

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.

Variation in *Nepenthes albo-marginata*

by Roger G. Shivas, 27 Lobe Street, Bald Hills, 4036, Australia

Nepenthes albo-marginata is a widespread species that has been reported from peninsular Malaysia, northern Borneo and western Sumatra. Although widely distributed this species only occurs in a limited number of locations.

I have seen *N. albo-marginata* on Penang Island, atop Mt. Ophir and Kedah Peak in peninsular Malaysia, at Bako National Park in Sarawak and in the south of Sabah near the border with Brunei. This species has also been reported to occur on Nias Island off the west coast of Sumatra. *N. albo-marginata* appears to be restricted to coastal locations, especially lowland hills and bluffs up to 1,000 metres in altitude.

There are at least two distinct forms of this species. In effect these two forms are separated by the South China Sea. The peninsular Malaysian form has large pitchers that measure up to 20 cm high and 3 cm wide. The form from Borneo has slender, pencil-like pitchers that measure up to 15 cm high and 1 cm wide.

Although the colour of the pitchers is not a reliable taxonomic characteristic the

pitchers of the peninsular Malaysian form are crimson or heavily flecked with magenta. The form from Borneo is a lime green colour.

Further study and collections are necessary in order to determine whether these forms are sub-species or even species. However *N. albo-marginata* is easily identified by a white band adjacent to the peristome. The white band is formed by a dense layer of closely packed hairs. In older pitchers the band is less distinct. One plant observed on Mt. Ophir and thought to be a natural hybrid between *N. albo-marginata* and *N. sanguinea* still retained the white band.

At least four varieties of *N. albo-marginata* (var. *villosa*, *typica*, *tomentella* and *rubra*) have been described in the literature. It is not known whether any of these varieties correspond to the two forms mentioned in this article.

Although I have not seen *N. albo-marginata* on Sumatra the proximity of the island to the Malaysian peninsula indicates that it takes the form found there.





Nepenthes albo-marginata 'Penang form,' lower pitcher. Photo by Roger Shivas. See page 13.



Nepenthes albo-marginata 'Borneo form' upper pitchers. Photo by Roger Shivas. See page 13.