

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

VERTICORDIA STUDY GROUP

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NEWSLETTER NO 30 -- AUGUST 1998.

MEMBERSHIP

The Study Group welcomes the following new members:-
Paul Niehoff, 24 Crimson Avenue, Blackburn, Victoria 3130
John Maddern, 28 North Paradel Strathalbyn, South Australia 5255
Kathy Targett, 169 Wyee Road, Wyee, New South Wales 2259.

Members are reminded that subscriptions for the current financial year 98/99 are now due. Your prompt attention to same would be appreciated. As in previous years the subscription will remain at the nominal figure of \$3.00 and if desired advance payments will be accepted.

FINANCES 1.7.97 TO 30.6.98.

Credit Balance 30.6.97-----	\$514.69
Receipts 97/98-----	162.30
Expenses 97.98-----	304.80
Nett loss 97/98-----	142.30
Credit Balance 30.6.98-----	351.88

I am very pleased to acknowledge **donations** in excess of the nominal subscription from Elizabeth George-\$17.00 and Gordon Curtis-\$2.00

THE VERTICORDIA BOOK

Members will be pleased with the advice from Elizabeth George that the manuscript for her Verticordia Book is currently being assessed for publication. She will let us know when more definite information is available.

MEMBERS CULTIVATION NOTES.

Twelve months ago, in Newsletter No.28, I referred to a *Verticordia grandis* specimen grown in a 450mm long x 150mm dia PVC tube by **Ernie Koch** of Matraville N.S.W. Ernie has continued the treatment noted and on a recent check I was pleased to note it had lost none of its earlier reported vigour, and continued to produce many growth shoots with large dark green leaves He is contemplating giving it a fire treatment during summer to see if it responds with multiple growth shoots from the rootstock.

An earlier comment from **Dick Mills**, Banjup W.A. to the effect that, from his experience, the above species establishes best, given generous fertilising in the early stages would seem to be supported by the above.

Gordon Curtis, Happy Valley, South Australia, says :- "I am still plugging away testing out a few ideas. Twelve months ago I planted the front garden with various *Kennedys*, mainly *prostrata*, to see if they had any effect on root problems. To date I appear to be winning and have courage enough to plant out various types of *Verticordia*. I am also using

powdered limestone in the bottom of planting holes. A newly raised bed of *Verticordias*, *Lechenaultias* *Boronias* etc. is mulched with scoria and is looking good. Older plantings of *V.s plumosa* and *chrysantha* look as if they will be covered in flowers this year."

Pat Moyle, Mandurah, W.A. commented that taking cuttings from leader growth of developing plants of *V. fragrans* can lead to loss, whereas *V. muelleriana*, also in Verticordia Section Pennuligera, responds favourably to severe cutting back in early development.

Elizabeth George, Alexander Heights, W.A., in a July note says :- "Perth is well short of normal rainfall figures but we are expecting more rain this weekend. My garden and *Verticordias* are managing quite well, although I have again lost many of last year's seedlings since the winter rains began, due mainly to a new potting mixture which retains too much moisture. Green algae forms in the top of the mix, followed by powdery mildew on the plants, (which had previously been growing well). Fortunately the plants in my potted collection have been able to withstand the problem, probably because they are older and in larger pots containing some of the better mix. At present I have managed to maintain about 50 taxa in various sized containers and will keep trying more.

Having been able to observe *Verticordia* plants growing in the garden and in pots, I have discovered that birds and insects visit them to collect liquid from a small gland at the base of leaves on new growth, even when plants are not in flower. It has been intriguing to watch various honeyeaters, bees and other insects probing the gland, which has to be punctured to access the liquid. My taste buds can't detect any sweetness but perhaps the amount is too small, or is too subtle for humans. I had noticed the behaviour quite some time ago but assumed they were seeking moisture held in the leaf axis or blade. Most of the taxa I have investigated seem to possess the gland, although, as you may imagine, some leaves are so tiny it is difficult to be sure. My hope is that someone will do some research to find out what is the purpose of the gland."

Ted Newman and Pat Kenyon are continuing to add to their *Verticordia* collection noted earlier in Newsletter No 29 and report that, although they have experienced quite a few frosts this winter and some of the newer specimens are quite small, no plants seem to have been affected to date, except for a degree of colouring of a few from winter carotene.

I have visited their garden on numerous occasions since planting began and have been quite impressed with the growth rate being achieved. Due to circumstances reported earlier, (rabbit infestation), many of the specimens had been held in nursery pots considerably longer than I would have considered reasonable and required rather harsh treatment to open up and sometimes even discard much of the thoroughly congested root systems. The after planting treatment, as reported earlier seems to have worked, as there have been very few losses, and even plants which appeared on their last legs have taken up the challenge.

