

GREATER LAS VEGAS ORCHID SOCIETY

THE ORCHID COLUMN

SUNDAY, JUNE 3, 2007

2 pm

BUILDING OPEN AT 1 PM

Carol Siegel, Newsletter Editor

We greeted May with a packed room and a fun time. Our Sundays together are the best- dinner and a show, shopping, and loving friends. What could be better!

Congratulations to Tex and Gidget Severance on the medical school graduation of their son. They must be so proud. Congratulations to Dorothy and Chi Chi Bengochea and their daughter Danyelle's college graduation. I know Danyelle since she was a baby, and I am so thrilled for all of them. Time flies! Best wishes to Carolyn Jones for a speedy recovery from her knee surgery. Our thoughts are with Marlin Davis as he recovers from heart surgery. Congratulations to Eileen and Alex Mckyton on their 25th anniversary.

Many thanks to Christine De La Cruz, Beth Hewitt, Karen Fields and June Learn for the May feast. Thanks in advance to Poly Arcos, Angel



Escobar, Nita Bragg, Marilyn Short and Steve Ninemire for June treats.

Doug Conkin treated us to another of his excellent talks, this time enlightening us about how to grow cattleyas- everybody's favorite orchid. He suggested 2000-3000 foot-candles for six hours a day and lots of air circulation 24 hours a day. He recommended a drop in temperature of 10-20 degrees at night to induce flowering with ideal temperatures of 75-85 in the day and 55-60 at night. He stressed the importance of allowing cattleyas to dry out between watering and suggested repotting only when new roots are beginning to emerge. In many bifoliate cattleyas, that is AFTER they bloom. In other orchids, roots emerge BEFORE there is a bloom. Pay attention for best results.

Members were delighted with the gorgeous cattleyas I got from Orchids by Hausermann (www.orchidsbyhausermann.com) that we sold and with the raffle plants from Exotic Orchids of Maui

(www.mauiorchids.com). Jesse Sanders thinks they are a great place to order orchids at a terrific price.

Thanks once more to Tony Billitere, Ed McCormick, Myra Glassman, Clarice and Dennis Dean for all their help getting us hotel plants for the raffle. It is lots of work, but we really appreciate it.

We are grateful to Sharon and Uwe Proehl for volunteering to help dear Tony with picking up and storing the plants. We have such wonderful members!

Our speaker for June is Fred Clarke, owner of Sunset Valley Orchids, www.sunsetvalleyorchids.com 760-639-6255. Fred is also the manager of Flower Fields, the spectacular Carlsbad site of the millions of ranunculus sold nationwide. Clarice and I went there for their orchid day, and we were overwhelmed by the site of the riot of colors on a huge hillside. Fred will be speaking on "Catasetum, Mormodes and Gongora," the most interesting orchids to grow. He will be selling orchids and will be providing our raffle. He is generously offering a 10% discount on plants pre-ordered. Look on his site and see what delicious trouble you can get into!

Fred Clarke
Sunset Valley Orchids
"The Species of *Catasetum*,
Cycnoches and *Mormodes*"

Catasetum, *Cycnoches* and *Mormodes* are three related genera from the Tribe Cymbidieae. Individually, each has been considered an orchid oddity, or "botanical", of interest mainly to the seriously addicted enthusiast. These plants have a brief deciduous period in winter, when the plants need a definite dry rest period bordering on neglect. These robust orchids are native to lowland tropical forests in Central and South America and are usually grown in warm or intermediate conditions.

Commercially, *Catasetum*, *Cycnoches* (or 'Swan' orchids) and *Mormodes* (or 'Goblin' orchids) have occupied a small market niche on the edge of a sea of *Cymbidiums*, *Cattleyas*, *Phalaenopsis*, *Dendrobiums*, *Epidendrums*, and so on.

This talk will feature a widescreen computer slide show on some of some excellent species of *Catasetum*, *Cycnoches* and *Mormodes*. The presenter will be Fred Clarke of Sunset Valley Orchids in Vista.

