

FEBRUARY MEETING: GROWING ORCHIDS UNDER LIGHTS, AND OTHER GROWING TIPS!



It's cold—*really cold*—outside. And the sun has been little but a stranger to us in Central New York. The white-stuff keeps flying, and by now, seasonal affective disorder has become a way of life for some of us! So let's talk light. And warmth. And growing orchids! This is our theme for the month of February, a mid-winter theme we have adopted for several years now.

First there's our upcoming meeting (February 2ND, 2:00^{PM}, St. Augustine's), where we will watch the American Orchid Society video on growing orchids under lights. Artificial light provides a great way to grow orchids—you have control over the amount of light, the duration, and to some extent the quality. Although the quality of the sun-light here in Central New York is pretty good, our window-sill grown plants really loose out when it comes to amount and duration this time of year.

And after the video, members old and new are encouraged to volunteer hints on how they grow orchids. Do you have a unique solution to some aspect of orchid culture that makes your plants do better? Then share it with the club! With well over two centuries of collective orchid growing by our members, there are bound to be a few winning hints that the rest of us haven't thought of yet. Orchid-growers

are nothing if not imaginative! And after we've all become experts, the floor will be open to any questions members might have about solving their own problems, growing that problem plant, or diagnosing what sort of nasty has made your orchid into its high-priced condominium! And if that's not enough for one month, the following Saturday, February 8TH, the club will be taking its annual road trip out to visit our friend Joe Kunisch of Bloomfield Orchids!

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MEETING ON JANUARY 12TH
FEATURED INVITED SPEAKER DON
LEOPOLD

At the last meeting of the Central NY Orchid Society, members were fortunate to have the opportunity to hear Professor Don Leopold of the State University of New York College of Environmental Science and Forestry discuss the varied selection of orchids native to our geographical area. Don showed slides of native orchids that he's found over his 20 years spent doing research in the field. He discussed the specific types of habitats enjoyed by native orchids, and what to look for if you go out "hunting." In addition, he pointed out some of the difficulties associated with finding various species. For example, the Striped Coral-root, *Corallorhiza striata*, is a saprophytic species, containing no chlorophyll, and obtains all of its nutrients from its natural association with mycorrhizal fungi. It has no means of deriving energy directly from sun light. After flowering, plants of this species fall into a dormant period that can last more than a decade—during this time, the plant remains entirely sub-terrestrial until it secures enough energy from mycorrhizal fungi to bloom again. When considering current threats to the native orchid population, Don mentioned the white-tailed deer as the major threat to plant diversity in the Northeastern biosphere.

MEMBERS NEEDED! Deb Coyle is still looking for volunteers to help in planning next year's show.

Specifically, we need someone to act as the **Show Chairman** and another member to act as the **Judging Chairman**. The Show Chairman coordinates the show, handles interactions with the mall, organizes the layout, notifies vendors & other participants, and ensures that things run smoothly. The Judging Chairman must find enough judges, arrange their accommodations, take them to dinner the night before the show, and in general see that their experience is a positive one (so they'll return next year!).
Please contact Deb if you're interested.

MEETING MINUTES FOR JANUARY 12TH, 2003

1. New members & guests were introduced.
2. The club has a new vendor for supplies; Tropical Plants: an order was placed prior to the meeting. The supply of Phillips fluorescent lights has been exhausted, and the club is looking into ordering a new supply.
3. The Flower and Garden Show is scheduled for March 13-16, 2003. Small non-profit societies who wish to participate will be placed in a lottery; there are 10 clubs and only 5 spaces.
4. There are 2 area shows in which we traditionally participate this spring, and we need volunteers to help set up and take down. The GROS show in Rochester is scheduled for 3/27-3/30, and the STOS show in Binghamton will be held on 4/25-4/27.
5. Dues are due, please give your checks to Dianne Bordoni or Deb Coyle.
6. For our upcoming Fall Show, we need a Show Chair and a Judging Chair. Without people willing to fill these positions, CNYOS will be forced to cancel the show.
7. The next meeting is scheduled for February 2, and will include a video on growing under lights, as well as members' growing tips.
8. The Museum of Science and Technology and Phoenix Flower Farms are both sponsoring trips to the Philadelphia Flower Show.
9. The Church has requested that we clear out some of our space—our collection of AOS back issues will be discarded, unless someone wants them.

