

were trapped and absorbed. Thus, the feeding period seems to trigger increased sporulation (Fig. 6).

Watching this fungus feeding on nematodes under a stereomicroscope is a fascinating laboratory demonstration guaranteed to engage students' attention.

BIOLOGICAL CONTROL

Because some nematodes are serious plant and animal pathogens, some research has focused on controlling parasitic nematodes in the soil by the addition of the nematode-trapping fungi. Although results have been encouraging, no biological control methods have proven to be commercially practical at this time.

FURTHER READING

- Alexopoulos, Constantine J. and Mims, Charles W., *Introductory Mycology*, John Wiley and Sons, New York, 1979.
- Barth, Robert H. and Broshears, Robert E., *The Invertebrate World*, Saunders College Publishing, Philadelphia, 1982.
- Bessey, E. A., *Morphology and Taxonomy of Fungi*, Hafner Press, New York, 1950.
- Drechsler, Charles, Some hyphomycetes that prey on free-living terricolous nematodes, *Mycologia*, 1939, 29, 447-479.
- Thorn, R. G. and Barron, G. L., *Carnivorous mushrooms*, *Science*, 1984, 224, 76-78.
- Webster, John, *Introduction to Fungi*, Cambridge University Press, Cambridge, 1980.

PEST CONTROL

by Curtis Yax, 12 Division, Apt. 1, Oneonta, NY 13820

A while ago, I wrote to Mr. Joe Mazrimas concerning the elimination of small black flies and maggots which infested my new tropical sundew terrarium. The pests came from plants purchased from Australia. At first, I thought the flies would be a good food source for the plants. Within a month, the surface of the peat moss began to crawl repulsively with plump white maggots.

Joe suggested that I use a pest strip—his idea being that the gas vapor would kill the flies and eventually the maggot problem would be eradicated. At that time, I could not find any pest strips in the store because of the season. I bought a non-toxic product instead called Fly Ribbon (Terro), distributed by the Senoret Chemical Co., Kirkwood, MO 63122. The ribbon proved to be effective. It is very sticky, so if you have long hair like I do, care must be taken not to get it stuck to your locks or beard, and of course your plants. I taped it very securely to the back glass of the terrarium (when removed, the brownish glue stays on the glass and is very unattractive). This fly ribbon killed a multitude of flies while I killed the maggots with tweezers. Between the two methods, it took several months to get rid of them.

My wife, Michele, informed me that a store was selling an Insect Strip by Starbar for \$3.99 (Starbar, Zoecon Corp., 12200 Denton Drive, Dallas, Texas 75234). This agricultural commodity is VERY TOXIC, so care must be taken when handling it.

I also had infestations of several chewing insects from the same plants purchased from Australia. Also, a small brown fly invaded the terrarium. When I used this pest strip, the infestations disappeared within 24 hours. Here are directions on working with the material. First, cut pieces of thick, sturdy plastic on which the smaller piece of strip will go. For a piece of pest strip 2" x 2", cut a piece of plastic about 5" x 5" for easy handling. This will also prevent poison from seeping and contaminating the soil. Next, put on some plastic gloves or thick plastic bags, lay out old newspapers and open the contents, being careful to unwrap only up to the desired amount. Avoid breathing in this vapor and try not to get too close to it. It smells somewhat like perfume. With a razor blade, cut a piece down the width of the bar for small pieces and use the length of the bar for bigger pieces. The strip is very hard and tough, so care must be taken to avoid

puncturing your gloves or cutting your fingers.

After you have the piece cut, use Elmer's glue (latex type) to secure the bar on the middle of the plastic piece. Wrap the unused bar and place it out of reach of children and pets. You will notice that it looks like cheese. Leave the area for a breath of fresh air and on your return, the bar should be securely fastened to the plastic. Now you can handle this without gloves and place it in your terrarium or by pots which have plants infested with ants, aphids, flies and many others. The insects will climb up the plants and die in a day or so. This strip also kills bugs which hide underneath leaves!

Remove the bars after checking the plants the next day or so, place in plastic

bags separately, and then wrap them all in one bag. This is to prevent you from touching other bars when you stick your hand inside for just one bar. Repeat this treatment when pests reappear.

I have also found a product called "Algae Destroyer" suitable for tanks containing *Utricularia gibba* and *purpurea*. However, it will kill *Aldrovanda*. With only a few treatments, algae disappear forever. The directions for usage are adequate for 5 gallon aquariums and up. The chemical resembles chewable vitamin pills so these must be kept out of reach of children and pets. Smaller pieces can be used for small containers. The cost is \$2.39 for 18 tablets and the address is: Aquarium Pharmaceuticals, P.O. Box 222, Perkasie, PA 18944.

PRELIMINARY REPORT ON MITE INHABITATION STUDIES IN SARRACENIAS

by Robert Naczi, 19 Boulder Brook Dr., Wilmington, DE 19803

For two weeks during mid-August, 1984 my ecology professor, Dr. Richard W. Fredrickson and I traveled through the southeastern United States studying the mites associated with *Sarracenia* species. Four species of mites have been described from the pitchers of *Sarracenia* species and are thought to live nowhere else. Little is known about these mites. In fact, they are reported from only three *Sarracenia* species. Hence our goal is to study their distribution, ecology and systematics.

Through the very helpful guidance of Drs. George W. Folkerts, Robert K. Godfrey and Donald E. Schnell, and supported by grants from Sigma Xi (the scientific research society), the Saint Joseph's University Sigma Xi Club, and the Claude E. Phillips Herbarium (Dover, Delaware), we collected pitcher contents from at least one population of each of the species of *Sarracenia*. We sampled all five subspecies of *S. rubra* and a few hybrids also.

As a result of processing the nearly forty samples we collected, I have found that

mites occur in the pitchers of every species of *Sarracenia*. Each *S. rubra* subspecies has mites and so do the hybrids sampled. The mites appear to be most abundant in young pitchers which are in prime trapping condition and which contain abundant prey. Large pitchers in such condition may contain well over one hundred mites. The mites produce no obvious effects on the plants and may be commensals. I will now begin identifying these mites and plan to inform CPN readers of my findings.

Photo right:

N. albo-marginata scrambling through trees of Penang. Photo by Roger Shivas.