

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTSTHE AUSTRALIAN DAISY STUDY GROUP NEWSLETTER NO.21

Dear Members,

The year seems to be shaping up to a busy one for the ADSG. Already we have spoken to a number of groups and I thank Judy Barker and Jenny Rejske for spreading the "Daisy" message and Maureen for organising, preparing and setting up the eye-catching display of daisies and publicity for our book at the local library. In between times we get on with the task of sowing seed etcetera, and it's very informative to compare notes and to ponder why some seed will germinate for one propagator and not for another, when techniques are virtually identical!



IXODIA
25
Ixodia achillaeoides
x 2/3

unknown causes that tends to dampen enthusiasm, but the main thing is to enjoy your project. Try tossing your ideas around with a sympathetic listener as you seek out solutions. Let us know what your problems are, if any.

Two new brachyscomes are described in the current issue of Muelleria. B.sp. (Pilliga) is now Brachyscome formosa and B.sp. (Three Springs), also known to us as B.sp. (Yarra Yarra Lakes), is Brachyscome halophila. We thank Dr. Philip Short for reprints of his paper.

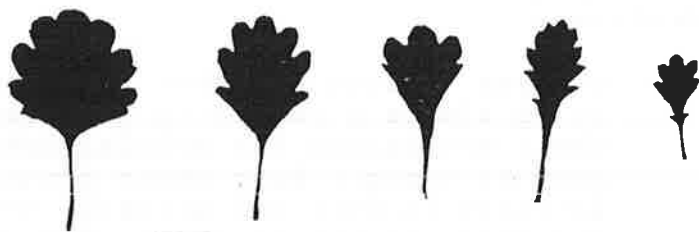
Esma.

EXTRACT FROM MUELLERIA VOL.6, NO.6, (1988)

Dr. Philip Short has kindly given us permission to reproduce extracts from his article 'Two new species of *Brachyscome* Cass. (Compositae : Astereae), with a note on the orthography of the generic name', *Muelleria* 6(6) : 389 -398 (1988).

Brachyscome formosa P.S.Short, sp. nov.

Perennial herb, to c. 15 cm high, rhizomatous, glabrous. *Leaves* cauline, alternate, mainly green but often purple, particularly on the lower surface; petiole absent or c. 3-25(31) mm long, the base decurrent; lamina usually circular to elliptic or widely obovate to obovate, rarely oblanceolate, 10-30 mm long, (4.5)7-24 mm wide, with 3-7(11) lobes, the lobes sometimes 1 or 2 toothed. *Capitula* solitary, terminal, heterogamous, radiate. *Involucre* 5-8 mm diam.; bracts 14-26, overlapping, elliptic or obovate, 2.6-4.5 mm long, 0.9-2 mm wide, mainly herbaceous but with scarious margins. *Receptacle* conical, pitted, glabrous. *Ray florets* female, 19-34; corolla 9.8-15.8 mm long, 1.8-2.6 mm wide, pink. *Disc florets* bisexual, 40-83; corolla 2.5-3.6 mm long, 0.7-1 mm diam., yellow; stamens 5; anthers 1.05-1.45 mm long, microsporangia 0.8-1.2 mm long, apical appendages 0.2-0.4 mm long, base obtuse, endothecial tissue radial, filament collar straight in outline and composed of uniform cells and basally not thicker than the filament; pollen grains (2910)3000-



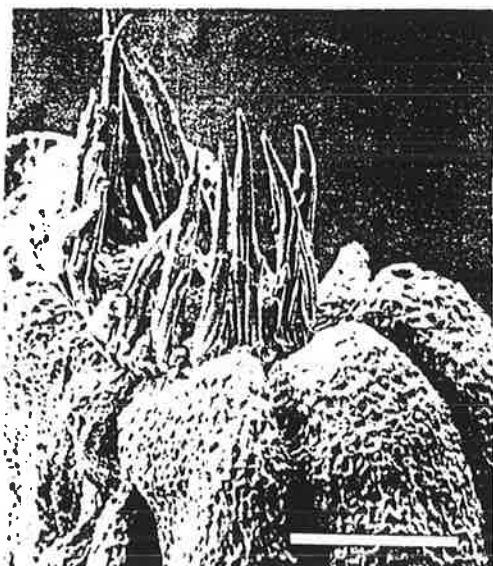
B. formosa

5000(5250) per floret; style branches flattened, with deltoid, papillate tips, the stigmatic papillae marginal and not reaching the apex. *Fruits (cypselas)* homomorphic, obovate, flat, 2-3 mm long, 0.9-1.4 mm broad, conspicuously tuberculate on each face, with an entire, narrow wing. *Pappus* a ciliate ring, 0.15-0.2 mm long. Figs 1, 2.

Chromosome number: $n = 9$ (Short 2425).

DISTRIBUTION:

All known areas are in New South Wales between c. 30°-33° S. latitude and c. 148°-150° E. longitude. Herbarium collections are from the vicinities of Coonabarabran, Gulgong, Mudgee and Grattai. The species also occurs in the Pilliga Scrub, having been introduced into the nursery trade from that region. I have also observed it at the base of Timor Rock and data supplied by Smith-White *et al.* (1970) suggest that it grows in the Warrumbungles National Park.



- carpopodium.
All scales = 200 microns.

Fig. 2. Fruit of *B. formosa* (Short 3028).
general surface view.

pappus.

NOTES:

B. formosa has been recognized as a distinct taxon possibly requiring formal recognition, for a considerable time. It is evident from the label accompanying MEL 1553040, a collection gathered by Woolls and cited below, that Ferdinand Mueller felt that it was a distinct species and had considered naming it after Woolls. Davis, in 1947, determined a likely duplicate of the same collection as "probably *B. melanocarpa* Sond. & F. Muell." (Woolls, NSW 15342). Elliot and Jones (1982) referred to it as an unnamed species with affinities to *B. melanocarpa*. Although the voucher specimens have been destroyed by insects (R. C. Carolin, pers. comm. 1984) it is evident from the general description, chromosome number determination and cited distribution that Smith-White *et al.* (1970) also knew this taxon. They referred to it as species no. 5 of the superspecies *basaltica*. (The superspecies concept is that proposed by Davis in 1948).

