

Are members of the board. Our next club meeting will be a repotting seminar, which will be held on April 20, 2019. For the April repotting seminar club members should bring: their orchid in need of repotting, a new pot (preferably 1" in diameter larger than the old pot), potting media, cutting tools, a few sheets of newspaper, a 5 gallon bucket (if available), and a dish tub (if available). The club will be providing Hick's #5 potting media for this event, but if you desire some other potting media (i.e. sphagnum moss) than you will be responsible for bring that material with you. Pat Dupke mentioned that she will bring in several clay pots that she has available. These clay pots will be available for sale (inexpensive) to those in need of a new pot for this repotting seminar. We will plan to break up into small groups in order to discuss repotting and have a demonstration on how to repot an orchid from those club members who are more experienced.

Pat Baig presented our treasury report:

Arlene Appelbaum provided a membership update for the club. As of today the club now stands at 107 registered members. We had 3 new members join our organization at this month's meeting. At our meeting we had 50 members in attendance. As a reminder yearly dues are due – the current fee is \$20 for an individual and \$25 for a couple. Arlene is searching for a vendor to produce our club name tags featuring our new logo. She is currently taking down a list of names of those interested in purchasing a new name tag.

Matt Riesz discussed the beautiful orchids featured on our show table for this month.

The club enjoyed a presentation by Bill Nunez on how to grow orchids from seed.

The raffle was drawn and the meeting adjourned.



SPEAKER SEGMENT

by Kara Warnock

Our speaker for this month was Bill Nunez who was here with us today from Seminole, Florida. For those of you who don't remember Bill spoke with our club last March on *Encyclia tampensis* and other *Encyclia spp.* and their hybrids. He was nice enough to fill in for Paul Phelps of Phelps Orchids who was supposed to be our speaker this month, but due to receiving heart surgery last month could not make it here with us today. Thus, for all of the little things that Bill Nunez has done and continues to do in service of our organization Steve Mattana extended him an honorary lifetime membership to our club. Today our discussion was on "Growing Orchid Seedlings and Basic Seedling Care".

Why would you want to grow orchid seedlings? There are a lot of different reasons one might grow orchids from seed. Personal satisfaction being one. It can be challenging at first especially if you are unfamiliar with the task of raising orchids from seed. However, the very first time you present your own hybrids for judging and they are awarded it can be ten times more rewarding knowing that you had a hand in raising them from infancy. That you were the one responsible for the pollination, flasking, re-plating, and growth of the orchid to bloom size. Growing orchids from seed is one way to go about improving the quality of your orchid collection. Creating hybrids utilizing seed pod propagation generates seedlings that are like members of a family – related and similar in appearance yet different from one another. . Over the years you are able to cull plants from your collection by choosing to keep only the very best plants.

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Some individuals may grow and hybridize orchids for experimentation. You imagine in your head the results you might achieve by crossing two particular orchids together. Sometimes these experiments work out for the best and sometimes you look at your newly bloomed orchids and wonder “What the heck was I thinking?” You try to learn from your missteps and conduct a little more research prior to making your next hybrid. Finally, some grow orchids from seed for recognition. If you are the first person to create a cross between two orchids you will have the opportunity to register the name of the cross (whatever name you like) with Kew Botanical Gardens in London after the plant has bloomed.

The start of every orchid hybrid is the flasking stage where the young orchid seedlings begin to grow as little protocorms suspended in an agar solution. As the seedlings grow larger they are replated (or transferred) onto a new agar solution until the time comes when they have achieved sufficient growth and are ready to be deflasked. Growing orchids from seed can seem like a daunting task, but there are some simple steps that you can follow that will drastically reduce your failure rate. Prior to deflasking your orchid seedlings you want to take precautions to ensure their survival and get them prepared for life in the real world. You have to remember that the seedlings have been living in the protection of their mother’s womb this whole time inside the sterile environment provided by the flask. To prepare the seedlings for deflasking, Bill soaks them (while still inside the flask) in a ¼ strength solution of RD-20 (Physan 20). This helps to protect them against infection from fungus and bacteria present in the harsh environment outside the flask. The best way to remove the seedlings from the Erlenmeyer flask is to wrap the entire

the entire flask inside a towel and tap about midway up the flask with a hammer to break the glass. The easiest way to pot out your seedlings from the flask is to create a large, community pot in which the seedlings can grow together. Once removed from the flask you will notice that all of the seedlings are growing with their roots firmly planted inside the dense agar solution, which should be formed into the shape of a hockey puck. To create your community pot you should select a plastic or clay pot that is 1” larger in size than the diameter of the puck of agar containing the plantlets. Fill your pot about half way full with your desired potting media. Gently break off some but not all of the agar from around the roots of the seedlings and place the puck on top of the media inside the pot. Then begin to rotate the pot and backfill the pot with the remainder of your potting media. When you are done remember to add your plant tag with the appropriate identification regarding the hybrid cross and lightly water your seedlings.

