St. Augustine Orchid Society NEWSLETTER
September 2013
Volume 8 Issue #9

Club News

September 3 Monthly SAOS Meeting

by Lola Stark, seacuter@bellsouth.net

Welcome and Thanks. President Jeannette Pacetti opened the meeting at 7:20 pm with 62 people present, and Debbie Sandy announced that we had 5 guests, one new member, Janis Croft, and one returning member Marianne Moody. Jeannette thanked Jeanette Smith, Bonnie Myers and Barbara Conrad for our food table and urged that if you enjoy the refreshments, please help pay for it by dropping a dollar in the jar on the table. Linda Stewart reminded the September birthday folks to be sure and get their birthday raffle tickets from Christie Peppard. She asked that if anyone needs a sunshine card to please get in touch with her. Please be sure and vote for the best orchid on the show table; we've got a lot of outstanding orchids! Dick Roth will count the ballots and announce the winner after the break.

Club Business. Penny Halyburton showed us the Vanda Book from our library and announced that Mary Ann Bell has donated the Time-Life Book on Orchids, thanks Mary Ann! It will be placed in the library and be available for those who would like to borrow it. Members can borrow any book we have for a month by going on our website, looking through the books available and e-mailing Penny to have your choice brought to the next meeting. We have a wonderful library - please use it!

Gainesville Show. Jeannette announced that we've been invited to go to the Gainesville Orchid Society yearly show to set up a display and asked for hands from those willing to help take, set up, and go back to break down. The show will be held October 19 and 20 with set up on the 18th. If you're interested please let either Harry McElroy, Jeannette or Sue Bottom know immediately. Without help, we will not be going.

Mac shares his passion for orchids with SAOS

Keiki Club. The Keiki Club is going to take advantage of EFG Orchids in Deland having their Open House the 18 to 20 of October. The group going on Friday will meet at the Flying J, under the big sign to leave at 10 AM. Saturday, another group will be going with the same meeting time and place.

Ace Repotting - The next repotting clinic will be at Hagan Ace on US 1 on September 7 from 9 am to 1 pm. This is a great chance for those with problems to talk to the experts of the SAOS to find out how to repot and also find out if your orchids have a problem.

Potting Supplies. Our supplies are available at all meetings and include both potting mixes and fertilizers. This month we've added Test Strips to be used to test the pH and alkalinity of your water, both that coming from your water source for your orchids and the water coming through the potting mix of your orchids. The strips come with a great paper on how to use them and also what the results means.

Orchid Events. The only show this month in Florida is that of the Ridge Orchid Society in Lakeland on September 15 and 16. Fred Keefer announced that his Fall Open House will be on Sunday, November 3. The admission price is Christmas Toys for the children in Hastings, which he's been helping with over the years! There will be lots of food and orchids to enjoy!

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Club News

Upcoming Orchid Events

September

7 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
10 JOS Meeting, 7 pm, Topic TBA
Brian Monk. BluLlama Orchids
15-16 Ridge Orchid Society Show
Lake Mirror Center, Lakeland

October

1 SAOS Meeting, 7 pm
Dr. Courtney Hackney
Hackneau's Art and Orchids
Orchid Growing Tips
5 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
8 JOS Meeting, 7 pm, Topic TBA
Louis Del Favero. Del Favero Orchids
11-13 South Florida Orchid Society Show
Bank United Center, Coral Gables
12-13 Fort Pierce Orchid Society Show
Fort Pierce Shrine Club
18-20 Orchtoberfest at EFG Orchids
4265 Marsh Road, Deland
19-20 Gainesville Orchid Society Show
Kanapaha Botanical Gardens
25-27 Delray Beach Orchid Society Show
Old School Square
26-27 Brevard County Orchid Society Show
Melbourne Auditorium

November

2 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic - tentative
3 Open House at Orchids by Del Rei
Orchids, Food and Libations, 1 to 4 pm
4270 Cedar Ford Blvd, Hastings
5 SAOS Meeting, 7 pm
Rafael Romero, Plantio La Orquidea
Schomburgkia Species and Hybrids
12 JOS Meeting, 7 pm, Topic TBA
Segundo Cuesta, Quest Orchids

December

3 SAOS Christmas Auction, 6 pm
Different Location, Earlier Start
Moultrie Trails Clubhouse
121 Crooked Tree Trail, St. Aug 32086
8 JOS Christmas Auction, 5:30 pm
Orange Park Country Club
2525 Country Club Blvd, Orange Park

