



The Slipper Orchid Alliance Newsletter

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Fall 2003

Culture of the Paphiopedilum

It was ten years ago when I received a beautiful gift of four orchids in bloom. These were my very first orchids, a Dendrobium, Cattleya, Phalaenopsis and Paphiopedilum. I couldn't even pronounce their names. The first three I thought were beautiful with a lovely fragrance. I have a passion for flowering plants, but the Paphiopedilum I thought was a bit strange, different from all the rest and certainly did not look like an orchid to me. It had hairy petals with spots and stripes and a pouch with veins. I did a little reading about the care of orchids and remembered that they liked high humidity. So I watered and watered and watered, almost every day. I watered them so much that I killed all four of those beautiful, expensive orchids. Little did I realize how important it was to understand the culture of orchids. Anyway, I shrugged off my loss, and thought that orchids were not as easy to grow as they were purported to be. I assured myself that I would never care for another orchid again. Over the next two years I kept thinking about that Paphiopedilum. It was different, unique, mystical and strange. Not the conventional orchid you see for sale. I never saw a Paphiopedilum for sale during all my journeys to several nurseries. Little did I realize that I was becoming "hooked on Paphs."

SOA Membership

Dues are US\$25 for individuals or US\$50 for supporting (commercial) members. Dues can be mailed to Jean Metcalf, 2553 Main St., Lake City, PA 16423.

Information about membership in SOA can also be obtained from Jean via email, orchidiva@yahoo.com.

After much thought, I figured out my orchid dilemma. I needed to build a greenhouse. So the project began. A relatively small greenhouse, nestled among bamboo, Dawn Redwood trees and a small grove of *Cypripediums*, located on the highest elevation of Essex County in Georgetown, Massachusetts, about 30 miles north of Boston. What started out to be a hobby slowly turned into a nice small business. Over the years and many plant failures I noticed that the only orchids that were flourishing were the Paphiopedilums. The fascination and passion with Paphiopedilums just got stronger and stronger. A determination was building up inside me to grow the best and healthiest Paphs possible. Yes, I was "hooked on Paphs." I never met a Paph I didn't like.

I read all I could about the culture of Paphiopedilums and spoke with dozens of people who were experts in the field regarding Paph culture, only to discover that almost everybody had a different growing technique and their own opinions of Paph culture. Granted, there are the standard cultural fact sheets that state the proper temperature, lighting, moisture, repotting, etc. But what is the culture of Paphiopedilums? I would have to duplicate their natural habitat and growing conditions in Borneo, Southeast Asia, Indonesia, India and the Philippines. This seemed to be an impossible feat. What are the best growing conditions for Paphiopedilums? It depends on whether they are grown on the East coast or the West coast or anywhere in-between in the United States. So basically through research, experimentation and devoted study of the culture of Paphiopedilums, I developed a technique that has been extremely successful for the growing of Paphiopedilums at Tindara Orchids. We grow Maudiae types and complex hybrids.

Our lighting conditions are kept at 1500 foot candles, somewhat higher for *rothschildianum* hybrids. Lighting is monitored several times a day. The 1500 foot candle level is kept constant and consistent throughout the greenhouse.

We have seven fans located about four feet above the Paphs that run constantly. Air is circulated above the Paphs to keep a nice constant breeze. The fans are never blowing directly on the Paphs.

Our under-the-bench mist system runs for five hours a day during the summer months. The misting starts at 9:30 am and is completed by 3:30 pm each day. Occasionally we use an overhead mist system during the summer if the temperature gets really hot. The overhead mist system goes on only three times a day, is finished by noon and only runs for a two-minute period. The overhead mist system combined with the fans blowing above the Paphs creates a fine, refreshing mist throughout the greenhouse. We are very careful not to get the Paphs wet. With this method we keep a constant humidity level of 65%. During the summer months the temperature in the greenhouse is kept between 78 and 82 degrees. During the winter months temperatures are much cooler, and we maintain about a 15-degree differential between night and day with a low nighttime temperature of 56 to 60 degrees.