B. formosa has also been recognized as a distinct taxon in the nursery trade, being sold in the eastern states of Australia as 'Pilliga Posy' and in Western Australia as 'Tinker Bell' (Anon. 1985). Neither name has been officially registered with the Australian Cultivar Registration Authority (G. Butler, in litt. 1985).

B. formosa is readily distinguished from *B. melanocarpa*. Unlike *B. formosa*, *B. melanocarpa* is an erect, branching herb with an indumentum of glandular and septate hairs. The leaves are commonly cuneate and the fruit is black and lacks the well-defined but narrow wing of *B. formosa*. Smith-White *et al.* (1970) recorded a haploid chromosome number of $n=6$ for *B. melanocarpa*. I have determined $n=9$ for specimens of *B. formosa* from the type locality. It is clear that despite past suggestions to the contrary the two species are not closely related. *B. formosa* appears to have close affinities with another, apparently unnamed, taxon from eastern Victoria and southern New South Wales. Collections of this taxon (e.g. Forbes 512, Walsh 1214, Walsh 1492 — all at MEL) are commonly and erroneously referred to *B. angustifolia* A. Cunn. var. *heterophylla* (Benth.) Davis and *B. petrophila* Davis.

Observations of low seed set in cultivated specimens suggest that this species is self-incompatible. That the species must or usually cross-pollinates is reflected by other attributes. Thus it is gynomonoeious, has large ray florets, produces an average of 3,840 pollen grains per disc floret and has a pollen/ovule ratio (P/O) of 3,033 (see table 1). The use of P/O values in determining plant breeding systems is well documented (e.g. Short 1981, Lawrence 1985). The P/O compares well with the values recorded by Lawrence (l.c.) for self-incompatible, gynomonoeious species of *Senecio*.

Brachyscome halophila P.S. Short, sp. nov.

Annual herb, 10-33 cm high, sparsely hairy. Leaves basal and cauline, mainly alternate but the lowest ones opposite, entire and linear, c. 1-4 cm long, 0.1-0.2 cm wide, or pinnatisect, (1)2-8(c. 12) cm long, (0.5)1-4(4.2) cm wide, all leaves green, basally decurrent and with scattered septate hairs. Capitula solitary, terminal, heterogamous, radiate. Involucre c. 7-8 mm diam.; bracts 8-14, overlapping, elliptic or obovate, 2.7-5.2 mm long, 1.1-2.8 mm wide, mainly herbaceous but with scarios apices and margins. Receptacle conical, pitted, glabrous. Ray florets female, 9-13;

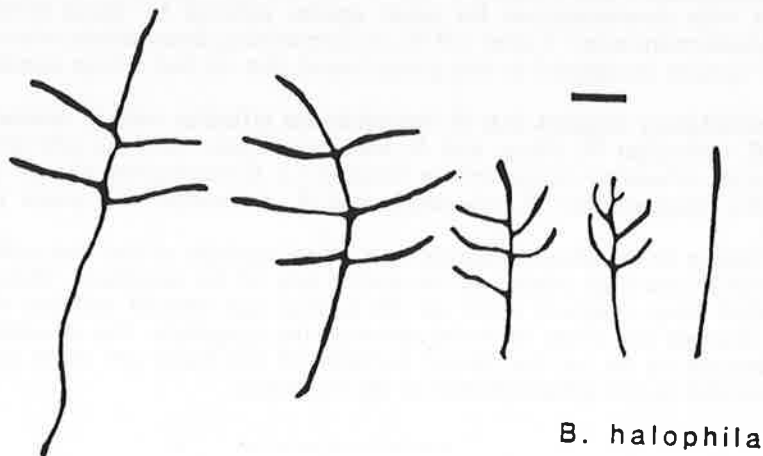


Fig. 1. Leaf variation in single plants of *B. formosa* (Short 2425) and *B. halophila* (Conn 2160). Basal and near basal leaves on left to uppermost cauline leaves on right. Scales = 1 cm.

corolla (5.1)7-10.5(11.2) mm long, (1.6)2-3.8(4.1) mm wide, white or pale mauve or purple except for white at base. *Disc florets* bisexual, 40-118, corolla (1.7)2-2.8(3.2) mm long, 0.6-1.2 mm diam., usually yellow but young florets sometimes tinged red; stamens 5; anthers 0.75-0.96 mm long, connective truncate, endothelial tissue radial; filament collar straight in outline and composed of uniform cells and basally not thicker than the filament. Style branches with the tips \pm lanceolate and papillate, the stigmatic papillae marginal and not reaching the apex. *Fruits (cypselas)* homomorphic, 2-2.6 mm long, minutely tuberculate, brown to brown-black; lateral surfaces with two ridges forming an apical shoulder; abaxial and adaxial surfaces of an entire or 3-10 lobed wing, the lobes with one to several curled, twin hairs; carpodium absent. *Pappus* absent. Figs 1, 3.

Chromosome number: $n=9$ (Short 2800).



Fig. 3. Fruit of *B. halophila* (Short 2193).
abaxial/adaxial view.



lateral view.



base of fruit showing twin hairs.
Note absence of carpodium.
All scales = 200 microns.

NOTES

The collection *Short 2877*, from near Pindar, differs from typical *B. halophila* in floret colour. The ray florets are bright purple with white at the base and in young disc florets the lobes are often tinged red. Specimens from the type locality have only white to mauve ray florets and yellow disc florets. The phenotypic differences may be due to variation in environmental conditions. However *B. halophila* is apparently confined to the margins of salt lakes and as previously noted (Short 1981, 1986) the salt lakes of Western Australia have undoubtedly been reservoirs of speciation. This is a result of the physical isolation of populations in different lake systems and drainage divisions (Bettenay & Mulcahy 1972; Mulcahy & Bettenay 1972). The type locality of *B. halophila*, on the eastern edge of Yarra Yarra Lakes, is in the South West Drainage Division. Population *Short 2877* is approximately 120 kilometres further north and is in the Murchison Drainage Division. Hence it seems that the phenotypic differences observed between the populations of *B. halophila* may be genetically determined.