St. Augustine Orchid Society Organization

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Program. Our speaker for the evening was Mac Rivenbark of Mac's Orchids in Fort Lauderdale. His program was on "Vandas and Vandaceous Orchids". Mac and his wife, Helen, have been growing orchids for 14 years and they brought lots for us to enjoy! He's become a specialist on the Vandaceous orchids of the Philippines, explaining that some of those are endemic which means they only grow in a specific place in the wild. For those not acquainted with the way plants are named, in order to have the names the same all over the world, the scientific names are managed by the Royal Horticultural Society based in Great Britain. For a given species, the first name is the genus and it is capitalized, the second name is the species and it is not capitalized (and the two names are both italicized), thus *Aerides abrata* is the name of a particular orchid species that is known by the same name throughout the world.

Aerides are very easy to grow. There is one species of *Aerides* called *Aer. odorata* var. *calayana* that only grows where it gets the morning sun on the eastern side of a mountain. Thus it is often helpful to know where an orchid grows so you can duplicate the conditions and get the plants and flowers you are hoping for when you buy a particular orchid. Other genera that are Vandaceous (in the Vanda family) that Mac spoke about include *Arachnis* that can easily be crossed with the Vandas producing the intergeneric hybrid called *Mokara* that are very easy to grow and are exported all over the world because they produce lots of blooms. The genus *Amesiella is* endemic to the Philippines, epiphytic (they grow on trees, but don't harm them) and the flowers are quite small (1 to 2 inches), but the plant can grow quite huge. The *Ascocentrum* genus is widely interbred with vandas producing the intergeneric hybrid called *Ascocenda. Dipodium palidosum* has an interesting life cycle; the plant starts out as a terrestrial plant, grows up a nearby tree to the top as an epiphyte, then falls over to the ground and becomes terrestrial again. Fascinating! Mac spoke about *Phalaenopsis* being crossed with *Doritis* orchids to become the intergeneric hybrid *Doritaenopsis*. He reiterated that Phals like to grow out from a tree, not up from a pot, and suggested we plant them in baskets or orient them so the water freely drains from the crown of the plant. Some tolerate full sun in the early morning or late afternoon, like *Phal. schilleriana*. *Pteroceras longicalcarum* makes a waterfall of flowers that are very small, but the plant is very floriferous. *Rhynchostylis* is another genus that is easy to grow and he suggested *Rhy. retusa* which has pendulous blooms of flowers with many great colors to choose from. *Robiquetia merillii* grows in little light and has pendulous blooms. The inflorescence will have up to 100 blooms. Mac thought *Sarcophyton pachyphylus* was very hard to grow until he found out that they grow near beaches, so he added epsom salts to his fertilizer and got great blooms.

Having gone through the genera of the vandaceous family, he then spoke about the different *Vanda* species, including *luzonica* (named for the island of Luzon in the Philippines), *roblingiana* (which means cold and happy), and *coerulea* (blue, which is happy down to 45F). *V. sanderiana* is widely used in hybridizing because of its great shape and two toned coloration. *V. lamellata* is a quality plant that can be grown by just ignoring it. It blooms five times a year. *V. javierae* is the rarest of the *Vandas* because it blooms only when it is above water (over a river perhaps) because it requires high humidity. *V. merrillii* var. *rotorii* (again named for the person who found it,) has long stems and a variety of colors including some that are nearly a perfect red.

Mac grows most of these Vandaceous plants. After going through the genera, he spoke about the their culture. Water them thoroughly. Using some soap in the water will also help control certain pests. Be consistent with fertilizer. Mac uses Southern Ag fertilizer which is 13-5-13 and fertilizes nearly every week or every other week. In September he gives phals some Epsom salts which provides magnesium. He suggested using a Cal Mag fertilizer to provide the plants with additional calcium and magnesium. He flushes his plant once a month by thoroughly soaking them, waiting as half hour and then watering them again. This washes out the salts accumulated in the pots. Find the perfect spot for your orchids by moving them around every three or four weeks if they're not happy where they are. If you need to spray with a pesticide, be sure to spray both sides of a plant, not just the side facing you. For a miticide he uses Organicide available at Home Depot and uses a copper fungicide for his Phals.

His wife, Helen, would like Mac to grow the large Cattleyas and he says he's still trying, hampered because of the hot Fort Lauderdale nights!

Meeting Conclusion. Following a break, Dick Roth announced that Sue Bottom's *Epidendrum ciliare* was the winner on the show table. We then had our plant raffle with Fred Keefer providing the entertainment and Christie Peppard, Dianne Batchelder and Coral Godwin protecting the plants!