We water each Paph twice a week, usually Wednesday and Saturday. (Our water comes from the town of Georgetown wells and goes through a water treatment facility that is supposed to neutralize the pH and remove iron and manganese. It is not treated with any chemicals as far as I know.) We fertilize only once a month (half strength) with seaweed-enriched fertilizer (3-20-20).

Our growing medium, which we believe is the key to strong, healthy Paphs, is one of the major components of our growing techniques. I use a medium consisting of a blend of Diatomite, coconut husk chips, perlite and charcoal. Diatomite, which is imported from Australia, is a sedimentary rock primarily composed of the fossilized remains of unicellular fresh water plants known as diatoms. Over the millennia the diatoms have been compressed to create, in our opinion, one of the most effective growing mediums available. (The formula used at Tindara Orchids is "Patent Pending" and will be available through our web-site.)

This is how we prepare our growing medium. We start by rinsing the coconut husk chips to remove any salt. The coconut husk chips are placed in a perforated bucket and rinsed several times. Then I rotate them to another perforated bucket so that the bottom coconut husks are now on top, to make sure we have a thorough rinsing. I repeat this rotation process two more times, then soak the perforated bucket within a slightly larger bucket overnight and drain. The Diatomite is soaked for four hours to hydrate and to remove any dust, then drained. We use two sizes of Diatomite, small (1/4 inch chips) and medium (1/2 inch chunks). After this process we place the coconut husk chips, Diatomite, perlite

(large size) and charcoal (small chips) in an 18-inch by 26-inch plastic tub, seven inches deep. This is the same type of tub available at a hardware store to mix cement. Once the ingredients are put into the tub we mix by hand. This is enough potting medium for 40 plants in 3 1/2 inch pots. We then water the medium with about two gallons of water and let it sit overnight or about twelve hours. The water includes a capful of Physan, two teaspoons of seaweed enriched fertilizer and one capful of SUPERthrive. We found that the potting medium will absorb all the nutrients and get the Paphs' root system off to a good start without any shock.

We use this potting medium formula to repot, to pot newly arrived bare-root stock, and to transplant from compot to 2 1/2 inch pots. We have never lost a transplant from a compot with this formula.

Potting a Paph starts by placing some medium in the bottom of the pot, centering the plant in the pot, and filling the pot, shaking or tapping the side of the pot as you go so you get a nice even distribution of growing medium around the Paph's roots. Once the pot is almost full, top off with all Diatomite. Do not press down or compact the growing medium. Why do we top off with Diatomite? We found that this prevents rot at the base of the Paph. It doesn't stay constantly moist or rot near the base of the Paph as fir bark or sphagnum moss would normally do. Diatomite is nice and clean.

We think that this formula is advantageous for multiple reasons. Diatomite is pH neutral and absorbs 150% of its own weight in water. It is sterile, non-toxic, lightweight, and it aids in the proper medium aeration that Paphs require. It doesn't break down over time, thus preventing root rot, and it is reusable. We believe that the high silica content in Diatomite aids in better root development and healthier plants with a robust flowering capacity. The coconut husk chips absorb moisture, and they do not decay or rot as fast as fir bark. There are fewer insects forming colonies within the potting medium, and coconut husk chips could last up to three years. The perlite and the charcoal speak for themselves, providing moisture retention and a healthier potting medium.

This culture for Paphiopedilums that we created may not be new and may not work for everybody, but we are extremely pleased with the results we are getting. To prove this point, we brought six of our Paphs to an AOS judging center recently, and although we didn't win any awards that day, the general consensus of the judges was that the flowers were large, the leaves had nice color, and the plants looked healthy and strong. Their comments included "My compliments to the grower" and "Although the Paphs are

Upcoming Events

AOS Members Meeting

October 22 - 26, 2003

Doubletree Inn

Sacramento, CA

Sponsored by the Sacramento Orchid Society.

