St. Augustine Orchid Society NEWSLETTER
August 2023
Volume 18 Issue #8

Club News

August Meeting
by Janis Croft

Welcome and Thanks. President Tom Sullivan opened the meeting at 6:50 pm with 38 attendees. He thanked Charlie for bringing in the pears and pear pie for the raffle, as well as Dianne, Linda,Dottie and Julie for the treats. He reminded all to remember to "Drop a Dollar" to help defray the cost of the coffee and supplies. He then stated that the Silent Auction plants would concludes after the break before tonight's presentation.

Club Business VP Linda Steward welcomed our guest and two new members: Haqqiqa McRee and Julie Pryor. Linda gave members with birthdays this month a raffle ticket. As our Sunshine Coordinator also, Linda asked that if you know of anyone in need of a cheering up or a get-well card, let her know at info@staugorchidsociety.org.

Virtual Show Table. Tom reminded members that the virtual show table is scheduled for Wednesday August 16th at 7 pm, and that photos for next month's virtual show should be submitted by August 26th.

Repotting Clinic. He noted that the next repotting clinic at the Southeast Branch Library will be held on August 5th from 10 am until noon. All are welcome to learn how to repot orchids, have them repotted by experts, or just observe and visit with club members. Tom announced that supplies for growing orchids are available on the back table and that you can request them by email at info@staugorchidsociety.org.

Gainesville Orchid Society Show. Janis Croft, Exhibits Chair, announced that the Gainesville OS has invited us to enter a tabletop exhibit in their October show. Janis asked for a show of hands to see who would be willing to help install and break down an exhibit. There was no interest. She then said if one had an orchid that they would like judged during the show, they should contact her for a registration number and then deliver their orchid in Gainesville before the judging starts.

Library. Librarian Howard Cushnir brought in Heat Tolerant Cymbidiums that is appropriate for the summer we have had. He also pointed out Sue's article on Fertilizing Weekly, Weakly in the latest AOS Orchid magazine. Remember to use the library collection listed on our SAOS website. If you would like a book or magazine, send a request to info@staugorchidsociety.org and he will bring the item(s) to the next meeting.

Show Table Review. Courtney and Sue started the Show Table with Cattleyas. Tom brought in a Cattleya wondering if Courtney could identify it. Courtney said it was a purple flowering semi-miniature Cattleya but that is as far he could go. He then advised all to tie your tags to your plants because, as he unfortunately learned during his hurricane damage, tags can be separated from the pot. He also logs every new plant in a book assigning a number and date purchased. This has helped him also verify tag names.

Courtney said it was difficult to hybridize yellow cattleyas but the Blc. Terri Henderson demonstrates successful hybridization with beautiful tall yellow flowers with a striking red velvet lip. Courtney held up a Ctsm. Sheriff Frank Drew and our guest speaker, Tony Millet, an AOS judge, commended Janis on her plant and said it was definitely awardable due to the size and flatness of the flower. A Neofinetia falcata hybrid was mounted and covered with gutter guard, a Harry McElroy trick. There were two Habenarias on the table, Hab. Ptarmigan and Hab. Jiaho

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Club News

Upcoming Orchid Events

August

5 SAOS Repotting Clinic, 10 am til 1 pm
Southeast Branch Library
6670 US-1 N, 32086

8 JOS Meeting, How to Choose an Orchid
Jim Roberts, Florida SunCoast Orchids

12 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave.

16 SAOS Virtual Show Table, 7:00 pm
Courtney Zooms into Cyberspace
An Invitation Will be Sent by Email

September

2 SAOS Repotting Clinic, 10 am til 1 pm
Southeast Branch Library
6670 US-1 N, 32086

5 SAOS Meeting, 6:30 pm
Schomburgkias
Bret Ullery, Accent Orchids

9-10 Fall JOS Orchid Festival
Mandarin Garden Club, Jax 32223

9 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave.