The chromosome number determination of $n=9$ (Short 2800) for *B. halophila* is consistent with determinations for other species referred by Davis (1948) to subgenus '*Metabrachycome*'. Carter (1978), in determining chromosome counts for 12 of the 17 species recognized in this group found that all had a base number of $x=9$.

Fruit morphology suggests that *B. halophila* has affinities with *B. cheilocarpa* F. Muell., *B. ciliocarpa* W. Fitzg. and *B. oncocarpa* Diels, i.e. it is referable to the superspecies *ciliocarpa* recognized by Davis (l.c.). (Examination of type specimens at MEL suggests that *B. ciliocarpa* and *B. oncocarpa* will prove to be conspecific).

The reference to the abaxial, adaxial and lateral surfaces of the fruit refers to the orientation of the fruit relative to the central axis of the receptacle. Hence the usually divided wings (deemed to be on the adaxial and abaxial surfaces of the fruit) point towards and away from the centre of the receptacle. The shoulders of the fruit (deemed to be on the lateral surfaces of the fruit) are more or less orientated parallel to the circumference of the receptacle.

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Dr. Short and John Colwill (of Harper's Seeds) had both given us seed of *B. halophila* last year. Members who tried it out were very pleased with their results. We will report on it at length in the next NL. Suffice it to say it has a pleasing, modest habit and relatively large white, tinged mauve, heads over a long period. At times the mauve tinge is more in evidence than the white.

Judy.

SPECIES OR FORMS NEW TO THE GROUP

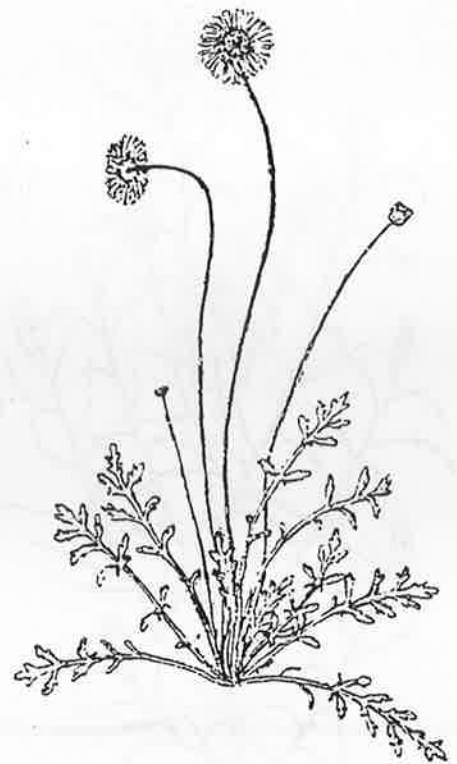
Brachyscome stuartii (N.S.W., Qld.)

(named after Charles Stuart)

Brachyscome stuartii was first grown by me after a trip to south-eastern Queensland, where I found it growing in abundance in many areas, amongst out-crops of granite and not too far away from rivers and streams.

Seed germinated readily within ten days from sowing. Finding myself with many plants on hand I decided to group three of each colour together in large pottery containers and, thereafter, derived a great deal of pleasure from each. They flowered profusely for many months, but when the warmer weather arrived (much to my consternation) they all collapsed and died - probably due to sheer exhaustion! Jenny kindly came to the rescue with more plants and these also suffered the same fate.

Listed as a perennial, and Jen assures me that it is, it is annoying to find this brachyscome acting like an annual in Mulgrave.



Brachyscome stuartii x 1/2

B stuartii is such a pleasing plant that I intend to persevere with its cultivation. As yet, I have only grown it in containers, but it certainly should be tried in a rockery and other situations. It has attractive foliage, somewhat like B. nivalis var. nivalis and, like that species, grows into neat little clumps up to 20 cm high. Leaves are radical, dark green, pinnatisect, 3 - 7 cm long. Each segment is 3 - 9 mm long by 2 mm wide, and may be entire or irregularly toothed or lobed. Flower-heads, 1.5 - 2 cm in diameter, are an added attraction as they come in varying shades of mauve, pink and white with yellow disc centres. These appear singly at the ends of erect stalks 18 cm long. The rays are 5 - 8 mm long and 1 mm wide.



surface views



achenes
x 2.0 approx.



side view

Achenes are black, cuneate, 1 mm wide, 1.75 mm long, with thickened margins. The pappus is short with white bristles.

Maureen Schaumann.

Olearia tenuifolia

(N.S.W.)

(tenuifolia = slender leaves)

Shiny Daisy-bush

In April 1987 I found this small bush scattered around Burrinjuck Dam on stony, dry soil in fairly open areas. It was never taller than 50 cm in this habitat and only one small mauve head caught my eye. The few seeds collected were sown within



Olearia tenuifolia x 3/4

have not lived to tell any sort of tale. I will persist with this species in the hope that it will increase its production of flower-heads and its longevity as we propagate from it.

The closely-related Olearia cordata may be distinguished because the leaves are not so crowded and are densely glandular-hairy, never glabrous. The leaf bases are broad and cordate. The achenes are prominently ribbed and the pappus does not have an outer row of short bristles.

The foliage is similar to that of Olearia glandulosa in that it is sticky and narrow, but the heads are much larger and fewer than they are in that species.

Judy Barker.

Brachyscome tatei

(S.A.,W.A.)

Brachyscome tatei is a small, rounded perennial herb 30 cm wide and 20 cm high, but differing from most other brachyscomes in that the leaves are thick and fleshy.

Flowering for eight to ten months of the year, B.tatei is well worth growing in a container and should also be tried in a rockery, even though it doesn't take too kindly to wet conditions. The advantage of container growing is that, during continual wet weather, it can be moved in under the eaves or any other spot that has overhead protection.

Pruning is essential when it becomes leggy, and I usually place the cuttings around the parent plant to prevent it looking lost in the large container. These root without too much trouble and are eventually removed and potted on when the new growth appears on the lower woody stems of the main plant.

two days and germinated in twenty-five days.