Contact Nick Burnett (burnettnb@aol.com) or log on to their website (www.sacramentoorchids.org) for more information.

Sixth Annual Slipper Symposium

November 1, 2003

Ramada Plaza Hotel

Kissimmee, FL

Contact Jamie Lawson for registration or more information. 888-619-7687, jimorchids@aol.com

Quito Orchid Show and Conference

February 5 - 8, 2004

Quito, Ecuador

Contact Harry Zelenko at zzz@uio.satnet.net or log on to www.aoq.info/pages/1/index.htm

Paph Forum

February 2004

National Arboretum, Washington, DC

Slipper Orchid Alliance will meet in conjunction with the Paph Forum. Details in next newsletter.

young they show a great deal of potential.”

We are now in the middle of an experiment whereby we are growing some Paphs in 85 % Diatomite. So far the results look extremely promising.

We are also experimenting with a few Phalaenopsis, which are growing in 100% Diatomite. At this point a nice aggressive root system is developing, and the leaves look healthy, exhibiting no stress.

We are now approaching one thousand Paphiopedilums at all stages of growth, all in a predominantly Diatomite medium. Our process will be that of continuous experimentation, and we remain convinced of the benefits of Diatomite in the culture of Paphiopedilums.

Frank Coppolino
Tindara Orchids
www.tindaraorchids.com

Paphiopedilums in Taiwan

For anyone who has seen Volume I and II of the books *Paphiopedilum in Taiwan*, you already know there are quite a few well-grown Paphs over there. The quantity, variety and quality of Paphiopedilums in Taiwan are overwhelming, considering the size of the island.

Taiwan has an area about the size of Maryland and Delaware combined. Imagine over fifty Paph nurseries all within reasonable driving distance and having about five days to visit as many as possible. This was the enviable task I faced on a recent trip there with a couple of fellow slipper orchid fanatics.

When we think of orchids in Taiwan usually Phalaenopsis come to mind first, and with good reason. Over half of the Phalaenopsis imported into the U.S. last year came from Taiwan, at a cost of about ten million dollars. There's no doubt that Phalaenopsis are Taiwan's and the rest of the world's favorite orchids.

In contrast to the large number of Phalaenopsis growers, there is the relatively smaller group of slipper orchid growers in Taiwan, represented by the T.P.S. - the Taiwan Paphiopedilum Society. The T.P.S. has published Volume I and II of *Paphiopedilum in Taiwan*, with Volume III due out in August of 2003. Anyone who grows Paphiopedilums would be wise to add these books to their library. They are an invaluable tool for familiarizing yourself with the new multifloral and parvisepalum hybrids, and they have sheer entertainment value.

Check out Volume I if you want to see two of the best clones of the most prized Paphiopedilums, Paph. sanderianum 'Shin-Yi' and Paph. rothschildianum 'Duo-Fong.' The cover is graced with the mythical Paph. stonei var. album 'Formosa.' My first day in Taiwan I was actually holding all three of these plants in my hand. Buying divisions of them was another story - I would have needed a second mortgage.

All of the plants I saw there were thriving with little effort from the growers. Most Paphiopedilums are native to the tropics, the area between the Tropic of Cancer and the Tropic of Capricorn. Southern Taiwan, where most of the Paph nurseries are located, lies just below the Tropic of Cancer. The year-round weather forecast is hazy, hot and humid. The only places I could get comfortable were in front of the greenhouse exhaust fans and cooling pads, or in the hotel

shower. All of the plants, on the other hand, seemed quite comfortable in this environment. Even the species we normally think of as cooler growers, such as *Paph.micranthum* and *Paph. armeniacum*, were thriving and many were in bud.