12 JOS Meeting, Trends in Vanda Breeding
Robert Fuchs, RF Orchids

13 SAOS Virtual Show Table, 7:00 pm
Courtney Zooms into Cyberspace
An Invitation Will be Sent by Email

16-17 Ridge Orchid Society Show
IFAS Stuart Center, Bartow

30-1 Tampa Orchid Club Show
Northdale Recreation Center

October

3 SAOS Meeting, Reblooming Orchids, 6:30
Courtney Hackney

7 SAOS Repotting Clinic, 10 am til 1 pm
Southeast Branch Library
6670 US-1 N, 32086

11 JOS Meeting, Topic TBA
Speaker TBA

11 SAOS Virtual Show Table, 7:00 pm
Courtney Zooms into Cyberspace
An Invitation Will be Sent by Email

14 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave

15 Keiki Club - Growing Area Tour, 1-3 pm
Sherrie and Lester Jenkins' Home
2150 Eventide Avenue, St. Johns 32259

21-22 Gainesville Orchid Society Show
Kanapaha Gardens

21-22 Delray Beach Orchid Society Show
Fieldhouse at Old School Square

November

1 SAOS Meeting, Judging Orchids, 6:30
Alan Koch, Gold Country Orchids

St. Augustine Orchid Society Organization

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Yellow Bird. Courtney said more and more hybrids are being made in this group with wonderful results. Sue said if you can grow a potato then you can grow Habenarias. Epidendrum magnoliae is a native that Sue found it fallen on the ground and mounted it on bark. It is important to use rainwater because this variety is sensitive to salt. Spanish moss also helps keep humidity around the roots.

SAOS Program. Sue introduced our speaker, Tony Millet from Ft. Lauderdale. He learned how to grow orchids from his mom and has been growing ever since. He has been growing orchids for 30 years and hybridizing for 20 years. He is also an accredited AOS Judge. He spoke to us about flasking and other in-vitro work. He introduced his topic by stating that he was going to show us how orchids "do it" (meaning reproduce.) The he picked two assistants from the audience to help him demonstrate. One would be flasking in a sterile environment and the other on the table top so we could all see.

Tony asked what is the value in hybridizing. When hybridizing with species, you can actually make a contribution to the conservation of the species. Knowledge of the species is gained through the results of hybridizing efforts. Line breeding by hybridizing the best with the best is used to improve the flower quality and selfing a flower by self pollinating it is used to attempt to get hidden genes to express themselves, like unusual color forms. With hybrids, you can try to combine the best qualities of two flowers in the hope of improving them.

To begin, one needs to fertilize a plant by looking under the flower column and finding the pollinia. Pollinia are clumps of pollen, an adaptation orchids made to make sure their pollinators would carry the pollinia to another receptive flower. The pollinia is placed on the sticky stigmatic surface to start the fertilization process. The flower starts to wilt as the fertilization process begins and the seed pod forms behind the flower over the course of several to many months. There are published guidelines for how long it takes for a seed pod to ripen. Timing is important because the longer you leave a pod on the plant, the more likely it will get contaminated with bacteria or fungus. It should be harvested when it is ripe, but before the pod breaks open. If the pod breaks open, an additional sterilization step is required during the flasking process.

The seeds, which looked like powder, are then placed on the specially prepared nutrient rich gelatin solution in a sterile flask. The agar solution is made with gelatin, water, crushed up fruit and crushed charcoal. The mixture is boiled, poured into the flask, which is then sealed and then microwaved to sterilize its contents. Once cool, the seeds can be sown in the sterile solution in a sterile environment.

Once the seedlings are of good size, they can be removed them from the flask by filling it with water and picking them out as they rise to the top. He them places the plantlets under a thin layer of living Sphagnum Moss for six months watering only with rain water until they double or triple in size. The live moss works well because of the presence of natural good fungal organisms (mycorrhiza) in the moss which help the plant get established outside of the sterile environment. For this process, he uses 8' planks of cedar with 1" live sphagnum on top. He selects seedlings for good characteristics such as round and/or flat leaves, clarity of color, etc.

There can be quite a time lag between the time a flower is fertilized, the seeds germinate in the flask, the plantlets are large enough to be removed from their sterile environment, and the plant matures enough to bloom, anywhere from 2 to 7 years depending on the variety. Tony said there is no greater thrill that the moment you see the first flower of a plant you have created.

