TUBEROUS DROSERAS IN SOUTH AUSTRALIA

by Ray C. Nash

I read with some little amusement the comments in Vol. I, No. 4 of CPN on the subject of our Australian tuberous Droseras. These CP's are the only species I have had any success with, other than a hybrid Sarracenia, S. flava, Utricularia dichotoma, and U. gibba ssp. exoleta.

In reality my success extends only to those species native to South Australia, plants from Western Australia have been tried but these eventually fade away. The wet-dry condition is an essential must. Winter is the time that the majority of our rain falls, although several inches may fall during summer showers. The summer can be long and dry; in fact, the evaporation rate is higher than the annual rainfall.

During the winter, the soil in which D. peltata, D. glanduligera, D. whittakerii (Mt. Lofty Ranges type), D. stricticaulis and often D. auriculata grow can often have water covering the surface. In summer, these same lands will be dry and dusty. D. whittakerii var. praefolia will often push through very parched soil to flower, followed a few weeks later by the first heavy winter rains. If these plants do not show in early April, then it is a good sign of a drought winter. I would suggest that intending growers make up a very loose compost, composed of coarse washed river sand to a mesh size of about 2-3 mm. Into the sand is mixed about one part of humus material to each five parts of sand. The humus material can consist of a Eucalyptus sawdust, German peat or rotten and aged pine sawdust.

The tubers are planted five diameters below the surface and spaced an equal distance apart. The "dropper root" is used by young plants or plants planted too shallow and are just getting the tubers down to a safe depth. Many of our tuberous Drosera stay at one depth for their whole lifetime or until the soil is disturbed. When these plants are removed from the soil, in the bushland, the tuber will be found to be covered with a thick layer of old tuber fiber.

The method described in allowing these plants to go dormant is correct, but the dry time can extend from 3-5 months. Normally, these plants dry off in early November (the beginning of our summer) and reappear in late April to June. During this time the pots should be kept cool and shaded and not watered except for a little natural rain. Once growth is evident, then the compost should at first be kept just moist and as the plants develop, the amount of water may be slowly increased. It may be necessary to place the pots in a small saucer which will hold up to half an inch of water. Once the flowers have finished, the compost should be allowed to slowly dry out. As the plants start to die back, stop all watering and prepare them for the summer sleep. The dry period is essential.

During the summer, shade temperatures can get as high as 40° C. (110

with the average of about 30°C. (86°F.). In winter, the air temperature will fall as low as 0°C. (32°F.) during the early mornings, but averages about 5°C. (40°F.). The average winter daytime temperature goes to 15°C. (60°F.). The plants do like misty or foggy conditions in the early morning followed by mild sun; this seems to stimulate the glands on the hairs.

Several species do not object to being alone in a pot, but I find that D. planchonii grows best if planted with differing species, in my case it is grown with our native terrestrial orchids. D. glanduligera is grown with mixed native grasses and other small plants, in a very sandy compost. D. stricticaulis is grown under mild swamp (bog) conditions along with native Crassula.

All species, other than D. glanduligera, take several years to reach the flowering stage when grown from seed. I do not recommend splitting the tubers up, but if this method is tried, then I would suggest a system that has been used on native terrestrial orchid tubers. In this method, the tuber is split through the eye (the shoot) and each part is quickly sealed with wax. Another method is to remove the tuber from the stem just as the plants break surface. The stem will grow a new tuber and the tuber will produce another stem. Leaf cuttings may also be used to increase the number of plants.

THE SPECIES

Drosera whittakerii (eastern form): occurs in southeastern part of S.A. giving away to the Mt. Lofty Ranges form a few miles east of the River Marray. Also found in Victoria. This plant can often be found in large colonies, some quite thick with the plants making a carpet upon the ground. This form reproduces mainly vegetatively by lateral underground stems produced from the main stem just below ground level. If these lateral stems grow above the ground, then small leaflets can be produced complete with hairs and glands. Generally, these plants have few flowers.

Drosera whittakerii (Mt. Lofty Ranges form): abundant throughout the before mentioned ranges. A much larger plant than the eastern form, producing many flowers often on branching stems. Does not often reproduce vegetatively, seemingly relying mostly upon seed, does oft times produce very small open colonies.

Drosera whittakerii var. praefolia: confined to a very restricted part of the Mt. Lofty Ranges, within a radius of 5 miles of the small township of Clavendon, about 16 miles south of Adelaide. This plant has not been included in any conservation reserve, although the author is always trying. To this time, I have not had or seen any member of this variety reproduce vegetatively but it too does form small compact groups. This plant produces abundant flowers, one plant in 1973, grown by the author, had 25 flowers. It does produce abundant seed and many seedlings are to be found about the adult plants. The stem will often branch, usually below ground level which gives the appearance of several plants as each stem forms a separate rosette of leaves.

Drosera peltata: Mt. Lofty Ranges, Flindess Ranges and into eastern Australia. Does not appear to reproduce vegetatively but produces abundant seed. Often great masses of this plant may be seen in paddocks (fields) that have not been ploughed or have not been so treated for 50 or so years.

Drosera auriculata: found in some areas as the above but can stand drier conditions. Both grow in swampland (bogs) but this does not mean to say they will survive under such conditions in cultivation. I think the swamp growing plants only survive to flower. This plant will multiply very slowly vegetatively but most new plants are produced from seed, which is often quite abundant.

Drosera stricticaulis: confined, as yet, to one collection from Eyre Peninsula not a great distance from Port Lincoln. The South Australian plant is smaller than those found in Western Australia. This species reproduces vegetatively and makes only a small amount of seed from each flower.

Drosera planchonii: found throughout the better watered areas of this arid state of Australia. The tubers are usually buried deep in the soil and in the case of sandy soil, very deep. It would appear that seed is the only method used to multiply this species and each flower can produce quite a large amount. This plant has a long, thin stem and is often termed a climbing form, although I think clinging would be a better term as the sticky glands adhere to other plants thus supporting the stem and large white flowers.

Drosera glanduligera: a plant of specialized habitat, usually growing only in a very damp sandy soil or damp soils in open areas but is found over a wide area in the damper parts of the state. This plant reproduces only from seed and has the reputation of being an annual. However, I have found that if the plants do not flower then a very small white tuber is formed, so that the plant can last through the summer to grow and perhaps flower the following winter. The seed can take up to two years to germinate.

Generally, all of the above plants like a little direct morning sunlight, when they have first been watered. I use the rosetted species as natural flytraps amongst my native terrestrial orchids to catch small insect pests.

Atthis point I would ask you not to write asking for plants or seed as collecting both is very time consuming and I have already overcommitted myself in these matters for some time. Until I have satisfied those I have already promised plants and seed, I must say sorry to any more requests.