Paphiopedilum rothschildianum still seems to be the most popular *Paph.* in Taiwan, although the Taiwanese taste for what constitutes good form differs somewhat from our own here in the U.S. The FCC awards that were given by the A.O. S. recently for various clones of *Paph. rothschildianum* were mostly to sib crosses of *Paph. rothschildianum* 'Rex' X *Paph. rothschildianum* 'Mont Millais.' Most of these clones have short inflorescences with little spacing between flowers. In Taiwan this is considered an undesirable characteristic. Their awarded clones tend to have much longer inflorescences with plenty of space between flowers.

I saw a lot of new, blooming-size multifloral crosses, but I'm not sure what breeders are trying to accomplish here. Sure, I can see the beauty in a *Paph. Michael Koopowitz* or a *Paph. Prince Edward of York*, but when you start crossing these back to *Paph. rothschildianum* and *Paph. sanderianum* everything starts looking the same to me. I think even an experienced orchid judge would have a hard time distinguishing a *Paph. Formosa Lady* from a *Paph. Oberhausens Rubin* if they weren't labeled. I guess it won't matter if they can be sold someday in Home Depot for under ten dollars, which I seriously doubt.

This brings us back to the reason *Phalaenopsis* are still the most popular orchid. Wholesale prices of budding *Phalaenopsis* in Taiwan can be around one dollar and seventy-five cents, whereas a budding multifloral *Paphiopedilum*, which has taken two to three times as long to grow, is costing close to twenty-five dollars wholesale. Even if you could resale a *Paphiopedilum* for under ten dollars, I think most novice orchid growers would still prefer the *Phalaenopsis*.

If you ever visit Taiwan you can probably rent a car and visit any number of *Phalaenopsis* nurseries along the North-South highway. If you plan to see any great *Paphiopedilums* be prepared to travel on a series of two-lane roads and long, hidden entryways, and be sure to have a well connected guide.

Dennis D'Alessandro
Gypsy Glen Orchids
Beaver, Pa.

Kissimmee, FL

Sixth Annual Slipper Symposium

The Slipper Orchid Study Group of Florida (which is a Supporting Member of the SOA) will present a one-day symposium, "Sexy Slipper Orchids," on November 1, 2003, at the Ramada Plaza Hotel in Kissimmee, Florida. (This is the Symposium that Paul and Mary Phillips originated, and they are still greatly involved.) Speakers, lunch, break refreshments, sales tables and auction are included in the registration fee of \$100. A down-south Florida champagne BBQ in the evening at the World of Orchids Gazebo is \$10 extra. There is a discount of \$25 for registration before October 1, for previous seminar attendees or for groups of ten or more. Ratcliffe Orchids is providing a free slipper seedling to each paid attendee, but your location in the picking rotation will be determined by the date of your registration slip. There will also be an Open House at Ratcliffe Orchids on Sunday, November 2. Contact Jamie Lawson for answers to questions or to receive registration material: 888-619-7687, jimorchids@aol.com, 1301 Welser Avenue NE, Palm Bay, FL 32907. There is also a web-site at <http://home.cfl.rr.com/slipperorchids/>, which also includes a registration form.

The day will feature three speakers and a panel discussion in which renowned slipper growers will reveal their cultural secrets. H. P. Norton may be better known for his *Phalaenopsis*, but in 1996 he became hooked on *Phragmipediums* when a *Phrag. besseae* he was holding in his greenhouse for a friend bloomed. Since then he has been hybridizing *Phrags*, especially reds, and has received many AOS awards, including one FCC, twenty-one AMs, six HCCs and one CCM.

Frank Smith of Krull-Smith Orchids will delineate the four main types of *Paphiopedilums* and reveal secrets for growing each group. Jamie Lawson says that a lecture by Frank that he heard at a local society meeting was so enlightening that as a result he has been able to keep alive species that had previously committed suicide, bloom plants that had never bloomed before, and bloom previously bloomed plants with increased size and flower count.

A biography for Munekazu Ejiri of Suwada Orchids was not available as of the printing of this article, but he is expected to discuss the latest trends in slipper growing in Japan.

