

February 2010- Growing Paphiopedilums in Lava Rock

A monthly growers advice column by Courtney Hackney.

Winter is the time when spikes from the multiflora Paphs in my collection suddenly appear. Paphs are not a group of orchids that I used to have in my collection, but gifts over the years brought the occasional Paph that would flourish for awhile and then suddenly decline because I did not repot them frequently enough. After reading an article on Paphs in their natural habitat, I realized that they typically grow in limestone outcrops so high acidity in decaying media seemed like a logical explanation for the decline in growth as the medium degraded.

A visit from Paul Phillips confirmed what I suspected; dolomite limestone aided Paph growth and was discovered long ago by English Paph growers. For many years, I added pelletized lime to my Paphs every month or so. If I forgot, I would notice a change in leaf color on a few Paphs that would prompt me to add lime. Within a week, I could see the color change in my Paph leaves reverted to its normal light green color. With this regimen, I could go a year without repotting, but still the medium degraded too quickly for my taste.

Perhaps Paph lovers enjoy repotting, but those of us that grow cattleyas find repotting a chore; hence, my search for another medium. The use of lava rock as a medium for Paphs was almost accidental. A large plant of Paph Lady Isabel fell off the bench and a growth broke off leaving its roots behind. I threw the growth into a clear plastic pot, which immediately fell over from the weight of the plant. I was experimenting with lava rock for my cattleyas at the time, so I threw a handful of lava rock into the pot to keep it from tipping over and set it among the other Paphs with the intention of repotting as soon as I got some Paph mix. Needless to say, I forgot about the plant until I saw a large spike emerging on the Paph bench. When I lifted the plant the root system had almost filled the bottom of the pot and there were two new growths.

Rock does not seem like a medium that Paphs would like because Paphs like constant moisture in their medium. They have fine roots, which dry out quickly. How could they survive in rock? As I experimented with lava rock as a medium it became clear that lava rock had an ability to absorb a large quantity of water once it had weathered. Initially, I used pea sized lava rock right out of the bag, but would find a

layer of fine, red sand at the bottom of the pot after a few months. Paphs in this mix often had dead roots similar to situations where the medium had degraded.

After several iterations it became clear that the lava rock had to be weathered by soaking in water for a few weeks or left outside to loosen the fine grains of sand from the porous surface. This is not necessary with most rock materials. Also, it was clear that larger size lava rock was necessary to allow enough air movement around the roots. Half inch diameter worked best, although in larger pots one inch diameter or larger is placed in the bottom to increase drainage.

Dolomite lime, preferably the pelletized form, is still added to the surface because it lasts longer, but the powdered form will work just as well. When I used rainwater, which was acidic, lime was added monthly, especially in summer when orchids were watered two or three times per week. The combination of lava rock and lime led to Paph roots that would fill the plastic pot and occasionally deform it from their expansion. Often the pot would need to be cut to remove the Paph, but only after several years' growth. At last, no repotting.

The only modification in this protocol occurred after my move to Florida where I have water with more dissolved solids and a pH of 7.5. I now add lime less frequently and get the same results. I am still experimenting with even larger pieces of lava rock for larger pots, now required because the Paphs get so large. Crushed lime rock is also readily available in Florida and is now being added as a surface dressing as both an additional source of lime and because it does not absorb water providing better drainage. Stay tuned for the next chapter after these experiments are concluded.

****Where do you find lava rock?**

****Most large garden stores carry this product in bags as mulch. It can also be obtained from landscaping businesses that supply mulch.**

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 here with his permission.

Citation: Hackney, C. (2010, February). February 2010- Growing Paphiopedilums in Lava Rock.
Retrieved from http://www.rose4art.com/Growing-tips/growing_paphiopedilums_in_lava_r.htm