



### CLUB NEWS



**Francisco Miranda**

#### August 4 Meeting

by Janis Croft

**Welcome and Thanks.** President Tom Sullivan opened the meeting at 7:00 pm with 27 attendees. Tom thanked Dianne and crew for Covid cleaning the room and preparing cookies and coffee in individual containers. He then pointed out the locations of the Silent Auction Table, Sales Table, Vendor Sales Table and Raffle Table.

Membership VP, Linda Stewart started by introducing our guest and new member Brandon Silvester. Due to the lack of in-person meetings, Linda asked all with birthdays from April through August to raise their hands for their free raffle ticket. As our Sunshine Coordinator also, Linda announced that if you know of anyone in need of a cheering up or a get-well card, let her know by emailing her at info@staugorchidsociety.org. Tom next informed all that the Silent Auction would end after the presentation.

#### Club Business.

**Virtual Show Table** – We will continue with our Courtney Hackney led Show Table presentations via Zoom conference video. We will try to do them on the 3rd Tuesday of every month. The photos are in for the August 18 Virtual Show Table. You can send photos of this month’s blooming orchids to Sue Bottom for September’s presentation. Each month’s Virtual Show Table is recorded and posted on our website.

**Catasetum Competition Grow & Jim Roberts Seedlings** – We’ll be awarding the best grown catasetum plant in September so send photos of your plant to Sue Bottom, and of course send pictures of the bloom as soon as they are fully open. The first to bloom gets an award as does the best bloom and best grown. Sue then announced we would be planting Jim’s seedlings in March when hopefully all will be able to attend in person meetings. Fingers crossed.



*Bob explains his ‘Orchid Tree’ to Charlie & Bonnie*

Repotting Clinics will not be held at Ace Hardware for the duration of the pandemic. The clinic will be held on Saturday, September 5, 9 am til noon at the Memorial Lutheran Church Pavilion across from back parking lot.

Culture Classes began concurrent with our move to the Church, beginning before the main meeting. This month, Bob Schimmel showed us how to build an orchid tree, a structure on casters that you can hang your orchids on and roll into the sun or out of the rain. With our limited attendance, we hope to resume culture classes in 2021 once we have bid the virus adieu!



*Marv is celebrating his 89th bday this month*

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# CLUB NEWS



## Upcoming Orchid Events

### August

- 8 Florida North-Central AOS Judging, 1 pm  
CANCELLED
- 11 JOS Meeting, Topic TBA, 7 pm  
Thanh Nguyen, Springwater Orchids

### September

- 1 SAOS Mtg, Backyard Growing 6:30 pm  
Walter Muller, St. Aug Orchid Society
- 5 Repotting Clinic, 9 am til 1 pm  
Memorial Lutheran Church  
3375 US 1 S – by back parking lot
- 8 JOS Meeting, Topic TBA, 7 pm  
Courtney Hackney
- 12 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.
- 20 Keiki Club for Orchid Beginners, 1 pm  
Growing Area tour  
Bob and Yvonne Schimmel's home  
702 Wilkes Court, St. Aug 32086

### October

- 3 Repotting Clinic, 9 am til 1 pm  
Memorial Lutheran Church  
3375 US 1 S – by back parking lot
- 3-4 South Florida Orchid Society Show  
CANCELLED
- 6 SAOS Meeting, 6:30 pm  
Transitions and Adaptations  
Linda Stewart, St. Aug Orchid Society
- 10 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.
- 13 JOS Meeting, Program TBA, 7 pm  
Art Chadwick, Chadwick Orchids
- 16-18 Field Trip to EFG Orchotoberfest  
4265 Marsh Road, Deland 32724
- 24-25 Gainesville Orchid Society Show  
CANCELLED
- 31-1 Delray Beach Orchid Society Show  
CANCELLED

### November

- 3 SAOS Meeting, 6:30 pm  
Venezuela's National Flower  
Fred Clarke, Sunset Valley Orchids
- 7-8? Fort Pierce Orchid Society Show  
CANCELLED
- 10 JOS Meeting, Program TBA 7 pm  
Fred Clarke, Sunset Valley Orchids
- 14 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.
- 14-15 Deerfield Beach Orchid Society Show  
CANCELLED

### December

- 1 SAOS Christmas Auction, 6:30 pm  
Memorial Lutheran Church

### St. Augustine Orchid Society Organization

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Supplies of potting media and plant tags were available on the SAOS sales table. Feel free to preorder your supplies by emailing [info@staugorchidsociety.org](mailto:info@staugorchidsociety.org) and we will have it ready for you at the next meeting.