Fred Clarke has been growing orchids for 30 years and has been hybridizing for 22 of those years. With over 24 years as a professional grower and manager in the horticultural industry, Fred applies these skills at his orchid nursery; Sunset Valley Orchids, located in San Diego, California.

He is a passionate orchid grower whose curiosity in orchids is broad and varied. Although developing *Cattleya* hybrids has been his sustaining interest, he is also actively creating new *Bulbophyllum* and *Paphiopedilum* hybrids plus some others to be named if they work out!

His pioneering work in *Catasetum* intergeneric hybrids led to the development of several notable hybrids, most recently the grex, *Fredclarkeara* After Dark, which produced "the blackest flower ever witnessed". This grex has received five FCC's and three AM's on the first flowers shown for judging!

Fred is an Accredited Judge in the Pacific South Judging Region. His plants have received hundreds of quality awards from the American Orchid Society.

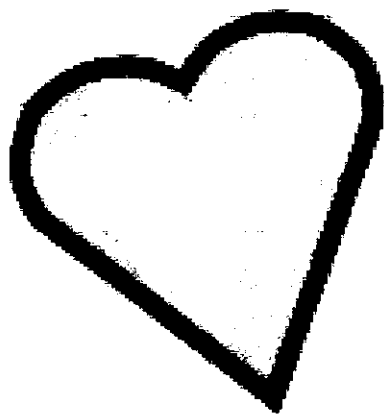
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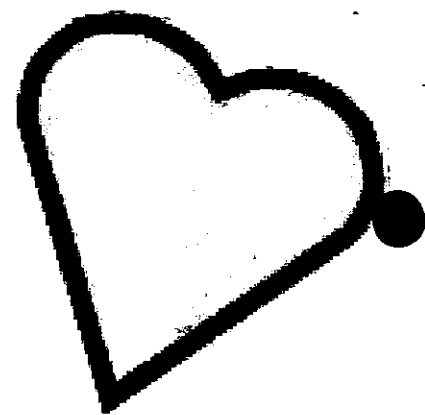
fred.clarke@worldnet.att.net

Paula Garrett, a new club member and a botanist at the UNLV Arboretum has been working with me on a brochure for the university on the Native Orchids of Nevada as well as on a big laminated poster. We are so thrilled that this important work will be disseminated throughout the community. Our club has really made a difference! Paula is such a smart, self-motivated and generous lady, and we (and I) are so thrilled to have her so interested in our work in orchids. Paula sent my name in also for the UNLV Forum Lectures, and I will be doing my sex life of orchids talk there in November. I am grateful to Paula for her interest.

The Springs Preserve will be opening on June 8, and it is a fabulous addition to our city. This 180-acre park has 2 ½ miles of hiking trails, gardens, a museum on the origins of Las Vegas, one on the Mojave Desert, and another on conservation and sustainable growth. Photoelectric cells coat the covered parking and will provide 75% of the electricity for the facility. It is supposed to be GORGEOUS and lots of fun and education. 243 million dollars has been spent on the Springs Preserve, and it is a dream that has taken ten years to come to fruition. They welcome volunteers



**Margarita Party,
Sunday, June 24,
2PM - ?**

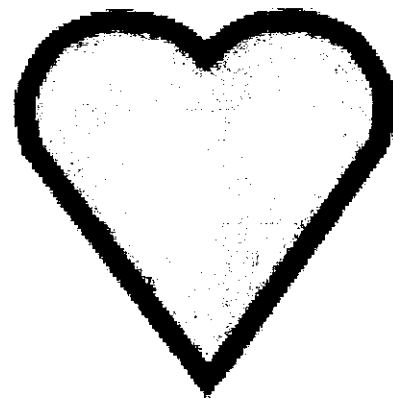


**Come celebrate the
25th Anniversary of
Alex & Eileen McKyton**

**9033 Big Plantation Ave., Las Vegas, NV
Phone 251-1456**

Directions

**North on 95 to Durango exit, turn right on
to Durango and get in left lane immediately
Turn left on El Capitan and go over 1 mile
to Brent and turn left on Brent. Third street
on left turn left on Blushing River, left on
Big Plantation. **Free Valet Parking**
Bring a dish if you like**



