>H. diosmifolium</u> | <u>H. chlorocephalum</u> | Ph. (051) 56 2535 |

Colin Jones from Ringwood, Vic., about 25Km east of Melbourne, has found that no special treatment is required for germination of Helichrysum adenophorum var. waddelliae. He sows on a medium of 2 perlite : 1 peat moss. Using Seed Bank seed he found viability of '88 was excellent, of '89 poor.

SEED LIST:

A full seed list is published in each March newsletter. Please keep this list as additions and deletions only will be recorded in the other 1990 newsletters.

A STAMPED, SELF-ADDRESSED ENVELOPE MUST BE ENCLOSED WITH EACH REQUEST FOR SEED.

Please write to Esma Salkin, 38 Pinewood Drive, Mount Waverley, 3149.

Ammobium alatum, Angianthus tomentosus.

Brachyscome aculeata, basaltica var. gracilis, ciliaris (garden), ciliocarpa, curvicarpa, diversifolia var. diversifolia, exilis, gracilis, heterodonta var. heterodonta (Qld., NSW.), iberidifolia, lineariloba, melanocarpa, nova-anglica, obovata (Lake Mountain), parvula var. parvula, ptychocarpa, readeri, scapigera segmentosa, spatulata (Blayney, Lankey's Plain), tadgellii, whitei.

Calocephalus brownii, citreus, platycephalus.

Calotis ancyrocarpa, erinacea, inermis, multicaulis, scabiosifolia, xanthosoidea.

Cassinia aculeata, complanata, laevis, longifolia, quinquefaria, uncata.

Cephalopterum drummondii, Chrysocoryne drummondii, pusilla, Chthonocephalus pseudevax.

Craspedia chrysantha, glauca (Cape Conran, Echo Flat, Reef Hills, Vic.), glauca var. alpina, globosa (Kempsey, SA., WA.), pleiocephala, sp. (Lankey's Plain, grey leaf, sp. orange).

Erigeron pappocroma.

Helichrysum acuminatum, adenophorum var. waddelliae, apiculatum (Anglesea, compact form, Naracoorte, mixed, Mt. William), blandowskianum, bracteatum (Bonang Hwy., Crescent Head (prostrate), Ebor, Grampians, Mt. Wilson, Patterson's Cutting, Swift's Creek, S.W. Rocks, Western NSW., Yarrangobilly, "Diamond Head", hybrids - gold, lime, peach, pink, white, mixed, bracteatum var. albidum, backhousii, cuneifolium, davenportii, elatum, hookeri, ledifolium (Wellington Range), lepidophyllum, leucopsideum, newcastlianum, obcordatum (Fryerstown, Ringwood), podolepidium, pterochaetum, rosmarinifolium, scorpioides (Mt. Wilson, Lithgow, Ringwood), secundiflorum, semipapposum (Maldon, Mt. Buller, Wyangala Dam), subulifolium, viscosum (Maldon, Goulburn, Tumut, Tiger Hill).

Helipterum albicans ssp. albicans var. albicans (Dargo High Plains, Harcourt, Hotham, Hovell's Creek, Lithgow, Mt. Samaria, Ringwood, Wallangara), albicans ssp. albicans var. buffaloensis, albicans ssp. albicans var. incanum (Gunning, Tas.), albicans ssp. alpinum, antheroides (Whitlands, wine-bud), chlorocephalum, diffusum, floribundum, humboldtianum, involucratum (now Erymophyllum ramosum ssp. involucratum, jessenii (now Hyalosperma semifertile), molle, praecox (now Hyalosperma praecox), pygmaeum (Wail), simplex (now Hyalosperma simplex), manglesii, roseum, splendidum, strictum, Hyalosperma cotula (syn. Helipterum cotula).

Ixiolaena leptolepis, sp. (Western NSW.), Lagenifera huegelii.

Leptorhynchos panaetioides, Microceris scapigera.

Minuria cunninghamii, denticulata, integerrima, Myriocephalus gracilis, guerinae.

Olearia magniflora, phlogopappa (mauve, Lankey's Plain, garden), rudis, subspicata (Charleville), tomentosa.

Podolepis auriculata, canescens, gracilis, jaceoides, kendallii, lessonii, neglecta, rugata.

Rutidosis helichrysoides (Qld.), Streptoglossa liatroides, Vittadinia sp., cuneata complex

Waitzia acuminata, aurea, citrina, suaveolens.

If any member could provide the Seed Bank with seed of Erodiophyllum elderi we would be exceedingly grateful.

SEED DONORS

Many thanks to Beth Armstrong, Judy Barker, Barbara Buchanan, Jeff Irons, Colin Jones, Ruth Marriott, Esma and Alf Salkin, Colleen Simpson, Maureen Schaumann, Joyce Strong, and Julie Strudwick.

SUBSCRIPTIONS

Subscriptions are \$5.00 per year or \$10.00 for overseas members. Fees are due on 30th. June, 1990, payable by cheque. Members will receive two warnings; one in the June NL, and a large red cross (if necessary) in the March NL.

NOVEMBER