Librarian Howard Cushnir brought in the new book from AOS, *Orchids and their Culture* by Mary Gerritsen and Ron Parsons which was immediately borrowed. He encouraged all to use the library collection listed on our SAOS website. If you would like a book, send a request to [librarian@staugorchidsociety.org](mailto:librarian@staugorchidsociety.org) and Howard will bring the item(s) to the next meeting.

**SAOS Program.** Sue Bottom announced our guest speaker, Francisco Miranda, from Miranda Orchids in Haines City, FL. Francisco spoke on *The Genus Catasetum in Brazil*. He discussed flower dimorphism, which is a very interesting feature of *Catasetums*. Francisco had pictures showing both the male and female flowers. The female flowers have thick upright stems and a few long-lived flowers that are often referred to as green helmets, all species being similar looking. He pointed out how the male flowers have two antennae that cross each other in some species and in others they grow parallel and can be very small. He told us that in some species, if you accidentally bump or touch the antenna, they will propel pollinia up to 6 ft. If the wrong pollinator for that species interacts with the antennae, it can be killed from the flying pollen projectile. After the discharge of the pollen, the flower fades, a problem experienced by exhibitors in orchid shows.

The plants typical bloom first with female flowers and then later with male flowers that are much more colorful and showy. Female flowers are produced in healthy vigorously growing plants, usually in high light conditions. In the early growing season, the tree canopy can be sunnier and the *catasetum* leaves are just forming so higher light levels favor the formation of female flowers. Later in the season with increased shade, the male flowers are more common. To produce seed, the pollen from male flowers must be available on the same or nearby plants with female flowers.

Francisco showed a map of the three regions in Brazil where the *catasetums* grow. About three quarters of the *Catasetum* species grow in the Amazon where the climate is evenly hot, moist and tropical as well as equatorial so day and night lengths do not vary substantially. Some of the better known *catasetums* from this area include *pileatum*, *macrocarpum*, *denticulatum*, *tigrinum*, *barbatum*, *fimbriatum* and *saccatum*. These plants can tolerate warmth and high moisture levels during the active growth cycle, which often lasts much of the year. Any rest period for these plants is caused by periods of lesser moisture. Francisco showed a slide of *Ctism. denticulatum* that is easy to grow

and often grows near *Ctism. tigrinum*, so the two of them can produce a naturally occurring hybrid. Often the plants are growing in the tree tops so they can be difficult to see from the ground. One plant with an interesting history is *Ctism. rooseveltianum*, named after Teddy Roosevelt who went on a four month expedition in the Amazon in 1913.

The Central region of Brazil has a long dry season so *catasetums* growing here have adapted to extended droughty conditions. Nights can be cool and humidity low throughout much of the year. Plants often grow on long-lived trees, above the reach of the ranging cattle that like to eat *catasetum* bulbs. Well known *catasetum* species in this zone include *spitzii*, *schmidtianum*, and *fimbriatum* (also found in the Amazon). *Ctism. fimbriatum* tolerates a wide range of conditions so it is often used in hybridizing.

The Coastal region ranges from the warm, humid sea coast to 5,000 ft cool mountain elevations. The dry season in winter is short, so the winter rest season is induced by drops in temperature rather than dry conditions, which is what causes the dormant season in the Central corridor. Well know species from this area include *cernuum* and *luridum*. Francisco stated that we could grow plants from the southern part of the Coastal region because they can handle cold similar to St. Augustine, particularly *Ctism. cernuum*.

Francisco concluded by saying that his photos are a result of more than thirty years of visiting the Brazilian orchid natural habitats, and unfortunately several of these places have been totally destroyed throughout the years. In both the Coastal and Central regions near the coast and civilization, much natural habitat has disappeared. Many of the *catasetums* that used to grow there are now gone and only the photos remain.

**Meeting Conclusion.** The evening concluded with the Silent Auction and Raffle. Thanks to all the helpful hands that stayed to Covid clean the tables and chairs and room.



