like ordinary water. The other two had no pitchers on them still sealed, and not being too adventurous, I resisted the temptation to sample these.

Since returning home, I have been told that actually five different Nepenthes grow in Singapore, the other two being two crosses - a Nepenthes hookeriana and another natural hybrid. Perhaps the round-leaved one was one of these. However, I wrote away inquiring about these two plants and managed to get in contact with the Garden's chief specimen collector, Mahmud. In his reply, he informed me: "There is a Nepenthes hookeriana not in Singapore but in Borneo and Malaysia." Unfortunately he makes no mention of the other one. Just who is right I do not know. Mahmud has been working for the Gardens for 27 years and is extremely knowledgeable about all types of plants. The botanist has an M.Sc. and at the time I was speaking to her she did not know of them. However, the existence of another two Nepenthes on Singapore comes from a paper written in the early 1960's on an analysis of Singapore's Nepenthes by Sally Green.

The Botanic Gardens at Singapore in an effort to increase its collection of carnivorous plants has expressed a willingness to swap the local Nepenthes for other carnivorous plants. If you would like to obtain plants or seed, write to: Miss S.Y.Geh, Botanic Gardens, Cluny Road, Singapore 10, Republic of Singapore.

FIELD OBSERVATION OF WINTERING UTRICULARIA VULGARIS

by A. Roger Kirby

While passing through northern Virginia on a recent trip to Maryland, I spotted several swampy areas that I felt needed a closer look for any CP's that might be there in winter bud. After marking the mileage from different points, I continued on, planning to stop on my way back.

Leaving Maryland on Monday morning, I drove into Virginia and proceeded to one of the areas I had marked by mileage. Upon arriving at the first bog I noticed the bog had little water in it for this time of year. I slipped on my hip boots, grabbed a five gallon bucket and walked into the shallow water and mud of the swamp. I immediately noticed Utricularia all over the bottom of the bog. I started gathering and putting them into the five gallon bucket. The plants were approximately twelve inches long, or six inches on each side of their "Y" form, and at the crown was the dark green whorled winter bud. I gathered the plants until I had the five gallon bucket about one-third to one-half full. I left the swamp for the car and I checked my watch and realized I had only taken twelve minutes to do all I did. I looked closer at the Utriculariaas and recognized them to be U. vulgaris because of the very large bladders, some 1/8" long in size, or 4-5 mm. x 2 mm. wide.

I had only covered a few square yards and due to the enormity of the swamp, it would take a full day to check it out more thoroughly for additional species of CP's.

I now plan to return in the spring to take a closer look when the plants are in bloom. I feel more Utricularia species are there and I also plan to take pictures. This seems a great place for CP enthusiasts, so I will let CPN know of my progress.

OBSERVATIONS OF TRICHOPTILUS PARVULUS AND DROSERA

by Grady Lucas

It seems that not all insects will succumb to the carnivorous nature of Drosera. One of these insects is the caterpillar of the moth Trichoptilus parvulus. This moth is a fairly small representative of the phylum pterophoridae, or "plume" moths.

Although many insects are known to be associated with Sarracenia and other carnivores, few are known to be associated with Drosera. There have been reports of a moth larva of the family Noctuidae which might feed on the plant, but these apparently crawl only on the glandless portions of the plant. Certain Australian Hemiptera of the family Capsidae are said to feed on the juices of arthropods caught by Drosera and are able to move about the leaves without any apparent difficulty.

After hatching from their eggs the larvae are no more than 1.5 mm. long, and their larval life will usually last about eight days.

Usually the first sign of Trichoptilus is that the leaves seem to have been chewed away, and pellets which look like fecal matter litter the surface of the leaves. The caterpillars apparently stay hidden under the sphagnum moss during the day and come out at night to feed.

The main food of the younger larvae seems to be the stalked gland itself, whereas the older larvae will not stop at just the stalk and will usually eat the leaf blade as well. They may also eat the remains of captured insects. It may take from 10-20 minutes for a