

STYLIDIUM STUDY GROUP. NEWSLETTER No. 8. DECEMBER 1981

1. Note the change of serial number above.

2. Notes from members.

Keith Alcock has found that applications of over strength foliar fertilizers of the "Aquasol" type in Autumn, when the plants are beginning to show new growth, is disastrous. The leaves very rapidly collapse and the plants may die. The affected plants also seem to suffer from root burn and Keith has found it necessary to give "soil transfusions" to many of the plants. It would appear that the leaves are not as efficient as exotics at coping with inorganic or urea type fertilizers, and the plants are also intolerant of these compounds in the root zone. It would be very interesting to know whether there is a specific intolerance, such as urea or phosphate. Bearing in mind the diverse soil types and habitats in which *Stylidium*s grow, there is a lot of scope for someone.

I have no plans for such work in the near future, but if anyone else is interested I can provide some plant material. In the first instance material should be genetically the same (ie. cuttings or offsets), then the findings can be tested on seedlings. I have applied weak 'Aquasol' to ailing plants at other times of the year; some plants died and some survived, but there was no pattern from which to draw conclusions. Organic fertilizers such as "Maxicrop" do not appear to be deleterious, but no controlled experiments have been done to establish whether they are beneficial.

Leonie Morgan has reported steady progress with her collection and notes that *S. elongatum* loses its leaves each year and dies back to a "mushy green mass" in the centre, from which new leaves grow each winter. *S. dispersum* has died, possibly a response to the very wet winter in heavy soil; this species grows in sand between Geraldton and Kalbarri. Leonie has planted *S. repens* and *S. rhyncocarpum* in the garden – it will be interesting to see how they go.

Several members have reported losses during the summer, and others during the winter. Alan Thomas (Ballarat) has *S. plantagineum* growing better under the eaves of his house than in the open. This may also be a reflection of the drier conditions.

It is becoming clear that a plant's response to a grower's horticultural conditions may be a reflection of the soil that it is growing in. Thus soil A plus conditions A may give better results than acquired in soil that is significantly different from one's own mix. And by that I mean a complete change of soil, washing off all the old soil from the roots of the plant. This is not as drastic as it seems and is most likely to be successful in autumn-winter, though I have done some in spring and summer with reasonable results. The main thing is to expose the roots as little as possible. I have found that plants in my earlier mix of sand and compost sometimes went yellow and did not grow well; when these were repotted into a sand/sandy loam mix they soon greened up and looked much healthier.

3. Propagation.

Cuttings of *S. rhyncocarpum* and *S. falcatum*, mentioned in the last N/L, struck satisfactorily and have been potted on. Those of *S. preissii* and *S. imbricatum* were not nearly as successful, and more work is indicated. I set cuttings of the soft new growth of *S. adpressum* in late April, and *S. dielsianum* in September. Both species have struck, and the former seems to be stronger than offsets from the same plant. Cuttings of *S. adnatum* were set in September; these were tip cuttings and all had incipient buds. Two pieces formed roots after 6 weeks, and these appear to be growing on normally. Another two were potted up after 10 weeks, but these are very yellow, and have not shown any new growth, 4 weeks later; they are still alive though.

Leonie Morgan's seedlings eventually all died, which is very disappointing, but should not be regarded as an indication that propagation from seed is necessarily too difficult. The seed that I sowed also gave disappointing results, in that *S. diversifolium*, *S. amoenum* and *S. carnosum* all

damped off and no plants survived. I got three plants of *S. planagineum* and scads of *S. crassifolium*. The two Victorian forms of *S. graminifolium* gave good results, but the Qld. form did not. My interpretation of these results is that the commercial seed raising mix remains far too wet and encourages the growth of fungal organisms. *S. crassifolium* occurs in wet situations and is thus tolerant of the wet conditions and the local forms of *S. graminifolium* are probably tolerant of poorer drainage than the WA species.

I have been asked about the viability of *Stylidium* seed when stored; the only data I have on this is a batch of *S. brunonianum* seed which gave good germination after 5 years. But the viability for many species must be fairly good since seed from commercial sources may be several seasons old at the time of sowing but usually gives reasonable results. This is another field of study.

4. New Collections.

Keith Alcock has sent back some very interesting material this year, and given us some fun trying to get it all going. the recipe for success with bare rooted material seems to be the high humidity, stable conditions of the cold frame or poly house. While plants can be re-established in pots outside in sheltered conditions, the vagaries of Melbourne's weather makes constant attention necessary.

My reference to plants seen in the Blue Mountains of NSW now needs further comment. The fine leaved species noted at Mt. Victoria is the same as the plants sent to me last year as *S. productum*, and is in fact *S. lineare*. The plants have flowered this year and there is no doubt about their identity. the other species at Mt. Victoria is *S. productum*, or at least it is consistent with the description of that species, particularly in respect of the stomata on the underside only of the leaves, and the tendency to form stolons. This species was also observed to have very short glandular hairs on the seedling leaves.

Two species sent over by Eileen Croxford earlier in the year have been identified as *S. fasciculatum* and a yellow flowered species which could be either *S. glaucum* var. *angustifolium* or *S. luteum* var. *clavatum*, though the plant does not entirely match the description of either of these species. One of the problems is that the arrangement of the petals in *S. glaucum* is not clearly stated in the two keys.

5. Experiments.

The experiment I began a year ago with *S. pritzelianum* has not yielded any useful results yet and will be continued.

I have planted a number of species in a garden bed prepared as follows: a hole was dug in a sheltered area, into the subsoil (25cm), and the soil mounded to some extent around the edge to increase the depth. The hole (2m across) was lined with plastic, to keep out tree feeder roots, and about 5cm of 1-2cm scoria spread over the bottom. The bed was then filled up with a 1+1 mix of a sandy loam and white sand. As well as planting *Stylidium*s, I have also sown some of the same seed that failed in commercial seed mix. Both *S. amoenum* and *S. diversifolium* seedlings have appeared and are growing well. Other seedlings have also appeared from seed dropped in the pots from last year's flowers. I am hoping not to have to water the bed over summer so as to observe the behaviour of plants under "natural" conditions.

6. Distribution.

Since my offers of seed and plants, in earlier N/Ls produced zero response, I will not be keeping a seed bank, nor will members get preference in the disposal of plants arising from my efforts at propagation. *Stylidium*s will now be available to all comers. The extent to which I might reserve choice specimens for members is likely to be directly proportional to their demonstrated interest in the Study Group.

Best wishes to you all in 1982

Richard Davidson.