Respectfully Submitted,
Barbara Weller, CNYOS Secretary

- February 2** **Regular Meeting:** AOS Video—growing under lights. In addition, members are encouraged to bring in their problem plants and culture questions for a problem-solving session, and our more seasoned members are encouraged to bring in their growing tips to share with the group.
- February 8** **Trip to Bloomfield's Orchids:** see details on pages 7 and 11.
- March 13-16** **Central NY Flower & Garden Show** in the Horticultural Building at the NYS Fairgrounds. CNYOS is hoping to participate by selling orchids and educating the public.
- March 29-30** **Genesee Region Orchid Society Show** in Eisenhart Auditorium at the Rochester Museum of Science & Technology. Set up is scheduled for March 27, and judging will be on March 28.
- April 10-13** **23RD Greater New York International Orchid Show**, Rockefeller Center, New York, NY. Contact: Carlos Fighetti, 4325 Piermont Rd., Closter, NJ 07624; (201) 767-3367.
- April 25-27** **Southern Tier Orchid Society Spring Show**, Oakdale Mall, Reynolds Road, Johnson City, NY.



STOS NEWS: NEWS FROM THE SOUTHERN TIER ORCHID SOCIETY

The next meeting is scheduled for Sunday, February 16. No additional information is available at this time.

Monthly meetings begin at 2:00^{PM} in the Vestal Public Library. For directions, etc. call STOS president Kenneth Lattimore at 570-553-2753 or e-mail him at <klatt@epix.net>.



GROS NEWS: NEWS FROM THE GENESEE REGION ORCHID SOCIETY

February 3RD, 7:00^{PM}: Clark T. Riley, a well known lecturer and orchidist specializing in native American species, brings his considerable experience in genetics combined with forty-plus years of very practical orchid growing to the GROS in February. Dr. Riley will present a program on "Down and Dirty Orchids: Terrestrials for Everyone." As you know, terrestrial species are becoming increasingly popular these days. Dr. Riley's illustrated talk will cover many of the most beautiful species, with practical cultural hints for all growers. He will also be bringing plants to sell—a variety of inexpensive ladyslippers and terrestrials, primarily Paph. and Phrag. seedlings.

Taken with permission from *The Orchid Collection*, Newsletter of the Genesee Region Orchid Society, Vol. 25, No. 5, February 2003, Phil Matt, Newsletter Editor (716) 288-7025.

Cypripedium Alliance

| | |
|--|-----------|
| <i>Paph. Doctor Jack (concolor x niveum)</i> | Braue |
| <i>Phrag. Hanne (sic) Popow (besseae x schlimii)</i> | Stuart |
| <i>Paph. villosum</i> | " |
| <i>Paph. wilhelminiae</i> | " |
| <i>Paph. delenatii</i> | Kot |
| <i>Paph. argus</i> | Churchill |
| <i>Paph. exul</i> | " |
| <i>Paph. fairrieianum</i> | " |
| <i>Paph. gratixianum</i> | " |
| <i>Paph. spicerianum</i> | " |

Cattleya Alliance

| | |
|---|---------|
| <i>L. gouldiana</i> | Lloyd |
| <i>B. nodosa</i> | " |
| <i>Neolauchea (sic) pulchella</i> | Pace |
| <i>L. gouldiana</i> | Ditz |
| <i>Prosthechia garciana</i> | Stuart |
| <i>Bnts. Donald Prince (S. brevipedunculata x B. nodosa)*</i> | Kot |
| <i>Bl. Morning Glory (L. purpurata x B. nodosa)</i> | Capella |
| <i>Bc. Maikai (B. nodosa x C. bowringiana)</i> | Braue |

Vandaceous

| | |
|--|--------|
| <i>Phal. pallens</i> | Ufford |
| <i>Phal. venosa x Artemis</i> | Lloyd |
| <i>Phal. Cloud of Butterflies x Kathleen Ai</i> | Cohen |
| <i>Phal. Yu Pin Pearl (Ever Spring King x Musashino)</i> | " |
| <i>Dtps. Bright Kiss x Malibu Target</i> | " |

Oncidium Alliance

| | |
|---|--------|
| <i>Rdza. batemannii</i> | Braue |
| <i>Miltoniopsis santanae</i> | " |
| <i>Billra. Marfitch (Mtssa. Charles M. Fitch x Oda. Fremar)</i> | Witkin |
| <i>Trpla. laxa</i> | Stuart |
| <i>Hwra. Lava Burst (Mini Primi x Rdza. lanceolata)</i> | Cohen |

Dendrobium

| | |
|--|--------|
| <i>Den. obtusisepalum</i> | Witkin |
| <i>Den. bellatulum</i> | " |
| <i>Den. bellatulum</i> | Coyle |
| <i>Den. Crystal Pink x Ise</i> | " |
| <i>Den. Banana Royal (sic) (Liholiho x canaliculatum)</i> | Pace |
| <i>Den. sulawesiense</i> | Stuart |
| <i>Den. Memoria Sun-Winds Cio-Cio-San (Anna Bibus x lithocola)</i> | Cohen |

