



The Atlanta Orchid Society Bulletin



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JANUARY EVENTS

*** AtOS Now Meets in Day Hall ***

The AtOS will meet in ABG's Day Hall starting January 2004. Since Day Hall is already booked for September 13, the society will meet in the basement classroom that month and possibly October.

The Meeting:

8:00 PM Monday, January 12, 2004

Ms. Nina Rach, Houston, Texas

Cultivation of Stanhopea

Nina Rach will talk about how to grow Stanhopea and other members of the Gongoreae family. Ms. Rach is an AOS accredited judge and started her judging career at the Atlanta Center before moving to Houston. Nina has a wonderful website if you would like to check it out before the meeting: <http://www.autrevie.com/AutreVie.html>.

DUES ARE DUE (YES IT'S THAT TIME AGAIN!!!!!!)

Dues (\$30 single, \$45 household) for the calendar year 2004 are due. Your membership dues continue to bring you a monthly newsletter and underwrite the cost of speakers and programs presented throughout the year. Prompt payment helps us determine our budget for the year. Dues can be paid directly to Scott Smith at the December or January meeting or paid by check (payable to the Atlanta Orchid Society) mailed to Scott at 481 W. Ontario Avenue, Atlanta, Georgia 30310.

GREENGROWERS MEETING

WHEN: January 17

TIME: Noon

PLACE: The home of Dianne Morgan and Danny Lentz. See page 12 for details.

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THE ATLANTA ORCHID SOCIETY

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Refreshments

COLLECTOR'S ITEM

Gongora horichiana Fowlie

GON-goe-ra hor-ICK-ee-ana

Tribe: Cymbidieae

Subtribe: Stanhopeinae

Etymology: Dedicated to Don Antonio Caballero y Gongora, viceroy of New Granada (now Colombia), during the eighteenth century. Species epithet honors Clarence Horich, German orchid collector in Costa Rica during the latter half of the twentieth century.

The genus *Gongora* as currently circumscribed (the genus *Acropera* is considered to be a section of this larger genus) contains about 65 species distributed from Mexico to Bolivia. The plants grow as epiphytes in ant nests in wet forest from sea level to 1,000 meters. The species in this genus should be grown under intermediate to warm conditions. To accommodate their strictly pendulous inflorescences they should be grown in baskets of moisture retentive media. They can also be grown mounted if care is taken to afford them sufficient water. If grown in pots, the plants must be mounded up such that the rhizome is well above the rim of the pot. Otherwise, the inflorescences will remain buried in the potting mix. The species and hybrids in this genus are heavy feeders and should be given copious amounts of fertilizer and should not be allowed to dry excessively.

All species of *Gongora* are pollinated by male Euglossine bees (fragrance collectors). The flowers are powerfully fragrant with often an almost medicinal odor. The taxonomy of individual species is determined by structure features of the labellum.

Gongora horichiana is known only from Panama and Costa Rica. It is pollinated by male *Euglossa dodsonii*. It is closely allied to *Gongora armeniaca* and may possibly be synonymous with *Gongora armeniaca* var. *bicornuta*. The species was first collected by Fowlie, Spencer, and Horich in the area around Carrablanca in Costa Rica. Pseudobulbs are conical to egg-shaped 4-4.5cm high and 3-4cm in diameter. The species is usually bifoliate although three leaves are not uncommon. Leaves are lanceolate to elliptic up to across. Inflorescences lateral becoming hanging, thin and wiry up to 30cm long carrying up to 20 flowers.



Photo courtesy of Andy's Orchids

EVENTS OUT AND ABOUT

JANUARY 2004

Sat. 1/10 American Orchid Society monthly judging, Atlanta Center, 2PM, Atlanta Botanical Garden workshop. If entering plants, please try to arrive prior to 1:30PM to allow sufficient time for research and paperwork. Note: A 30 minute training session will begin at 1:30PM.