Meeting Conclusion. The evening concluded with the Raffle table. Thanks to the helpful hands that stayed to help clean and store the tables, chairs and room.

August 16 Virtual Show Table

Courtney talks about the plants brought into the Show Table at our meetings. He also does a monthly online program focusing on the pictures of blooming orchids members send in. Courtney will Zoom into cyberspace at 7 pm to talk about the different orchid varieties with tips on how to grow them. An invitation will be sent to your email address. If you want to share images of your beauties in bloom for next month's program, send high res pictures by August 26th.

American Orchid Society Corner

Webinars
August 15, 8:30 pm, AOS Members Only
Judging Neofinetia falcata Hybrids – Peter T. Lin

September 21, 8:30 pm, Everyone Invited
Greenhouse Chat - Ron McHatton

Orchids Magazine this Month
White Phalaenopsis – Robert Griesbach
Paphiopedilum concolor – Judith Rapacz-Hasler
Leafless Orchid Chiloschista – Zam & Dalstrom

Photos of Latest AOS Awards

August 1 Meeting
Schomburgkias

Bret Ullery of Accent Orchids in St. Petersburg will be talking to us about Schomburgkias. While the Schomburgkia genus has been eliminated with the species transferred into Laelia and Myrmecophila, hobbyists still use the term Schomburgkia to describe the vigorously growing plants with long inflorescences having twisty curvy flowers. Hybrids with cattleyas are much valued for their robust growth, shorter flower spikes and full flowers.

Bret and his wife Ruth started Accent Orchids in 2012, with Bret building the shade houses. He loves to talk to people about orchids and how to grow them, particularly his favorite dendrobiums, schomburgkias and grammatophyllums. Bret has been the president of the Tampa Bay Orchid Society and is currently the president of the Florida West Coast Orchid Society.

Inspiration

Blc. Green Goddess 'Golden Delight' x
Blc. Chinese Bronze 'Marco Polo'

Orchid Questions & Answers

by Sue Bottom,
sbottom15@hotmail.com

Q1. What are the bright white dots on the buds and inflorescence? It doesn't look like scale. How do I treat it?

A1. Your plant is very healthy, exuding plant sap. Some little moldy something or other is growing on the sap, it is nothing to worry about. The blooms are going to be fantastic!

Q2. Could this be scale growing on the roots of my vanda?

A2. I didn't think it was scale, but had no idea what the critter was. Corky took the plant over to the University of Florida, and they diagnosed the problem, oribatid mites feeding on the fungus and algae on the vanda root. From GardeningKnowHow.com: "The Oribatid mite is a type of soil mite that is commonly found in wooded areas where it often assists in the breakdown of organic matter. These mites occasionally make their way to patios, decks, container plants, or even inside homes. They are generally drawn to decaying organic matter such as leaves, moss, and mold." A couple of doses of Permetrol solved the problem.

Q3. I'm have a leaf spot issue on some paphs and probably should get something on them with all this wet weather. I don't usually have any issues with fungus. Any recommendations?

A3. A picture is worth a thousand words! I would say that's a cercosporoid infection, one of the leaf spotting fungi. According to Ann Chase, Daconil Ultrex, Pageant and Heritage are all highly rated for cercosporoids. Of course, fungicides usually will not cure an existing infection, just help stop the spread of the disease. You'll have to cut away the infected tissue to remove the source of spores. If it were my plant, I'd probably opt for the Pageant.

Temperature Effects on Orchids

by Dr. Courtney Hackney

Optimal time to repot is rapidly coming to an end as days get shorter. Repotted orchids need time to grow new roots into the medium so that they can acquire water and nutrients during winter and in early spring. Always remember that plants are “cold blooded”, which means only that their growth is entirely determined by temperature.