In Praise of *Catasetum*

By Carol Siegel

They say you never forget your first orchid, and my first orchid was truly unforgettable. There used to be a nursery in town called the Orchid House, and it was there I fell in love with orchids. I walked in, and Bob Vitto, the owner, told me he had a very special orchid to show me. It was a *catasetum*. He told me to bend close to the flower and touch the middle. Unsuspecting, I did as I was told, and a missile shot out of the center of the flower and stuck to my nose. No amount of pulling could dislodge this thing. Such began my love affair with orchids—and with *catasetum*. They say the nose knows, and mine knew I had come home to the weird and wonderful world of orchids.

A WEIRD ORCHID

Of all orchids, *catasetum* are truly the most strange. Not only do they have spring-loaded pollinia (orchid pollen), but they have fabulous fragrance and exotic flowers. They have separate male and female flowers that look totally different. Their pseudobulbs look like fat cigars, their plants look dead for most of the winter, and their seed pods are as big as baseballs. So special!

EXPLODING POLLINIA

With about 100 species, the genus name *Catasetum* (kat-uh-SEE-tum) comes from the Greek *cata*, meaning "downward" and the Latin *seta* meaning "bristles." The male flowers have two "bristles" or appendages called "antennae" that in the male flowers extend down into the lip cavity and keep the sexual apparatus under tension. Any touch can cause an explosive release of the pollinarium that sticks to the pollinator- or in my case, the nose.

SEPARATE MALE AND FEMALE FLOWERS

Most orchid flowers are "perfect," which in the flower world means they are bisexual hemaphrodites with both functional male and female parts in every flower. *Catasetum* have male flowers and female flowers that look very different. Early explorers believed that the male flowers were a different species from the female flowers because they were so unlike, causing lots of confusion in describing the genus. Later, it was understood that when a *catasetum* blooms, it can carry all male or all female flowers, a combination of male and female flowers on one spike, or occasionally even regular bisexual flowers (which are usually sterile).

It is believed that female flowers will be produced when the plant is given lots of light, and male flowers will be produced in shadier conditions. Female flowers of all species are amazingly similar, with a thick, fleshy hood. Male flowers are thought to be more interesting and varied and can be encouraged by moving the plants out of bright light after the pseudobulb has matured in the spring. In nature, many more male than female flowers are produced, and it seems the orchid only produces female flowers when it thinks that conditions are so good that it can invest in the expensive act of producing a big seed pod.

CATASETUM RELATIVES

Catasetum belong to a subtribe called *Catasetinae* which has four relatives that grow a lot like catasetum. Much of what is said about catasetum applies to these, too. *Clowesia* has a few species that have bisexual flowers which can fling their pollinia, too. *Cycnoches*, the swan orchid, has long-lasting male and female flowers which bear little resemblance to one another. *Mormodes*, the goblin orchid, has amazing separate male and female flowers, too. Finally, *Dressleria* has some bisexual species that fling pollinia after the anther cap is lifted.

CATASETUM SEX

In a mature male flower, the entire column is a trap waiting to be sprung. Male bees from miles away are attracted by the fragrance of a waxlike, musky substance in the lip. It contains aromatic hydrocarbons and volatile terpenes (strong smells!!) which mesmerize the male bees who land and fight each other off in the frenzy to collect this fragrant oil. They will later make a potent aphrodisiac to attract female bees. In the excitement, one of them bumps into the antennae and the pollinarium is thrown forward at speeds of ten feet per second. The pollinia do a complete somersault and land behind the head of the frightened bee. Inebriated from the waxes and wanting more, he drunkenly avoids the male flowers that have frightened him, and gorges on the waxes inside the female flower hood, depositing the pollinia. The seed pod forms in a few months and contains at least a million seeds.