Fri. 1/16 – Sun. 1/18 Fort Lauderdale Orchid Society Show, War Memorial Auditorium, Fort Lauderdale, FL. Contact: Bob Henley at 954-772-4836 or bobdot@bellsouth.net

Sat. 1/17 American Orchid Society Monthly Judging, Carolinas Center, 2PM, Kilgore Hall of the North Carolina State University, Raleigh, North Carolina.

Mon. 1/19. Pre-entry deadline for the Southeastern Flower Show. See write up in this newsletter for more details.

Fri. 1/23 – Sun. 1/25 Manatee River Orchid Society Show, Palmetto, Florida. Contact: Dave Junka, 9312 71st. Ave. E., Palmetto, FL 34221.

Sat. 1/31 – Sun 2/1 Venice Area Orchid Society Show. Contact Barbara Wagner at 941-923-7706 or barbjwag@cs.com

FEBRUARY 2004

Sat. 2/7 – Sun 2/8 Gulf Coast Orchid Society Show, Gautier, MS. Contact: Glen Ladnier (228) 832-0999

Mon. 2/9 Atlanta Orchid Society monthly meeting, 8PM, Atlanta Botanical Garden basement workshop. Our speaker will be a representative of Red's Rhodies in Oregon discussing growing and flowering Pleiones.

Sat. 2/14 American Orchid Society monthly judging, Atlanta Center, 2PM, Atlanta Botanical Garden workshop.

Mon. 2/16. Plant registration for the Southeastern Flower Show, 6:30 PM to 8:30 PM at the Georgia World Congress Center, Hall C. See write up in this newsletter for more details.

MINUTES OF THE DECEMBER MEETING

The meeting was called to order by President Linda Miller.

David Mellard gave an update on the prospect of moving the monthly meetings to Day Hall. Most were in favor of this move. He will present new information as it is received.

New officers were sworn in. [See Page 2 for list of new officers.]

The meeting was then handed over to David as the highest-ranking officer in attendance.

Fred Missbach spoke on behalf of the society thanking Ron McHatton and Randy Young for all their contributions. With their move to Florida they will be missed, but Fred made a motion that they be extended a permanent society membership which was unanimously approved.

Refreshments were served. This being the holiday party there was a vast assortment of delectable treats. Thank you to everyone for all the wonderful food.

The gift exchange was held and fun was had by all.

The Results of the Show Table Judging was announced by Randy Young. Judges were Doug Hartong, David Mellard, Teresa Pociask and Julie Walkosky.

There was no speaker this month due to the holiday party.

There being no further business the meeting was adjourned.

Respectfully submitted,
Teresa Pociask, secretary

DECEMBER 2003 EXHIBITION TABLE AWARDS

CLASS 1: CATTLEYA ALLIANCE	Blue	<i>Blc. Keowee 'Wings of Fire', HCC/AOS</i>	Brinton/Park
	Red	<i>Pot. Little Toshie 'H&R', AM/AOS</i>	Grzesik
	White	<i>Schomburgkia superbiens</i>	Rinn
CLASS 2: CYMBIDIUM ALLIANCE	No entries in this class		
CLASS 3: DENDROBIUM ALLIANCE	Blue	<i>D. (Norma Jackson x Kelli Nicole 'Camelot')</i>	Hansen
	Red	<i>Dendrobium Spike Bibus</i>	Brinton/Park
CLASS 4: EPIDENDRUM ALLIANCE	Blue	<i>Prosthechea garciana</i>	Hartong
CLASS 5: ONCIDIUM ALLIANCE	Blue	<i>Rossioglossum insleayi</i>	Rinn
	Blue	<i>Colmanara Wildcat 'Bobcat', AM/AOS</i>	Rinn
	Red	<i>Oncidium hyphaematicum</i>	Dampog
	Red	<i>Oncidium Twinkle</i>	Hallberg
	White	<i>Oncidium ornithorhynchum</i>	Nierenberg
	White	<i>Adgm. Summit 'Frenchtown', AM/AOS</i>	
CLASS 6: CYPRIPEDIUM ALLIANCE	Blue	<i>Paphiopedilum villosum</i>	Mellard/Marino
	Red	<i>Paphiopedilum Jack Tonkin</i>	Harrow
	White	<i>Phragmipedium Don Wimber</i>	Brinton/Park
CLASS 7: PHALAENOPSIS ALLIANCE	Blue	<i>Phalaenopsis Siam Treasure</i>	Brinton/Park
CLASS 8: VANDACEOUS ALLIANCE	Blue	<i>Neostylis Lou Sneary 'Blue Bird'</i>	Walkosky
	Red	<i>Ascocenda Malvarosa Gem</i>	Dott
CLASS 9: MISCELLANEOUS ALLIANCE	Blue	<i>Bulbophyllum lasiochilum 'Black'</i>	Nierenberg
	Red	<i>Zygopetalum Arthur Elle</i>	Grzesik
	White	<i>Bulbophyllum medusae</i>	Hartong

