

The substratum of Bull Swamp is a gooey, smelly muck in which a large number of small fresh water clams (about 2 mm. in size) and isopods can be found. Thus the muck, though smelly, is very much alive, providing a veritable feast for the Utricularia. All sub-alpine bogs support large numbers of mosquitoes and gnats, and Bull Swamp is no exception. Most of the Drosera leaves were covered with such flying beasties. Unfortunately, there were enough left to feed on the carnivorologists. The water felt rather warm on the surface, but one inch into the muck was quite cold. Freshets of clear cold water could be found throughout the swamp and the water seemed to be far from stagnant. Thus, Bull Swamp is an interesting place, deserving far more than this short two-hour visit.

BUGS! BUGS! BUGS!
by J. A. Mazrimas

This is a rather embarrassing subject to discuss in this newsletter especially when you consider the type of plants that becomes affected. Nevertheless, at one time or another, insects will suddenly explode in numbers resulting in many of our carnivorous plants being overwhelmed by them. Prevention is, of course, the key to keeping plants free from insects and healthy besides. This means cleanliness in the use of pots, utensils and removal of all debris and dead matter from the area of the collection. Secondly, I would be cautious in introducing any new plant into the main collection. The new plant should be grown for a while in an isolated area even though you received it from a good friend or even a commercial grower. But if trouble does strike, these are some of the things that I would do: first, I would try washing off the bugs with water from either a hose or from a trigger-type sprayer set for a heavy spray. This should be repeated about three or four times in two-to three-day intervals. Usually aphids are easily swept off the plant by this method. Sometimes, the white cottony mealy bug can also be removed by this method. If this doesn't work, then both mealy bugs and scale insects can be treated with a Q-tip dipped in rubbing alcohol provided that the infestation is not too large. As a last resort, I would use the pesticide Malathion at the recommended dosage stated on the bottle. I spray only the infected portion of the plant and repeat this about a week later. Sphagnum moss (live) is killed by this material and Pinguicula leaves are especially sensitive to it also. So I remove the excess chemical after fifteen minutes with copious amounts of fresh water. Scale insects are particularly difficult to kill because of the hard waxy coating that protects them. They seem to hide in the small crevices of many pitcher plants such as Sarracenia and where the lamina joins the stem in Nepenthes. So I gently use an old toothbrush dipped in the Malathion solution to dig these out. These three pests, aphids, mealy bugs and scale, are the most common invaders of a collection. So far, I haven't yet been bothered by spider mite probably because this mite detests the high moisture associated with these plants.