Thanks to Watson Realty and Jeanette Smith for the use of their meeting space at 3505 US 1 South

August 18 Keiki Club Field Trip to Hick's Orchid Supplies

by Mary Colee, keiki@staugorchidsociety.org

Two carloads carpooled down to Hick's Orchid Supplies in Orlando and were welcomed by the entire Hicks Family. Not only were we able to get some much needed and not readily available orchid supplies, but we learned a lot too. We got tours of the growing areas, the production area, different uses of various potting media, pots and mounts as well as saw how to pollinate an orchid. The Hicks family were gracious hosts and we hope to be able to visit again.

pH and Alkalinity Test Strips

Interested in an easy way to test your water? We have test strip kits available for purchase for $2 that will give you valuable information about your water quality, your potting mix and a good fertilizer to use. Instructions on how to test and interpret results are included.

Keiki Club on October 18 and 19 Field Trip to Orchtoberfest at EFG in Deland

We're planning two field trips to EFG in Deland for the Orchtoberfest on both Friday October 18 and Saturday October 19. EFG Orchids is a commercial orchid grower, owned by George Hausermann Jr. originally of Chicago and fourth generation orchid grower. Orchids and tropical plants will be offered for sale by EFG and the half dozen or so vendors participating in the event. The Hausermann clan will be busy preparing all the German food they will have for sale, usually rouladen, wienerschnitzel, brats, spaetzle, German potato salad and more, including German beer! For those that want to carpool together, we'll meet by the tall sign at the Flying J truckstop at exit 305 off US 95 by 9:45 am so we can get to EFG by 11 am. EFG is located at 4265 Marsh Rd, Deland, FL 32724. Contact Keiki Club Coordinator Mary Colee at keiki@staugorchidsociety.org to let her know if you're going or if you have questions.

Who Knows What Evil Lurks?

Once you get home and before you introduce a new plant to the growing area, apply a protective drench to kill any lurking pests. The Bayer imidacloprid product is a great systemic pesticide that can be introduced to the plant via the roots and absorbed throughout the plant. It will kill scale, mealybugs, etc. from the inside out without your having to spray it. If you are lucky enough to find the imidacloprid product that is 1.47% strength, mix up 1 ounce of it in a gallon of water and thoroughly drench the growing media (at 0.74% strength, add 2 oz/gal; at 0.47% strength, add 3 oz/gal, etc.).

Inspiration

Growing Tips for September

Dr. Courtney Hackney,
hackneau@comcast.net
Dept. Biology, Univ. North Florida

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 where it is much cooler.

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 cease 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 with 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 ideal 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 R/O 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.

Your Orchids in September

based on Robert Scully, Ned Nash & James Rose checklists, courtesy of the AOS

General Growing Tips. The welcome transition to fall is upon us. Once the temperature and humidity mediate, you'll notice many of your plants putting on a second growth spurt, reward them by watering a little more frequently with dilute fertilizer. You can expect the emergence of buds on many orchids from the cattleyas, evergreen dendrobiums and vandas to cycnoches, catasetums and miltonias. Select the ideal spot for the plant and place pendulous bloomers atop an inverted pot. Support the inflorescence as it emerges and open the sheath to prevent the accumulation of moisture around the developing buds.

Cattleyas. Despite the shortening days and lowering angle of the sun, you will see a flush of new root tips. Keep water and fertilizer in balance with heat and light. Check plants for potting needs for the last time. Any in dire need should be repotted as there is just enough of the growing season left for plants to establish before the days get short and cold. The spectacular, multiflowered *C. bowringiana* should be in sheath. Observe the puffy sheath structures often, they may need to be opened at the tip to encourage evaporation of condensation that forms around the buds. *C. labiata* and its hybrids will begin to flower this month along with the spectacular and fragrant forms of the species *C. percivaliana.*

Cymbidiums. Through diligent breeding programs, the cymbidium season gets stretched longer and longer. *Cym. ensifolium* hybrids will bloom first with the winter blooming standard sized hybrids soon to follow. Stake inflorescences and move plants to a shadier location to help the flowers develop.

Dendrobiums. This is the season for the phalaenopsis and canaliculatum type dendrobiums. The long, arching sprays of flat dark red-purple to white or pink saucer-like blossoms provide weeks of satisfaction. Fertilize with low nitrogen fertilizer for the best flowers. *Nobile*-type hybrids should continue to be maintained on a nitrogen free fertilizer program. You can start to gradually reduce watering frequency on the winter dormant dendrobiums.