Notes on the Exhibition Table.....by Ron McHatton

Class 1 Red Schomburgkia superbiens This species was originally described by Lindley as *Laelia superbiens* and finally transferred to *Schomburgkia* 77 years later. The plants were originally discovered by George Ure Skinner in 1839 and is known from Guatemala, Honduras and Mexico. The fusiform, two-leaved pseudobulb, long inflorescence with numerous elongated bracts and the numerous undulate keels on the disc of the lip belie its affinity to *Schomburgkia*. This species was introduced into cultivation in 1842 by Hartweg. They flowered for the first time in February of 1844. This species, while requiring bright light, does not require the intense light required by most of the genus. A white form does exist and is in cultivation as *Laelia superbiens* 'Don Hubert Cross'.

Class 4 Blue Prosthechea garcianum This plant was entered as *Encyclia garcianum*. This plant actually belongs to a genus of about 98 species, *Prosthechea*, distributed from South Florida through Mexico to tropical America. Other more familiar species of formerly *Epidendrum/Encyclia* no circumscribed by *Prosthechea* are *P. cochleata*, *P. chacoensis*, *P. calamaria*, *P. brassavolae*, *P. boothiana*, and *P. baculus*. Vegetatively, the two genera are distinguished by the round or egg-shaped pseudobulbs (*Encyclia*) versus an elongated somewhat stalked pseudobulb (*Prosthechea*).

Class 5 Blue Rossioglossum insleayi Please note the correct spelling of this species. This genus has four species distributed from Mexico to Panama. The genus is distinguished from *Odontoglossum* and the others of the alliance by the round, laterally compressed pseudobulbs. There are two or three thick leaves at the apex. All species in the genus are epiphytes in wet cloud forests from 600 to 1,500 meters. The species respond well to intermediate conditions if provisions are made to provide cool nights. Flowering is enhanced by providing a short dry rest period after completion of new growths. *Rossioglossum insleayi* comes from Mexico.

Class 5 Red Oncidium hyphaematicum Please note the correct spelling of this species. I am assuming this is the correct name for the plant exhibited (*Onc. haematochilum* was also a possibility based on the entry tag spelling however this species is now *Trichocentrum haematochilum* and clearly a member of the former "mule-ear" oncidium group. *Oncidium hyphaematicum* belongs to the *Oncidium altissimum* section having characteristically yellow or brown "dancing lady" flowers loosely arranged on long inflorescences. The species are robust and of easy culture given bright light and ample moisture when growing.

Class 5 White Adaglossum Summit 'Frenchtown', AM/AOS This clone has an AOS award and it should be included as part of the name of the plant. This cross is a mating of *Rhynchostele bictoniense* (formerly *Odontoglossum bictoniense*) and *Ada keiliana*. The introduction of *Rhynchostele bictoniense* imparts an erect or nearly erect inflorescence and helps to spread the flowers out along the inflorescence. Many *Ada* crosses have a tendency to carry their flowers tightly spaced and many do not open fully. Mating to *R. bictoniense* helps to overcome those deficiencies of the *Ada* parent.

