

## **July 2007 - Growing Orchids Under High Humidity Conditions**

A Monthly growers advice column by Courtney. [Hackneau@comcast.net](mailto:Hackneau@comcast.net)

Most of us have noticed the change in humidity that comes with summertime heat. What is significant to your Orchids outside or in a greenhouse is that your plants lose less water each day than they did when the humidity and temperature were lower. Most plants open their cells to the outside through microscopic structures (stomates) on the underside of leaves that both cool and allow gas exchange. When the outside humidity is much lower than the 100% humidity inside the leaf, a leaf can lose more water than it can get. This causes stress and may cause stomates to close, thus limiting growth and causing the leaf to overheat. Thus, your Orchids may not require as much water as they did in April and May.

High humidity also provides ideal conditions for both fungal and bacterial rots. Higher humidity means that plants do not dry as quickly. Reducing watering, coupled with increased air movement will minimize rot problems. If you have a small number of plants check for water in the crowns of Phalaenopsis and for water in developing leaves of Cattleyas. Remove any water that is still on plants at the end of the day by either dumping it out or blotting with a paper towel.

Growing inside is also affected by increased humidity because air conditioners run more. Besides cooling the air in your home, these systems also remove water from the air. Thus, plants inside may need increased water and you may need to increase the humidity around your indoor Orchids with trays of water, ferns placed alongside, or by some other means.

Several hobbyists have asked if they could use the water that runs from an air conditioning compressor to water Orchids. This is the water removed from the air in your house and is essentially the same quality as rainwater.

High heat and humidity provide the ideal conditions for one of the most frustrating pests: slugs. These shell-less snails seem to appear out of nowhere just before the buds you have watched for the last 3 weeks open leaving just a little nub. Slugs are hard to keep out of the greenhouse and even harder to get rid of outside. They are amazingly quick and will disappear in a minute or two after you turn on the lights. You may not notice them during most of the year as they contentedly consume dead leaves and algae at night. Even if they consume a few new roots you are not

likely to spot them. In the summer's heat and humidity, they can move six or feet or more in a matter of minutes, finding your most prized and carefully tended buds.

My strategy is to look for slugs before they do any damage. On warm rainy nights I check the inside walls of the greenhouse. Often, I know where to look because I see their slime trails in the early morning before I water. Typically, there will be one or two that are relocated far from the greenhouse. They are not poisonous, only slimy. My daughter kept one as a pet for a couple of weeks. They are interesting beasts as long as they are not in the greenhouse. Shallow plates containing stale beer (any brand) will also attract slugs that can then be removed. This may or may not be toxic to slugs unless they drown. They generally refuse to leave the beer on their own.

Just to be sure my prize buds do not become snacks for slugs I use small quantities of a product called Deadline. I put a few drops of this black gooey liquid at the base of the pot or on the bench nearby. This is more attractive than buds and kills slugs quickly. Rarely do I find dead slugs as the removal techniques listed above seem to be very effective at humanely removing them. Those small bush snails, however, are another problem not as easily managed. They tend to be attracted to moist media such as Sphagnum and do their damage on new growths and new roots. Each one by itself is not a serious problem, but there may be a dozen or more in an individual pot. There are several bait products available that work well, but the limited mobility of these small creatures and the number of very tiny juveniles that are always present makes it impossible to eliminate them without covering the surface of every pot and surface with bait.

As with all pest control products, be sure you follow the application recommendations. This is especially important if you have pets with access to your growing area. Many of these products are tasty to your pets and can injure or kill them. Even products now deemed non-toxic may be found to have some toxicity someday. Use pesticides only when you have no other choice. Try other methods first. Be sure that you have a problem and have identified the pest. Consult local experts or your county extension agent.

*Jacksonville Orchid Society member Dr. Courtney Hackney, Retired Emeritus Professor of Biology at the University of North Florida, is a noted author and acknowledged "orchid expert." He published a column of orchid advice that ran for many years, and we are presenting select articles with his permission.*

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