Oncidiums. Of the three popular pansy orchids *Miltonia xbluntii*, *roezlii* and *spectabilis*, the latter is probably the most showy. The reddish purple flowers of *Milt. spectabilis var. moreliana* usually appear singly and last for weeks.

Paphiopedlums. Standard green-leaved paphiopedilums begin to show their bloom sheaths this month. Late season heat waves can blast these early sheaths, so provide proper cooling and air circulation.

Phalaenopsis. The bulk of this season's growth is being ripened this month. Begin to watch watering more carefully and reduce feeding proportionately with reduced watering needs. *Phal. hieroglyphica* flowers reliably in the autumn. Its fragrant pale yellow flowers are distinctively marked with well defined brown lines on the sepals and petals. *Phal. equestris* and *Phal. lindenii* may also show their best now, the former may be everblooming through spring and the later will arouse curiosity with its attractively striped lip.

Vandas. This is the principal blooming season for *V. sanderiana* that is the foundation for large flowered modern vandaceous hybrids. Position plants so the inflorescences will grow out of the leaves toward the light. Help uncooperative types by placing a thin bamboo stick between the emerging inflorescence and the flattened form of the leaves, thereby forcing the raceme outward.

Other Genera: Catasetum Relatives. Autumn is typically the end of the growing season for the catasetum relatives. Plants may produce flowers from pseudobulbs with leaves, or in some instances, from bulbs that have already lost their leaves. Watch the undersides of the leaves to control spider mites which seem to find these delicacies just as the foliage reaches its prime or plants are about to bloom. Support the basal racemes of catasetums as they emerge and consider placing the pots on inverted pots to provide room for them to hang freely.

Orchid Questions & Answers

by Sue Bottom, sbottom15@bellsouth.net

Q1. These cymbidiums both have the species devonianum as one of the parents, why are they so different?

A1. Our cymbidium expert Harry McElroy handles all cymbidium questions, he answers: The flower on the left is Cym. Devon Odyssey (devonianum crossed with erythrostylum) and the flower on the right is Cym. Vogelsang (devonianum crossed with insigne). The other parent of the plant on the left, the species erythrostylum, intensifies the devonianum lip as you can see in the flower while the insigne parent in the plant to the right breaks the color into spots. Unfortunately the erythrostylum cross would not be heat tolerant though the insigne cross would probably bloom in northeast Florida.

Q2. Sometimes when repotting I see a white growth on the pot or potting media, like this piece of large charcoal that was at the bottom of a clay pot for drainage. Stumped, I brought it to our go-to guy Dr. Courtney Hackney for answers.

A2. Through microscopic examination Courtney determined that the white growths are lichens. Lichens are a peculiar life form that is not a single organism, but rather a combination of two organisms, a fungus and an algae, which live together symbiotically. Usually lichens require light although fungi can extract energy from organic material and sustain both, but this is fairly unusual. Weird!

Q3. Could you tell me if this is a bacterial infection of this phal?

A3. That looks like bacterial soft rot, a very fast moving bacterial infection caused by *Erwinia* that will kill the plant if it gets to the crown. Get a single edged razor and cut off all the soft, water soaked leaves an inch below the obvious infection. On your plant, that means cut the top leaves off at the base. Then drench what is left of the plant with hydrogen peroxide. Don't wait a moment to take action!

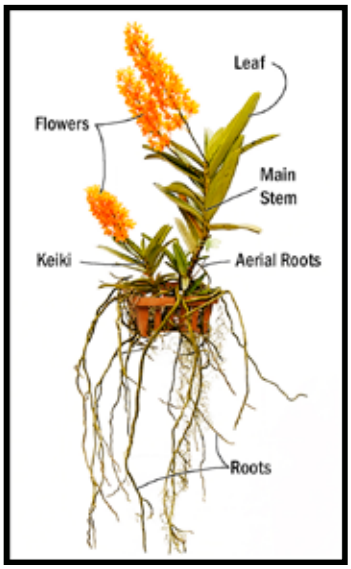
Q4. My Ctsm. barbatum has 3 keikis on one of the pseudobulbs. They pop out and send their roots on a long journey down to the sphagnum. Should I cut the pseudobulb and lay it on sphagnum or just leave it alone?

A4. Trust your instincts. Cut the pseudobulb and lay it partially immersed in sphagnum moss in another pot. Leave the rest of the plant alone in the pot except perhaps the yellowing pseudobulb should be removed too.