Once potted out it is best to move your community pot and/or small seedlings to a designated area of your greenhouse that is separate from your mature plants. You do not want to have any of your mature plants hanging directly over top of your seedlings, as the seedlings will require different treatment from that of your mature plants. You do not want what you are treating your mature plants with to wash down onto your seedlings since the seedlings absorb things at a different rate than the mature plants. For your growing seedlings you want to try to maintain temperatures in your growing area between 73-80°F. They prefer 40-50% light coverage and 50% shaded conditions.

The seedlings prefer good water quality and will require more frequent waterings than your mature plants, as they cannot afford to dry out for very long.

For watering your seedlings Bill recommends using the Wonder Waterer, a watering wand that creates a soft, uniform spray of water that won't disturb your young plants. To feed your seedlings you can use the same fertilizer that you are using for your mature plants just apply at $\frac{1}{4}$ the normal solution. For seedlings it is important that your fertilizer be balanced as studies have shown that too much of one nutrient can prevent uptake of another. If you can remember only one thing on how to care for your orchid seedlings, than remember this phrase, "How much beer does it take to get a 3 year old child drunk compared to Jeff Rundell?" The point being that we have to do everything for our seedlings on a much lower scale than our mature plants until we get them to reach blooming size.

For seedling plants it is extremely important to inspect them for the presence of pest and disease daily. For young seedlings infections and/or pest infestations can be significant enough to kill the plant. Even if the infection and/or infestation isn't enough to kill the plant it can lead to poor growth habit that will cause seedlings to take longer to reach blooming size. There are several products that can be used to combat pests on your orchids that are mild enough for use on seedlings. Insecticidal soaps are mild yet effective against pests such as mites and scale. Bill prefers to make his own insecticidal soap using a concoction of the capsaicin from Carolina Reaper peppers mixed with Dr. Bronner's peppermint soap for use on his plants. Isopropyl alcohol is another good product that is safe to use for pests on seedlings. It will kill most insects on contact including scale, thrips, and aphids. For treating mites he suggests using Avid or Lucid (generic) to effectively control infestations. For preventing snail and slug damage to plants you can scatter bait in your pots and throughout your growing area. Also, as a preventative against snails and slugs you can spray a concentrated solution of

copper sulfate on the surfaces throughout your greenhouse. It is very important that when spraying copper sulfate that you do not directly spray any of your orchids, as it is an herbicide at higher concentrated doses. To create an effective barrier against snails and slugs it is necessary to reapply the copper sulfate to surfaces every 3-4 months. There are a number of different fungicides and bactericides that can be used on seedlings. Phyton 35 and Kocide are two good products that are often utilized, however, these products are copper based and should always be mixed according to the labeled instructions or they could turn into plant killers. Other popular bactericide/fungicides are Banrot, RD-20, Captan, Aliette, Cleary's 3336F, Subdue, and Zyban. Probably the best broad spectrum fungicides available at the moment is one called Heritage, but it can be a little pricey for some to use. In order to protect plants post removal from the flask Bill recommends utilizing a bactericide/fungicide product at $\frac{1}{4}$ strength to treat your community pot or individual seedlings once a week for the first month.

Cultivating orchids from flask to bloom can be a labor of love, but it can also be extremely rewarding for those that pursue it. A book that should be in your library if you plan on growing seedlings, which Bill affectionately refers to as his Bible for seedling care, is *Orchid Seedling Care (With Special Emphasis on Water Quality)* by Bob Gordon. Providing orchid seedlings with the exact conditions that they need in order to grow past the critical stage (achieving a height of 5-6") and to thrive might be challenging at times but the payoff potential is huge. You never really know until you bloom your seedlings what unique beauties you might discover and that makes growing orchids from seed an interesting journey.