Each orchid can survive within some temperature range, but within that range is an optimal temperature range where it grows fastest because it can take up nutrients and water at a rate sufficient for it to use all of the light it is getting and move water to its leaves fast enough to keep its leaves cool while it absorbs sunlight. At higher temperatures an orchid may not be able to keep its leaves cool enough to prevent burning and at lower temperature it may not be able to obtain nutrients fast enough to turn light into new tissue.

The ideal temperature range for most orchids was determined by the natural environment of an orchid’s ancestors. This may be easy to determine for a species, but more difficult for hybrids. Hybrids, however, have been selected for best growth at typical greenhouse temperatures. Vandas whose ancestors are from the lowlands of the tropics generally stop growth at a much warmer temperature than phrags from the Andes.

Most hobbyists pay attention to the temperature in their growing area. That, however, in not exactly what your orchids experience. Direct sunlight on a plant leaf warms the interior of the leaf far above the air temperature. If there is no air movement around the leaf or the orchids cannot obtain enough water to cool its leaves through transpiration then an orchid leaf can quickly burn even though the air temperature is below the maximum temperature recommended. Conversely, lots of air movement can allow an orchid to survive in an environment where air temperature is far above what is recommended.

The temperature within the orchid pot is another important facet for orchid growth. Typically, the temperature within an orchid pot is different than the air temperature; cooler during the day and warmer at night. The temperature within the pot determines the rate of root growth, nutrient uptake, decomposition of the medium, etc. In winter, a dark pot will absorb heat and roots remain well above the ambient air temperature at night. A soil temperature probe is ideal for understanding growth of orchids because it indicates what is happening in the pot. Hobbyists often note that root growth in vandas ceases much earlier in the fall than other groups of orchids. To some degree, this occurs because we generally grow vandas in baskets where root temperature is at or near that of the air.

White plastic pots in a greenhouse remain much cooler than dark green pots even when there seems to be little direct light on the pot. Most surprising is the temperature within clear plastic pots. These act like little greenhouses and warm up quickly. A clear, plastic pot with medium exposed to direct sunlight can warm to well over 100 F in a matter of 15 minutes, while a white or even green pot remains below 90 F. This can be a problem in summer, but ideal in winter when air temperature is low and days short. Phalaenopsis mericlones grown side by side in clear and white pots will open their first flowers a week or so apart simply because of the difference in medium temperature produced by different types of pots.

This heat gain is most extreme when the medium is dry as the water in a wet medium absorbs large quantities of heat. Many successful hobbyists who live in environments that are not idea for orchids take advantage of the different characteristics of pots and use it to mediate temperature extremes. Clay pots tend to be cooler than plastic in summer. Water evaporates from the exterior of the pot cooling the pot and its roots. Water is pulled continuously from the medium through the pot as long as the medium is wet. This works extremely well to cool orchids in hot climates during summer as long as there is lots of air movement and a supply of good water. The quality of water is critical since water is continuously evaporated from the surface of the pot and any dissolved salts are deposited on the pot surface.

If water quality is poor, i.e., lots of stuff in the water, a silver or grey sheen will develop on the pot surface that limits water movement through the pot. This salt buildup can become so severe that roots die when they come in contact with the pot. Fertilizer dissolved in deionized or rainwater can produce the same effect unless there is a sustained effort to flush pots. Pots can become so filled with a surface glaze of salt that water no longer moves from inside to outside a pot. In fact, salts can move back into the clay pot and make even the interior surface toxic to orchid roots. Hobbyists who use water high in dissolved solids are well advised to discard clay pots and not reuse them. Many arid areas in the U.S. have water with lots of dissolved solids. This combined with low humidity and high temperature leads to clay pots with lots of surface salts.

Note: Dr. Courtney Hackney wrote a monthly column of his orchid growing tips for about 20 years; we are reprinting some you might have missed, this one from August 2008.

Creating New Orchids

So You Want to Make a Seed Capsule
by Ned Nash, courtesy of the AOS

When you have a toothpick and a flowering orchid or two, it's easy to create a seed capsule. Your choices include a selfing (self-pollinating a species or hybrid), a sibling (crossing two of the same species or hybrid together), or a hybrid (crossing two different species, hybrids or one of each together). With a little luck, you will soon have a seed capsule ready for flasking at home or by the custom lab of your choice. In a few years, you will have a crop of fine seedlings, ready to bloom, and made by you. However, for good or ill. like raising a first child, most orchidists enter into the production of their first seed capsule without adequate knowledge and forethought. And, like raising children, the successful and satisfactory raising of a population of orchid seedlings is much more complex than just making the cross.

