

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

VERTICORDIA STUDY GROUP

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NEWSLETTER NO 44 -- July 2005.

MEMBERSHIP

I am very pleased to welcome the following new members to our Study Group :-

Bob Carroll, 23 Perigee Close, Doonside, NSW 2767

Bob comments:- "I know little about Verticordias except that they are mostly reputed to be difficult to grow in my area; (Sydney's outer western suburbs). I have had some success in the past growing them in containers, but even then they did not live long, probably due to lack of skill and knowledge on my part. but I wish to learn more and would appreciate your advice"

Ian Budge, RSM 6, Biddle Road, Dunsborough, W.A. 6281

Ian lives on a 100 acre property, 250 Km south of Perth and 6 Km from the sea.. He works as a Coordinator for Parks and Gardens in the Busselton Shire and says " My training in horticulture some 26 years ago still fuels the passion I have for W.A. Native Plants but my work rarely involves verticordia.

My interest in verticordia can be blamed on Elizabeth A. George's book 'Verticordia, the Turner of Hearts'; an excellent layman's guide to this genus.-----I had the pleasure of meeting her in person at the Wildflower Society Landsdale Nursery where I was able to pick up a few rare and endangered species and try them out on our property.

About 14 species have been planted in the last 12 months on our grey sand overlaying gravelly soil.-----They are doing well with occasional light watering during hot weather and protected by planter bags from clumsy roos and damaging rabbits.

The area is notorious for harbouring dieback in this Jarrah/Marri country, so I've taken on board the comments of Hazel Dempster to attempt to treat plants with phosphoric acid in advance of infection, to build up resistance to the soil borne fungi.----- My training in horticulture some 26 years ago still fuels the passion I have for W.A. Native Plants. I am currently growing the following species :-

<i>V plumosa</i> var. <i>plumosa</i>	<i>V.nitens</i>
<i>V.blepharophylla</i>	<i>V. monadelpha</i> , pink
<i>V. staminosa</i> var. <i>staminosa</i>	<i>V. monadelpha</i> , white
<i>V. plumosa</i> var. <i>vassensis</i>	<i>V. monadelpha</i> var. <i>callitricha</i>
<i>V. densiflora</i> var. <i>densiflora</i>	<i>V. pennigera/attenuata</i>
<i>V chrysostachys/muelleriana</i>	<i>V. mitchelliana</i>
<i>V. longistylis</i>	<i>V. endlicheriana</i> var. <i>angustifolia</i>

I would love to grow heaps more this planting season and look forward to your response.

The concern I have ----- is that they are in serious decline in our state from many quarters:-

- 1- Overrun by weeds; in particular Sth. African Love Grass, the AIDS of the plant world
- 2- Salt encroachment from the ground water levels rising
3. Unnecessary clearing of land by landholders.

In my travels to my parents in law, cousins and friends in the Dalwallinu, Wubin, Buntine and Moya districts, (reasonable verticordia country.), my concern is that future generations will never know how beautiful they are except in photographs. The road verges, once lined with *V. eriocephala*, *V. monadelpha* and *V. picta* are completely barren of undergrowth

So with this in mind I would love to see a serious attempt to cultivate and domesticate these plants for garden usage----- We have the space to grow as many species as possible and I would love to grow those ----- that can handle many soil types. I have no commercial interests.-----My motivation is purely based on interest and preservation of this stunning genus"

The following is my reply to Ian, which might be of interest to Study Group members generally HMH:

I am very pleased to welcome you to the ASGAP Verticordia Study Group, particularly as you hail from the home of verticordias. I note your enthusiasm for this beautiful genus of wildflowers, and our research can certainly profit from your participation. We in Eastern Australia have faced an 'alien' climatic situation and have needed to think a little more objectively and discover why these plants are sometimes regarded as difficult to maintain, and hopefully come up with answers. I believe we have made considerable progress in these objectives and I also believe the thinking we are developing can be applied beneficially across Australia, wherever they are grown in a garden situation, as distinct from natural distribution in their chosen climatic range and soil type.-----

----- You mention the decline of the roadside scene in WA.in regard to your beautiful wild flowers. I have noted further and increasing deterioration of same with each of my five trips dating back to 1966. In fact the other day I received a note from a South Australian member, who, upon speaking to one of your well known nurserymen on his trip of last spring, received the following reply:-"If you want to see Western Australian wildflowers go to Victoria."