*Francisco's Sales Table*



# CLUB NEWS

## Covid Considerations

Everyone has been schooled on the guidelines on social distancing during the pandemic. Take your temperature before attending events to make sure you do not have a fever. We are limiting attendance at meetings to those that have preregistered. With a maximum of 50 people, four people can space themselves about 6 ft apart at each of the large 8 ft diameter circular tables. Face masks are not mandatory, but you may wish to bring one, just in case. We are looking forward to having our regular meetings, with all the personal interactions, beautiful plants and knowledgeable speakers.



## Repotting Clinics

Starting in September, we are relocating our repotting clinics to the pavilion at the Memorial Lutheran Church. August is a dangerous month for repotting with all the stress induced by high heat and humidity, but plants have a growth spurt in the fall when temperatures mediate, so we'll be repotting in September and October.

When: Saturday, September 5, 9 am til noon

Where: Memorial Lutheran Church  
Pavilion Across from Back Parking Lot  
3375 US 1 South

## American Orchid Society Corner

### Webinars

August 13, 8:30-9:30 pm, Everyone Invited  
Greenhouse Chat Orchid, Q&A - Ron McHatton  
August 26, 8:30-9:30 pm, AOS Members Only  
The Genus Maxillaria – Eric Sauer

### Orchids Magazine this month:

Rhyncholaelia digbyana by van Kampen-Lewis  
Hugh Low by David Rosenfeld  
In Pursuit of Teagueia by Kelsey Huisman  
Cypripedium guttatum in Alaska by Miranda

### Photos of Latest AOS Awards

## September 1 Monthly Meeting

Backyard Orchid Growing  
Walter Muller, St. Aug Orchid Society

Our very own Walter Muller will share his orchid growing secrets with us. You have all see those incredible phalaenopsis he brings to the Show Table. He grows them in his backyard without a greenhouse. His green thumb extends to other genera too, based on the vigorously growing and flowering plants that he's sent in for our Virtual Show Table presentations. Come learn his tricks!



George Hausermann of EFG Orchids will be joining us, hosting the sales table. He will be selling plants as well as providing raffle plants. We will have our normal raffle at the end of the meeting. Friends and guests are always welcome!

When: Tuesday, September 1, 6:30 til 9 pm

Where: Memorial Lutheran Church  
3375 US 1 South, St. Aug 32086



## Virtual Show Table

Courtney has continued his review of our blooming orchids in his mid-month Virtual Show Table presentations on Zoom. We have had an incredible response to the programs, over 150 views last month! Many who do not bring plants to the show table have sent in pictures of their beautiful orchids.

Pictures should be [sent in](#) by the last Saturday of the month so they can be compiled for the newsletter and virtual presentation. Send in pictures any time this month before August 29th.

During this pandemic, we are all having a hard time remembering what day of the week it is. So, if you miss the live talk, Terry uploads the video of Courtney's presentation to YouTube. A link is posted on our [newsletter page](#), as well as being sent directly to members





# INSPIRATION

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*Catasetum Marsh Hollow*

© Terry Botto



# CULTIVATION



## Orchid Questions & Answers

by Sue Bottom, sbottom15@gmail.com

**Q1.** This came on suddenly, at first I thought maybe sunburn but didn't really think so based on its location in the pergola. Yesterday I moved it to isolation, and noted that the black areas are the same

under the leaves. Today I saw the start of weeping. Is it a goner?



**A1.** That is some sort of rot, either black rot from the water molds or more likely rot from a bacterial infection. It happens during hot, humid weather when there is excessive leaf wetness from daily rains. You can either move your plants under cover to protect them during rainy weather or spray the leaves before and after rain events with something like Copper, Hydrogen Peroxide or Physan. Cut away all the infected tissue from the quick moving rot.