Class 7 Blue Dtps. Siam Treasure This cross of *Phalaenopsis lowii* and *Doritis pulcherrima* has the potential to be a really wonderful little flower. Good clones should be flat and very well presented on an erect or arching inflorescence. Both parents are small plants and the flowers should be well proportioned to the size of the plant. Depending on how the color inheritances of the two parents interact, the flowers could vary from deep violet to lavender with a very dark contrasting lip. A single clone has received an AOS award and the description of that flower was 12 flowers per inflorescence, about 3.7cm in natural spread. The sepals and petals were described as lavender sharply contrasting with the deep violet lip. The only negative element of the description was that the flowers were slightly reflexed (a trait inherited from *Doritis pulcherrima*)

Class 8 Ascocenda Malvarosa Gem Please note that this plant was entered as an unregistered grex. The spelling of the parents names should be: *Vanda* Mevr L. Velthuis (note NOT Merv) and *Ascocenda* Yip Sum Wah. This plant was donated to the gift exchange and the winner should make note of the registered name. This plant is about 25% terete-leaved (pencil-like) *Vanda* (properly *Papilionanthe* species) and should be given very high light levels. Without strong light, the plants will grow well but not flower up to their potential.

The International Phalaenopsis Alliance has given the Atlanta Orchid Society permission to reprint a series of articles on plant management and nutrition. If you wish to join the IPA, please visit their website at <http://www.phal.org>.

pH Management and Plant Nutrition
Part One of a Five Part Series

Phalaenopsis, The Journal of the International Phalaenopsis Alliance
Spring 2003

To coincide with a report on Rob Griesbach's presentation at the AOS members Meeting in Hilo, Hawaii about how chemistry can be used to impact color in Phals, The Journal in this issue is beginning a five-part culture series on pH management and plant nutrition. The series is being written by Bill Argo, who earned a Ph.D. in Horticulture from Michigan State University in 1996. Argo is in technical sales and services with the Blackmore Company, which is located in Belleville, Michigan, and is a leader in seed-sowing equipment and seed-sowing technology. The information in the series will be general in nature but will have applications for orchid growers, including Phal enthusiasts.

The series at a glance

Articles will continue in successive issues of *The Journal*

Part 1 - pH management and plant nutrition

Part 2 - Water Quality

Part 3 - Fertilizers

Part 4 - Substrates

Part 5 - Pulling it all together

By Bill Argo, Rives Junction, Michigan -- Plants are basically water surrounded by a pretty package. If we place 100 pounds of healthy living plant material into a special oven to remove all the water, we will have only about 10 pounds of dry plant material left. In general, plants are about 90 per cent water and 10 per cent dry matter.

The 10 pounds of dry material that we have left is made up of carbon (C), hydrogen (H), oxygen (O), and a number of inorganic salts. If we take the 10 pounds of dry plant material and remove all the carbon, hydrogen, and oxygen, there will be about one pound of ash left. Thus, plant nutrition is the direct management of about 1 per cent of the plant by weight.

(continued on page 7)

JOIN THE AMERICAN ORCHID SOCIETY

For \$40/year, you reap the following benefits:

- 12 issues of *Orchids*, the Society's monthly full color magazine chock full of insightful articles and tempting ads for plants and supplies.
- 10% off on purchases from the Society's Bookstore and Orchid Emporium.
- Reduced or free admission to participating botanical gardens.

For a limited time, if you join for two years (\$72) you will also get a \$30 gift certificate (good on an order of \$100 or more) at any one of 13 commercial growers who advertise in *Orchids*. **JOIN TODAY.** For information, contact David Mellard.

JOIN THE ORCHID DIGEST CORPORATION

Don't let the name fool you, the Orchid Digest is a non-profit membership-based organization dedicated to orchids. Designed to appeal to the mid-range to advanced grower nothing beats the *Orchid Digest*. For just \$28/year you get 4 issues of full-color, in-depth articles about orchids. The magazine is large format and the fourth issue of the year is always an extra-special issue devoted to a single genus. Join now to begin your subscription to the *Digest* with the **January 2004 issue.**

For membership application forms contact David Mellard.

pH Management and Plant Nutrition continued

The ash that is left is composed of the essential plant nutrients. However, these nutrients are not all taken up at the same rate. The essential plant nutrients can be separated into two groups, macronutrients and micronutrients. Macronutrients are found at relatively high concentrations in the plant tissue and include nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), and sulfur (S). Micronutrients are found at much lower concentrations in the tissue than macronutrients and include iron (Fe), manganese (Mn), zinc (Zn), copper (Cu), boron (B), and molybdenum (Mo).