Miscellaneous

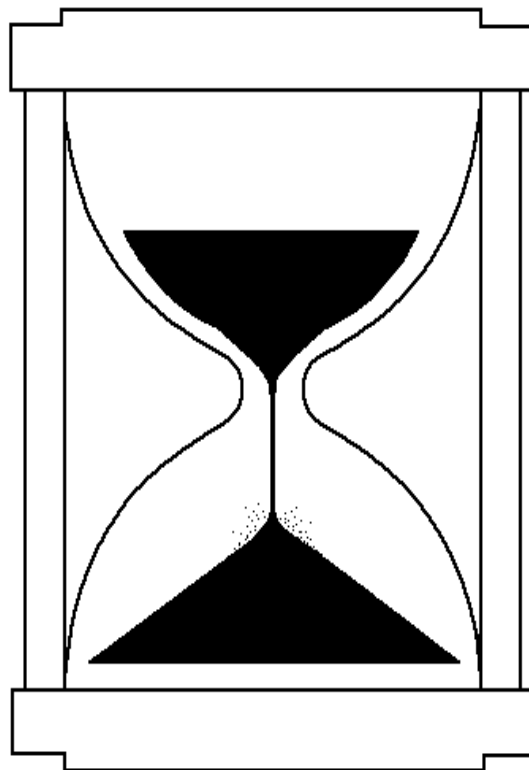
| | |
|--|--------|
| <i>Ceratostylis philippinensis (sic)</i> | Witkin |
| <i>Pths. (sic) allenii</i> | " |
| <i>Bulb. plumatum (?)</i> | " |
| <i>Cnths. amazonica</i> | Stuart |
| <i>Max. sp.</i> | " |

*According to the new RHS regulations of orchid nomenclature, *Brassophronitis* should probably now be abbreviated *Bs.*, but as there is already too much *Bs.* in orchid registration, it will probably not be changed.

Iris Cohen

IMPORTANT!!! TIME TO PAY DUES! LAST CHANCE!

Over the next month, CNYOS will be looking for your annual membership dues (due each December). **Check the label on this newsletter: if it reads "C" you are a Courtesy mailing. If it reads "M02," you are a paid member and owe dues for the new season. "M03" reflects a paid status. "CM" denotes a Commercial Mailing. These labels may not be entirely up to date, so if you've already paid, but your status has not changed, please contact us!** If, however, you are currently receiving this newsletter as a courtesy and haven't joined the club, you will be removed from our mailing list after February. **Likewise, those who have not paid dues by the end of February will also be removed from the mailing list.** A few exceptions will be made, including commercial vendors and representatives of various gardening organizations. Annual club dues are \$15.00 per person or \$17.00 per family, payable to CNYOS. Dues should be mailed to CNYOS President Deb Coyle, at 5186 Winterton Dr., Fayetteville, NY 13066.



CLUB REMINDERS

Orchid-Growing Supplies are now available, including fir bark, sphagnum, sponge rock, charcoal, and 40W fluorescent tubes. Call Dianne Bordoni for details on pricing and availability (446-3836).

The **CNYOS Club Library** is now located at St. Augustine's church. Make arrangements with Val Introne (682-8595) if you want to borrow an item from the Library.

**DON'T FORGET TO BRING YOUR
BLOOMING ORCHIDS FOR THE MONTHLY
SHOW TABLE!!!**



Phalaenopsis bellina (violetaceae), photograph by Vagisha Sharma, with digital enhancement by J. Stuart.

REFRESHMENT SCHEDULE

| | |
|------------|-----------------------------|
| February 2 | Deb Coyle & Dianne Bordoni |
| March 2 | Dave Ditz & Margaret Tupper |
| April 6 | Monica Kot & Donna Coleman |
| May 4 | Bev Costello & Joanna Kweik |

WANTED! Your Original Articles!

This month *THE ORCHID ENTHUSIAST* is privileged by an exceedingly rare event—an article written by one of our own members! Charles Ufford recently had his article on growing *Phalaenopsis* species published by the International *Phalaenopsis* Alliance, and that article is reprinted on page 8! *Congratulations!* Why, one might ask, is this such a rare event? Because few members take the time to write down their experiences. Certainly some of you out there have experience that is worth sharing! Do you grow a certain type of orchid really well? Or perhaps you have a unique approach. Please consider sharing your expertise here! Next month we will again be fortunate to have a contribution from Charles, on his *Phalaenopsis braceana*, awarded at our show last fall. But then your humble newsletter editor will have to resume pulling his hair out over where to find original articles for your enjoyment. Have you noticed? He's getting a bit thin on top!

Our most sincere condolences to CNYOS Member Hilda Belman, upon the recent loss of her husband, Sidney.

Our thoughts are with you.

CNYOS IS NOW ON-LINE!

CNYOS is on-line at www.paphiopedilum.net. The site is regularly updated and will be changed as the club's two crack web-masters (Jeff Stuart & Charles Ufford) have time to do so, so check back frequently!