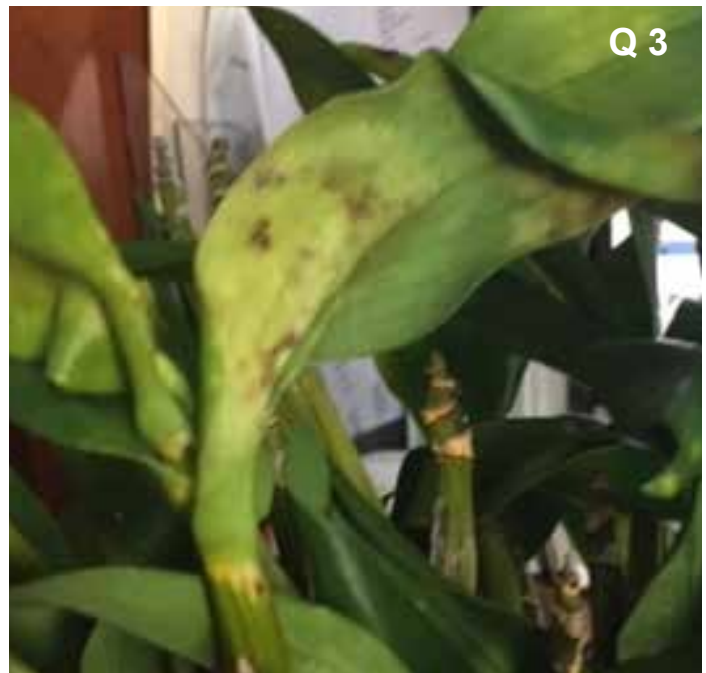


**Q2.** This hornet looking insect visited me, so I did a video for my grandson who adores insects. When I later identified it, it turned out not to be a hornet or yellow jacket (I hadn't seen a stinger), but a beneficial insect that preys on thrips and aphids, called a [Virginia Hoverfly!](#)



**A2.** You learn something new every day! Here is [Nancy Morrison's video](#) to help you identify it!

**Q3.** This Dendrobium Fire Wings has a problem, any ideas?



**A3.** That looks like one of the Cercospora fungi that readily infests Dendrobiums. The sad thing is you really have to sanitize the plant, which means removing all the infected leaves, thank goodness Dendrobiums are so resilient. Try to improve air movement, and consider protective fungicidal sprays. This [article on growing dendrobiums](#) from the University of Hawaii has a section on Cercospora.





# CULTIVATION



## Orchids in Summer

by Courtney Hackney

It has been a wonderful summer so far with no hurricanes and relatively cool conditions, i.e. no 100-degree days. There are few years when evening temperatures are in the 60s in July. Orchids love these conditions and the greenhouse is full of beautiful sights and especially great fragrances. Encyclias are

one of the most fragrant groups of Orchids, but are often not part of hobbyists' collections because of their rather small brown-green flowers. Each species has a unique scent and our family knows them not by their scientific name, but by their fragrance. There is the "Banana Cream Pie Orchid" (*Enc. plicata*), the "Pop Tart Orchid" (*Enc. alata*), and so on. Besides the large-flowered *Cattleyas* that provide fragrance during the day, there are also night fragrances as well from *B. glauca*, *B. Jimminey Cricket*, and the like.

If you are an indoor or under lights hobbyist and cannot grow these relatively high light Orchids, pick up some of the fragrant *Phalaenopsis*. *Phal. bellina* (formerly known as the Borneo form of *violacea*), *Phal. violacea*, *Phal. fasciata*, *Phal. luddemanniana*, and most of the other summer blooming *Phal* species are extremely fragrant. While they grow more



slowly than hybrids, they are relatively easy to grow and flower under lights and put out one of the most intense sweet fragrances in the Orchid world.

Many late summer standard *Cattleyas* are blooming early this year, especially the yellow hybrids such as *Blc Toshie Aoki* and *Lc Mary Ellen Carter 'Dixie Hummingbird'*. Other hybrids usually in bloom in September are filling sheaths with growing buds. In the past, I always assumed that changes in blooming season were related to some aspect of culture in my greenhouse, but with this column and the email from readers, I have discovered that often many growers report the same thing and this year is no exception. On a visit to *Carter & Holmes* in Newberry, South Carolina in July, *Gene Crocker* noted the same early blooming phenomenon in their greenhouses. They are far inland of *Wilmington, NC* and are not affected by sea breezes.

There are a few successful cultural experiments worth noting this summer. The first is my continued attempts to resurrect *Paphs* that have lost their roots. Mature plants recover relatively easy by repotting into smaller pots that fit their remaining roots, but not seedlings. Books suggest putting plants in plastic bags with a little media until root growth begins, but this has not worked well.

In a recent study at the here at the University, we needed to grow plants in a media that contained absolutely no nutrients. The only thing that worked was nylon fiber batting packed into a pot. When plants were removed they had developed an incredible root system in the Nylon. So... I tried Nylon on my sick *Paphs*. It did not work as the sole media, but when the stem of the *Paph* below the leaves was wrapped with nylon, placed in a small pot with standard media packed around the Nylon so that the nylon was compressed around the stem just about every plant put out new roots. If a seedling had absolutely no roots and was small it was difficult to stabilize the plant. This was solved by tying the plant and nylon to a small bamboo stake, which was then placed in the pot as before. The bamboo stake held the plant in place until roots could become established. When these plants were removed after six months, most of the stakes had rotted away. The Nylon allows enough air movement to get the roots growing, and then encourages roots to penetrate down to the bottom of the pot. If roots do not go to the bottom of the pot as would normally happen without the Nylon, the media gets soggy and the plant again loses its roots. If you have a favorite plant that is on the way out try it. I plan to try it on my next *Phal* that loses its roots.

