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THYSANOTUS AND RELATED GENERA STUDY GROUP NEWSLETTER NUMBER 2

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A small group of us met to discuss the sorts of work we should be doing in the study group. As we need plants to do any research, and because there are several problems associated with growing *Thysanotus*, the meeting discussed the problem of propagation.

1. Germination of seed: there is a problem with immature seed, fungal contamination of seed (are they the same problem?).

D.J. is to look at the effect of fungicide treatment of seed on the rate of germination.

A.G. is to look at the effect of Gibberellins on advancing the maturity of seed collected when immature.

To this end, we have purchased some more seed of *T. multiflorus* from W.A.

2. Transplantation of plants from the field: there is a problem with death of tubers after flowering with plants growing in sterile soil in pots. Mycorrhizas may overcome that problem but others are introduced. Mycorrhizas are associations between soil-borne fungi and the roots of plants. The fungi function as extensions of the root system of the plant and are involved in the transfer of mineral nutrients to the plant in exchange for carbohydrates from the plant. They may also effect the uptake of water to the plant and in some cases the hormone balance of the plant.

Transplanting from pots to the garden: again mycorrhizas may be involved, or there may be a problem with nutrition of the soil.

3. Storage of tubers: we have not had success in storing tubers out of soil for more than about two weeks. The tubers rot if the storage medium is too moist, and dry

out if it is too dry. It might be useful to find out how orchid growers store their tubers. At this stage we suggest that you leave the tubers in soil if you can.

4. Mycorrhizas of *Thysanotus* : unusual mycorrhizas have been found. I hope to write an article to Australian Plants on mycorrhizas - perhaps in two parts. The first on common types of mycorrhizas to correct some of the misconceptions currently being published, particularly in A.P.; the second part on unusual mycorrhizas.

Some related genera have also been examined. *Arthropodiun, Dichopogon* and *Caesia* form vesicular-arbuscular mycorrhizas. We need to obtain either seed of *Murchisonia* or some fresh roots of young plants. Seed is preferred as we can then do the work at our leisure, and we can check the identity of the species if we grow the plant on to maturity. However, if any of the readers can be of any assistance, it will be appreciated. There are two species, one from the Murchison River area of W.A. and the other from the north of S.A.. If you are forwarding fresh roots, please send them in a sealed small glass container with the roots in 50% water and 50% methylated spirits to Andrew. The alcohol/water mix will preserve the roots for up to about three months, provided the fluid does not dry out. Dried roots will not be of any use to us at all.

4. Taxonomy: we understand that the new edition of Flora of Australia will cover the Liliaceae. The section on *Thysanotus* has been written by Dr N. Brittan, the Australian expert on *Thysanotus*. I am led to believe that it will be out by the middle of 1987.

5. Photographs: we now have a very limited number of photos of *Thysanotus*. They were taken in gardens and in the field. Keep them rolling in. September to January is the most likely time to see them. We prefer colour slides showing the flowers, whole plant, surrounding vegetation and so on. Remember that some flowers are only open for a few hours. Happy hunting.

Peter McGee

Newsletter editor.