This wall of cattleya seedlings are mostly hybrids that have yet to bloom. The waiting can be excrutiating.

First, think about the time and expense constraints such an endeavor will place on the plant and you. The plant carrying the capsule may be stressed by the effort, causing it to decline. This is an especially important factor to consider if the plant is in need of potting (or may be during the term of the seed capsule, which may range from a few months to more than a year), or is otherwise run down. Consider time, too, in terms of your growing sophistication in the hobby. Determine if this population of seedlings will seem important one, two or five years from now. Until the seed capsule is ready for harvest, the process is, in essence, free. With the readiness of the seed capsule, your expenses will include not only time, but also money. Depending on the lab service you select, you will often be charged a fee just for sowing the seed, and reflasks (the final product) are extra. You will be expected to pay for having the seed sown whether or not the seed germinates. Before you make a cross, take the time to do some research. If you are making a random hybrid just to see what happens, it will cost you money to find out that it does not work.

Determine how many seedlings you will want to raise and how many will be enough. Consider how much room you have to grow the plants to flowering size. How good will the seedlings seem after you've spent a few years growing them, presuming that you continue to grow in knowledge and experience? These are all germane points to consider when determining how many reflasks you order. Count on 25 to 30 seedlings per flask. I would suggest that few hybrids or species made by the beginning grower warrant the production of more than one flask, or 30 seedlings. If it is good, 30 are plenty. If it is not, you will not have invested too much to find out.

Determining Space Requirements. Now comes the period when you are investing time, money and space in your growing area, let's do some math. From the pollination to maturity of seed will average about eight months. Germination and reflasking may consume another **1**6 or more months. We are at least two years from our initial urge.

One flask will go into one community pot containing 24 plants and remain there for one year. (One to six of the plantlets ex-flask have been culled.) Assuming the one community pot is a 4-inch pot, this isn't really too bad, about ¼ square foot. After a year, assuming you have done a moderately good job of growing, the plants will be ready to be transplanted. If you are dealing with cattleyas or phalaenopsis. they would be potted in 3-inch pots. You've achieved a 75 percent success rate, leaving you with 16 seedlings in 3-inch pots for a total of approximately 1 1/2 square feet. Note that so far we're down to about 50 percent of what we started with. This is production loss and culling of the weak or poor growers. If you want to raise seedlings, get used to this sort of attrition rate. So far, so good.

If you are raising faster-growing seedlings, like phalaenopsis, you may expect some of them, at least, to bloom in the 3-inch pots within a year. If this is the case, you need only pot the ones you want to keep and give away or sell the culls. In most cases, you will need to pot at least once more after another year into 4- or 5-inch pots.

Let us assume that you are an above- average grower, and that you have culled properly at the earlier stage, giving you a phenomenal 100 percent success rate of all 16 plants needing to go up into 5-inch pots. These will consume 4 square feet and should bloom within another year or so at least before you need to pot on.

Calculate your investment. Commercial growers often figure on the cost of a bench-square-foot year. That is,

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Allen Black received the AOS Award for Excellence in Hybridizing in April 2023, the first time it has been granted to a hobby hybridizer. Allen has hybridized with many Brassavola species, here is the primary hybrid B. Yaki 'Black's Best' (appendiculata x nodosa). photo by Allen Black

how much does each square foot of bench cost to grow per year? Here, then, we would have 5.75 bench-square-foot years. In your case, though, a more relevant cost accounting would include the total time (four or five years) as well as the space and materials involved. It is easy to see that what may have at first seemed inconsequential builds quickly. Fortunately, there are ways to reduce the time. You can buy flasks or community pots, or a group of small seedlings in 2-inch pots. Or, you can invest the equivalent amount of money in a select variety and end up with nearly the same result.