MAXILLARIAS TENUFOLIA & RINGENS

This month we take a small look into the New World genus *Maxillaria*. This diverse genus has flowers that range in size from a mere quarter inch to 5 or 6 inches wide. The *Maxillaria* tribe consists of a group of better than 40 related genera that share common characteristics both in growth habit and floral form, and includes many familiar genera such as *Bifrenaria*, *Cochleanthes*, *Lycaste*, *Pabstia* (*Colax*), *Promeneia*, and *Zygopetalum*. A group dedicated to this fascinating group of orchids, the *Maxillaria* Alliance, can be found online at <http://www.geocities.com/RainForest/5278/>.



Maxillaria tenuifolia

© 1998 Greg Allikas

Maxillaria tenuifolia is the famous "coconut orchid"...it smells just like coconut! This warm-growing species is common throughout the lowlands of Mexico and Central America. This orchid belongs in every collection because of its easy growing nature, attractive grass-like foliage, rust-red flowers, and delicious fragrance.

Max. tenuifolia is a straggly plant with long rhizomes so is best grown on a mount or in a basket. Warm temps and intermediate light will produce a specimen plant in a few years.

Maxillaria ringens is an attractive low elevation orchid from Mexico and Central America. The pseudobulbs are topped by a single leathery leaf

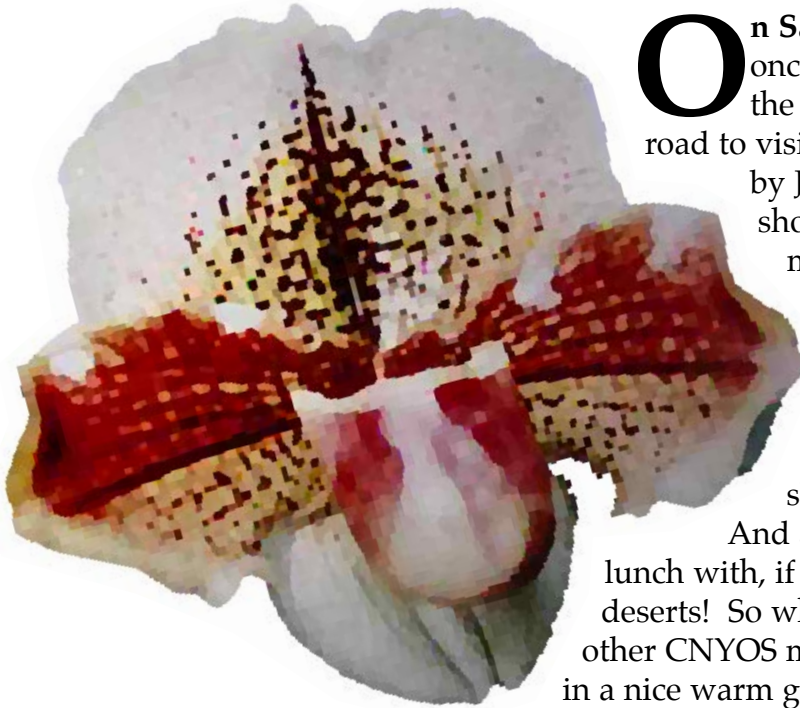
up to a foot long. The flowers resemble a small *Max. luteo-alba* (a species from higher elevations).

Several single-flowered inflorescences arise from the base of the newly matured pseudobulb. The two inch (5cm) flowers are yellow with a white center, have good substance and a sweet, straw fragrance. Grow *Max. ringens* in an open potting mix (such as tree fern or lava rock) in bright filtered light and intermediate to warm temperatures.



Maxillaria ringens

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On Saturday, February 8TH, CNYOS members will once again take the opportunity to get out of the cold and into a greenhouse by hitting the road to visit Bloomfield Orchids, owned and operated by Joe Kunisch. Joe is a regular at our annual shows, and never fails to bring a selection of mouth-watering Paphs and Phrags with which to tempt us! He prides himself on offering a great selection of high-quality orchids. Although he specializes in slippers, astute members have managed to pick up uncommon species and select non-slipper hybrids during our previous visits.

And as in past years, Joe will be providing a nice lunch with, if history is any indication, a few incredible deserts! So what do you have to lose—car-pool out with other CNYOS members, get a free lunch, spend some time in a nice warm greenhouse, and even pick up a few orchids! Sounds like a no-brainer to me!

If you're wondering about Joe's selection, there will be a number of catalogs available at this Sunday's meeting. You can also check out his recently updated website: <http://www.bloomfieldorchids.com> (or connect from the CNYOS Website Links page).

If you'd like to join us, plan on meeting at St. Augustine's Church between 9:30 and 9:45^{AM} Saturday, so we can form car pools and be on the road by 10^{AM}. That will put us at Joe's around 11:30. Joe will need a head-count, so **please call Judi Witkin by Thursday, February 6 (422-0869)**. Directions are provided on page 11 if you need to drive separately.