CATASETUM LEAVES

The great thing about catasetum leaves is that if they become spotted, blemished or disfigured by insects, they will probably fall off at the end of the growing season, and you will have another chance! No one will know about your lack of experience and poor fortune, because next year you will get a whole brand new set of leaves. The leaves have parallel folds like a fan (plicate) and love lots of light.

CATASETUM PSEUDOBULBS

Catasetum have big, long-lasting moisture-storing organs called pseudobulbs. Although they come in lots of different shapes, they mostly look like fat cigars. They are an adaptation to the dry season that they find in nature in places like Mexico, El Salvador and Brazil, and allow the plant to survive with little water throughout the winter. Some have even said that catasetum hate water, but they just hate too much water at the wrong time.

The pseudobulbs are covered by leaf sheaths which when young and green are connected to the leaves. After the leaf falls, the sheaths become dry and papery, often with sharp spikes to deter foraging animals. Remove the sheaths to prevent being stuck and to avoid insects from hiding within.

THE GROWTH CYCLE OF CATASETUM

Unlike cattleya and phalaenopsis, most catasetum lose their leaves after the growing season. They have a unique period of rest or dormancy which corresponds to the dry season in nature. Once a pseudobulb and its leaves show signs of yellowing, it will not produce any more leaves, but may eventually put out a new growth from its base. The old pseudobulb will remain a source of reserve for the total plant for a long time, but eventually they will shrivel and become soft and should be removed. During the dormant period, the plant should be given a minimum of water until a new growth emerges and is two inches long. Then, the grower should spring into action with regular watering and fertilizing as the drama of regeneration quickly begins.

Sometimes, the flower spike appears simultaneously with the new growth in spring, in other it appears in summer or fall. There are even some species that bloom long after they lose their leaves.

THE DORMANT PERIOD

When dormant, a catasetum may be treated in one of three ways:

1. Leave it in its pot and potting material and place it somewhere where it won't get its regular watering. Give it only enough water to prevent shriveling of the pseudobulb.
2. Remove it from its pot, throw out potting material, put it back in the pot naked with its tag and water with your other plants,
3. Take the plant out of its pot with its tag, store it somewhere dry and sprinkle occasionally.

Arthur Holst, author of the excellent book *THE WORLD OF CATASETUM*, uses the first method since he says that it preserves the old roots. I tried the second

method this year, recommended by one of our speakers, and it also worked well. I watered the pseudobulbs just once in a while, and they are doing very well with their first flush of green growth. In any event, water must not be withheld completely. The period of dormancy can last from several weeks to several months, interrupted as the first exciting green growth arises on the otherwise dead-looking plant.

REPOTTING

Catasetum grow best with minimal root disturbance and really like to be mounted. If you grow with a pot, Charles Marden Fitch recommends putting a plant that has outgrown its pot into a larger pot filled with some growing medium. This pot within a pot allows him to leave the plant undisturbed for 3-4 years. Repot when the new growth and roots are just starting. You can do conventional bark or sphagnum potting, but Arthur Holst recommends putting a wood mount vertically against the far wall of a pot, attaching the plant to the mount with the base one inch above the medium in the pot, and letting the plant decide whether to grow up the mount or into the pot. !! He also uses another unconventional method by only putting very large (2 to 3 inch) chunks of wood, bark and charcoal in a plastic pan, net or clay pot which he says retains some water yet allows a lot of air without smothering the roots. He also likes growing in wooden baskets, propped up by some wood and bark chunks and chips.

FERTILIZING

Everyone has a different opinion on fertilizer just as everyone has a different opinion of vitamin supplements. Don't fertilize during the dormant period, but fertilize with a weak formula every time the plants are watered after the new growth is 2 inches tall. Holst likes to add nutrient solution containing silicon from time to time since he believes it helps resist disease and fungi.