Available Options. Still, you want to raise orchids from seed. There are several types of seedlings you can raise. Species are always popular, whether from selfings or siblings, and are a fine way to engage in real-life *ex-situ* conservation. This is a fairly reliable way to get more of the same thing, as well. No gambles on recombination here. One of the most popular types of breeding is the creation of primary hybrids, the crossing of two species together. There are several reasons orchid lovers are still making and growing primary hybrids.

- Experimental use in new group or in a newly popular group. Hybridizers must start somewhere.

- To improve and change growth habit.

- By crossing a species that is difficult to grow with an easy one, the hybridizer can create a hybrid that is easier to grow.

- If a big species is crossed with a small grower, a plant of intermediate, more manageable size often results.

- Enhance seasonality - lengthen blooming season, sometimes will bloom twice or more a year.

- When a warm-growing species is bred with one requiring cooler conditions, more-adaptable progeny often results, growing in areas where neither parent is especially well-suited.

- Retain and enhance charm of species. Primary hybrids usually still look like orchids, rather than some artificial creation.

- Nice plants were in flower at the same time.

- Curiosity. Without curiosity, most hybrids would never have been made.

Several types of primary hybrids exist:

- The expected (like X like) – an example might be *Cattleya* Enid where the similar *(Cattleya mossiae* and *Cattleya warscewiczii (gigas))* were crossed.

- The unexpected (unlike x unlike) - Some of the hybrids in the *Zygopetalum* Alliance fall into this category.

- Random - *Cymbidium x Ansellia. Cymbidium x Catasetum and Cattleya x Barkeria.*

An advantage of primary hybrids is that owing to the simple nature of the genetic combination, one can expect a fairly uniform population, midway between the two parents. In other words, a lot of plants that look alike, with few really poor ones.

- Some of these same reasons apply to more-complex hybrids, such as:

- Experimental use in new group.

- To improve and change growth habit.

- They were in flower at the same time.

- Curiosity.

There are shortcomings here for the beginning hybridist, as the complex genetic makeup of many advanced hybrids may lead to some unwelcome surprises in the form of unwanted colors and freakish shapes.

Raising a population of seedlings from one's own hybridizing is an experience that few dedicated orchidists will want to miss. All too many, though, enter into the process without first doing some research. It is important to stress, however, that hobbyists can afford to make and raise some of the more speculative hybrids that lead to that one good hybrid, where professionals cannot. Commercial growers have to concentrate on high-average breeding, because they have to be able to make a living by selling

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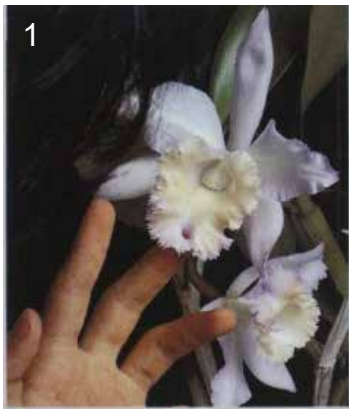
the majority of the plants they raise. The luxury of raising a why-did-I-do-that cross belongs to hobbyists alone.

A Word about Virus: Orchids are subject to viruses that can deform their leaves and flowers, eventually causing the plants to decline and, in some cases, die. When setting seed on an orchid, take precautions to present the spread of virus, recommends Ann Jesup, contributing editor to *Orchids* magazine. If you are transferring pollen from a virused plant to a clean plant, it is possible the virus will be transmitted to the clean plant. If the capsule is developing on a virus-infected plant, the virus can be transmitted to offspring if the capsule is harvested when it is green. However, if the capsule is allowed to dry, most likely the virus will be absent in the progeny.

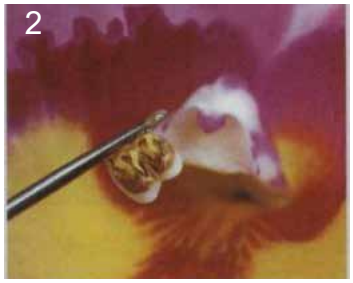
Lc. (now C.) Elegans (1879) var. rubra 'St. Augustine' is a primary hybrid between tigrina and purpurata, grown by Sue Bottom and purchased from Miranda Orchids.