These 12 essential plant nutrients are commonly provided by various fertilizer sources, which includes not only the water-soluble fertilizer, but also can include the irrigation water and container substrate. There are several other nutrients that are considered as essential for normal growth including sodium (Na), chloride (Cl), Nickel (Ni), and possibly chromium (Cr). However, these later four essential plant nutrients are not required by plants in large amounts. Because they are often found as contaminants in a number of different fertilizer sources, it has not been demonstrated that they have to be specifically applied to plants.

Substrate pH and plant nutrition

The term pH is a direct measurement of the balance between acidic hydrogen ions (H⁺) and basic hydroxide ions (OH⁻), and can be measured with a pH meter. The pH of a solution can range between 0 (very acidic) and 14 (very basic). At a pH of 7.0, the concentration of H⁺ and OH⁻ are equal, and the solution is said to be neutral.

When growing plants in containers, the pH range commonly found in the solution extracted from the substrate is much narrower, from about 4.5 to 8.5. The recommended substrate pH range from growing plants in containers is even more specific, around 5.8 to 6.2, depending on the crop.

The reason that the pH of the solution in the substrate is so important is that it affects nutrient solubility. Using Figure 1 (Editor's note: Figure 1 could not be reproduced for the newsletter, see comment at end of this article) as an example, the solubility of micronutrients

(iron, manganese, zinc, boron) and phosphorus decrease with increasing pH.

Substrate pH can also be an indication of problems. For example, low pH can be an indication that sufficient lime was not added to the substrate, or that a fertilizer is being used that is too acidic for the water quality. High pH can be an indication that too much lime was added to the substrate or that there is too much alkalinity left in the irrigation water.

Substrate pH can also affect the uptake of nutrients by the plant. Iron (Fe) uptake generally decreases with increasing pH because it precipitates out of the soil solution at higher pH levels. Phosphorus (P) also will precipitate out of solution at higher pH levels. Phosphorus uptake will be further reduced above a pH of 7.2 because any phosphorus left in solution is converted into a less available form. Nitrogen (N) uptake can be indirectly affected by medium pH because low pH decreases nitrification (conversion of ammoniacal nitrogen to nitrate nitrogen) or the conversion of urea to ammoniacal nitrogen.

Plants and nutrient uptake

Plant species differ in their ability to take up nutrients at a given pH level. While there are not good examples with orchids, there are good examples with other plants produced in containers.

For example, geraniums and African marigolds are very efficient accumulators of iron (Fe) and manganese (Mn), and are often grown at a relatively high substrate pH (6.0 to 6.8) compared to most container grown crops. The high pH reduces iron and manganese solubility, which limits the uptake, and prevents toxicity problems.

At the other end of the spectrum are plants like rhododendrons, blue berries, and petunias, which are very inefficient at taking iron from the soil solution, and are often grown at a relatively low substrate pH (5.2 to 6.2). The low pH increases iron solubility, which increases the uptake, and prevents deficiency problems.

There is a third group of plants, like poinsettias, chrysanthemums, and impatiens that can be grown over a relatively wide range of pH's (5.5 to 6.3) without showing any deficiency or toxicity problems.

The acceptable range where orchids will grow and perform best will be relatively narrow and will be similar to that of other plant species. If you had to choose a pH range to grow all orchids, then the recommended range would be 5.8 to 6.2, again, just like all other crops. (Editor's note: An exception to this rule might be terrestrial orchids that grow in humus with a limestone base, for example, *Paph armeniacum* and *Paph sanderianum*. These orchids might do better at slightly higher pHs, for example, between pH 6.2 and 6.8).

pH management and plant nutrition

Many growers make the assumption that growing in containers is like growing hydroponically. Unless water is constantly dripping out of the bottom of the container, then it is not like hydroponics. Others consider growing in containers like growing outside in soil. It is not like that either.