LIGHT

Most catasetum are sun-loving plants and grow well in their native habitat in full sunlight and like humidity. They rarely grow in the deep shade of the tropical jungle. However, they need constant air movement naturally or with fans. Remember that if you decide you want male flowers, you will need to bring the plant to a more shady spot after the leaves are formed. You may still not get males, but it will, supposedly, up the odds. (Personally, I like girl flowers...)

INSECTS

The major pests are spider mites and mealy bugs which can be controlled with 70-90 % rubbing alcohol sprayed directly on the insects. Pull the dry pseudobulb sheaths off to prevent insects from hiding. Ants will often make a nest in the plant transplanting mealy bugs with them. Orange Guard will deter ants and a plastic ant-

bait disc on top of the potting mix will kill them. You can always submerge the plants for 30 minutes in a bucket of water, and the ants will drown.

Among the vendors of catasetum are Carter and Holmes of South Carolina, Chuck's Orchids of Jacksonville, Florida, Carolina Orchids of South Carolina, H&R Nurseries of Hawaii, JEM Orchids of Florida, Sherwood Forest Orchids of Florida, and Ken West Orchids of Hawaii. Look them up on the AOS website (www.orchidweb.org). "CAT-E-WHAT?" <http://www.orchidjudges.org/docs/txt003.html> is full of information as is "Catasetum Culture" at <http://www.selby.org/shops/Cataset.htm>. Try Catasetum!! You will love them.



Catasetinae Plant Culture

Fred Clarke

Cycnoches, *Catasetums*, *Mormodes*, and *Clowesia*

The cultural information below is a generalization and will apply in most situations; however each grower and growing environment is different. I encourage you to make adjustments based on your experience and growing conditions.

Catasetinae have a distinctive growth and rest period (dormancy). For best plant growth it is important to understand and respect these growth phases. When the plants are in active growth maintain constant root zone moisture and fertilize regularly. This is essential to optimizing the development of new growth. When the plants are dormant little or no water is needed as the pseudobulbs store enough moisture and nutrients to survive the dormancy. Catasetinae plant culture is not difficult. All it takes is an understanding of the seasonal growth patterns. The plants vegetative state signals to the grower their changing needs. Interpret the signals and make the appropriate cultural adjustments. Here is what to look for:

Early spring:

Catasetinae begin their new growth in early spring. However, watering should wait until the new growth has well developed new roots. This means you should let the new roots grow to an approximate length of 3-5" before you begin watering. Let me emphasize this point. Wait to water until the new roots are well developed. The waiting to water is not easy, my natural instinct is to begin

watering when I see new growth, but I have learned through trial and error that it is better to wait to water than start watering too soon. I also believe that *Catasetinae* roots deteriorate during dormancy and in the following year they are not as effective at taking up moisture and nutrients. This makes the new roots vital in the plants health. This reinforces the message about not watering too early.

Mid-Season:

Once the new roots are sufficiently developed, this is the period where the plants are rapidly developing their new pseudobulbs. There is a surprising amount of growth that occurs in these 3-4 months, often the plants will double their size. Due to this, the plants require constant moisture and regular fertilization. In most cases, irrigation will be needed 2 or 3 times a week. A balanced fertilizer at full strength is suitable for this rapid growth. Light levels at or above those suggested for *Cattleya* will help insure strong good growth and flowering. This is the time when the fruits of your labor will begin to pay off as the flowering season is in underway.

Late Season:

Sometime after flowering, in the late autumn the plants will begin to enter the dormancy phase. Understanding the signals of the onset of dormancy and the factors triggering it are important in good plant culture. The plant first signals are the yellowing and browning off of the leaves, at this time stop fertilizing and reduce watering by ½ and when most leaves are yellow/brown and have dropped off cease watering altogether. The general rule to follow is: by the 15th of November stop fertilization and reduce watering by ½. Most leaves should have yellowed or fallen off by the 1st of January, however, if the plants still have leaves all irrigation should be stopped at this time.