You referred to the reputation this genus has acquired of being too difficult to propagate. This is certainly understandable with regard to propagation from seed. I don't know however how well your earlier training in horticulture covered propagation from cuttings. To me this is by far the easiest method of propagation but I believe thought must be given generally as to the best time to take cuttings. The method does not generally involve much expense. You hear of misting and bottom heating in glasshouse situations but very primitive methods can be set up requiring little time or cost and these sometimes give better results than the more sophisticated ones

I would add that when you propagate your own plants there are some very distinct advantages.as opposed to buying prepared nursery stock. You probably realise the variety of species available is often rather limited.The nurseries are there to earn a living and understandably they concentrate their efforts on a few well known species which might attract interest from the general public, who are used to growing common garden plants, and only expect to dig a hole, water them a couple of times and forget them. Over here in Eastern Australia you can rarely buy freshly propagated tubestock. Most nurseries like to sell plants at an intermediate stage which looks attractive from an uneducated buyer point of view, having even, on occasion, reached or approached the flowering stage

Perhaps the greatest advantage of propagating your own is that you can pick your time for planting out, with respect to the stage of growth of the specimen. I prefer to plant out from a reasonably deep pot, (150mm x about 75mm top diameter), and select a stage before the leaders have started to circle the bottom of the pot, although it is true there are a few species which may accept root, with balancing foliage pruning. Even if this applies to the particular species however much more after-planting attention is needed to compensate for the lack, or interference, of leader root development. You also need a little bit of luck regarding the weather. If I am in the position of having to use a nursery grown specimen to increase my range of species I would firstly bare root it, remove all coiled and restricted roots, prune back the foliage growth in proportion,repot it in different soil and use the prunings as cutting material. If it was eventually planted, this would not be until it was making vigorous new growth, which could, on occasion take six months or so.

There are also other advantages in propagating your own, and I note your family affiliation with the verticordia rich northern or central sandplain areas

Another distinct advantage is the psychological boost it gives to your interest. There is nothing like having a few of your own cuttings struck, potted up and awaiting that more favourable weather period for planting them out. With the space you have available also you can propagate many specimens of a particular verticordia and note their reaction to varying local aspects and other situations

----I sympathise with your animal problem. I have crimson Rosella parrots which get very excited about flowers, especially red ones. You may need to put up a notice 'Animals, keep out'. I have to put out toy snakes and lizards sometimes, but they would hardly be appropriate for you.

Your soil type sounds ideal for Verticordias in the main. You are very lucky and also lucky to have all that space available. If you have plants from medium to heavy soil areas such as *Verticordia huegelii*, you might do well to dig a hole and fill it with your gravel underlay, rather than plant into the sandy surface strata. This is one species which seems sometimes a little chlorotic over here, grown in sand.

I note your reference to Phytophthora cinnamomi and your use of phosphorus acid. I would be very interested in due course to have your assessments of your trials in the long term. Over here we are more used to confronting the Phytophthora problem, as it is very widespread in Eastern Australia, particularly with our warm weather rainfall. Plants of the Myrtacea family however can usually be handled reasonably with special attention to drainage. We do have great difficulties however with some of the WA Proteacea, particularly the upright Banksias and Isopogons.-----

Please don't hesitate to ask if you would like help or discussion on any aspect of growing verticordias and in the short term especially, of propagation. When I started the Study Group over here my first emphasis was to test as many species as possible for response to various soils and longevity. I am now trying to build up my coverage from about 40 species or varieties and achieve better plant performance with respect to the various ones.

DONATIONS

I am very pleased to acknowledge the following donations in excess of the nominal fee:-

SGAP Queensland Inc.	\$10.00
Graham Eastwood	\$2.00

MEMBER REPORTS

The following update and comment, (2/05), from **Adrian Lamande and Mae-Lin Han**, Donvale, Victoria would be of interest to all members With reference to propagation Adrian says:- "I prepared by removing the bottom leaves to approximately ½ way and treated the bottom with Clonex Purple. As space was not available in my cold frame, they were instead placed on a new heat mat outside of the frame and covered with plastic soft drink bottles. The drink bottles worked quite well until we had a few very hot days; 30+, and a few were cooked. The verticordias fared better than other species and only a few cuttings were lost. At this point in time the bottles were removed and the cutting material had to survive without a humid environment. Given this adversity the strike rate was quite a bit higher than I had expected, and I believe that many Verticordias can be easily propagated without the use of a cold frame.