How to Set Seed on an Orchid

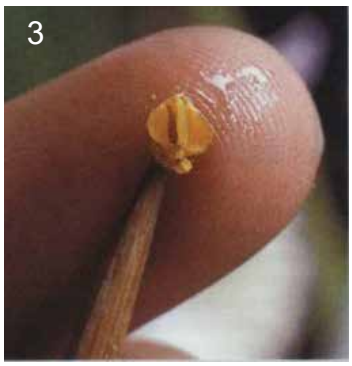
by Ned Nash, courtesy of the American Orchid Society



Step 1. One of the first things that any aspiring hybridizer should do is evaluate the flower. Determine if it has qualities that make it worth using as a parent. While these flowers of Brassolaeliocattleya Virginia Cain (C. Claesiana x Blc. Greenheart) have been selected only as illustrative of a typical cattleya, the grower might have been attracted by the soft pink color, which is nicely offset by the fringed cream lip. The compact growth habit, or the tendency to flower more than once a year, might have also influenced the hybridizer's decision to use this hybrid in a cross.



Step 2. With a toothpick or needle, remove the anther cap to expose the pollinia. (The anther cap can be found at the end of the column, which is in the center of the flower.) These pollen masses, whether or not the hybridizer intends to use them, should always be removed before the flower is pollinated. If no immediate use for the pollen is planned, it may be stored for at least a year if kept in an airtight, moisture-proof container such as an empty pill capsule or stoppered test tube. Be sure to label with the full name and date of removal.



Step 3. Orchid pollen grains, unlike those found on other plants, are massed into pollinia that are often sticky. Only one or two of the pollinia are needed for pollination. Extra pollinia, of which there may be several from each flower, may be stored for future use as described in Step 2.

Step 4. The stigmatic surface usually shows its receptiveness by being sticky, causing the pollen to adhere to it. Here, the pollinia (end of pen tip) have been placed on the stigma. If the stigmatic surface is not sticky, it often indicates that the flower is not receptive and will not make a capsule. If the cross is successful, the stigmatic surface will often close, and pollen tubes will grow to the ovules. If the pollen mass is not an appropriate size (too big), the pollen may be rejected and the cross will fail.

Step 5. After a flower is pollinated, the flower parts wilt and the ovary begins to swell, signaling what may be a successful cross, as shown on this cattleya hybrid.

Step 6. If left to ripen entirely, the seed capsule will dehisce (open at valves), and the seed willl be dispersed by the slightest breeze. Some growers allow the capsule to ripen fully on the plant, as shown by this Brassocattleya Daffodil, while others harvest the capsule while it is still green and propagate the seed using a technique called green-pod culture.

Step 7. Once the seeds are sown on agar in a flask, those that successfully germinate develop into protocorms. which eventually grow into seedlings. The ascocenda seedlings shown here with good root systems and healthy leaves are nearly ready for transplanting.

These article appeared in the American Orchid Society Orchids magazine, in January 2000 (Vol. 69:01, pp.20-27).

What's in the Pot?

by Sue Bottom

If you're playing poker, you have a pretty good idea what is in the pot. When you buy an orchid, well, not so much. You might look at the mix at the top of the pot and assume that's what's in the rest of the pot, and sometimes you would be right. If you are right, you probably have a good idea of how to water the plant.

Seedlings. When plantlets are deflasked, they are often dropped into plug trays in sphagnum moss or oasis, where they grow up enough to be transferred into larger containers. Some growers remove the water retentive material before potting up plants in a bark mix, and some simply drop the root ball and sphagnum together into the pot and backfill with bark. These seedlings and young plants are then offered for sale in small pots. If you water the pot when the bark is dry, the sphagnum moss will stay too wet and the roots inside will rot, and if you water the pot when the moss is dry, the bark will be too dry and the roots will dessicate. This can be less of a problem in a small 2 to 3 inch pot, but in larger pots it is a death sentence. At the potting clinics, we have seen instances where a plant in sphagnum moss was removed from a 4 inch diameter pot at the nursery, dropped into a 6 inch pot and then bark backfilled around the moss, and we have to administer the last rites 6 months later.

