is abundant but cultural environments are not right for flowering. He cultivates it in sphagnum moss with ground water: 17-18° C., pH slightly acid. Many scapes were formed simultaneously, but most of the flower buds did not bloom and there was only one flower. The corolla was 8 mm. long and 6-7 mm. wide, pale pinkish-purple with a yellow spot in the center.

## SHORT NOTES

### HABITAT OF DROSERA PELTATA
by B. Whitehead

In an effort to cultivate Drosera peltata more successfully, I have made observation trips to large concentrations of the species in the Nowra and Jervis Bay districts, both on the south coast of N.S.W. The areas visited were typical habitats for the species in this area, and in one spot plants were so frequent that it was impossible to avoid treading on them while walking. It was hoped that a study of their habitat might provide some useful information, and the description follows for those who might be able to make some use of the information.

Yalwal Road, NOWRA: The area supporting the Drosera peltata population here was a flat sandstone shelf sloping gently for about 100 meters down to a creek. In many places, bare rock was visible, in others, moss had covered the rock and beyond the mossy area shallow soil supported a population of heath plants which ranged between 50-150 cm. in height. Surrounding the area was dryish bush-land with much larger shrubs and Eucalyptus trees of different species to a height of 10 meters. Drosera peltata occurred only in the low heath and in the moss. The moisture content of these areas was extremely variable, the only constant factor being that areas where they were to be found would receive more water than the surrounding areas, and appreciably more light, in some cases, full sun. Depth of the tubers in the moss ranged between 2-5 cm., usually the complete depth of the moss with the tuber setting on the rock underneath. Water was seeping through the moss so that it continually held much water, as opposed to being damp. Plants of Drosera peltata were found just as commonly in the heath. Tuber depth was about the same, despite the rock being comparatively much deeper and the soil only damp. The areas were inspected in winter, in the plants' growing season. The dormant tubers in summer would be subjected to both very dry and very wet periods, and quite a bit of heat. The other carnivorous plants in this area were Drosera pygmaea. Drosera binata would also probably be evident in summer.

JERVIS BAY: The flat tops of hills where sandstone comes very close to the surface and causes water to seep constantly on the slightly lower levels provide, in these lower levels, predictably suitable habitats. The story was the same here as above, except that moss was not so common. Plants were absent from the white sand areas, but abundant in the sandy mud lower down. Here they had little competition from other plants as the ground had been burnt some months ago and the sundews were present in their thousands, some already in flower. Associated carnivorous plants were Drosera pygmaea,

spathulata, and Utricularia lateriflora.

Drosera peltata has red, fairly hard tubers which are renewed annually. Some plants inspected had a small thick "root" extending below the tuber, and I can only assume that, as with some terrestrial orchids, young Drosera peltata plants produce a deeper tuber each season for one or more seasons until a suitable depth is reached. What determines a suitable depth is difficult to determine.

As for cultivation of the species, my best but very limited success has been with the plants growing in sphagnum moss, pots stood in shallow water. Self-sown plants appear to be more reliable, and for this reason it might be better to start this species off from seed, either in fairly well-packed sphagnum or sandy soil.

## OBSERVATIONS ON TUBEROUS DROSERAS
by Richard Sivertsen

I've had dropper root formation with Drosera peltata in pure sphagnum moss, sand-peat mixtures and sand-loam. The important factor is not necessarily the medium, as long as it is slightly acid, but kept just moist to damp, and as cool as possible--preferably 40° F. at night to 65-70° F. in the day. Humidity doesn't seem to be too critical as there were weeks when it varied between 25-35% and sometimes lower. The most critical stage in its growth is during the first four to six weeks of new seasonal growth from the tuber. It should be kept only damp, and drying it out will not harm it at this time because the plant is being fed from the tuber, both water and nutrients.

In nature, the Australian winters begin with light rains so that it takes time for the hard and crusty-dry baked sandy soil to become moist again. When the tubers are just starting new seasonal growth and they are exposed to overwetness, the tuber can't shrink down, as it is supposed to for a brief period, and it can't cope with this premature excess moisture so that it eventually rots. So as the young growth continues, the tuber is the only source of water and nutrients for the first four weeks. As the plant matures, the original tuber shrinks slowly and then forms thick dropper roots along with thinner roots used to absorb water. I usually peek to check on its progress, carefully. The original tuber may or may not disappear altogether, sometimes reduced to a swollen portion of the stem underground. Then more moisture can be applied and as the plant ends its growing cycle after flowering, the original tuber will start to swell up again. This is followed by formation of the dropper roots with thickened knobs at their tips which will ripen into tubers within another four to six weeks depending on the species. The soil is gradually drying until the surface growth has withered. Then it is safe to poke around to see if the tuber is fully swollen again and has shed its roots. It can be dug up and stored in a warm place wrapped in cheese cloth without any soil.