Under cultivation it makes quite a handsome shrub to 1 m with a dense, upright habit. The dark green, shiny leaves are very sticky, linear, and measure 1 - 2 cm x 1 - 2 mm. This form has a few small lobes along the margin of the top half of the leaf and both surfaces are glabrous except for an odd long white hair.

The stems are also sticky and are covered with short glandular hairs.

Quite large, mauve heads, 3.5 - 4 cm across, are borne singly at the ends of the branchlets from mid-January to April. Flowering could not be described as profuse, but there are generally a few open heads and plenty of buds at any given time.

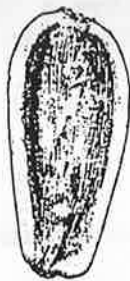
The achenes are brownish, 1.8 x 0.8 mm, have three or four inconspicuous ribs and are covered with long cream hairs. The pappus is 4 mm long and has an outer row of short white bristles as well as an inner row nearly twice as long.

Three plants together in a large pot have flourished and have produced a bit of viable seed, but plants put into the garden by Jenny Rejske and I

My one plant produced viable seed which was sown in March this year. Germination occurred in seven days, producing as many as thirty new plants. I expect it had been cross-pollinated before leaving the nursery as it was in full flower when purchased.

Brachyscome tatei has flower-heads 2 cm in diameter which are of the palest pink changing to white with age. These are borne at the tips of short stems 3 - 9 cm long, mainly bare, but occasionally showing a minute leaf bract. Ray florets 70, the rays 5 mm long and 2 mm wide. Involucral bracts 12, green, obovate, obtuse, 3 mm long and 2 mm wide. Receptacle conical, pitted, 2.5 - 3 mm wide, 1 - 2 mm high.

Leaves are cauline, 1 - 3.5 cm long and 1 - 2 cm broad, spatulate, entire or irregularly toothed, green and succulent, covered with minute glands and appearing alternatively along the stems.



surface view



side view

achene of B.tatei
x 20

Achenes are 1 mm wide and 1.75 mm long, brownish black with lighter coloured margins. The central region is thickened and bears short stiff bristles. The pappus is a ring of minute teeth.

Maureen Schaumann.

THE CONTINUING ROOT APHID SAGA

by Bev. Courtney.

Having mentioned, in the last Newsletter, my intention to try deterring root aphids with naphthalene, I suppose I had better share with members the results of this rather odoriferous exercise.

Because soaking pots in pyrethrum can become rather expensive I had been casting about for something cheaper which could perhaps be mixed in with the potting mix or placed in the bottom of pots.

I thought of naphthalene because it has long been used to keep moths and silverfish out of linen cupboards and bookcases.

First, I had to find out if exposure to naphthalene vapour killed root aphids. I selected about a dozen healthy root aphids and placed them in a small glass jar. (A healthy root aphid is defined as one which moves when poked!) A large flake of naphthalene was taped to the inside of the lid. At this stage all the intended victims were wandering aimlessly on the bottom of the jar. Next morning the hand lens revealed a scene of carnage! Twelve little bodies lying on their backs with legs in the air. Needless to say they all failed the poke test.

So that bit worked all right; now to try it on some pots.

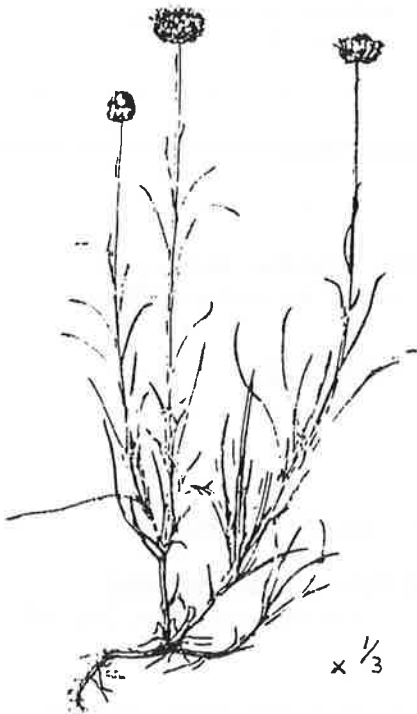
I chose several pots which were heavily infested with root aphids. The plants all showed the usual symptoms - yellowing of foliage and general lack of vigour.

Naphthalene flakes were placed in the bottom of each pot — a good pinch for 3 inch (7.5 cm) pot and a heaped teaspoonful for 6 inch (15 cm) pots. (The naphthalene gradually vaporises and must be topped up regularly.) The pots were checked at weekly intervals with the following results:

- after about a week plants appeared to be greening up and were putting on new growth.
- the root aphids seemed to gradually lose vigour and after six weeks it was hard to find any which were still alive.
- plants were not obviously affected by having their roots in contact with naphthalene vapour.

We are now heading towards the cooler weather and a period when root aphids diminish naturally so I shall repeat the exercise next spring and summer when root aphids are usually at their peak. It may be possible to achieve a 'quick kill' by enclosing pots in a plastic bag with a larger amount of naphthalene.

All in all, quite a satisfying exercise. The garden smells nice, too.



Helipterum albicans ssp. *albicans* var. *buffaloensis*

HELIPTERUM ALBICANS

by Colin Jones.

As can be seen from the chart set out in the book "Australian Daisies" *Helipterum albicans* is not a singular species, but one which is separated into sub-species, varieties and forms.

My experience with this species started in April last year when Maureen initiated me into growing daisies. Among the packets of seed I was given were two of this species — ssp. *albicans* var. *albicans* marked PS '85 and ssp. *albicans* var. *buffaloensis* marked GT '86. The var. *buffaloensis* responded to my tender care. However, in June another attempt was made with a packet of var. *albicans* marked Wallangara '86. Success!

Seed was sown on a mix of 3 parts coarse sand and 1 part peat moss, with trays sitting on a gravel bed. Overhead watering was applied as necessary.

The seedlings were tubed in various mixes as I went through the proverbial learning curve, oops curve. I tried a number of mixes, but was not happy with any as they did not appear to be helping the plants to maturity. Then I noted that our good friend and editor was using a mix of 1 part perlite and 1 part potting mix (pine-bark based) plus slow release fertiliser and IBDU, (I have since altered the mix to 1 part perlite and 2 parts potting mix.) 'Voila', better root and top growth!