Logo & Paph. image courtesy Bloomfield Orchids, <http://www.bloomfieldorchids.com>

THE NEW YORK BOTANICAL GARDEN

A Celebration of Orchids: An Exhibition and Sale of Fine Orchids

February 28-March 30, 2003

Surrounded by a mystique that few plants can rival, orchids inspire fascination, obsession, and awe. This winter the Garden will present a month-long Celebration of Orchids: An Exhibition and Sale of Fine Orchids, its most extensive orchid exhibition since the Enid A. Haupt Conservatory restoration was completed in 1997. Hundreds of plants from the Garden's collection of more than 5,000 specimens will be on display in the landmark Victorian crystal palace, including species from Africa, Asia, the Caribbean, and the Americas, along with many beautiful hybrids. <http://www.nybg.org/events/orchids.html>



Photo of *Brassavola nodosa* and NYBG Logo courtesy of <http://www.nybg.org>

Growing Phal Species in an Upstate NY Apartment

By Charles Ufford

*Central New York Orchid Society & International
Phalaenopsis Alliance*

Oriskany, NY

In the 12 years I've been growing orchids, I've become interested in growing Phal species more than any other orchid genera. I've moved around quite a bit during this time, switching jobs and returning to college. One of the lessons I've learned in my many moves is that Phal species have cultural requirements that can be tough to provide in an apartment, especially one in a very changeable environment such as that in upstate New York.

In the past, my attention to cultural requirements left a lot to be desired. During warm weather I'd play golf after work. I'd forget my plants and often they would get too dry. In the winter I'd be indoors a lot and would unnecessarily water my orchids more frequently than in the spring and summer. Inevitably, I provided the worst conditions for my plants. Not surprisingly, many of them died.

After a brief period when I didn't buy new orchids, I started getting more serious about finding, collecting, growing and, most hopefully, flowering Phal species. Lately I've become interested in growing some of the more obscure species. The result is I now have a diverse collection of mostly very warm growing Phal species plus a few intermediate to cooler growing ones.

I used to grow all of my orchids in plastic-enclosed areas under fluorescent lights, which worked well for most Phal hybrids. After I started buying more species, I thought it would be good to find cultural information about them. I bought Margaret and Charles Baker's book on orchid species culture (*Orchid Species Culture: Volume One Pescatorea - Pleione*, Timber Press) and made a list of what I had or wanted. Then I looked up the environmental conditions the Bakers listed for *Phalaenopsis*. Wow! I was surprised to find out what temperature, moisture and humidity levels the plants are exposed to in their native habitats. In my present apartment in the winter, for example, the temperature is usually only about 65 F, except for a few times when the thermostat sticks and it gets up to about 74 F (or I simply get tired of wearing sweaters or being able to see my breath!). I have electric baseboard heat and somewhat drafty windows, so for me to heat my apartment into the 80s and 90s F that many Phal species are accustomed to in the wild is unthinkable. Last winter the electric rates were at a 20-year high, and just paying the bill to keep myself and my dog comfortable was pretty high. Also, in an upstate New York winter the humidity can drop very low and the static can be bothersome, let alone be at a proper



THE AUTHOR'S COOL-GROWING AREA ABOVE THE KITCHEN SINK. NOTE THE PROXIMITY TO THE WINDOW. COOKING IMPLEMENTS TAKE SECOND BILLING IN THIS KITCHEN!

level to grow healthy orchids.

To improve the cultural conditions for my Phal species, I made three different growing areas. The first area is the cool area, which is above the kitchen sink. I placed three wire shelves over the sink and enclosed the area with plastic. The bottom of the growing area drains into a funnel which drains into the sink. In the winter I keep the cooler growing Phals here, close the plastic most of the way at night (except for extremely cold nights) and open it during the day for warming. On sunny days it is important not to keep the plastic closed as it could get too warm for these species, even in the winter.

During warmer periods, I open one of the windows in front of the kitchen setup and place a fan in one of the living room windows where it blows out. The breeze coming in provides evaporative cooling. Most of these plants are mounted with sphagnum around the roots and I take extra care to make sure they stay damp. It's not perfect, but it seems to work. Next on my list is to find a way to make a miniature fan-pad cooler. I also put

most of the mounted Phals in this area as runoff from frequent misting drains into the sink. It also helps that I can just water the plants in the sink.

The second area is an eight-foot shelf divided into two equal sides. One side is open, and non-heated and is where I grow orchids other than Phals that need cooler/brighter conditions than the Phals prefer. The other side is an enclosed, heated and humidified growing area for my Phal species and other orchids that want warm conditions. Both sides are in front of large windows that face southwest. Both sides also started as 1 x 4-foot shelves bottom-lined with plastic to catch water and hold in humidity. The water drains to the center of the shelves where a bucket catches the runoff. A small aquarium pump sends the water back up into the area's water-holding space to provide more humidity.