Orchid Plant Parts and Why They Matter

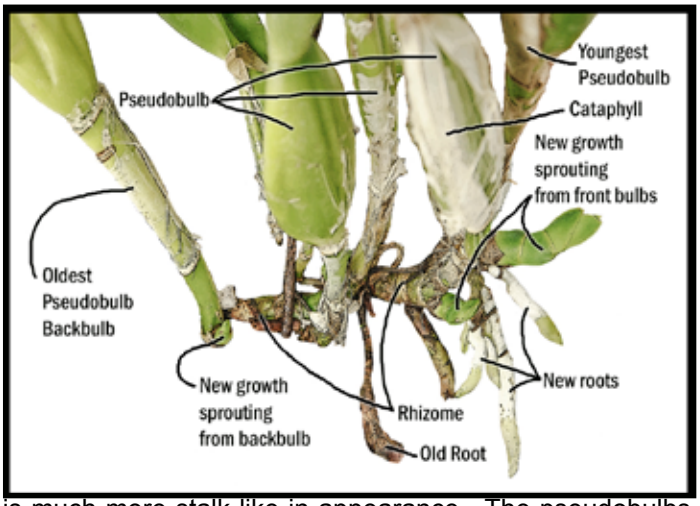
Sue Bottom, sbottom15@bellsouth.net

It doesn't really matter if you can remember all the names of orchid plant parts, but it is to your benefit to understand how these parts function. We'll talk about all the basic orchid parts to help focus your attention on things to look for when you are looking at your plants.

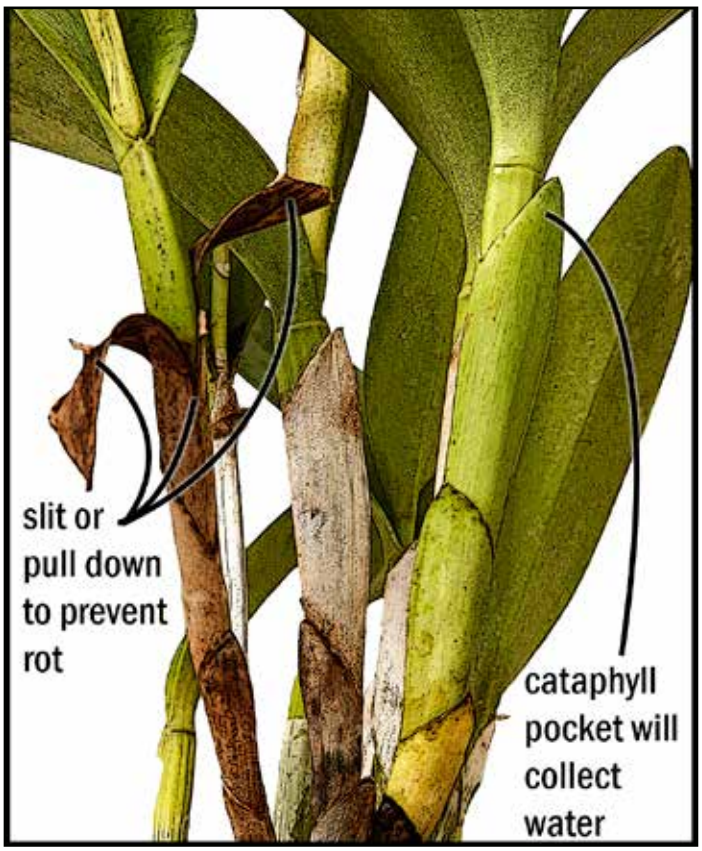


Orchid growth habits fall into two basic groups, the monopodial orchids that grow vertically and the sympodial orchids that grow laterally. **Monopodial** orchids like phalaenopsis and vandas grow upward from a single stem. Orchids with this growth habit grow upward from season to season from a single vegetative shoot. Leaves, roots and flower spikes sprout from nodes along the stem. Normally the plant will lose its leaves from the bottom up and continue to grow new leaves from the terminal or apical tip while making new roots along the stem. Monopodial orchids do not have fleshy pseudobulbs for storage of food and water like the sympodial orchids, so they require more frequent watering and feeding. Vandas often produce a **keiki** (KAY-kee) a Hawaiian term for baby that is used to describe a plantlet that sprouts from a mature plant. Keikis are a great way to share your plants with friends.