Mass Produced Phalaenopsis. Is there anyone that has not bought a phalaenopsis from the grocery or big box stores that is potted in sphagnum moss? These plants are often mass produced pot plants that many simply discard after blooming. To save labor costs, the grower pots them in tightly compacted sphagnum moss so they only need to be watered perhaps once every three weeks. You bring one of these into your growing area and water it with the rest of your plants, maybe every Saturday morning. After a while, the plant starts looking dehydrated and leathery so you repot it and find that the roots have all rotted, so you complain that sphagnum moss is the devil in disguise. The truth is: the plants grew great in sphagnum moss when they were only watered every three weeks when the moss deep in the pot approached dryness.

When you first start buying orchids, you buy anything from anybody if you like the flower. You don't spend much time looking at the plant itself, much less what the plant is potted in. As you keep collecting plants, you find you have a hodgepodge of different pots filled with moss, bark, clay pebbles, gravel and who knows what else, and you water all your plants on the same day, whether they need it or not. Unless you have the self discipline to decide whether each plant is ready to be watered, you should group together plants with similar light requirements and watering frequencies. A much simpler approach is to use a consistent potting mix that allows you to properly water you collection all on the same day.

Clockwise from left: lava rock, sponge rock, charcoal, clay pebbles and Styrofoam in the center are all nonbiodegradable components of potting mix that promote airiness inside the pot.

You are always going to find plants from different vendors with flowers that are irresistible. Once your new plant is bloomed out, knock it out of the pot and take a look at the roots and the potting mix. You may decide everything is fine and drop it right back into the same pot, or you may decide to repot. You don't know how long the plant has been in the same potting mix or how much longer the potting mix might be viable and you may decide that the potting mix is incompatible with your watering habits. Repot it in your mix of choice for that type of orchid, particularly if the plant is growing new roots or if you can do this without damaging too many roots.

Clockwise from left: New Zealand sphagnum moss, SAOS coarse blend with some sphag moss, bark based coarse mix, tree fern based coarse mix, lava rock and cypress mulch. When choosing a potting mix, you are balancing its airiness (porosity) and its ability to retain moisture to meet your plant's needs.

Eventually, you learn who your trusted vendors are. You know how they grow their plants and what to expect from plants you buy. Plants bought from the trusted few can stay in their original potting mix, maybe just removing the plastic pot and dropping the plant into a clay pot. You know the mix is still good for a year or two by which time the plant will outgrow its container.

If you had unlimited time, you could grow all your orchids mounted or in open baskets/pots and water them one or three times a day and never have to think about potting mixes. Keep your roots happy, select a potting mix that works for your watering habits and time constraints as well as your orchids' needs.

Show Table

Grower Suzanne Susko
Mps. Black Gold

Grower Bev Vycital
Ctsm. Jamie Lawson XOXO

Grower Courtney Hackney
Lc. Higher Ground 'Hackneau'
AM/AOS

Grower Sue Bottom
Lc. (now C.) Allen Condo 'Hackneau' HCC/AOS

Grower Leslie Brickell
Den. Hibiki 'Tiny Bubbles' FCC/AOS

Grower Sue & Jimmy Broussard
Blc. Toshie Aoki 'Starburst' AM/AOS

Grower Keith Davis
C. leopoldii alba 'Bracey's Original'

Show Table

Grower Steve Dorsey
Lc. (Tai Rose x bicolor)

Grower Allen Black
B. Yaki 'Black's Best'

Grower Leslie Brickell
Stanhopea oculata

Grower Sue Bottom
Parastylis (Pps. laycockii x Rhy. retusa)

Grower Janis Croft
C. Green Emerald 'Orchid Queen' AM/AOS

Grower Suzanne Susko
Ctsm. Graham Wood

Link to all Submissions https://flic.kr/s/aHBqjAPser