Where to plant them? Mind you, I have a wife who still has nightmares from removing English Daisies from our lawns. "No worries, Dear. These will not be weeds," says I!

As with all growing things, whether it be from cuttings or seed, some are destined for a long life, while others — well! To assist plants that I use in my own garden I have found it profitable to pot them into 4 inch (10 cm) pots before letting them loose in the garden.

In early September three var. *buffaloensis* were ready to plant out, so one went

into a sandy, gravel, loam bed, another at the top of a retaining wall and another in a raised garden. All reached the flowering stage, but soon died. On reflection I believe growth was excessive.

In late October I planted out 6 var. albicans and 6 var. buffaloensis in what was once my front lawn. The ground had been mulched with shavings over fifteen years ago, but had not been dug over. The plants were placed in groups 6 to 10 inches apart. Growth has been very good, but at about half the rate of the earlier plantings. However, flowering has been profuse, providing a good seed supply.

Other H.albicans planted in the spring were:-

- (1) H.albicans ssp. alpinum - four plants in line planting in sandy gravel loam with semi-shade. Three died early February. No flowers to date.
- (2) H.albicans ssp. albicans var. incanum - one plant in sandy gravel loam with full sun. Died late December.

Watering has been by an automatic spray system, twice a week for up to an hour each time.

What of 1988/89 ?

- (1) Wait and see how the albicans plants survive and grow on into 1989.
- (2) Experiment with the same subspecies/forms of H.albicans from other places to see if I can come up with better results.

HERBARIUM (continued from Newsletter No. 20, p.7)

by Esma Salkin

SEED LIBRARY

This complements the herbarium and is perhaps of more value to us. Seed is stored in sealed cellophane bags, 10 x 6 cm, and labelled with fine texta. They are easily examined with a hand lens or microscope, and there is no danger of losing a precious achene.

MINI HERBARIUM

Beth Armstrong introduced us to this novel idea. All you need are a few sheets of stiff paper, a small folder (A5 for example), Scotch Magic tape (preferably in two widths, 19 and 25 mm) and a pen. Take one flower with a bud if desired, representative leaves (mature, intermediate and growing tip), and fruit. Mount beneath sticky tape. The clear tape shows detail well, flower colour is retained and as an added bonus you may find you have caught the pollinator! The herbarium is quick to handle, weighs little, and these few samples are enough for identification, along with relevant notes of course (name of species, location, height, habitat, etc.).

COLLECTION OF SEED

The same data listed for herbarium specimens is relevant when collecting seed. Judy Barker has written an excellent article in Newsletter 8, where she stresses that it is crucial to collect mature seed, i.e. for most Asteraceae when seed is about to fall from the seed head. Collect when dry and avoid seed infested with insects or you may end up with a packet of dust. Unless you are interested in reproducing a particular characteristic of the plant collect from a wide selection

of plants and take 10 - 20% of seed from each plant. This policy ensures that the diversity of the gene pool is maintained. This is particularly relevant if you are reintroducing species to an area and wish to make certain that the local genetic strain remains viable.

I collect seed in large envelopes and treat for insects , usually by placing the envelopes in a plastic bag in the freezer section of the frig.. You may prefer to use an insecticide. Store at about 20°C in conditions of low humidity.

CLEANING SEED

This is done after killing insects and can be tedious. Remove debris and dead insects. Shake seed from heads if present and sort out the mature seed. This looks plump and cannot be depressed. Sieving, blowing, etc. in my experience is more hazardous than useful. I process my seed in an airy place and have an aversion to craspedias with their heads full of dust and allergens.

GARDEN COLLECTION

Remember, as Judy has said, that massed planting will raise your chances of getting a high percentage of fertile seed. I now plant my daisies in groups. This also makes it easier to try hand pollinating. Normally Brachyscome spathulata fails to set seed for me, but when I rubbed together flowers from two adjacent plants I found that I had produced a high percentage of fertile seed that germinated within a week. Collecting seed from your own garden can be very rewarding; you may find you have an unusual hybrid purely by chance or by design. Observe all your new seedlings closely for different characteristics.

SOME NOTES ON SHRUBBY HELICHRYSUMS UNDER BRITISH CONDITIONS

by Jeff Irons

A plant catalogue published about twenty years ago listed six shrubby helichrysums, today I can find only two. The four I have are described below.

Helichrysum costatifructum

This was grown from Tasmanian seed, which germinated well. Plants were put out in various parts of the garden, but the only one to survive was in the well drained soil against a sheltered wall. Flowering occurred after some four years. Since the colour was a muddy white, and the plant not very showy, it was scrapped.

Helichrysum ledifolium

This is available from a few British nurseries, I suspect from vegetative propagation. The form we have will not stand up to really severe winters and a recent winter with an average January temperature of -1.5 C caused my ten year old plant's death. Comments of Australian visitors lead me to believe that it fares better in Britain than in mainland S.E. Australia. Whether this is because of water availability or lower temperatures I cannot say.

Helichrysum rosmarinifolium

Britain has two forms of this plant, both have smaller leaves than the Anglesea form. One, sold as 'Silver Jubilee', has longer leaves and a whiter appearance

than the other. It is also more susceptible to aphid attack. What little literature there is states that it requires a dry soil, and a sunny position. Curtis, in her Flora of Tasmania, states that it prefers moist to wet soil. I find that in moist soil next to a rubble filled drain, and part sun, it grows well.

Helichrysum thyrsoideum

Has been grown in Britain since Victorian times, but I can find no record of a nursery selling it today. My own experience is limited, but I think that it prefers sharp drainage. Young growth is subject to aphid attack.

SPECIAL PROJECTS LIST (additions and alterations)

- Joy Cook - the genus Leptorhynchus.
- Ian Smart - Helichrysum apiculatum
- Jenny Rejske - Olearia species (Victorian only)
- Alpine species
- Esma Salkin - H. scorpioides / H. rutidolepis
- Helipterum anthemoides
- Beth Armstrong - the genus Calotis (not Olearia spp.)
- Colin Jones - the genus Ixiolaena
- Alpine species.

Otherwise the list remains as it appeared in Newsletter No.20.