The ones that did not make it were a grafted *V. galeata* (the *D. citriodora* rootstock seemed to have been inadequate to sustain the scion in a small pot pre-planting out, during the long periods of drought), *V. plumosa* var. *vassensis* which had hung on for a while but deteriorated following a break in the dry conditions in late April, (suspected collar-rot), and *Verticordia chrysostachys* which was a reasonably mature but spindly specimen before planting. (It had made a good recovery but was blown completely out in a heavy wind storm during the recent July).

It is early days yet but as reported in N/L 29 three survivors from an earlier planting have done remarkably well, and we will certainly be watching with keen interest as plants progress more into maturity.

STUDY GROUP GARDEN, CHERRYBROOK

The following report covers plants currently surviving (July 1998), with particular focus on older specimens.

From experiences with *Verticordias* at our former garden at Mt. Kuring-gai in the early days of the Study Group, it became evident that resistance to soil and air-borne pathogens varied extensively between species. The basic soil at the new Cherrybrook address, to which we moved in April 1985, is brown, heavy, clay-loam. This seemed to present a challenge but it also provided an opportunity to assess species' acceptance of a soil type and texture in which few *Verticordias* occurred naturally.

After preliminary preparation, specimens were planted from August 1985. All beds in the *Verticordia* Section have been elevated to approximately 300mm to improve drainage. In order to explore plant responses a variety of differing soil types have been imported (see below). Unfortunately some neighbour trees on the Eastern side restrict sunlight to a degree; the section enjoying about 60% exposure in summer, (North-East to North-West), and a little greater percentage in winter. To assist documentation of individual treatments a co-ordinate system for specimen positions has been adopted.

A number of different cultivation strategies have been tested in attempts to overcome particular problems, (undoubtedly accentuated by growing in a summer-wet, winter-dry region), especially from root rotting and collar rotting pathogens. Some observations on these have been reported from time to time in the Newsletters.

Although the current winter has been considerably wetter than Sydney's average, the last few years in Eastern Australia have been characterised by long drought periods, particularly during the warmer part of the year, but this has not been all negative. The incidence of autumn fungal attack on foliage, which on earlier occasions had sometimes been noted, has been minimal of late.

In order to assess plant responses to post-flowering fertilising, particularly of newly established specimens, and summer watering, a regular program was maintained from late spring 1997 to mid-January 1998, following which it was tapered off. Although the late summer and early autumn period was exceptionally dry, the response and ultimate effect of the added water in the post-flowering late spring and early summer period seemed to pay off, most plants coming through very well.

During this recent summer we heard a lot from the media about the hole in the Ozone Layer and on several occasions some very hot sun temperatures were certainly experienced. The conditions seemed to be accentuated however, more by virtual lack of appreciable air movement than by extreme ambient air temperature. It was interesting to note then, that although some apparently robust garden specimens of indigenous plant species were sun-scorched and died, in my own and many other people's gardens, none of my *Verticordias* suffered any apparent serious effect on these days, except for few relatively old specimens which finally gave up the ghost after barely hanging on for some time.

A further but personal event however, did not do very much for a while for my *Verticordia* activity, or in fact the garden generally. Most of 1996 and into 1997 was taken up, firstly waiting for, then undergoing, and finally recovering from, a hip replacement. This was followed by an operation on an ankle. This is all behind me now, but unfortunately some species suffered from lack of attention during this period and combined with the drought situations noted, resulted in my personal holding of *Verticordia* species being considerably reduced. I am currently trying and hoping to be able to restore my plant range again so that research on same can be carried forward.

As noted, where *Verticordia* species of differing ages occur, the following report gives priority to older survivors. Where special observations seem appropriate, they have been

highlighted The notation used to denote the particular soil type where each is growing is as follows:-

- A----Basic brown clay loam alluvium ex shale.parentage. (Shale.at 5metres)
- B----As A but with compost and sand dug into top 200mm
- C----Loamy gravel (refer N/L 29). pH corrected to 7 after excessive alkalinity noted.
- D----Nutrient deficient coarse sand.
- E----As D but with compost dug into top 200mm.
- F----As D but with compost plus a little sandstone parentage loam dug into top 200mm
- G----Yellow sandstone parentage loam with concretionary ironstone inclusions
- H----As G but with compost dug into top 200mm

V. acerosa var. *acerosa*- B- 4½ Yrs- 500mm- Growth quite erect-Vigorous but unflowered as yet. **Younger specimens seem more prone to mildew attack on leader growth.**