The onset of dormancy is caused by several factors, the maturity of the pseudobulb, shorter day length, cooler day/night temperatures and a reduction of root zone moisture. In most of the country dormancy occurs naturally however when the plants are cultivated in warm growing areas such as in South Texas, Florida, Hawaii, or in the home or under lights sometimes dormancy needs to be encouraged. I have found that stopping watering in early January regardless of the number of green leaves will trigger the dormancy.

Note: Watering during dormancy should only be done if the plant shrivels severely. Usually a single irrigation is sufficient to restore the bulbs.

Here's a summary:

- As the new growth develops wait to irrigate until the new roots are well developed and are 3 to 5" long. (don't be in a hurry to water, it is better to wait)
- Irrigate and fertilize frequently while the plants are in active growth.

- Stop fertilization and reduce irrigation by $\frac{1}{2}$ around by mid November.
- Cease watering by the 1st of January.

Light levels: Catasetinae like light levels comparable to Cattleya's at about 2500-4000 foot candles (fc) However, the plants are widely adaptable and do well with light levels as low as 1500 fc and as high as 5000 fc. For optimal growth I suggest a Southern exposure or a location where the plants will receive plenty of bright, filtered light

Potting mix: For mature plants I have been using a 50/50 of mix of coconut husk chips and Maidenwell diatomite. (*When using coconut husk chips the contained salts need to be leached out prior to use. Always use a triple, 24 hour soak changing the water between each soaking prior to use*) for seedlings up to a 3" pot size I like to use New Zealand sphagnum moss with the bottom 1/3 of the pot filled with Styrofoam peanuts. However, this genus is not too particular in what it is potted in and any well drained media will work well.

Containers: I prefer to grow in plastic pots, however clay pots, baskets, and cork slabs will all work. Catasetinae don't like to be over potted, select a pot size that will allow for 2-3 years of growth.

Fertilizer: When in active growth, regularly use one teaspoon of your favorite fertilizer per gallon of water.

Air movement: Catasetinae enjoy abundant air movement, if you are growing in a green house use air circulating fans. Also, hanging the plants allows for maximum air movement around them and often they do best hanging.

Repotting and Dividing: Is done as the new growth is just starting to develop and before the new roots start to show. (remember no watering until the roots are well established, 3-5" long). Unlike most orchid plants Catasetinae do well when divided in to 2 bulb pieces. Divisions are made by cutting with a sterile tool or by pulling the bulbs apart. I try to keep the size of my plants between 2 and 5 bulbs.

Insect pests: Catasetinae are generally pest free, however spider mites are attracted to the soft leaves of these plants. Spider mites are quite small, they live and feed on the undersides of the leaves. Take care in checking for them as the plants are leafing out and control them with a recommended miteicide from you garden center. Although the leaves will drop off during dormancy this is not an excuse to not treat for them.

Please feel free to contact me on any question regarding the growing of this genus. Once the basics are understood they are very rewarding.

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Growing *Catasetum* on the Windowsill

Helen Hersh explains how those who grow orchids in the home can try their hand at this genus of Neotropical orchids.

Photographs by Charles Marden Fitch

ANYONE LOOKING FOR SOMETHING different to grow on a bright sunny windowsill should investigate the genus *Catasetum*. These orchids need maximum light to bloom to their fullest potential, which makes them ideal for a southern or west window with no shading. Do not grow in a north or east exposure.

There are more than 50 known species of *Catasetum*, with numerous natural hybrids. The natural habitats stretch across the West Indies through Central and South America, with some of the same species or variations turning up in several different locations. The plants, which are warm-growing and heavy feeders, depend on rainy seasons for their growth cycles and require a short rest period in winter.