SPECIAL PROJECTS REPORTS

SHRUBBY DAISIES AS CUT OR DRIED FLOWERS

by Maureen Schaumann.

We are finding that there is a wealth of material suitable for floral work amongst our many Australian shrubby daisies. We have only just started to scratch the surface in this vast field and I am looking forward to experimenting with all these new interesting varieties now becoming available to us.

Of the few that I have tried so far, all appear to have great potential both as fresh or dried flowers. Their lasting qualities are excellent and they far outlive the exotic species. Drying is simplicity itself. All that is required is to pick in bud (especially if the buds are colourful) or when the flowers are just about to open, and hang upside down in loose bunches to dry. As most of these shrubs have thick, woody stems try wiring them, especially if space is limited in your container. Wiring will look neater, eliminate the unsightly holes thick stems produce in the oasis, and also prevent an overcrowded look in the arrangement. It is important to make sure your wires are kept well hidden. Unlike the single daisies which can be stood upright after wiring, the cluster daisies need to be hung upside down for a while to allow the side stems to stiffen.

Another tip worth remembering is that if the flowers and leaves drop after hanging upside down, use more fresh material and the alternative method of preserving with glycerine. Most cassinias benefit from being glycerined immediately after being picked; this also assists in making the stems pliable for floral art work. Refer to methods of using glycerine (page 45) and wiring and drying (page 40) in our book "Australian Daisies".

A further point when using Australian flora in dried floral arrangements is to always make sure beforehand that they have retained their colour after drying. If colour has been lost arrangements can take on a rather dull or drab looking appearance, a poor advertisement for our colourful native flora.



Cassinia
aculeata
x 2/3

Listed below are a few shrubbies which have been tried to date with success:-

<u>Name of species</u>	<u>Colour</u>	<u>*Wired</u>	<u>#Dried</u>	<u>Comments</u>
Cassinia aculeata	White or cream clusters		+	Flowers drop after drying. Glycerine after picking to prevent this.
Cassinia quinquefaria	Straw-coloured loose clusters		+	As above
Cassinia uncata	Dull gold clusters in a compact head		+	Foliage and flowers excellent when dried.
Helichrysum diosmifolium	White and pink clusters		+	Dries well. Pink form retains colour. Glycerine method yet to be tried.
Helichrysum ledifolium	Small white clusters. Terracotta buds	+ (new growth only)	+	Excellent dried. Buds retain colour. Foliage remains green as well as showing yellow leaf reverses to advantage.
Helichrysum obcordatum	Gold clusters in a compact head		+	Retains colour reasonably well. Foliage drops. Glycerine to prevent this.
Helichrysum purpurascens	Small white clusters. Rose pink buds	+	+	Dries well. Buds retain colour.
Helichrysum rogersianum	White clusters	+	+	Foliage and flowers are excellent when dried.
Helichrysum semipapposum (Anglesea form)	Gold clusters in large compact head	+	+	Excellent dried flower. Retains colour. If wiring hang upside down for side branchlets to stiffen.

<u>Name of species</u>	<u>Colour</u>	<u>*Wired</u>	<u>#Dried</u>	<u>Comments</u>
<u>Ixodia achillaeoides</u>	White papery clusters	+	+	One of the most attractive and best dried flowers available. Florists tint this species in all colours.
<u>Odidia achlaena</u>	Large white clusters in a compact head	+	+	Foliage and flowers dry very well. Has potential.

* Wired - Species in this column with + are easily wired by cutting off most of the stem and inserting wire up the remaining 1 cm left behind the head.

Dried - Species in this column with + have been hung upside down in loose bunches to dry

.....

Helichrysum podolepidium

Adding to my article on H.podolepidium in Newsletter No. 20, I now wish to report that trials on both fresh and wired flowers reveal that fresh flowers, picked when just opening, will last more than a week, but the flowers shrink and lose their colour rapidly when wired.

Rutidosia leucantha

The rather unusual flowers of Rutidosia leucantha, another species tried, also last as a freshly picked posy, but diminish in size to something unrecognisable when wired and dried.



VICTORIAN OLEARIAS

as told by Jenny Rejske

Jenny has given me a preliminary report as a personal communication. She asked if we had noticed that olearias died before our very eyes. We had all noticed. There seems to be only a two to three year life expectancy with many species - less in some cases. A number of her plants had done well in dry spots or in well drained positions with plenty of root protection.

Olearia asterotricha grows and flowers well in a pot, but has not been very successful in the garden.

Olearia frostii

O.decurrens flowered in a pot and was lovely.

x 2/3

O.frostii is doing well, but has not yet flowered.

O.glandulosa has flowered in a pot and is growing nicely in the garden, but has not flowered there.

O.phlogopappa (all varieties and colour forms) are doing well in the garden and "grow like weeds".

Reliable species are O.floribunda, O.myrsinoides and O.phlogopappa.

Jen has observed that olearias grow better in pots that might appear too small for

them. Hers are in dappled sun and often feel quite warm. She wonders whether they may like to be root-bound, whether they like warm roots, or whether they merely have excellent drainage while receiving water whenever they need it.

Helichrysum apiculatum

by Ian Smart.

Some preliminary comments on my observations and attempts to grow this species:-

1. Generally seed propagation success was not encouraging on seed obtained from the seed bank.
2. Plants propagate well from cutting material as long as the material is not too soft.
3. The amount of viable-looking seed collected from container grown plants is minimal. What are their pollinators?
4. Plants can take a lot of neglect. Many times I have thought I had killed a plant through neglect (i.e. no water) only to see it spring back to life within 48 hours after a good soaking.
5. Plants can take hard pruning and bounce back with increased vigour.

Additional comments

by Judy Barker.

The study of this species complex has been fascinating in the discovery of the wide range of foliage forms that seem to be included in this species. Ian agrees with me that there are probably six foliage forms at least. Ian is just setting out on a trip around Australia so could easily add to this number. Add to this the variation in the colour of the heads, in the number per cluster, in the shape of the involucre, in the length of the bracts, and in the habit of the plants and you find yourself feeling sorry for the revising botanist.