Of the species tried, 2 x *V. blepharophylla*, 2 x what I believe to be *V. acerosa* and 3 x *V. minutiflora* were successfully struck and have been removed from the cutting bench and have at least doubled in size

As well as these 2 x *V. fastigiata* have struck good roots but show no signs of any growth yet and have been left in a protected situation. All of the *V. densiflora* var. *cespitosa* are still quite green but show no new growth, and don't yet have any roots.

As well as the above our search for verticordias is never ending and many new species have been found in a variety of locations. I believe that I accidentally omitted, *V. monadelphica* var. *callitricha* from my last list but we have been growing a plant grafted on to *Darwinia citriodora* in potting mix in a large terra cotta tube for about 18 months. It just flowered with quite a spectacular display. Out the front *V. chrysantha*, (I do believe it to be *V. chrysantha* because of the apparent lack of a lignotuber, but will endeavour to identify it next time it flowers), flowered in early September, followed by a very small plant of *V. densiflora* which had put on little growth in the last 12 months. Since flowering however it has about doubled it's original size.

A small cutting grown *V. nobilis* planted about 2 months ago also flowered and then died. After examination of roots and surrounding soil I have decided that this was probably due to lack of water.. It was quickly replaced with a grafted *V. venusta* from Phil Vaughan

V. plumosa had a quite unimpressive flowering but is a very healthy two year old plant. It was planted out quite small; 7cm x 3 cm, and is now about 30cm x 20 cm and very compact due to regular pruning. (In Sydney also the 2004 flowering was not up to usual standard and I attributed this to the very dry preflowering growth period-H.M.H.). All of these plants are grown in a mound of soil mix, (approx. 60% decomposed

granite; road sand, dromana toppings, and approx 40% standard sandy loam. It is about 60-70 cm high at its highest point. Included in this mound are many rocks for plants to get their roots under. Before it was piled up the very heavy yellow /grey clay was broken up to about 30 cm and graded into the mound, so there is a gradual change in soil texture rather than a sudden one. This seems to grow these verticordias quite well and I have had very few problems with them.

Out the back a very small plant of *V. mitchelliana* has recovered from defoliation. It was planted about 12 months ago as a small (5cm x 5 cm, cutting grown plant and has done nothing but lose its leaves since. Hopefully it will grow a bit soon. It is however in quite a shaded location due to the fact that an *Acacia leprosa*, 'Scarlet blaze', has defied its label and become a lot wider than expected very quickly.

Next to this I planted a small, (4cm x 2 cm), cutting grown *V. galeata*. It has put on quite a bit of new growth over summer and is now about 7 cm high. *V. drummondii/attenuata*, (more on this in a minute), flowered well twice; once in about November and again in January, and has, in the past few weeks put on much new growth. This again was a small cutting grown specimen; 7cm x 5 cm, when planted about 18 months ago and is now about 35 cm x 20 cm, and again is kept compact by regular pruning. All of these are growing on a mound much the same as the front except the soil mix proportions are reversed due to a mix up at the garden supply centre. The mound is about 1 metre high x 4 metres wide and 3 metres long and also houses a *Dryandra*, 3 *Petrophiles*, 2 *Isopogons* and a *Prostanthera magnifica*

A small, (5cm x 2 cm) cutting grown *V. staminosa* has recently been planted on a nearby mound similar in size but made up of a soil mix comprising 60% propagation sand and 40% sandy loam. In the past 6 months it has more than doubled its size. Next to this is planted a recently acquired *V. lindleyi* var. *purpurea*. It wasn't in very good condition, (quite root-bound and slightly yellow in colour and I didn't hold out very much hope for it as other specimens of verticordias from this source have not done very well. I believe this was due to the fact that they were too established. This is why I like to plant all of my verticordias very early. I took a few cuttings from it however despite that there was not very good material and I managed to strike one anyway. It is still alive, its colour has improved a little and I think it will probably make it.

As well as these I have added a grafted *V. grandis*, (on to *Darwinia citriodora* with a Geraldton Wax intergraft) to the collection on another mound similar to the front one and close to the house. Because it is close to the back window it probably only gets sun until 2-3 pm, so I hope this will be enough. It has grown a little since being put in but it is still too new to comment on. Next to this I planted another *V. mitchelliana* grown from cutting, just because I had one. I have also acquired grafted *V. mirabilis* which is still in a pot until I can find it a good home. I am a little concerned that it may have a few foliage problems in our colder climate, given its desert distribution, and plan to give it full sun with some reflected heat if possible. The above is a full update on our verticordias.

Verticordia drummondii/attenuata?