*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 2001.*



# CULTIVATION

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## Growing *Catasetums*

by Fred Clarke, Sunset Valley Orchids  
reprinted with permission

The best way to understand how to grow orchids well is to learn about the environmental conditions in their natural habitat, where orchid species have adapted to survive and thrive. *Catasetums* grow primarily in areas with a warm, wet summer followed by a dry winter, and these plants have evolved very specific seasonal growth habits. In the spring, just before the onset of the rainy season, they begin growing and rooting, in anticipation of a period when moisture and nutrients will be plentiful. Plants develop their pseudobulbs during the growing season to effectively store moisture while they are dormant during the dry winter season. Besides annual rainfall patterns, there are other seasonal environmental triggers for the plants: lengthening days in spring, warm nights and long days of summer, shortening days of autumn, and short days and cool nights of winter. These seasonal changes are the signals for *Catasetum* plants to start growing in spring, develop in summer, prepare for dormancy in fall, and finally become dormant in winter.

Dormancy is a plant's adaption to conserve moisture during the drought-like conditions in winter and early spring. Leaves turn brown and drop off, leaving the pseudobulbs wrapped in dried leaf tissue that forms a natural sunscreen. The pseudobulbs also harden their exterior surface, further assuring that moisture is stored during the pronounced dry winter period. This ability to conserve moisture over the dry season is critical for the plant's existence. Female flowers pollinated in the wet summer season mature their seed capsules during the winter, consuming the plant's energy reserves while waiting until spring to disperse their seeds when the rains begin again. Few orchid plants go through such a dramatic seasonal change. The key to your success in growing these plants is understanding the importance of the adaptations that *Catasetums* have evolved in their natural environment. An understanding of these adaptations was used to produce a seasonal guide to growing these plants successfully.

*Spring:* *Catasetums* begin their growth in the early spring with the warming and lengthening days. New growths emerge at the base of the prior year's pseudobulb prior to the rainy season, and the plant does not need watering during this initial growth phase. The new growth produces roots that develop in anticipation of the forthcoming spring rains. Once the roots have reached a length of 3-6" it is time to begin watering and fertilizing. Restricting water during the initial growth period encourages better root development. This is an important rule of thumb that should be followed for best results.

*Summer:* With the heat, humidity and long days of summer, the plant enters a period of very rapid leaf growth and pseudobulb development. This is the rainy season in nature, and the plants have evolved to utilize constant moisture and nutrients. In most cases, irrigation will be needed 2 or 3 times a week for best growth. A balanced fertilizer applied at a rate of 1/2 tsp per gallon is suggested. Bright light levels at or above those suggested for *Cattleyas* will help to produce strong growth and flowering. This is also the time when you will begin to see the first blooms of the season. During active growth in the summer, when plants are being watered and fertilized frequently, the ideal day temperatures should be 70 to 95 degrees F with nights 5 to 15 degrees F. cooler. *Catasetums* enjoy abundant air movement. If you are growing in a greenhouse, use air circulating fans. Hanging the plants high in your growing area allows for maximum air movement around them as well as increased light levels.

*Fall:* *Catasetums* have fully developed their pseudobulbs by late fall, which is the peak of the blooming season. In their natural habitat, the shortening days, cooler temperatures and end of the rainy season are the signals that cause plants to begin hardening off in preparation for dormancy. Now is the time to reduce irrigation and stop fertilizing. The first signs of dormancy in your collection will be yellowing leaf tips on the lower leaves. Shortly thereafter, the whole leaf will yellow and drop. The general rule to follow is: on the first of November reduce watering frequency and stop fertilizing. Continue to reduce watering frequency until late December, then stop watering completely.

*Winter:* During early winter, the dry season begins, with its short days and cool temperatures. The plants respond by completing the hardening off of their pseudobulbs, dropping the last of their leaves, and entering dormancy. By late December and January, most leaves should have yellowed or fallen off, and irrigation should be stopped. Plants will generally stay in this dormant state for 1-3 months. During dormancy, minimum temperatures should be 50-65 degrees F.