Since Kissimmee is next to Orlando and Disney World, everyone in the family can find activities to make this a memorable weekend.



Paph Sierra Lace 'Ann Marie' HCC/AOS

(The New Orleans Orchid Society purchased our Slipper Orchid Alliance trophy to be presented at their show in May earlier this year. The winner of the trophy was Ann Roth, for her Paph. Sierra Lace 'Ann Marie' which received an HCC of 75 points at the show. She has joined the SOA, and below she shares with us how she grows this lovely Brachypetalum.)

Although I have been growing orchids for over 30 years, I have only recently started with the genus Paphiopedilum. I live in the very humid southeastern part of Louisiana where nighttime temperatures remain in the 70's for about six months of the year, relative humidity exceeds 90% and summer in the greenhouse is near 100 degrees. I always thought that it would be impossible to grow Paphs without special cooling equipment.

After some experimentation and research into warmer growing varieties, I have found that the most important cultural requirement is a high volume of air movement. My Paphs are immediately in front of the windows with exhaust fans running when the greenhouse temperature tops 80 degrees. I pot in slightly larger pots than most Paph growers seem to use with a loose, well-drained mixture because I water frequently in warmer weather to help cool the plants. In the cooler winter months, I water less frequently and with rain water when available. The Paphiopedilums, which are part of a rather diverse collection of orchids, have been situated in the northeast corner of my greenhouse and receive more than 5000 foot candles on bright days in summer.

I am as anxious for the cooler fall weather as the Paphs because as soon as the temperature begins to drop, the buds start to emerge and the flowering begins in earnest.

Cyps and Relatives

I'm sure all of us have family members who we wish shared our orchid enthusiasm. For a Christmas gift I included an orchid book about Native Orchids in my Uncle Richard's presents. It made sense to me. He has a cabin in West Virginia that borders the Monongahela National Forest, a 900,000 acre tract of protected land, and logically one would think that native orchids would be plentiful. He hikes, camps, and fishes. If he became interested in orchids, then no one better for me to go on a trek with than one of my favorite relatives!!

He began calling about the orchids he recognized in the book while walking to his favorite trout-fishing stream. He invited us to view the plants and assured me that he knew where some populations of *Cypripedium acaule* resided. Comments were also made about yellow lady-slippers being sighted. Soon plans were made for me to come to West Virginia and see the *Cypripediums* and do some trout fishing!!! He advised me to bring an old pair of shoes???

Many people have seen lady-slippers in the wild, but I had never been that lucky, so I jumped at the opportunity.

On May 31st, Mike and I arrived in Elkins, West Virginia, at a cabin that looked like a little house in the woods. Richard and Aunt Sandy were very happy to see us and Richard had several courses mapped out on the national forest map and pointed out locations where the Cyps. had been seen. We will be following Glady, a cold mountain stream that harbors native brook trout. The streambed consists of sandstone and limestone. Native brook trout are very demanding of good water quality, and the stream must not have any silt that can be stirred by current and interfere with their gill membranes. Trout can live in water only where the pH levels are above six. Yes, I know this is a lady-slipper story, but this trout information will prove to be very interesting later.

We began walking the Allegheny Trail, and I was enjoying the fresh mountain air and the sounds the steam makes as it flows down the mountain. On the lower part of the trail we started to see signs of vegetation that prefers the same soil conditions as lady-slippers. Ground pine was abundant, and it enjoys acidic soils. Next, we encountered a live peat bog, fed by rainwater and runoff, where plant material decays very slowly. I was sure we were getting close to *Cypripedium* territory now.

As we walked along an abandoned train rail bed, we saw

a few solitary *Cyp. acaule* plants, and I was enchanted by their simple beauty.