Sympodial orchids like cattleyas, dendrobiums and oncidiums branch outward horizontally rather than grow vertically like monopodial orchids. Sympodial orchids grow laterally and produce a new shoot along a rhizome that develops into a stem with roots and leaves and eventually produces flowers. This growth process is repeated in a continuous cycle. Sympodial orchids have pseudobulbs that grow along a **rhizome** (RYE-zohm), a root-bearing stem the apex of which progressively sends up leafy shoots. When repotting, the rhizome should be at or just above the potting media. There is a greater potential for rot if the rhizome is buried in the potting mix. A **pseudobulb** (SOO-doh-bulb) is the thickened portion of a stem used when discussing cattleyas, oncidiums and many other sympodial orchids. A cane, used when discussing dendrobiums, is similar to a pseudobulb but



is much more stalk-like in appearance. The pseudobulbs and canes are like the humps on camels, storing food and water to sustain the plant during droughty conditions. They perform a vital function to the plant even when leafless. **Front bulbs** are the pseudobulbs on the younger part or the plant. The front bulbs are the actively growing part of your plant and it is from these new growths that new flowers will emerge. The **backbulbs** are the pseudobulbs on the older part of the plant. The backbulbs are often



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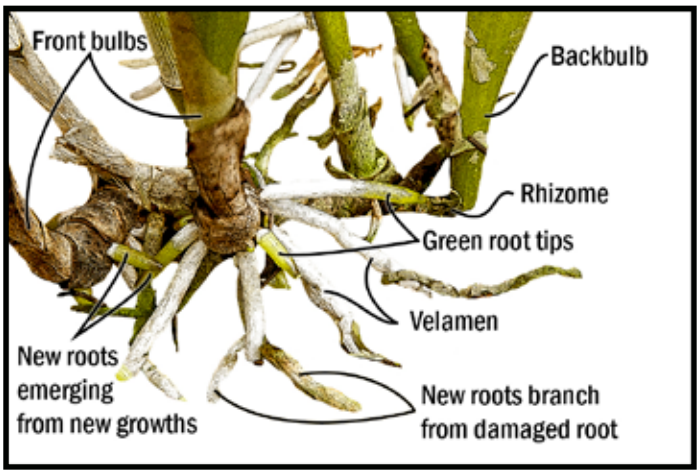
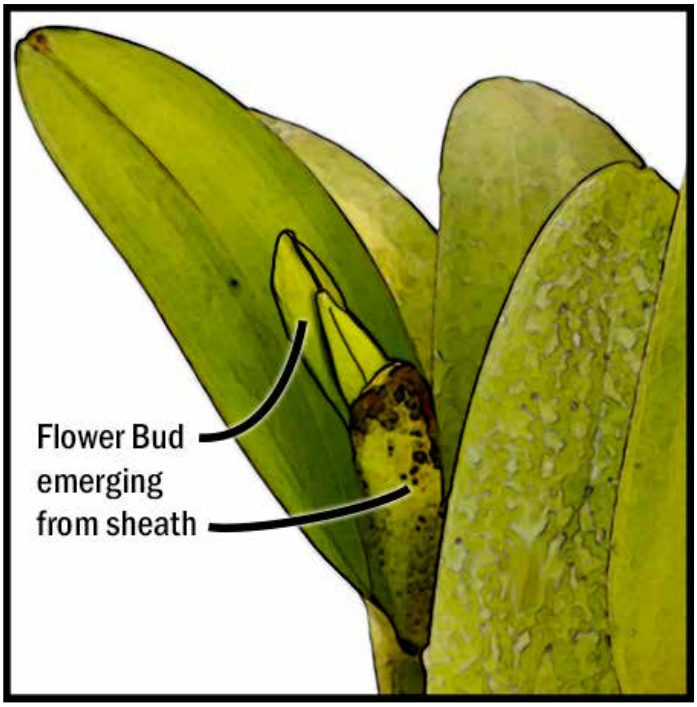
without leaves but as long as they are still green, they continue to provide nourishment to the plant. Backbulbs can be used to propagate new plants from the original plant when new growths are encouraged to sprout from blind or dormant **eyes**, the incipient buds of vegetative growth. There are at least two eyes on each pseudobulb so that if one eye or lead becomes damaged, a new pseudobulb can emerge from the other eye. The **cataphyll** (KAT-a-fill) is an undeveloped leaf that forms around the base of the pseudobulb and matures to form a papery sheath along the length of the pseudobulb. When the pseudobulb is growing, the cataphyll provides some structural support and protects the tender new growth from mechanical and insect damage. Cataphylls can sometimes form pockets where water can accumulate and bacterial action can cause the bulb to rot so the pockets should be slit or the cataphyll pulled down so water will drain freely. Once the growth is mature and hardened, the dried cataphylls can be removed before they become hiding places for scale and other sucking insects.