Research has shown that the pH and nutritional management of container grown crops, including orchids, is affected by the interaction of a number of different factors, including the water quality, water-soluble fertilizer, and the substrate.

Bill Argo. 10770 Crabapple Drive, Rives Junction. Michigan 29277. 517-569-3559. bargo@blackmoreco.com

For more information on pH management see:

Understanding pH management of container grown crops, by William R. Argo and Paul R. Fisher. Available from Ball Publishing, Tel: (630) 208-9080, web site: www.ballpublishing.com. Meister Publishing, Tel (440) 942-2000, web site: www.meisternet.com

Figure 1. Relative solubility of nutrients at different pH levels in one peat-based media (graph based on research by Dr. John Peterson, Ohio State University.)

Editor's comments: Figure 1 shows relative solubility of various micro- and macronutrients at pH levels ranging from 4.5 to 7.5. In general, phosphorus, iron, manganese, zinc, and boron have relatively greater solubility at pH ranging from 4.5 to 6. Calcium and magnesium have relatively greater solubility at pH ranging from 6 to 7.5. The solubility of nitrogen, potassium, and copper is similar across pH ranging from 4.5 to 7.5.

Editor's note: Several AtOS programs planned for 2004 will cover some of the topics described in this series of articles. In March 2004, Atlantis Hydroponics will give a talk and demonstration about instruments that can be used in growing orchids. Examples include instruments or methods to measure pH, total dissolved solids (an indirect way to measure fertilizer concentration), and light intensity. In May 2004, Jan Szyren with Michigan State University will talk about the MSU fertilizers that the university developed specifically for orchids. AOS wrote an article recently about the MSU fertilizers.

CATTLEYS: THE QUEEN OF THE ORCHID FAMILY

Ron McHatton

Without a doubt, the flower brought to mind by the mention of the word orchid is most often a Cattleya (pronounced KAT-lee-ah). These stately flowers were once commonly available only in white, white with a purple lip, and shades of purple. By introducing other genera such as Brassavola, Laelia and Sophronitis, hybridizers have developed an astounding array of colors, patterns, and fragrances. It is now possible to find plants whose flowers are green with red or purple lips, solid uniform yellow or yellow with red lips often with red flaring on the petals, deep cerise often with vivid yellow veining in the throat of the lip, and even solid red flowers to name a few.

Named in honor of William Cattley, the English horticulturist who first flowered these spectacular plants outside their native habitat., cattleyas are divided into two groups according to the number of leaves on their pseudobulbs. Unifoliate cattleyas have a single leaf on each pseudobulb, grow 1-2 feet tall and carry from one to five flowers up to more than 7 inches across. Bifoliate cattleyas have two (or sometimes three) leaves on each long, slender pseudobulb and can reach up to 5 feet tall. Their somewhat smaller flowers are carried in heads of up to 25 flowers. Unifoliate Cattleya flowers last from two to four weeks on the plant and, in general, bifoliate Cattleya flowers last somewhat longer. Cut flowers last about half as long as flowers left on the plants.

FLOWERING

With one exception, cattleyas flower from the top of the recently matured pseudobulb. Cattleya walkerana appears at first glance to flower from the base of its pseudobulbs. On close inspection, flowering is actually from a specialized flowering growth and well grown plants consist of pseudobulbs with leaves alternating with these leafless flowering growths. In most species and hybrids, the developing buds are protected by a modified leaf called a sheath.

In some cases, most notably Cattleya labiata, the sheath can be double; i.e., one inside the other and in some plants flowering may occur without the formation of a sheath. Depending on a particular plant's genetic background, flowering may occur from a green sheath more or less immediately upon maturation of the growth or following a dormant

period from a dry brown sheath.

While the prime flowering season for cattleyas fall through spring, hybridizers have managed to extend this flowering season throughout the summer months.

LIGHT

Inhabitants of the mid-level forest canopy, cattleyas and their relatives are medium to high light plants requiring between 2000 and 3500 footcandles for optimum growth and flowering.