“We need to cross the stream now if you want to see more slipper orchids” said Richard. After a couple of minutes delay and a good talk with myself, we crossed Glady, with its chilly swift running water. Richard told me, “Later on in the year, the rocks are covered with moss and algae and are much more slippery.” In my mind I wondered how on earth could they be any more slippery than they were now. Thank goodness Mike was with me so he could offer a steady hand. Richard was assisting Sandy every step of the way too!! I now realize the purpose of the old tennis shoes.



Site 1

Immediately after crossing the stream, we saw more solitary *Cyp. acaule* living very close to the cliff side of the stream edge. (Site 1.) Farther away from the bank we saw several clumps of *Cyp. acaule* with groupings of four or so basal growths. I was surprised to see how the neighboring plants differed from each other in color and size and also the varying degrees of light situations in which the plants were growing. Almost all were in some type of shaded situation, but none in heavy shade. Soil samples were taken and carefully stored for later pH testing. The area was treed with poplar, birch, beech, maple and oak, and native wild azaleas were plentiful.

We crossed the stream several times. Still following the Allegheny Trail we encountered water running across the trail from the mountains above into the stream. After approximately six miles walking on the trail, we came to (Site 2.). It was a forested area that consists of wild cherry, poplar, and maple trees. At the very top of the mountain was a large stand of oak trees. The soil here was very loamy, and when you took some in your hand and compressed it, it held the shape of your hand. We again took a soil sample for pH testing. *Cyp. acaule* was everywhere on the hillside. I



Site 2

felt like I was standing on earth where no other has stood. This place was majestic, and strong sunlight was making it through the tree canopy high above. There was very little growth on the forest floor except for the lady-slippers.

A grouping of eighty-four *Cyp. acaule* drew my attention immediately. I counted them and then recounted. Many were mature plants with multiple growths, and seedlings were plentiful. Again, the color of the flowers was variable from light rosy shades to dark wine. I lay belly down on the ground taking photos of the largest gathering of lady-slippers I could ever imagine seeing. Mike was taking digital images of them.

Just a short distance from the large grouping of orchids was the granddaddy *Cyp* of them all, a *Cyp. acaule* with eight mature basal growths and seven flower spikes. One has to wonder how old this particular orchid was and how many brutal West Virginia winters it had endured. This lone *Cyp.* made the stream crossings and the cold wet pants disappear totally.



Soil pH values at Site 1 measured 4.2
 Soil pH values at Site 2 measured 4.5
 Average elevation was 1,800 feet
 Average winter temperature for Elkins, WV:
 December 22 degrees, January 18 degrees F.

As we left the last *Cyp. acaule* and started back down the mountain, I realized the importance of the tiny ecosystem we had been a part of all day. The lady-slippers needed the acidity of the soil and water that flowed down the mountain and the trout needed the alkaline water. The acid water flowed into the stream in abundance; however, the limestone substrate at the streambed provided enough of an alkalinity buffer to maintain the critical "above 6" pH that native trout need to remain alive.



As we fished Glady on our way back down the mountain, my thoughts wandered often to the lady-slippers. We were very fortunate to see so many *Cypripediums* on our very first native orchid outing. We will never forget this very special day.

I would like to thank my Uncle Richard for being so special in my life. Before he had children of his own, he took me on many West Virginia fishing trips that I will cherish in my mind forever. Thanks to Aunt Sandy for being the best cabin chef and hiking companion one could ever ask for and to Mike, for sticking with me and believing in me, no matter what excursion I am asking him to go on.

The exciting news is that Richard's oldest son, Steve, is now sending me photos of native orchids. Maybe I did get my wish and now have family members interested in orchids. It must be the book!!! I bought Steve the same native orchid book by Stanley Bentley. Next trip we are off to find *Cyp. parviflorum*.

Linda Thorne
Seagrove Orchids
www.seagroveorchids.com

The Phragmipedium Section of Phragmipedium

The Phragmipedium Section of the genus *Phragmipedium* currently consists of five species: *caudatum*, *wallesi*, *warszewiczii*, *lindenii* and *extaminodium*. All of the species are similar in their culture, and in their flower size and shape, in some cases making them difficult to distinguish. All five species are also native to Central and South America.