I hope to have something more positive for the next Newsletter, but in the meantime many thanks to the many members who have sent me seed. It has nearly all germinated.

COMMENTS ON SEED AND POTTING MIXES

by Jeff Irons.

Bev. Courtney's observation that her success rate in transplantation increased after she had changed from coarse sand to perlite raises some interesting points. I hope that it will not be considered presumptuous for me to comment on her finding.

In changing to perlite Bev has done two things. She has replaced a medium of unknown and variable composition by one of a known and reasonably constant particle size. If, as is likely, she used standard grade perlite, her new material has a larger particle size than the former one. I believe it likely that her improved success rate is due to the larger particle size, and that the same result could have been obtained by using grit of 3 - 5 mm size range. My own potting mix is, prepared using coarse sand, but it is not the usual kind. I go to the builders' yard after a period of heavy rain, and skim off the top half inch or so from his pile of coarse sand. Consequently what I have is grit, but I get it at sand price!

Equally interesting is her use of a soil-less mix, and in particular one of low water retentivity. When I think of the difficulty I have in keeping such mixes

moist in a British summer I wonder how she manages, and why perlite was chosen instead of vermiculite. Many growers in Britain have given up peat/sand composts and use instead one containing 10% of clay. These composts are nearer to a traditional mix and are easier to manage. More importantly the change to this more expensive compost was forced on them by customer reaction. Customers were receiving plants with large root systems, which looked fine, but which died on planting out. Often they had been grown on capillary beds with root promoting fertilizers. Reversion to a more traditional mix has cured the problem.

Compost composition is determined very much by climate and personal watering regime. This is exemplified in the plants I buy from a nurseryman in S.E. England. In his location evaporation is much greater than it is where I live. Through experience I have learnt that it is desirable to repot everything bought from him into a more open mixture.

Incidentally, one of the current vogue materials in Britain is bark. Commercial growers have realized that the superb drainage it gives makes it easier to over-winter plants. The trouble is that in summer they need watering three times a day.

Note that I differentiate between water absorption and retentivity. Peat has a high absorption but a low retentivity.

NEW MEMBERS

We would like to extend a warm welcome to two new members, both well-known to members of SGAP - Vic. and probably much further afield.

Mrs. June Rogers, RMB 5361, Horsham, 3401.

Mrs. Helen Morrow, 6 Janet Street, Lower Templestowe, 3107.

THE AUSTRALIAN DAISY STUDY GROUP WISHES TO THANK ...

...the National Herbarium of Victoria for sending us a copy of the latest issue of their journal, Muelleria. We are most grateful for this valuable source of information.

... Dr. Jack Warcup for generously donating so much seed to the Group. Much of it is new to us and therefore of considerable interest. Many of the species have germinated already and now we look forward to growing them.

HAVE YOU NOTICED ...?

... how freshly collected seeds of Podolepis jaceoides produce a heavy, oily stain on paper? Since taking on Podolepis as an extra study, I have noticed other Podolepis species do this also, although to a lesser extent. What could be the reason for such a high oil content in these seeds? Bev.

... how beautiful Brachyscome melanocarpa is in a terracotta hanging basket? Three plants together have stems to more than 30 cm trailing over the edge. It has been flowering since spring. Jenny.

... that Helipterum anthemoides (Higgins Plains) has lived all summer in the hottest, driest conditions while other forms have died? Now it has rained these plants are all going ahead. Joy Cook.

... that if Mr. Nextdoor grows pumpkins along the dividing fence, white fly covers the daisies in plague proportions, and cannot be controlled?
Jenny.

... that very thick cuttings of Calomeria amaranthoides will root successfully?
Barbara.

Barbara has been able to grow and flower C. amaranthoides at Kallista in the cool of the Dandenongs. She has given Maureen and I beautiful, fresh sprays of it for display.

ITEMS OF INTEREST

- Esma has been dyeing wool with natural dyes made from daisies. She uses a technique similar to that of dyeing with eucalypt leaves. A wonderful range of subtle colours has been produced by using different mordants. Species tried have been yellow H. bracteatum, H. semipapposum and the leaves of H. apiculatum (Norman Point). She has a collection of sample colours. This is another exciting sideline to our studies.
 - Maureen and Bev. have donated daisies for the decoration of a wedding cake. The result looked most attractive.
 - Daisies are appearing more often in nurseries. Bev. Courtney has opened Bush Garden Native Plants at 3 Burswood Close, Frankston. She specialises in daisies, correas and small to medium species. Ring (059) 71 2585 before coming. There is quite an extensive range at Kuranga Native Nursery in Ringwood too. We gave propagating material to Evan Clucas and were delighted to receive a donation of 5 inch (12.5 cm) and 6 inch (15 cm) pots of well grown daisies as well as a large number of tubes. This fulfills one of our Group's aims - namely to extend the range of species available in nurseries.
 - Joy Cook claims to have had her first success with a hanging fibre-lined basket. Westernport Nursery advised her to line the inside with a layer of black plastic which has a few holes at the base for drainage. This stops the wind from drying it out. She used Propine 321 potting mix with 1/5th. vermiculite and fed with long term Osmocote.
 - Maureen suggests the use of containers for growing some of the little species, such as Helipterum cotula, H. rubellum and Waitzia species.
 - Esma saw Myriocephalus stuartii germinating very well on a sand heap in a garden at Birchip. The gardener had simply cut up mature flower-heads onto the heap. A suggestion that this species regenerated too easily came from Jenny, and another of our members, Sharon Howard, who had told me it had become a weed in her garden.
- Esma also heard that B. multifida is hard to grow in Mildura. Is this due to alkalinity?
- Joy Cook has noticed H. cotula germinating in old pots after the last rain, so suggests you do not discard them until you have a good look at them.
 - Helichrysum ledifolium is one of my best-loved plants. It grows wherever and whenever I plant it, and it is especially reliable in salt spray and gale force winds,

STUDY GROUP NEWS

- A weekend in the Warby Ranges has been definitely planned for 8th/9th October. Interested members should contact Esma closer to that date.
- A weekend in Mt. Samaria State Forest has been tentatively planned for 19th/20th November.
- The Study Group has accepted an invitation to put on a display at Eaglehawk for the Bendigo Native Plant Group on 29th/30th October.
- The Study Group presented Maureen with a token of their esteem in appreciation for the wonderful job she did as Founding President. It was a sort of monocular with a

magnification of 30 and an inbuilt light, well suited for quick identification on the daisy trail.