Orchid Leaves vary from the thin leaved oncidiums and catasetums, the fleshy phalaenopsis to the hard dendrobium and cattleya leaves that have waxy coverings that help minimize water loss. Cattleyas with a single leaf are called **unifoliates** and cattleyas with two (and occasionally three) leaves are called **bifoliates**. Unlike the unifoliates, bifoliate cattleyas should be repotted only when they are growing new roots. **Stomata** (sto-MAH-tah) are pores on the lower surface of the leaf epidermis through which the plant breathes. The stomata are mostly closed during the day to prevent water loss by transpiration and open at night when temperatures are lower and humidity is higher. This means that orchids are not good candidates for foliar feeding. If specialty foliar sprays such as those containing minor or trace elements designed to be absorbed through the leaves are to be used, they are best applied to the undersides of the leaves in the predawn hours.



Orchid roots consist of an inside wiry filament and thick sponge like covering called **velamen** that helps prevent water loss and aids in absorption of water and mineral nutrients. Actively growing orchid roots have green (and sometimes reddish) tips, the longer the green tips the faster the roots are growing. The white velamen layer follows a few days behind the root's growth tip. The emergence of fresh roots tells you your plant is going into the growth mode, if it needs to be repotted, the time is now (or maybe



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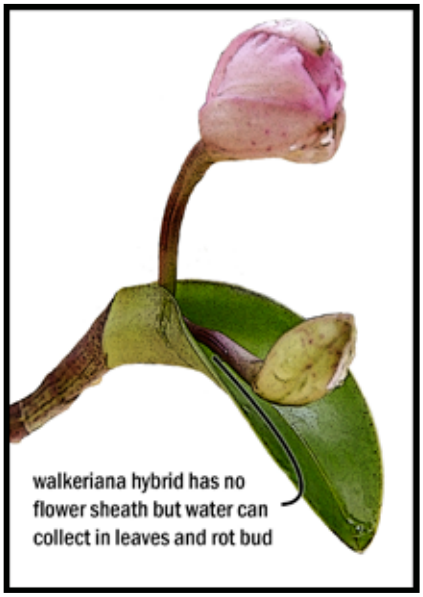
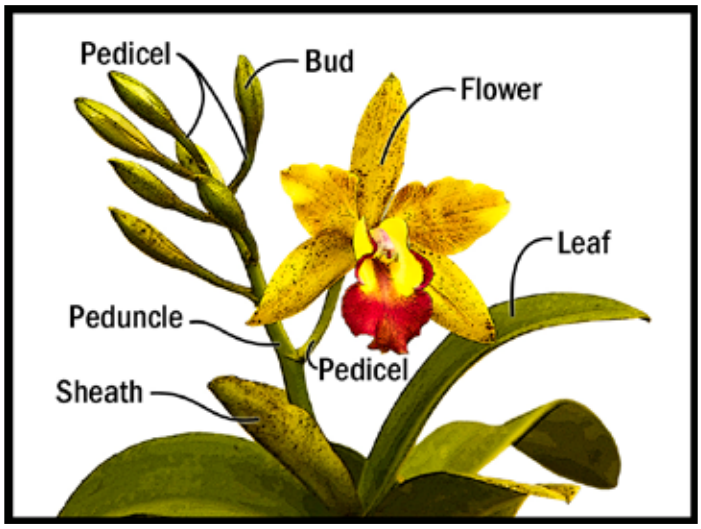
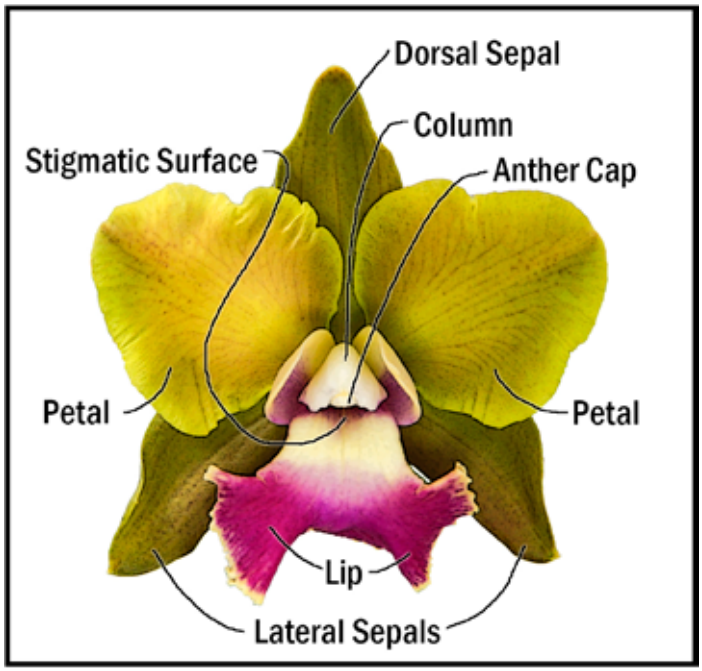
you should have done it last week when the new growth was swelling up before the green tips emerged).