V. aereiflora- Potted specimen only

V. albida- F- New planting .

V. amphigia- F- 3¾ Yrs. 270mm.**Improved by pruning old stems after dormancy.**

V. attenuata- C- 4¾ Yrs. 1150mm + F-2¾ 1150mm. **Requires wind staking particularly**

in light soil types

V. bifimbriata- F-New planting

V. blepharophylla- F-New planting

V. brownii- A-Grafted *D. citriodora*. 2 yrs.-750mm vigorous.**Seems to resent pruning immediately after flowering. OK late in dormancy?**

V. chrysanthella-A- 9¼ Yrs. + A-8 Yrs + A- 7¾ Yrs. **Mature plants seem less prone to mildew attack when active growth is carried on defoliated lower stems.**

V. chrysostachys var *chrysostachys* F- New planting. **Species seems slow to move from late autumn or winter planting,(as with some other species in V. Sect. Pennuligera.)**

V. cooloomia- F- New planting- **Species prone to small black ant infestation on foliage followed by scale or aphids.Controlled by ½ strength Malathion poured over soil surface. Previous mature plants adversely affected by White oil applications, although E. Koch found same effective painted on plant stems rather than leaves.**

V. densiflora var *densiflora*-E-3Yrs. self-sown- 1150mm

V. densiflora var *cespitosa*- B- 1 yr. 750mm + G- 1 yr. 1100mm

V. dichroma var *dichroma*- Potted specimen only

V. drummondii-B-¾ Yr.- 310 vigorous

V. etheliana var. *etheliana*- F-¾ Yrs-330mm vigorous.heavily budded.**Refer comments N/L 27 & 28. Freely draining subsoil seems highly desirable for species longevity.**

V. etheliana var. *etheliana* (2 Potted specimens) Refer N/L 23 for earlier comment on same Both 7¾ Yrs. since originally potted. Both staged outside since 10/97. Both 350mm still vigorous and flowering well.

V. fastigiata-A- 7¼ Yrs. Compact & vigorous.

V. fimbrilepis subsp. *australis*-F- New planting.

V. fragrans- E- 2 Yrs. 1000mm + B- 2 Yrs.680mm. Both vigorous. **Species seems prone to later loss if allowed to sustain wind damage to either roots or foliage. Freely draining subsoil seems highly desirable**

V. galeata - B- 4 Yrs. 600mm vigorous- Grafted *D. citriodora*. **Propagation from cutting difficult. Sole success to date from very small cutting taken early winter.**

V. grandis- C-8¾ Yrs. 700mm- Vigorous since pH correction.-(Refer N/L 29)

- V. helichrysantha*- E- 1 Yr. Squat & vigorous.
- V. huegelii* var *decumbens* A-2 Yrs- Vigorous
- V. hughanii*- E- 1 Yr. 200 x 300mm diam. vigorous **Best results in light, freely drained soil**
- V. lepidophylla*.-B- 1 Yr. growth has been very slow but has improved since 4/98.
- V. longistylis*-A-13 Yrs. Several plants- No problems. **E. Koch noted some chlorosis in light sand. E. Newman noted very good development in medium loam.**
- V. minutiflora* A- 10 Yrs. 700 x 1100mm dense & vigorous. **Less robust in lighter soil**
- V. mitchelliana*- B- 1 Yr.-390mm. **The jury is still out on this species in Sydney.???**
- V. monadelpha* var *monadelpha* Open form -E- 2¼ Yrs. 900mm vigorous
- do do do Dense form-G- 3 Yrs. 800x 900mm diam. very vigorous
- V. monadelpha* var. *callitricha*- E- 1 Yr.- 460mm x 400 average diameter.
- V. muelleriana* var. *muelleriana*- potted specimen only.
- V. nobilis*- New specimen awaiting planting.
- V. oculata*- F.- New planting. **Seems difficult to get started in late autumn or winter. See comment above re other species in Section Pennuligera.**
- V. paludosa*- F- New planting.
- V. penicillaris*- B- ¾ Yr.-150mm x 380 diameter
- V. pennigera*- B- 4½ Yrs-680mm multistemmed. Vigorous since pH correction.
- V. pityrhaps*- Potted specimen only. Rather spindly & poor looking.
- V. plumosa* var. *ananeotes* B- 5½ Yrs.- 400mm multistemmed
- V. plumosa* var. *brachyphylla*- G- 1 Yr-730 vigorous + B-600 vigorous.
- V. plumosa* var. *pleiobotrya*- F- ¾ Yr. **Very slow growth until mid autumn.** Now vigorous.
- V. plumosa* var. *plumosa*- A B C D- !2 total incl. self sown. Varying forms from squat & spreading to taller and bushy. Tallest growth in soil type D.
- V. plumosa* var. *vassensis*-B- 1 Yr.-600 vigorous **Seems more prone to collar rot attack than most other varieties of the species.**
- V. polytricha*- B- New planting.
- V. pulchella*- -F- New planting
- V. sieberi* var. *lomata*-F- New planting.
- V. sieberi* var. *sieberi* C- 4¾ Yrs. 700mm. Rather spindly but vigour improved after pH correction.
- V. staminosa* subsp. *staminosa*- E-3¼ Yrs-200mm x 350 diam. Flowering. **Improved by summer watering**
- V. staminosa* subsp. *cylindracea* var. *erecta*- C- 9½ Yrs -Improved after pH correction. Flowering -Younger self -sown specimens in soils E and B vigorous & flowering. **Species seems to suffer some branch die-back in drought conditions.**