I recently tried to identify our plant I had been told was *V. drummondii*. I was aware through the Study Group that many were incorrectly labelled and were in fact *V. attenuata*. This caused a few problems. Firstly the petals appear to be more akin to *V. attenuata* and narrower towards the slightly fringed tip. However the hypanthium is narrow and angular more like *V. drummondii* and the sepals have either 6 or 7 lobes. The style is about 7mm long and about 0.3mm thick, (*V. attenuata*), both the stamens and staminodes are incurved and the staminodes appear to be slightly 'bumpy', (*V. drummondii*). The leaves are small, about 1.5-2.0mm long and have a definite glossy sheen, (*V. drummondii*). So where am I now?. If anyone can see a flaw in my logic please point it out as the *Verticordia* Book in reference to these two species, is not as clear as I would like.

Two other things add to the confusion, looking at Margaret Pieroni's illustrations.. Firstly the stamenodes resemble her diagram of *V. drummondii* almost exactly and the petals that of *V. attenuata*. However it appears in her illustration that *V. attenuata* has the more angular hypanthium, (this could be just my perception) and that *V. drummondii* has more sepal lobes than it should. Now also being a student botanical illustrator-----and with five prior years of flower painting experience, I do understand the lengths to which Margaret would have gone to ensure that these illustrations were exactly what was in front of her.

This leads me to ask the question, if somewhere between the two species there are intermediates, or more radically -----do the two warrant separation? Not being a botanist or taxonomist I must admit-----I have very little knowledge of what constitutes a species separation.-----Has anyone done a cpDNA and nrDNA analysis of the *Verticordia* genus yet?"

The following comment based on my own very limited experience, was included in my letter to Adrian recently:--

With regard to your comments on *V.s attenuata* and *drummondii* I would certainly agree that casual observance of the foliage of both would cause doubts in one's mind regarding identification. I can't answer your question regarding intermediate forms but these may well exist. There are certain factors however which, from my experience, might point identification in either direction, viz.:-

Foliage colour. Viewing comparable specimens of both, *V.dummondii* tends to be a little bluer in tone than *V. attenuata*, which tends to be more greenish.

Plant dimension and growth habit. *V. attenuata* tends to develop much more quickly and if not pruned in early growth will become a much taller specimen, (in excess of 1 metre here) with foliage heavily concentrated in the upper plant region. This leaves a rather bare lower stemmed region and these plants have proved very susceptible to wind damage to the root system. Early and frequent tip pruning has produced lower, more bushy plants overall, easily maintained to about 600mm, which to me are far more attractive, particularly in flower. *V. drummondii* requires much less attention to growth control, but even if not checked, has not exceeded more than about 600mm total height

Flowering time. Despite seasonal climatic variations, particularly in recent years *V. drummondii* is a much later flowerer here and would not be expected to reach full flowering until April. On the other hand *V. attenuata* flowers in mid summer, although this year a few isolated flowers did show up as late as March.

Regarding DNA testing to establish plant identification. From what I have read to date, this is being viewed by some authorities as something which, if adopted ultimately by world botanical authorities, might solve some problems but might also cause so much confusion that the current identification bases to all of the world flora would need to be reassessed?

A Final Thought from Adrian and Mae-Lin.

I would respond to people labelling plants "too hard", "can't grow that here", "drop dead" or the like. This has given me the Smith's Chips ever since we have been trying to establish our garden. Initially we wanted to grow many Western Banksia species and were constantly told that we couldn't grow them in Melbourne. This was most often preceded by me asking why? to which I don't believe we ever received an answer. So many people just don't make any effort to find out why the growing conditions they are using are not suitable for a particular species and what they can do to improve their success. When I then tried to find out what we could do to establish a "W.A.heathland garden" on our heavy clay soil, information was hard to come by. Everything had to be done the hard way, by trying and then asking why?, and then trying again with this new knowledge.

To date the front garden is as finished as a garden will ever be, (it will constantly change), and contains a few difficult species but mainly easier to grow things. Now the back is still a work in progress but we have made a point of including not one easy to grow plant. Everything we plant is "too hard", "can't grow that here", or "a drop dead plant". By trying many methods including raising large mounds of imported soil mix, paying close attention to both top soil and sub-soil hydrodynamics, the inclusion of drainage features like a dry creek, agri. drains and gravel underlays and pits, the use of layers of limestone chips under garden beds and grafting techniques, we have started the process of taming many species, including Verticordias, Darwinias, (mainly various mountain bells from the Stirling Ranges), Banksias, Dryandras, Grevilleas and Eremophilas just to name a few.