The warm area is the main growing area, so I will describe it in more detail. At first, I had straight copper piping with heated water hooked together under the plants. A submersible aquarium heater in a three-gallon bucket heated the growing area and sent water up through the piping, and back down into the bucket. I placed used sphagnum moss under the pots to take heat from the piping up through the potting media and root system and around the plants via evaporation. This setup along with an evaporative, fan-driven humidifier in the enclosed area helped provide humidity. (A note about this heating/evaporative system: The same principles are used in warm-water heated, floor-heating systems for greenhouse ranges. Very warm water, as opposed to steam, runs from a boiler through the floor to more efficiently and effectively heat the root zone of the crop. In a greenhouse, floors and benches can have heating placed directly in or beneath them to cut heating costs and provide 'drier' conditions so that diseases that come about by wet conditions don't have the proper conditions to proliferate. Many orchids, though, prefer this humid environment, as long as air movement is also provided. The sphagnum is present amongst the heating coils of the orchid growing area to allow moisture to collect heat, rise up

from the coils and heat and humidify the air around the plants. Same physics, different results.)

I recently enlarged the area by attaching wire mesh to both shelves to enlarge each to two feet x four feet. The mesh is raised about six inches around the outside to help hold in humidity and on which I hang small mounted orchids. I also used coiled bendable copper pipe to run the water through, used capillary mat fabric wrapped around the heating coil to more cleanly hold and evaporate water, and added another shop-light. The humidifier runs almost all the time, although there is a timer in which I can regulate it during very humid summer conditions. I also have a soil warmer in the humidifier to try and raise the water temperature to 74 F before evaporation and subsequent release into the growing area. In the summer it isn't really necessary, though.

Another note about the water heater: I am using a 200 watt submersible aquarium heater that is listed as not having a regulated thermostat. This means that if you turn the gauge on a regulated one to 75 F, and it is placed in the proper size aquarium, it will be powered until it hits 75 F. The 200 watt heater is rated for 50-gallon aquariums, meaning that it can heat 50 gallons of water to the proper temperatures that fish might require. If you move it to a very small container, however, and leave the thermostat at the same setting, the water will get very warm. Since you want a lot of heat to release from your heating coil, you naturally want the temperature of the heated water to be a lot higher than the intended environment that your orchids are in. I believe that the water for my setup is around 100 F, plus or minus 5 F. The pump I'm using isn't rated for water quite that warm, but it was cheap and has been working for quite awhile.

The water in the bucket needs to be covered to prevent evaporation, which can happen quickly. The same is true with the water in the holding area underneath the pots. I have placed plastic egg-crating used for fluorescent light fixtures between the heating coils and the pots. The shelving is cupped underneath to allow the water to 'pool' below the capillary mat fabric so that a considerable amount of water is contained before running off into the collection bucket.



As a final note, I had originally thought of putting in a bigger bucket with a hot water coil attached to a thermostat in the growing area. Another thought was to run a pipe from the hot water source, through the growing area and back into the hot water supply. I don't know if this is acceptable with code, however, but if the heater was exclusively for the use of

THE AUTHOR'S WARM-GROWING AREA. NOTE PLASTIC TENT FOR HUMIDITY. SEE TEXT FOR FURTHER DETAILS.



STRATEGICALLY-PLACED COPPER TUBING BENEATH THE WARM-GROWING AREA CIRCULATES HOT WATER TO WARM THE ORCHIDS ABOVE.

the plants, and had no other openings, it may be acceptable. Of course, contact a professional about any real plumbing or heating work.

While I was working on this shelf area, I came up with another simpler, probably cheaper, but most likely just as effective idea: where the hot water comes up from the heater, pipe it out on one side of the shelf which has been raised slightly higher than the drain side. On the drain side, place a cut pipe, or plastic sheeting, so that the draining water will run directly back to the heater bucket. It would still be important to have a water retaining area for evaporation, but the water need not pass through a pipe underneath the plants. I haven't tested this out, so this idea is best tested by your own creativity! It is important to note, that the location of your setup and the power and control of the heating system has the greatest impact on the temperature range you can achieve for your Phals. I use the heat to provide a stable lower temperature range, and the sun from the windows will often raise the temperature to the upper 80s F. On sunny days it is sometimes necessary to open the plastic and turn up the humidifier fan to provide comfortable cultural conditions, and even partially remove it during the height of the warm season when air movement becomes more important than heating. Once again, the system you use will depend on the equipment on hand, your pocketbook, and most importantly, your creativity.

