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VERTICORDIA STUDY GROUP.

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As your Study Group Leader may I welcome the following members who have responded to this challenge to establish better guidelines for the propagation and cultivation of species of the Genus Verticordia:-

So that we derive maximum value from the combined efforts of the Group, I aim to encourage the greatest possible personal contacts with consequent interchange of ideas between members. I hope that all will avail themselves of any opportunities that may arise to further these contacts at the garden level.

Many species of the Genus have to date caused frustration among growers of Australian Plants, not only in the Eastern States but in Western Australia, their home state, and I hope by co-ordinating all of our efforts we can achieve and document a better understanding of the various species.It may well evolve that the growing of some of them may ultimately be best undertaken by those of us having particular soil or other conditions, or alternatively a willingness to devote the special efforts that may be necessary to create such.

I am maintaining a loose leaf register of species held by members as both stock plants or garden specimens and will need an updating of this information from time to time. This will put me in a position to suggest to those requiring propagating material of a particular species the nearest source where same might reasonably be obtained. I am personally building a bank of stock plants in large containers to include as many species as possible. Although the current score runs to about 50 species or forms, many are as yet not large enough for significant distribution of cutting material. Many species seem to be relatively slow growing even given the encouragement of persuasive nursery treatment.

I hope all Group Members will adopt this practice of growing at least some species similarly in large containers.Apart from the obvious value of being able to assist other members and so advance the work of the Study Group, an added advantage ensues from the fact that such plants can generally be maintained in a more lush form of growth which

is very suitable as propagating material. This allows greater flexibility of timing of propagation so that when new plants are to be introduced to the garden, (and this may well require to be varied to suit differing climatic zones), they can be planted at a juvenile stage, a practice I consider to be highly desirable.

For general guidelines on garden culture I feel the procedures noted in my introductory article in "Australian Plants", Vol. I No. 92, pages 371, 2 and 3 offer the best chances of success. I realise however that some Group Members will consider variations to these appropriate to their conditions, or the particular species being grown. Recording of all results with comparitive analysis should lead us to final answers.

One aspect of our efforts I propose to pursue relentlessly is the cause of plant losses. In regard to same I again strive to impress on Group Members the necessity to keep me informed of their observations. Whenever a loss occurs I would like to be advised of their personal assessment of the reason for same. Significant observations may include :-

Approximate date of loss.
Age of specimen since planting.
Planted as juvenile or advanced specimen ?
Seasonal conditions prior to loss (say 3 to 6 months).
Reaction to above conditions.
Defoliation by insect attack ?
Fungal attack on the foliage ?
Results of examination of root system.
Other factors.

With regard to root examination the following may be significant.

(a). If the stem at ground level shows the bark soft, mushy or missing altogether one of the collar rot fungi is the probable cause.Since I have adopted the procedures noted in the initial article referred to above I have suffered virtually no losses from this hazard.

(b). If the fine root system has rotted away the cause may be attack by the root rot fungus Phytophthera cinnamomi. Since elevating my beds I have experienced little apparent trouble from this source

(c). If the root system shows deformity such as a gooseneck just below ground level, careless potting on or potting into too light a medium is indicated. I believe this can ultimately cause growth restriction which can curtail seriously the effective life of a specimen.

(d). If knuckling of the roots against the container sides was evident the plant may have been containerised for too long or with species tending to lateral root growth, been restricted by too small a container,with ultimate result as noted in (c) above.

(e). If the root system had failed to develop in the ground beyond the profile of the original container the existence in the potting mix of artificial fertiliser is a most likely cause.This again may seriously limit the life of the specimen. If I could quote an experienced Native Plant nurseryman from W.A., too many plant suppliers make this mistake with Verticordias. He claims that if the original potting mix tends rather to be lacking in nutriment the plants, though not looking so lush, are in a far better condition when planted, to send out foraging roots.

(f). If the root system indicated curling in the bottom of the container or matting against the sides of same, the specimen had probably progressed before planting beyond the stage where

satisfactory establishment could reasonably have been expected, even though it may have survived for two years or so.

(g). If the root system appeared to be well balanced and healthy with adequate development and spread of fine roots, but the whole of the root system was confined to the upper soil stratum it may be that drying out was the cause of ultimate failure. Instances of this have been noted in the gardens of two Sydney Members in addition to my own with the species Verticordia densiflora. In all cases the plants had grown vigourously through winter and early spring but had terminated growth rapidly under dry seasonal conditions in late spring and failed to respond to artificial watering. The above plants were all grown in light soils. A plant in my garden in a medium textured soil and another in a situation only slightly elevated but with some large rock pieces adjacent to the roots have carried through satisfactorily and are still vigorous one year later. The inference would seem to be that this species, or at least some forms of it, tend not to develop a deeply penetrating root system and hence a soil structure less vulnerable to quick drying out of the surface stratum should be more to it's liking.

This latter growth characteristic is one we must document for performance of all species under garden conditions and again I must appeal to you to keep me informed of your observations in this regard. I feel the knowledge could direct us to a more objective approach in suggesting appropriate soil structures, depths, gravel inclusions etc. most likely to prove satisfactory for particular species. My experience with Vert. picta indicates that it throws down quickly an extremely deep root system and accordingly should be expected to prefer a deep root run in light sand. To date this seems to be confirmed by my garden performance.

The subject of propagation from seed is one I intend to pursue in a future Newsletter. To date I have achieved a little success in germinating about 16 species but have had difficulty in raising many of the seedlings to plantable size.Would any member who has attempted seed propagation of the Genus please let me know of their results, both positive and negative, and the procedures they tried.

Still on the subject of propagation I am pleased to report that Neil Arthur is currently undertaking, with some success, tissue culture procedures with some of the more difficult species including Verticordias grandis, oculata and ovalifolia. We will eagerly await more news of his efforts.

Some work is being done also with grafting of Verticordias on to stock of hardy Myrtaceae species such as Thryptomene and Darwinia. To date i am informed that Verts. mitchelliana and monodelpha seem to have taken satisfactorily. Peter Olde has expressed interest in pursuing this subject and we will be keen to hear of his progress.

On the taxanomic side much is currently being done in Perth by Elizabeth Berndt in co-operation with the Herbarium and we look forward eagerly to a better and updated identification key. I have been told that the revision of the Genus is well in hand so we may soon be in a position to sort out among other things, that group of yellow species that all look the same until examined in detail and then all seem to be a little different from each other.

For control measures of the mildew like attack on the new growth of many species, (this has been noted in Perth as well as in the Eastern States), My thanks go to Keith Alcock who made available to me trial quantities of the I.C.I. fungicides Saprol and Nimrod. A mixture of I.25 ml of Saprol plus 0.8 ml of Nimrod in I litre of water is applied by spray at two week intervals or more frequently if required until control is effected. Since using it the health of my Verticordia plants has improved tremendously. To date I have found it necessary with;-

Vert. plumosa, two forms.
V. chrysantha
V. acerosa
V. brachypoda
V. nitens
V. insignis
V. minutiflora
v. sp. affin. helichrysantha.

From the point of view of Group finances members are asked to note that no subscription will be required for years I983 and I984. After this the matter will be reviewed and members advised accordingly. When specific replies are requested however, inclusion of a stamped addressed envelope would be appreciated. Also when cutting material is supplied by mail it will be necessary to defray costs. Currently this would amount to approximately one dollar per package.

Finally may I again stress the necessity for Members to keep me fully informed of their doings Verticordia wise so that we may speed up our efforts to document this highly desirable Genus. At this stage at least no cultural results at all should be considered too elemental to warrant comment.

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