If we as a society don't start to ask ourselves why something didn't work and how we can do better next time, many of the best Australian plants will remain untamed.

Great point Max..I am really happy that someone else feels the same way"

Graham Eastwood, Batemans Bay, NSW commented (3/05) that he had been having rather disappointing results with his efforts in propagation from cuttings and felt that the seasonal weather conditions might have contributed significantly. He added that established verticordias in his garden were surviving well despite the drought, although he had failed to establish a number of juvenile specimens. A juvenile *V. monadelphae* has been very slow but seems to be hanging on. *(I have noted that this species has also been very slow to kick on here at Cherrybrook until cooler temperatures develop I should also admit that while propagation results I achieved during the recent summer were reasonably good, despite the extremely dry conditions, my later efforts during autumn have fallen far below my expectations. HMH)*

In a later report, (5/05), Graham says that the drought situation there was greatly improved from late autumn and that most of his verticordias have passed the autumn test. *V. drummondii* in particular, flowered profusely in April and early May. Self sown seedlings have appeared of *V. s mitchelliana*, *densiflora* var. *cespitosa*, (following earlier loss of the parent plant), *cooloomia* and *chrysanthella*. An earlier seedling of *V huegelii* has been very slow to develop but carried several flowers last spring and is now becoming more robust. He has yet to identify the variety.

In a brief note, (2/05), from **Gordon Curtis**, Happy Valley, South Australia, he noted that a 15 year old *V. grandis* on an elevated sand bed had returned to dormancy after early shooting, due he believed, to the unusually cool summer. It had previously responded favourably to a lime dressing acting on a comment from Elizabeth George's Book. *(I recall comments many years ago by early pioneer Australian Plant nurseryman Bill Cane, Maffra, Victoria, regarding propagation of this species. He had been growing two stock plants in large containers and having experienced previous difficulties he had tried giving one of them a light dressing of lime in August. From this plant he had succeeded in striking 64 small cuttings but from the other specimen, none.HMH).*

Gordon also said that of the verticordias he is still maintaining, *V. densiflora* was the only one to seed itself in

He was in WA last spring and returned home a little disappointed, especially from the difficulty he had experienced in acquiring new verticordia species to experiment with.

Gordon said the wildflower scene in WA did not look good, the dry conditions being very evident. Along the northern end of the Cockleshell Gully Road however a farmer had cleared a fence line and *V. grandis* was shooting up from the debris. He added that along the Coorow Road, roadworks in the National Parks has rejuvenated the bush to its former glory.

Dick Mills, Banjup WA, advises that he has agreed to advance the cause of our Study Group at the ASGAP National Biennial Conference in Perth, October 2005, hosted by the Wildflower Society of Western Australia

He proposes to organise an exhibit to show that verticordias can be grown, either by cutting or grafting.

A note from **Elizabeth George**, Alexander Heights, WA includes some observations in regard to *V. grandis* ability to adapt to varying soil types and suggests that "open, freely draining soil may be the crucial factor"

She lists the following examples of successful establishments in WA:-

Ex Study Group members Judy and John Grows, Parkerville – Gravel

Ex Study Group members Pat and Norm Moyle Mandurah- Deep yellow sand and grey bush sand.

Basil and Mary Smith near Wongan Hills- 20 year old specimen in deep white quartzitic sand over hard claypan

Margaret Pieroni, Attadale- Almost 20 years old in grey sand.

Study Group member Alec. Hooper- Maida Vale - Bush sand in display gardens at Zanthorrea Nursery.. Survived more than 10 years.

Charles Chapman Mt. Claremont-Sandy soil for many years

Elizabeth George- Yellow Builders sand for many years.

STUDY GROUP FINANCIAL POSITION AT 30/6/2005

Receipts 04/05	\$322.00	Summary	
Expenses 04/05	\$224.74	Credit Balance 30/6/2004	\$181.56
Nett Credit 04/05	\$97.26	Net Credit 04/05	\$97.26
		Stamps on Hand	\$25.00
		Credit Balance 30/6/2005	\$303.82

VSG Fees 05/06

Members are reminded that the 05/06 fee is now due. Please make cheques payable to the Verticordia Study Group. Prompt payment would be appreciated

H.M.Hewett, Leader ASGAP Verticordia Study Group

11 Harvey Place, Cherrybrook, NSW 2126

Tel. (02) 9484 2766