MAGIC HEMICELLULOSE SOLUTION ?

by Judy Barker.

I made my solution by cooking mulched twigs for a couple of hours at 200 C, filling the baking dish with water and decanting next day. The result (known to me as Hc) is dark brown, smells sweet and feels soapy - not unlike Cooper's beer. I sowed two pots with each species; one watered with Hc every second day and the other (the control) with water only. Here are the results:

<u>SPECIES</u>	<u>DATE SOWN</u>	<u>DATE OBSERVED</u>	<u>NO. OF SEEDLINGS</u>	
			<u>CONTROL</u>	<u>PLUS Hc</u>
<u>H.obtusifolium</u> (F'haven)	31.3.88	9.5.88	3	60
<u>H.obtusifolium</u>	11.3.88	9.5.88	0	
var. <u>tephrodes</u>	2.4.88	14.5.88		16
<u>Helipterum polygalifolium</u>	1.4.88	9.5.88	0	0
<u>Helipterum involucreatum</u>	12.3.88	9.5.88	0	0
<u>Ixodia achillaeoides</u> *	31.3.88	9.5.88	0	0

* This seed was collected from the garden and was later found to be devoid of mature achenes.

These results seem to indicate that Hc may have had an effect on the two forms of Helichrysum obtusifolium. This species and I.achillaeoides germinate in masses after bushfire, so I have repeated this experiment using both, and including H.leucopsidium. This time the ixodia seed contains mature achenes. H.polygalifolium and H.involucreatum appear to need another key.

SENECIOS TO CONSIDER

by Peter Vaughan.

While testing shrubby daisies I was tempted by the senecios. Initially I grew S.gregorii, S.magnificus and S. sp. "The Rock" (near Wagga). All were very impressive species that grew high, but died overnight. I then progressed to local species with very rewarding results. I am presently growing Senecio minimus.

I consider S.minimus to be my greatest find. It is a common plant in damp locations in the Wattagan State Forest, west of Newcastle. S.minimus is a bush to 1 m high and 0.6 m across. My plants are still healthy at two years old. A bush I cut back considerably after flowering is much healthier than the untouched specimen. The flowers are bright yellow, about 2 cm across, in clustered heads. Flowering is profuse, occurring in spring and lasting two months or so. The massed display is very spectacular.

S.minimus may be recognised as distinct from other senecios by the auricles at the base of the leaves. The stems are also winged, this serving as an important function.

This species is a powerful butterfly attractor. The common crow butterfly, Euploea core, found from the Northern Territory to Eastern Victoria, is irresistibly attracted to this species. Euploea core feeds (as a caterpillar) on poisonous plants and the resultant butterfly is poisonous to eat. Many (or all?) senecios are also poisonous. I suspect the butterflies are topping up their levels of toxins by feeding from this daisy. (Whilst I was living in Malaysia I noted similar habits there.) The amazing thing is the plant caters for this process. If the plant is not flowering the butterfly feeds from secretions on the plant's stems. The stem is winged so the secretions become channelled and easier to gather. (Photographs forwarded to the editor.)

(to be continued)

SEED LIST:

* denotes out of alphabetical order

ADDITIONS

- Apochlamys spectabilis
- Brachyscome microcarpa, tenuiscapa var. pubescens, rigidula *
- Calocephalus citreus
- Cassinia complanata, laevis, longifolia
- Craspedia glauca (Grampians), pleiocephala, sp. complex, sp.(orange form)
- Elachanthus glaber
- Gnaphalium sp.
- Helichrysum acuminatum, apiculatum (Anglesea), (compact form), (S.A.), argophyllum baxteri (buff form), bracteatum (Bonang Highway), (gold hybrid), davenportii, lepidophyllum, obcordatum (Fryerstown), (Ringwood), paralium, papillosum, podolepidium, rupicola, secundiflorum, semipapposum (Rushworth), (Mt.Buller), thyrsoideum
- Helipterum albicans ssp. albicans var. incanum (Tas.), (Rokewood), diffusum, simplex, tenellum, chlorocephalum *
- Leptorhynchos panaetioides
- Microseris scapigera (Heathcote), (Anglesea)
- Olearia algida, axillaris, pannosa, ramulosa (blue form), (Tas.)
- Othonna gregorii (syn. Senecio gregorii)
- Schoenia cassiniana
- Vittadinia bicolor, muelleri

DELETIONS

- Blennospora drummondii
- Brachyscome diversifolia (Mt. Samaria), (Tolmie), (Urquhart's Bluff)
- Celmisia saxifraga
- Cephalipterum drummondii
- Chrysocoryne drummondii, pusilla
- Helichrysum dealbatum, obcordatum (Tas.)
- Olearia lirata, lepidophylla, speciosa
- Podolepis sp.
- Vittadinia sp. (Flinders Ranges), (Nathalia), (Wanilla)

SEED DONORS

Many thanks to Maureen Schaumann, Betty Campbell, Colin Jones, Beth Armstrong, Barbara Buchanan, Stephanie Rennick, Esma and Alf, Thelma and Bruce Wallace, Ruth Marriott, Judy Barker, Bev. Courtney, Alison Pearce.

SUBSCRIPTIONS are due in June (\$5.00 per year). The Study Group is full at the moment and we have a waiting list. If you do not intend to keep up your membership Esma would appreciate it if you wrote her a letter of resignation.

All correspondence and requests for seed (enclosing a stamped, self-addressed envelope) should go to Esma Salkin, 38 Pinewood Drive, Mt. Waverley, 3149. 032326213

The next Newsletter is due in December, 1988. The deadline for contributions is November, 4th. Please send to Judy Barker, 9 Widford Street, East Hawthorn, 3123. 03613211
Thank you for your articles so far. They have given me much pleasure to type. Many thanks also to our artists, Gloria Thomlinson. Betty Campbell and Bob Mylius, whose work adorns these pages.

Judy.

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