



St. Augustine Orchid Society

www.staugorchidsociety.org

Rot

October 2013

by Dr. Courtney Hackney, hackneau@comcast.net

Hubris is a term that I think about whenever I get to a point where I think that I have finally figured out the culture of orchids. I have thought a lot about that this year. Never in my 50 years of growing orchids have I encountered such consistent issues with various rots. Yes, it has been a wet and rainy summer, but those have occurred before. Hurricanes always seem to bring more rot issues, but there have been none of those, so why this year?



The rot that has been an issue looks like it is fungal and resembles rots that turn up occasionally. First a pseudobulb on a cattleyas yellows and turns black, which eventually spreads up the leaf. Often by the time the dying bulb has been discovered, rot has spread to the rhizome. In many cases large cattleyas were lost and in others large plants reduced to just one bulb. Ironically, phalaenopsis that usually develop rots first have been unaffected as have all other orchid groups.

The speed of infection has been faster than most fungal infections, but slower than bacterial problems I have encountered. So how did I know that the problem was fungal? The fact that the bulbs stayed fairly firm was the first indication that the problem was fungal in nature, but once I opened up an infected bulb and looked carefully under magnification, I could see the fine filaments called hyphae that are characteristic of many fungi.

Standard treatments that always proved effective largely did not work. Even the "nuclear" option, Kocide, failed to halt the progression of this rot. I call this the "nuclear option" because the active ingredient in Kocide, copper, is fairly toxic, even to plants, so it is only used when absolutely necessary. If you must use this product be sure you raise the pH of the water you mix with it above 7 to limit plant toxicity. Most of the well water in my area is above a pH of 7. The product that finally seems to have stopped the carnage was Banrot, an old, reliable fungicide that I stopped using years ago.





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It was necessary to use it as a drench because the rot seemed to be entering my cattleyas through roots, even though most cattleyas were growing in lava rock. My guess is that old, dead roots were providing a starting point.

So what is next? Just because a problem seems to be solved does not mean it is really gone, especially if it is a bacterial or fungal problem. The greenhouse and all orchids are being maintained drier, i.e. less frequent watering, than would otherwise be occurring. Those few orchids that require more water, e.g. *Bulbophyllums*, are getting hand-watered when they look dry. Anytime a suspicious spot is found it is hit with Banrot. This will continue until the problem is gone, however long that takes. Kocide was also sprayed under benches and on walkways to kill as many fungal and bacterial spores as possible.

But where did this new rot come from? It is always easy to blame a new acquisition, but spores from rots can come from anywhere. My bet is the origin was the swamp next to the greenhouse, which was flooded all summer thanks to the wet weather, but there is no way to know for sure. The incident has prompted me to look at what led to the spread of rot in my growing area. The typical culprit is a lack of air movement, which can be caused by orchids packed too closely together or a need for more fans. The trick now will be to eliminate rots before winter comes and the greenhouse is closed up.