When given sufficient light, these plants should have a light yellow-green color and produce sturdy pseudobulbs that hold themselves up without staking. The formation of a sheath is a good indicator that the plants are at least getting sufficient light to flower if all other conditions are adequate. Plants grown in windowsills where light comes from only one direction will naturally produce growth toward the light source. This leaning growth should not be confused with weak or leggy growth that develops under low light conditions.

Many unifoliate Cattleya species such as Cattleya labiata, C. mossiae, C. percivaliana, and C. trianae and their hybrids require a night of uninterrupted darkness for flowering. A reading lamp left on at night produces enough light to keep these plants from blooming.

TEMPERATURE

Most mature cattleyas require a 15 to 20°F temperature differential between night and day for optimum growth and flowering. These plants are considered intermediate to warm growers which means that they should be provided night temperatures of 55 to 60°F and days from 70 to 85°F. While these temperatures are considered optimal, cattleyas will tolerate up to 95-100°F if shading, humidity and air circulation are increased.

WATERING

Mature cattleyas must be allowed to become nearly dry between waterings. Careful control of watering is critical to successful culture of this group of orchids. Since the time period between watering will vary significantly depending on pot size, weather and potting material it is not possible to specify a time interval.

You can gauge the water content of the potting material with your finger. Insert your finger about one knuckle deep into the potting medium. If it feels moist, wait a couple of days and retest. If it feels dry, the plant should be watered. Alternatively, a freshly sharpened pencil inserted into the medium can be used as a gauge of moisture content. Watering should be withheld until the pencil comes out appearing dry.

HUMIDITY

As with other tropical epiphytic orchids we have discussed in previous articles, cattleyas should be provided 50-70% humidity. Under greenhouse conditions or when summering out of doors, extra humidity can be provided with either a humidifier or misting system. When grown in the home, extra humidity can be provided by either an ultrasonic humidifier (cool mist humidifier) or through the use of pebble trays.

FERTILIZER

While actively growing, this group of orchids will benefit from the regular application of a balanced fertilizer. These fertilizers can be applied as very dilute solutions (1/8 recommended strength) with every watering or as 1/4 strength solutions with every other watering.

POTTING

Potting should be done every 18 months to two years but always before the medium breaks down significantly. Rooting occurs in cattleyas either just as the new growth is beginning, just as buds are developing or when the new growth is about half

formed depending on the variety. Repotting should occur just as root activity begins and before the new roots reach an inch in length. You should avoid potting these plants if the new roots from the developing growth are much more than an inch long. When cattleya roots are broken or cut, if the root has reached a length of more than about 3 inches, it will branch and regrow. Roots damaged when shorter than this often will not produce branch roots.

A pot should be selected that allows room for no more than two additional growths. This accomplishes two things. First, it tailors the pot size to the root system of the plant and second, it provides a mechanism to remember to repot. If the pot size allows no more than two additional growths, the plant will have reached the edge of the pot in 18 months to two years and if not repotted will then extend beyond the rim of the pot making it obvious that the plant should be attended to.

Using sterile cutting tools, trim away any dead roots, pile potting medium against one side of the pot and spread the roots out over the medium. While holding the cut end of the rhizome against the pot edge, fill the pot with medium, working it in and around the roots. Cattleyas should be potted firmly with the medium just level with the bottom of the rhizome and staked if necessary. After potting, the plants should be kept humid, shaded and slightly drier at the roots to encourage the development of new roots. Once actively rooting, the plants can be returned to their normal routine.

DIVIDING

Cattleyas have a prominent rhizome that connects the pseudobulbs and it is not hard to determine where to make the cuts. Sterile cutting shears or a strong knife should be used to slice through the rhizome. Cutting tools should be preferably heat sterilized between plants to avoid the spread of virus. To assure uninterrupted flowering, at least three to five mature pseudobulbs and the new lead are required. Seedlings with less than six mature pseudobulbs are best allowed to grow on undivided.