IS THIS YOUR PROBLEM ?

Do you live in an urban area with lots of nice friendly neighbours around ? To have good neighbours is a definite plus and the last thing you would dream of would be to do something to foul up the system. Have you noted though, the better the relationship you have with the people around you, the more likely it is that they acquire a **cat** and moreover, that they don't even bother to provide a kitty litter for it.

Now I find cats quite likeable and friendly animals but when you have a garden of Australian plants you find that the neighbours cats spend a great proportion of their time in your garden admiring the birds and furthermore that they seem to regard it as their personal toilet. Apart from the obvious threat to the native bird life a problem arises when, after months of preparation, propagating and growing on some rare and desirable (to you), specimen, the time for planting out arrives. As collar rot can be a problem with many Australian species, particularly in summer-wet conditions of Eastern Australia you dare not cover the soil close

to the plant with vegetative mulch, which might perhaps keep the animals at bay, so your only recourse seems to be to cross your fingers and hope. Unfortunately this does not always work. Cats seem to have an uncontrollable attraction to newly disturbed soil, especially with Australian plants in it. They will walk past rows of Geraniums, Petunias, Azaleas etc. to get to it and naturally the first casualty is your prized newly planted specimen.

I have found an answer though which seems to work quite well and does not unduly spoil the garden appearance. Cats seem to have an aversion to little sticks coming out of the ground at a low angle. About eight or so twigs of 2 or 3 mm diameter and about 20 cm or so long, placed in a ring around the plant and leaning outwards at say 30 to 45 degree angle are relatively inconspicuous and seem to work very well. By the time the specimen is established the soil has crusted a little and the twigs have rotted away to form part of the general setting.

So much for the neighbours cats. In parts of Eastern Australia Crimson Rosellas, although being a most attractive and desirable garden visitor, can make you gnash your teeth and forget your natural conservation tendencies. They can even make you wish the cats back. They don't seem to worry about blue, pink, white or many other coloured flowers but let them get a sight of the crimson of a *Verticordia grandis* or a *Vert. etheliana* and you are in for trouble. They don't bite off merely the flowers and buds but large pieces of stem growth to say 15 cm. or more long. I have also found Noisy Minors are a threat to some *Verticordia* species at the budding stage. *Verticordia penicillaris* in particular comes to mind, but in this case only the flower buds and not the plant stems are stripped.

Many supermarkets carry very life-like rubberised snakes in their toy departments. I keep a few of them and when one of my prized specimens is at the danger stage, I place the snake in a coil near it, or in the case of slightly taller plants, twist it around some of the branches. The birds get the message and keep their distance.

Finally there is the problem of large sugar ants. Small black ants I can live with but sugar ants, (to those who are not familiar with the term), are about 16 to 20mm long and orange and black in colour. As mentioned earlier in this Newsletter I use elevated beds throughout and in many places large sandstone pieces for edging or decoration etc. The said ants seem to feel I have placed the stones expressly for their use and if left alone they would soon expand their nests to take over and rain-proof large sections of the beds. While the ants themselves seem quite inoffensive they are so efficient in drying out the soil that my *Verticordias* soon languish or even die from drying out.

Acting on a suggestion by a talk-back radio host I have found a suitable control. Pour a weak solution of Malathion (about 50% normal application strength) into the holes of their nests. Sometimes they only move shop to a nearby stone but with a second application to the new area they usually get the message. The plants seem not to be affected by the treatment and I am led to believe that Malathion is fairly rapidly biodegradable.

I have it on very good authority that stalwart **Dave Gordon**, Myall Park Arboretum, Queensland, is 99 not out and getting very close to his first century. Congratulations Dave from the whole Study Group. We are all with you.

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