On cattleyas, flower buds emerge from a **sheath**, a modified leaf that encloses an emerging inflorescence. Some cattleyas bloom soon after the growth matures and the sheath is formed (said to bloom on green sheaths) and others rest for several months before blooming (said to bloom on dried sheaths). Sheaths should be watched carefully. If the color changes to yellow or brown, the sheath should be carefully opened and pulled down so water can drain freely. Otherwise condensation inside the sheath from day-night temperature changes can cause the flower buds to rot in the sheath. Some cattleyas like those with walkeriana in the background don't bloom from sheaths. If you allow water to accumulate in the cataphyll extending above the leaf base, it can rot the emerging bud.





The **inflorescence** (in-floor-ESS-ents) is the flowering part of the plant. Typical parts of the inflorescence include the peduncle, pedicel and flower itself. On a cattleya, the inflorescence consists of a **peduncle** (pe-DUNK-ul), the stalk of an inflorescence that arises from the bulb, and the **pedicel** (PED-i-sel), the stalk of an individual flower that branches from the peduncle. Some orchids like a *Rl. digbyana* have a long and twisted peduncle so the flower is normally not well displayed unless it has been staked to provide structural support. Phalaenopsis bloom from a flower **spike**, a type of inflorescence with stalkless or short-stalked flowers borne on an upright flower stem that bears the pedicels and flowers. Phalaenopsis should be staked during development of the flower spike to make sure the flowers are presented to their best advantage.



Orchid flowers have three outer and three inner flower parts. The outermost flower parts are the three **sepals**, the dorsal sepal at the top of the flower and the two lateral sepals at the bottom of the flower. The innermost flower parts are the petals, consisting of the two petals on either side of the flower and the **lip** or **labellum** usually at the base of the flower. The lip is a modified petal and often the most striking part of the flower. It is very different from the other two petals and plays an important role in pollination, often serving as a landing platform for insects. The **column** is a flashy structure that is in the middle of the flower and consists of fused reproductive parts, the male **anther** that bears the **pollinia** or pollen pellets and the female receptive organ, the **stigma**, a shiny depression filled with a sticky fluid. You don't need to know much more about this X-rated material unless you feel compelled to carry a toothpick around with you while you are admiring your orchid flowers. At that point, you'll have to give yourself over to a higher power as your orchid addiction has escalated!

Orchid Adventures at Kew Gardens

Stephen Edwards, Foreign Correspondent

Our penpal Stephen Edwards of Almeria, Spain recently visited Kew Gardens in London and filed this special report: Kew Gardens is known as the Royal Botanical Gardens and they have orchids inside the Prince of Wales Conservatory. As you pass through the entrance a wall of vandas greet you in many different colors, quite a stunning display. This section of orchids contains a number of trees and logs with orchids mounted on them as well as hanging baskets containing orchids of different shapes and sizes. The floor is like a moss carpet with a large collection of slipper orchids, dendrobiums, phalaenopsis and many more varieties. Every crevice and tree branch fork has been used and is covered with orchids. See all Stephen's pictures on Terry's Flickr account.

Show Table

Grower Dick Roth
Den. Fuchs Blue Twist x
Den. compactum

Grower Yvonne & Bob Schimmel
V. Robert's Delight 'Sol Red'

Grower Sue Bottom
Schom. schultzei x C. leopoldii

Grower Jeannette Pacetti
Pot. Burana Beauty

Grower Dick Roth
Blc. Shinfong Gold Gem 'Golden Jewel'

Grower Linda Stewart
Phal. violacea var. Malaysia

Grower Sue Bottom
Bc. Donna Kimura x Lc. Mem. Robert Strait

SHOW TABLE

Grower Lola Stark
Miltonia moreliana

Grower Sue Bottom
Epi. ciliare

Grower Linda Stewart
Neost. Lou Sneary 'Colorful Blue'

Grower Harry & Celia McElroy
Ascda. John De Biase 'Angela' AM/AOS

Grower Fred Keefer
Cym. Cherry Cola x Cym. dayanum

Grower Dick Roth
Neost. Lou Sneary