Catasetums were originally discovered around the mid-19th century, when many different species bloomed in English and European collections. They were often written about in gardening publications of the day. However, it was not until the late 19th century that new colonies were discovered with species and natural hybrids that they became greatly admired for their unusual, fragrant flowers. These new discoveries were so popular that *Lindenia* catalogs pictured numerous species and natural hybrids, often devoting whole volumes just to *catasetums*.

The volume of *Lindenia* dated January 1895 is one of several issues containing only *catasetums*. Several spectacular natural hybrids are illustrated, and described as "some of the most splendid orchids ever introduced into cultivation."

The plants of *Catasetum* x*Lindeni* and *Catasetum* x*Luciana* were collected among colonies of the species *Catasetum bungerothi* and *Catasetum macrocarpum*. The two other hybrids listed in that volume are *Catasetum* x*Splendens* var. *album* and var. *atropurpureum*, collected from that same location. It was suggested that although these were the same hybrid, possibly different parents within the colony were responsible for the variations. It is apparent from this wide variation in flowers that the hooded *Catasetum macrocarpum* is capable of producing exquisite flower forms and should be used today when possible as a parent, to try to bring back into cultivation some of these spectacular, possibly lost treasures.

Catasetums to Try

The February 1895 volume of *Lindenia* continued to describe more of the plants from the same colony that bloomed out for the first time a few months earlier. *Catasetum imperial* was among this later group, with its magnificent large white flower bearing a wine-red dish-shaped lip. This is a plant that is still in cultivation today, but is now known as the species *Ctism. pileatum* var. *imperial*.

The September 1895 issue illustrates one of the newly discovered species then called *Catasetum stupendum*. This species has similarities to *Ctism. saccatum*; however, it clearly shows enough different qualities, particularly in the large green spotted lip, to have warranted at the time

classification as a different species. That issue also contained a discussion of the taxonomic difficulties arising from the reluctance of most plants, under conditions of cultivation, to produce female flowers, which would have enabled more detailed analysis.

Even today the *Catasetum* species now known are extremely variable in flower size and plant size. There are many shapes and color ranges to suit almost any taste. The licorice-scented *Ctism. barbatum* is one of the more interesting species with a greenish background coloration, brownish-red spotting and a variable white bristling on the lip. Its 5-inch-tall pseudobulbs stay small, even on a mature clump. One of the largest flowers is on *Ctism. pileatum*; these can reach about 5 inches across on a good clone, with color variations ranging from icy green-white to the deep red of the imperial form. A mature clump of these with several spikes of dozens of fragrant flowers cascading down is quite spectacular. Other delightful species are *Catasetum tenebrosum* with its dark chocolate-brown color with a contrasting yellow-green lip, *Catasetum fuchsii* with its small pinkish flower, *Catasetum collosum* with its winged reddish-brown flowers and contrasting green lip, *Ctism. saccatum* with its similar shape and color, *Catasetum cernuum* with creamy white background and heavy red to wine spotting, and *Catasetum fimbriatum* with its fanciful frilly lip.

Another group of *catasetums* that is quite fascinating and quite different from the above are the helmet-shaped species. There are quite a few to choose from, starting with the green and yellow *Catasetum macrocarpum*, to the more dramatic *Catasetum maculatum*, which has a green exterior with wine-red and heavy reddish spotting, and the similar *Catasetum viridiflorum* with distinct interior red spotting.



An Odd Situation

One of the unusual traits of *Catasetum* is its having both male and female flowers. The female flowers are produced on mature plants that are grown in high light. The small female flowers are helmet-shaped, usually a dull medium green throughout, with occasional spotting in the segments. The male flowers are the ones described earlier and seen most often. Both emerge on inflorescences starting from the base of mature new pseudobulbs. Plants do not bloom again on older pseudobulbs, but retain them for food storage.