*A Word About Dormancy:* In the fall and winter it is important that plants receive dormancy signals. In their natural environment, this is caused by several factors: shortening days, cooler temperatures, lack of rainfall. Plants grown outdoors or in greenhouses will enter dormancy naturally in response to these triggers. When plants are grown in the home or under lights where changes in day length and temperature are less pronounced, the only dormancy signal might be the reduction in watering frequency. Starting on the first of November, reduce irrigation and continue to lengthen the dry interval until late December, when watering should stop, regardless of the number of

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green leaves. If there is a bit of pseudobulb shriveling, one or two additional waterings may be needed in January to plump them back up. It is important that plants go dormant on schedule so that they will begin their new growth in the spring, providing a long summer growing season and assuring best flowering. *Catasetums* in dormancy prefer humidity levels from 40 to 80%. This can be challenging to achieve in winter, especially in northern climates. An effective technique involves grouping the dormant plants on a humidity tray filled with water, which can help to create higher humidity levels around the plants.

**Potting mix:** For seedlings and mature plants up to a 5" pot size, AAA New Zealand long-fibered sphagnum moss with the bottom 1/3 of the pot filled with Styrofoam peanuts to assure good drainage has proven to work well. A mixture of fine bark and perlite is also excellent. *Catasetums* are not too particular about the potting medium, as long as their seasonal irrigation needs are met.

**Containers:** I prefer to grow in plastic pots, however clay pots and baskets will work as well. *Catasetums* don't like to be overpotted, and it is important to select a pot size that will allow for 2 years of growth.

**Repotting and Dividing:** This is best done as the new growth is just starting to develop and before the new roots start to emerge. At this stage, you will best know how to orient the plant in the pot, and the new roots will grow directly into the new mix. Even though you have repotted, remember not to water until the new roots are 3 to 6" long. If you notice new roots more than 1/2" or so, consider slip potting the plant up one pot size to avoid breaking the developing roots. *Catasetums* do well when divided into 2-bulb pieces. Divisions are made by cutting with a sterile tool or by carefully pulling the bulbs apart. Repotting can occur every second year, as plants should be potted in containers to allow for two years of growth.

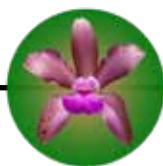
**Insect pests:** *Catasetinae* are generally pest free, with the exception of spider mites that can be attracted to the soft leaves. Spider mites are quite small; they live and feed on the chlorophyll in the cells on the undersides of the leaves. Spider mites are not actually insects, but belong to the related group Arachnida, which also contains spiders, and scorpions. For effective control, be sure to use a recommended miticide from your garden center.

While watching most orchids grow is a pastime requiring considerable patience, *Catasetum* plant growth can be called "seasonally dynamic." When growth starts in the spring, you can almost watch the leaves lengthen, and during the most rapid growth period in early summer it is not uncommon to have leaf growth of 2-4" per week.

Try putting a ruler in the pots next to your plant, and you will be able to measure for yourself. After many years of growing these plants, I am still surprised by how quickly they develop each summer. Suddenly, flower spikes appear, and many can flower 2-4 times a season. Now that is a nice trait! Shortly afterward, fall arrives, leaves begin to yellow and drop off, and suddenly plants are in winter dormancy. Truly a dynamic cycle!

One final feature for those of us who occasionally damage a leaf or have some sort of blemish appear. On other orchids, the damage persists for years, serving as a constant reminder. Not *Catasetums*. They are very forgiving in this regard; any leaves that are damaged drop off and are replaced with a new set during the next growing season. Just one more of the many reasons to grow this amazing genus!

*Fred Clarke wrote a series on the Catasetinae, this is an extract from the first installment appearing in the June 2019 issue of Orchids (88:6, pp 426-433).*



# CULTIVATION

## Rats

by Sue Bottom



*After - The little so and so's just ate through the middle of the basket, making a big scooped out hole in the center for their future little darlings.*

The summer shade house is a great environment for growing orchids. The buoyant air movement, purifying rainwater, filtered light, and nighttime temperature drop encourage vigorous growth and flowering in the orchids that summer there. The good news is the plants are exposed to the outside world. The bad news is the orchids are exposed to the outside world, including those chewing pests that are happy to munch on orchids, rats!