Southeastern Flower Show Orchid Exhibit

As many of you know, the Southeastern Flower Show (SEFS) has a special exhibit for orchids with most of the entries coming from the Atlanta Orchid Society and the South Metro Orchid Society. You can pre-enter your orchids up to January 19 or you can enter them at the show on Monday, February 16. The SEFS has a prefabricated orchid exhibit so the only thing you have to do is enter your plants. Please read the information below if you plan to enter plants. You also will hear more about this at the January and February society meetings.

Monday, January 19, 2004: Deadline for pre-entry of plants to be exhibited in the 2004 Southeastern Flower Show. Please pre-enter your plants even if most of your entries need to be designated as To-Be-Determined (TBD). To pre-enter, you can mail in the Horticulture Division Entry Form in the Exhibitor's Guide (p. 49) or use the website: www.flowershow.org

Monday, February 16: Plant entry and display set up for the Southeastern Flower Show. Plant registration is from 6:30 PM to 8:30 PM, at the Georgia World Congress Center, Hall C, on Northside Drive, just north of the Georgia Dome. Registration requires that two 4" x 6" cards be filled out for each plant entered. It is best to fill these out at home rather than at the show. Exhibitor information is on one side of the card and plant information is on the other side. See the Southeastern Flower Show Exhibitor's Guide (p. 21) for specific information to be included on these cards and for an example of a completed card. The entry process will be described at both the January and February meetings of the AtOS. **People who enter orchids in the Horticulture Division get a non-transferable exhibitor's badge that allows them a single-time free admission to the show.** Contact: Margo Brinton at (404) 315-1183, if you have questions.

Tuesday, February 17: AOS and ribbon judging of orchids entered in the Southeastern Flower Show begins at 10:30 AM.

Wednesday, February 18: Southeastern Flower Show opens to the public daily from 9:30 AM to 8:00 PM. If you enter orchids in the Horticulture Division, you will receive an exhibitor's pass that allows you a one-time free admission to the show. General admission to the show is \$18 for adults and \$6 for children 5 to 15.

Sunday, February 22: Southeastern Flower Show closes at 6 PM. Plant removal takes place from 6:30 PM to 7:30 PM. You must pick up your own plants or have made arrangements for someone to pick them up. You need to have one of the exhibit advisors check off the plants that you are removing before you can take them home.



**TO SUBMIT MATERIAL FOR THE NEWSLETTER, PLEASE SEND TO DANNY LENTZ, NEWSLETTER EDITOR: DBLGONGORA@BELLSOUTH.NET OR MAIL TO: Danny Lentz
1045 Wordsworth Dr.
Roswell, GA 30075**

TO BE INCLUDED IN THE NEWSLETTER, MATERIAL MUST BE RECEIVED NO LATER THAN THE 20TH OF THE MONTH.

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Please visit our web site at <http://www.atlantaorchidsociety.org> . If you have suggestions or, better yet, material to contribute to the site, contact Tom Kaschak at 678-474-9001

Remember that Tom is a volunteer also and will certainly appreciate the help.

Greengrowers:

January 17th Noon-2pm

Dianne Morgan and Danny Lentz
1045 Wordsworth Dr, Roswell, 30075
770 640-0112

We have a mixed collection of over 300 plants growing under lights, with both fluorescent and metal halide lighting. Most of the plants are potted in mixes based on coconut husk chunks instead of bark. Some are also potted in Fafard-3B, "semi-hydro", or mounted. We've only been growing orchids for 3 years, so we'd love to have some other people who grow under lights attend and share their experiences.

Directions:

- Take 400 North to Exit 6, Northridge. Stay in the right lane and turn onto Dunwoody Pl.
- Turn right onto Roswell Rd (BP on right). Go over the river and up the hill into Roswell.
- Turn left onto Magnolia (Shell station on left).
- After about a mile turn right onto Lake Charles Drive.
- Turn right at the second stop sign onto Wordsworth Drive.

We are #1045 on the right, you will go up a hill and we are just past the empty lot they are starting to clear.

Future Greengrowers:

- February : none
- March 27 : Linda Miller
- April 17 : David Mellard
- May+ : Open. Any volunteers?