The pseudobulbs are fleshy and hard. The foliage is a bright medium green, having long plicate leaves that are soft in texture thus making them susceptible to all kinds of infestations, especially spider mites in the warm days of summer when the windows are open. Preventive maintenance is helpful, such as applications of Safer Insecticide Soap, or a sun-oil spray. Whatever product you may choose, follow label instructions and only use products that are safe for use in the home.



Hybridizing

Hybridizing of catasetums, with the necessity for male and female flowers, has always been a challenge, although some crosses with breathtaking flowers have been achieved. Plants often go years without producing the necessary female flowers. Recently, J.E.M. Orchids and firms in Hawaii have been successful in creating a wide variety of wonderful new hybrids and some spectacular intergeneric crosses using *Mormodes* and *Cycnoches*. Breckinridge Orchids has also achieved some wonderful results such as its *Catasetum* Breckinridge Onyx, which bears dark garnet-red flowers of excellent size and shape.

Hybrids of note to look for are the older type *Catasetum* Francis Nelson (*fimbriatum* x *trulla*), *Catasetum* Spotted Dragon (*expansum* x *fimbriatum*) with colors ranging from yellows and greens to deep burgundy with blotches of white spots, *Catasetum* Fanfair (*expansum* x *saccatum*), which produces cascades of 30 or more yellow flowers with cherry spotting, and *Catasetum* Susan Fuchs

Opposite: *Cataseum* Orchidglade shoots its pollinia when the trigger is touched.

Above: The red label in this *Catasetum* Francis Nelson shows where to remove the older, dead pseudobulbs. The new growth with an inflorescence is shown at the right.

(*expansum* x Orchidglade) having huge dark green, saucer-shaped flowers with heavy burgundy spotting.

Growing the Plants

Culture of catasetums is fairly easy when they can be given high light. After a winter rest period of about two months with only scant watering, a new growth will emerge from the base of the last mature pseudobulb. When the growth reaches an inch, repot the plant into fresh potting mix (two parts small bark, one part charcoal and one part coarse perlite; or straight sphagnum moss). My preference is to use sphagnum on new divisions and seedlings, and the bark mixture on older plants that might consist of six or seven pseudobulbs and lead growth from several directions. Although these plants rest in nature, there are some that keep



growing all year. As a windowsill gardener, my preference is to rest them, allowing other plants to take their spot by the window until the new growths emerge. After repotting, begin a heavy feeding program using either a 20-20-20 fertilizer or a blossom-inducing one with a low nitrogen number, at full strength every watering. At the early stage of the new growth watering two to three times a week is recommended, until the growth is up about 3 or 4 inches (including the soft foliage). Young growths are susceptible to rot and should be watched in their early stages. The young growths establish quickly and grow a root system rapidly if properly fertilized. After they are out of danger, place the plants in a bowl with a full-strength blossom-inducing fertilizer (mixed according to directions), about 1 to 2 inches up the sides of the container. As soon as the medium absorbs the fertilizer mixture, it should be replenished. Continue this throughout the cycle of the plant or until it starts to drop its leaves in the late autumn when it enters its dormant period. By feeding intensely, the plant will

Above left: Mealybugs in the folds of new foliage suck sap from the tender tissue.

Above: This *Catasetum* hybrid (Kengar x *pileatum*), which is blooming for the second time on the same growth, is completely deciduous. Clay pots make suitable containers for *catasetums*.

grow a larger mature pseudobulb and produce flowerings more than once on the growth. From the time the inflorescence emerges from the base of the pseudobulb until the flowers open is about two months. After the first inflorescence fades a new one usually emerges from a different location at the base of the pseudobulb, if the plant has been fed enough.

The start-to-finish cycle of a *Catasetum* is about 10 months. The beautiful large foliage emerging and the inflorescence growth and fragrant blossoming is a wonderful feat of nature to watch. □

Helen Hersh last wrote about growing *phragmipediums* indoors in the June 1996 *Orchids*. Helen lectures on growing orchids on the windowsill. • 34 Plaza Street, Brooklyn, New York 11238.

