St. Augustine Orchid Society
www.staugorchidsociety.org

Power Outage

March 2003

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Orchid Growing Tips

It finally happened, a test of all my preparations for the “worst case scenario”, i.e. a power outage on the coldest of nights. It is surprising how complete quiet and darkness can awake one out of a deep sleep, but it did. At 2 AM on a night when Southeastern North Carolina set a new record of 13 degree F, the power went out. The thermometer said the temperature outside was 16 F. Combined with 30 MPH winds, the greenhouse was experiencing maximum heat loss. Would my two 25,000 BTU Southern Burner heaters maintain the greenhouse (22’ x 32’) at least 30 F above the outside temperature as planned? They operate using electricity they generate through the pilot light and so do not need external power. That should be enough to prevent freezing, but what effects would there be on the hundreds of Phal buds sitting in the cold?

The recording at the local power company said that the power would be out for two hours. How cold would it get in that time? My heating system has a backup 30,000 BTU electric heater that kicks on a few times a year when the ambient temperature drops below 35 F and keeps the greenhouse at 65 F. That would not happen tonight. AT 4 AM the temperature had dropped nine degrees in the greenhouse and the lack of circulating fans meant that some areas were getting even colder. Power returned at 4 AM and the whir of fans and electric heaters was reassuring. Unfortunately, the sudden surge of thousands of heat pumps and other electricity sucking devices overtaxed the power grid and darkness returned after just a few minutes of power. Power companies are usually optimistic when it comes to the return of power.

The new message from the power company was for a return of the power in two hours. The outside temperature was now 13 F and the greenhouse was getting noticeable colder. Despite the fact that power was not restored until 10:30, the air temperature never fell below 52 F in the greenhouse: Much colder than desired, but certainly not lethal for any orchids. Surprisingly, the temperature of pots and plants was around 60 F even when the greenhouse was coldest because of the thermal mass of pots and plants.

No damage was obvious when daylight returned the next day, which was fortunately nice and sunny. By mid-day the greenhouse was venting as temperature exceeded 92 F near the ceiling. Surfaces in the greenhouse including pots and plants were covered with dew because of the lack of air movement during the power outage. Cold dew on orchid leaves combined with rapidly warming humid air provided perfect conditions for bacterial growth. These are one of those times where a therapeutic anti-bacterial spray was warranted. Plants were sprayed with a copper based spray at ¾ the recommended strength and other surfaces with Physan at the recommended rate.

After a couple of weeks only one mature plant showed any sign of damage and no rots appeared. Mature Phals stopped producing new buds or leaves for a week or two. A few more buds dropped on Phals that typically drop buds anyway. Otherwise there was little damage. In fact, Paphs seemed to grow a little better. One miniature dendrobium species that is reputed to prefer cool nights has initiated spikes, the first time in several years. This was not a controlled experiment, but fortunately there were few signs of any permanent damage to my orchids. Every orchid grower must be prepared for the day or night when

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power is unavailable or risk loosing your collection in just a few hours. Given the value of the average orchid collection, a few preventative measures are worth the expense.

There are of course, more enjoyable things to do with your orchids this time of year. Now is the time to prepare the many late winter and spring blooming orchids for display at tour local club meeting or at a show. Tie up phal spikes before buds begin to mature. Tie the spike at least three times so that the spike will be supported in the middle as well as the top and bottom. The last tie should be just above the last node on the spike before the first flower on standard Phals. Multiflora phals should be staked carefully so that any branches that emerge from each node will be free to grow. Some growers tie this type of phal spike all the way to the top of the stake so that the end of the spike does not bend over resulting in a Christmas tree-like arrangement. Phals with large doses of violacea or amboinensis can also be staked in this fashion, but not above the first flower, as they do not typically carry enough flowers to cause the spike to bend. Avoid tying spikes tightly to the stake until the first bud is mature, as the spike will continue to elongate.

Paphs also need to be staked as early as possible so that the bud will orient properly. Again tie loosely to the stake. Multiflora Paphs can be a special challenge as they may grow quickly and exceed their anticipated length. It is best to identify cattleya buds before they emerge from the sheath. Before staking, be sure to decide where the flowers can emerge and open without contacting leaves or other flowers. It may be necessary to stake old bulbs away from the new one so that they will not interfere with the emergence or opening of flowers. This may be difficult in large plants and take some time to do properly. After staking, be sure and place plants back in their exact old location keeping the same orientation of the buds to the sun. Otherwise, emerging buds may twist and turn in ways that will frustrate all your efforts. Windowsill growers have an even more difficult job staking plants with long spikes as they reorient quickly to strong directional light, the type that comes in windows this time of year. It can be done though by staking early. Wrap a tie wire around the stem and stake a couple of times. Every couple of days, carefully slide the tie a little farther up the spike being careful to avoid the soft and very flexible new tissue near the top of the spike.

Remember to check buds for signs of insects. Thrips, mites, mealybugs, and even slugs seem to appear out of nowhere when there are buds to be sucked or devoured. Get out your magnifying glass and look for these pests before it is too late and a year of growing effort is lost to pests.