Orchid growers always have to fight denial. If you see something that doesn't look right, stop what you are doing and investigate. There had been signs of small damage to plants for several days, it just looked like random damage. Perhaps if I had pulled the plant down from the hanger to investigate, I would have noticed the gnawing damage sooner, before the little cabróns decided to set up housekeeping in the orchids.

We discovered the problems rats can cause several years ago. The dogs were always sniffing around the bottom of my car and we couldn't figure out why, until we pulled the car out after returning from a trip to the Keys and there was lots of plastic debris under it. We popped the hood and there it was, the rats' nest and lots of wires stripped. It cost \$6500 to replace all the wire harnesses in the car. The fellow at the automotive repair shop says they get a car in with the same problem several times a week.

Orchids in the greenhouse have had sporadic instances of rodent damage, a pot knocked over, new growths chewed on, tea bags containing Purely Organic fertilizer pulled from the pots, etc. Whenever damage is noticed, some rat poison is placed in saucers layered with Purely Organic fertilizer to tempt them. I never gave much thought to the types of rat poison until they started building nests

in my orchid baskets in the shade house. There is quite a variety of rat poisons on the market, although you have to be careful in selecting the proper bait to prevent collateral damage. From the Rodenticides Topic Fact Sheet:

*There are many different active ingredients registered as rodenticides in the United States. They can be grouped together according to how they work. Many rodenticides stop normal blood clotting; these are called anticoagulants. Bromadiolone, chlorophacinone, difethialone, diphacinone, brodifacoum, and warfarin are all anticoagulants. There are a number of rodenticides that are not anticoagulants, and these work in different ways...*

*Warfarin, chlorophacinone, and diphacinone generally require that an animal eat multiple doses of the bait over several days. These are known as multiple-dose anticoagulants. Single-dose anticoagulants, such as brodifacoum, bromadiolone, and difethialone are more toxic. One day's feeding can deliver a toxic dose...*

*Single-dose anticoagulants are more toxic because they bind more tightly to the enzyme that makes bloodclotting agents. They can also interfere with other steps in Vitamin K recycling. Second-generation, or single-dose anticoagulants, are not easily excreted from the body, and they can be stored in the liver. Most of these rodenticides are not allowed to be marketed to non-licensed applicators for residential use. Instead of classifying anticoagulants into "first generation" or "second generation", many sources refer to them as multiple-dose or single-dose rodenticides because it is less confusing...*

*Rodenticide baits are made to attract animals. Pets and wildlife may take the bait if they find it. When an animal eats the bait directly, it is called primary poisoning. Secondary poisoning is caused by eating poisoned prey... The rodenticides with high secondary poisoning risks to*



*After - If you see tell tale signs of plant damage on the ground, don't wait to investigate. This damage happened in a matter of days.*

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# CULTIVATION

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birds such as hawks and owls include difethialone and brodifacoum. The rodenticides that pose the greatest secondary poisoning risks for wild mammals, dogs and cats include chlorophacinone, diphacinone, and all of the single dose rodenticides. Bromethalin and cholecalciferol may pose secondary risks but these risks have not been studied as extensively.

We live adjacent to wooded property that abuts a large

state park, and we see all kinds of wildlife in the yard, deer, turkeys, foxes, hawks, ospreys and more. There was no question that rat poison was going to be used to protect the orchids in the shadehouse, so the goal was to find one with the minimum risk of secondary poisoning. The rat poison of choice is one containing bromethalin, a single-dose formulation for quick results without causing too much risk to Coral, the birds of prey and other mammals that live in the Hood.

### Citations and Additional Reading

Fisher, Frederick M., *Rodenticides*, University of Florida IFAS Extension PI284, Accessed July 2020, <https://edis.ifas.ufl.edu/pdf/PI/PI28400.pdf>

National Pesticide Information Center, *Rodenticides topic Fact Sheet*, Accessed July 2020