The last area is a combination of the previously-described growing shelf and a propagation unit I've read about on the internet, and in one of my textbooks that describes seedling orchid propagation by commercial growers. Some firms take their seedlings out of flask and place them in a controlled environment before finishing in a greenhouse. They often use a 2 foot x 4 foot metal pan resting on a heated propagation mat. Water in the pan evaporates, heats, and raises the humidity of the seedling environment, which is usually enclosed also by plastic sheeting. The area is lit by a fluorescent shop-light on a timer.

Through personal communications with other orchid growers/researchers, I have adopted a 16-hour photoperiod for

my seedling area. Research and experience by others has shown that a 16-hour photoperiod with standard fluorescent fixtures (lower light levels) allows very good development of orchid seedlings. There is other information, however, that by using a high-intensity light as from an HID or other similar fixture, exceptional growth and relatively early flowering of both species and hybrids with as little as a 12-hour photoperiod can be achieved. I have my lights turn on very early in the morning and turn off early in the evening to take advantage of cheaper utility rates and to minimize overheating during warm weather.

My area is simply a frame, which can be wood or metal, on which a 2 foot x 4 foot shelf sits. This rests on top of an oversized plastic foundation planter box whose dimensions are roughly 1 foot x 2 feet x 16 inches deep. The container is lined with heavy plastic to the top, and the shelf is also lined with plastic. A rectangular hole has been cut in the shelf plastic aligned with the opening of the container below. Water drains from the shelf quickly and easily to the container below where it is heated by another submersible aquarium water heater; a small pump circulates the water and a small fan blows across the water to bring the warm air up to the seedlings. The heater has a wire frame around it so that it never comes in contact with the plastic lining the container, as it could easily melt it. The entire unit is surrounded by plastic to hold in heat and humidity.

A shoplight provides more than enough light (and some heat) for the seedlings, so that the temperature can easily be adjusted to stay around 75 F at all times. Almost any water holding system will work, as long as the volume and surface area are enough to allow adequate evaporation to heat the area to the desired temperature, and your heat source is powerful enough.

Finding the right settings for your heating system will require some tweaking to get the temperatures necessary to best match the cultural conditions of your Phals. When obtaining materials, think of the equipment that will allow the greatest possible surface area for heat transfer, the quickest passage of water through the area and back to the heating unit, an acceptable amount of heat to change the temperatures in the area, and other similar variable factors. There isn't any best way to do it, just the one that works the best for you and your plants!

Most of all, enjoy!

Charles Ufford is a plug grower for Hines Color-Utica N.Y., a division of Hines Horticulture, Inc., Calif., and a member of the Central New York Orchid Society. He is also an avid photographer and is studying orchid photography with 35mm and large format cameras. P.O. Box 626, Oriskany, N.Y. 13424. cufford@surfbest.net. 315 491-4505.

Brian Savicki, maintenance manager at Hines Color-Utica, N.Y., contributed technical information for this article.

