

IN SEARCH OF DROSERA ANGLICA  
by Robert R. Ziemer

In mid-April we piled into the car to visit the Darlingtonia and Pinguicula vulgaris at Gasquet, California. After a couple of enjoyable hours walking among the vast stands of flowering cobra lilies and butterworts in the warm spring sun we continued up highway 299 through Grant's Pass to Medford, Oregon. Then along highway 140 toward Klamath Falls to Lake-of-the-Woods. As we neared the lake, a feeling of disappointment began to bud and in another ten minutes was in full bloom--for along the highway was two feet of snow and this was only at an elevation of 5000 feet. Bull Swamp was six miles and 1000 feet in elevation away. The snow pack there would be at least six feet deep. THWARTED AGAIN!

At the end of June I tried again. This time the only snow seen was on the mountain peaks above 8000 feet--well above Bull Swamp. The six miles of Forest Service dirt road to Fourmile Lake was well traveled by campers and fishermen by now. The setting of Bull Swamp is quite pretty--a subalpine bog of about 80 acres among spruce and fir at the eastern base of Mt. McLoughlin, a 9500-foot volcanic cone. The region is dotted with recent lava flows, predominantly on the northern and western slopes of Mt. McLoughlin. Bull Swamp lies in a saddle between two volcanic cones. Within a six square mile area 17 lakes and numerous ponds can be found, some of which are quite large, such as 1000-acre Fourmile Lake. Others are less than one acre in area. A few places, like Bull Swamp, have filled with organic material over the years to produce a bog. This late in June one could probably walk all over Bull Swamp without getting wet beyond the knees--I didn't try, however. Mostly the bog is three inches or so deep. Around the edges fir and spruce trees have fallen into the swamp. These and numerous hummocks of bunch grass provide a dry access for those disliking goo around the toes.

Drosera anglica abound, growing in all moist areas where water at this time of the year was less than about two inches deep and continuing up to perhaps one inch above the water line, forming a reddish-green carpet. Many Drosera thus were submerged by two inches but thriving nevertheless. Beyond about one inch above the water line the Drosera faded out and grasses and more hardy herbs increased. Co-habiting the zone occupied by Drosera anglica from about one-fourth inch above water, but extending to the deepest depths I saw (about 12 inches) was Utricularia intermedia. This species completed the visual carpet effect. No other species of Drosera or Utricularia could be found, though I searched the bog extensively. In other locations Drosera anglica is often found growing among D. rotundifolia. The D. anglica found in such areas is often genetically "contaminated" by the D. rotundifolia. In Bull Swamp D. anglica has been isolated from other Drosera species for some time. Don Schnell has observed these specimens appear different from his D. anglica in that "the 'paddle' of the leaf is much larger, almost approaching D. linearis in size."

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.