<http://npic.orst.edu/factsheets/rodenticides.pdf>

Category of Poison	Active Ingredients	Trade Names	Secondary Poisoning Risk to:	
			Birds	Mammals
First Generation Anticoagulants – Multiple Dose Feed Over Several Days, Lethal Within 1 to 2 Weeks	Chlorophacinone	Flatline	Low	High
	Diphacinone	Ditrac, JT Eaton Bait, Tomcat	Moderate	High
	Warfarin	Kaput	Low	Low
Second Generation Anticoagulant – Single Dose Feed, Lethal Within 4 to 5 Days	Brodifacoum	d-Con, Final, Havoc, Talon-G, WeatherBlok XT	High	High
	Bromadiolone	Bell Contract, Farnam Just One Bite II, JT Eaton Nectus, Resolv	Moderate	High
	Difethialone	First Strike, Generation	High	High
Non-Anticoagulant	Bromethalin (single dose)	Fastrac, JT Eaton Top Gun, Tomcat With Bromethalin Bait, Victor Fast-Kill	Low based on limited evidence	Low based on limited evidence
	Cholecalciferol (multiple dose)	Terad	Low based on limited evidence	Low based on limited evidence

Secondary poisoning risk from [Rodenticides Topic Fact Sheet, NPIC](#)



# CULTIVATION

## Catasetinae Competition Grow

Catasetums are growing like mad this time of year, fueled by the bright light, long days, high temperatures and lots of food and water.

If your plant blooms, be sure to send in a picture of the flowers, perhaps we'll be awarding the prize for the 'first to flower' catasetum this year! Take pictures of your blooms and send them over so we can start compiling the candidates for the 'best bloom' award. We're thinking of having Fred Clarke judge the pictures to select the winner.

In September, we'll be voting to see who gets the 'best grown plant' prize. Should be fun!



Glo MacDonald



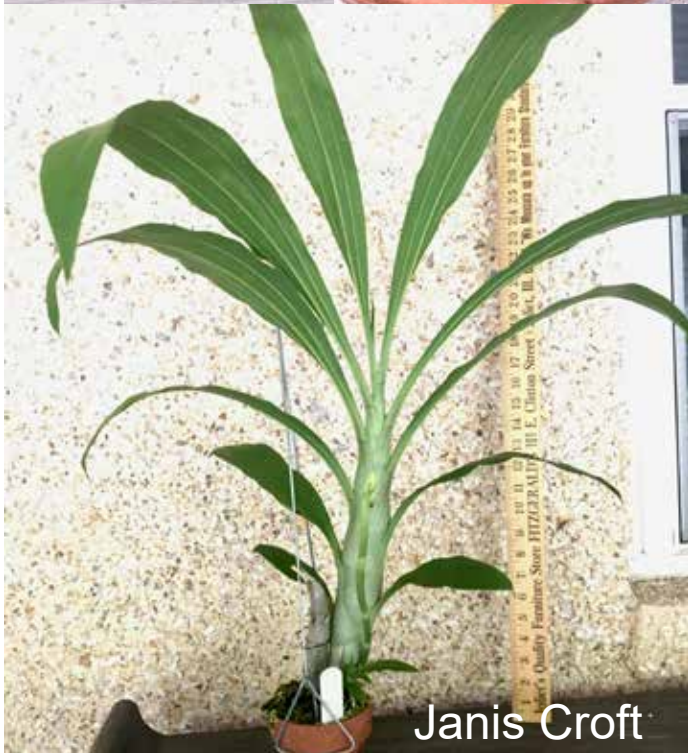
Sue Bottom



Bob Schimmel



Charlie Rowell



Janis Croft





# SHOW TABLE



**Grower Howard Cushnir**  
*Phal. Samera var. coerulea*



**Grower Janis Croft**  
*Ctsm. Donna Wise x Ctsm. denticulatum*



**Grower Penny Halyburton**  
*Onc. Makalii*



**Grower Charlie Rowell**  
*Den. Blue Spin*



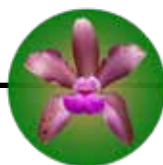
**Grower Courtney Hackney**  
*Slc. What'll It Be 'Hackneau'*



**Grower Lucinda Winn**  
*Ascda. Yanisa Gold 'Fuch's Gold'*



**Grower Bill Gourley**  
*Enc. tampensis*





# SHOW TABLE



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



**Grower Walter Muller**  
*Zygo. Blue Blazes 'Barrie Ford'*



**Grower Sue Bottom**  
*Lc. Maui Plum x Blc. Walden's Glen*



**Grower Sheila Nathanson**  
*Blc. Mem. Marg Steele 'Carmela'*



**Grower Linda Stewart**  
*C. Wendy Patterson*



**Grower Steve Hawkins**  
*Bulb. Daisy Chain*

Link to all Pictures. <https://flic.kr/s/aHsmPNKe9J>