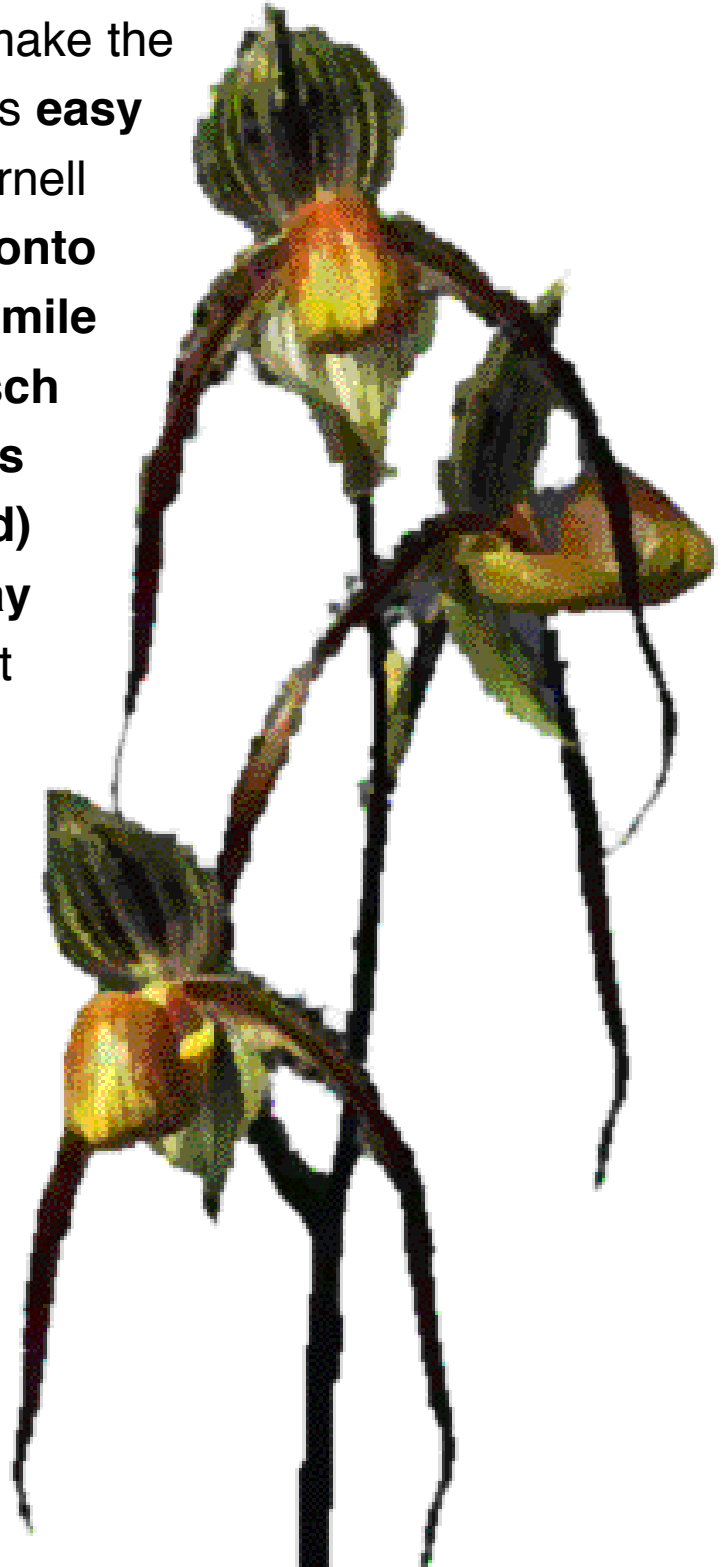


From the **NYS Thruway** (Rt. 90W), take **Exit 45** to **Rt. 490**. Once on Rt. 490, take the **Exit for Bushnell Basin**. At the end of the ramp, take a **Right onto Rt. 96**. Go about **1/4 mile** to **Thornell Road** and make the first **Left** (onto Thornell; this turn is **easy to miss**). Go to the end of Thornell Rd. and make a **Left at the "T" onto Bloomfield Road**. Go about **1/2 mile** down Bloomfield Rd.; **Joe Kunisch lives on the right, although his mailbox (#251 Bloomfield Road) will be on the Left. His driveway is on the RIGHT**, and goes about 300 feet uphill to his brown house.

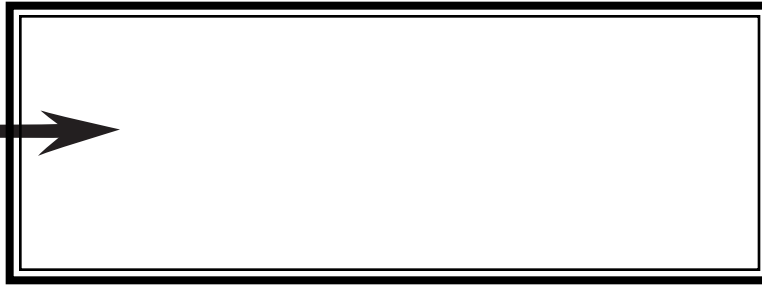
*****DO NOT GO INTO THE NEIGHBOR'S DRIVEWAY (WHITE HOUSE) ON THE LEFT*****

Park in the driveway and go through the open garage to the greenhouse in the back.

Paph. Edna Ratcliff 'Nike' AM/AOS ©Greg Allikas, 1996, Digitally enhanced by Jeff Stuart

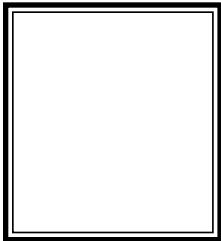


February 2: AOS Video on Growing Orchids under lights
Also: Grower's tips, and problem plants.
February 8: Trip to Bloomfield Orchids



Check your label:
if it reads "MO2,"
You Owe Dues!

Next Meetings: This Sunday, February 21



THE CENTRAL NEW YORK ORCHID SOCIETY
Your local AOS & Orchid Digest Affiliate
351 Kensington Place
Syracuse, NY 13210-3309

Central New York Orchid Society

Presidents: Deb Coyle (315) 445-9106
Dianne Bordoni (315) 446-3836
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Treasurer: Elinor Burton (315) 682-6274
Secretary: Barbara Weller (315) 468-5039
Newsletter Editor: Jeff Stuart (315) 471-1404

The Central New York Orchid Society meets at St. Augustine's Church, 7333 O'Brien Rd, Baldwinsville, at 2:00^{PM} on the first Sunday of each month from September through June. Yearly dues are \$15.00 per individual, or \$17.00 family. Dues should be paid to the CNYOS Treasurer, Elinor Burton.

THE ORCHID ENTHUSIAST

The CNYOS Newsletter, *The Orchid Enthusiast*, is a publication of the Central New York Orchid Society and is distributed to the Society's members ten times per year, prior to all club meetings, events, or functions.

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