Phragmipedium caudatum

Plants in the *Phragmipedium* section are similar in that they all exhibit extremely elongated petals. Each species produces flower petals in excess of eighteen inches and, in some cases, reach thirty-six inches in length. For growers new to this section of *Phragmipedium*, it is sometimes disheartening to observe a newly formed bud develop and open to only produce petals around four inches. What is fascinating to watch is the elongation of the petals over two or so weeks. With proper culture and a good strong quality plant, the petals reach unbelievable lengths. In order to obtain the best blooms from this section, several cultural requirements must be met. In general, the culture is similar

to the rest of the species of *Phragmipedium*. The roots must remain moist at all times, good bright light must be provided, and excellent air circulation and light feedings are all necessary. Also, above all, patience is a definite must. This group of *Phragmipediums* is generally slow to mature to flowering size and generally slow to produce large specimens for divisions. Seedlings generally require four to eight years to mature to flowering size as opposed to eighteen to twenty-four months on many of the other species of *Phragmipedium*.



Phragmipedium lindenii

The general culture of the Section *Phragmipedium* differs from the rest of the species of *Phragmipediums* in that they require slightly drier conditions. Plants in the wild are found growing either on rock outcroppings or are growing truly epiphytically. Personally, I have attempted many types of media and container combinations and have really found only one that is satisfactory. All of the species and the hybrids made between the species of this section are grown in typical vanda baskets planted in New Zealand long-fibered sphagnum moss. Each of the baskets receives a small amount of water from a drip irrigation system each day in the morning, which keeps the medium evenly moist but not wet. The high level of air movement in the growing area dries the medium slightly during the day allowing it to be “drier” at

night. This growing method seems to eliminate the perennial basal and crown rot problems seen in these species. Repotting is done at least annually. Fertilizer is applied at the same rates as to the rest of the *Phragmipediums* or about half recommended label rates. The desired light level is bright, but no direct sun, as is typical for other *Phragmipediums*. Humidity levels are not overly critical except at bud development and flowering. Petal length seems to be highly sensitive to humidity levels; the higher the humidity, the longer the petals seem to be. At other times of the year, the plants don’t seem to be too sensitive to humidity.

Flowering is at its peak in the late spring or early summer. Each species in this section is multi-floral, producing generally three to five blooms on each inflorescence. Plants will also readily produce multiple spikes on mature plants. As with the rest of the species of *Phragmipediums*, the plants will flower as growths mature as opposed to external triggers. Each of the species in the section, as stated above, is similar in flower shape with long petals. Each species also produces a long and sometimes very broad synsepal and a long dorsal sepal. The dorsal sepals are normally pinched along the length and extend forward over the pouch. Some curve is normal; however, the best examples are fairly straight, producing a nearly symmetrical flower. For many years, all of the members of this section were grouped under a single species, *caudatum*, with several varieties. Many hybrids were made and registered which caused a wide variation in colors and flower size. *Grande* (*caudatum* x *longifolium*) for example, is a very diverse hybrid with flowers ranging in size vertically from fifteen inches to nearly thirty. The colors range also from a tan or blond color to very dark burgundy. These hybrids were each made with a different form of the *caudatum*, which has now been officially broken into separate species allowing for creation of several “new” hybrids. Each of the species is unique and varies generally by color. I am sure there are more differences, but I am not a taxonomist and see little other difference. Starting with *caudatum*, generally the largest of the group, it produces heavily green-veined flowers. *Caudatum* is, in my opinion, the most interesting with the varying levels of veining and very large flower size. The plants of *caudatum* also tend to be the largest as well, reaching nearly two feet across for each fan. There is a variety of *caudatum* called var. *sanderae* that produces nearly as large flowers; however, the plants mature on very small plants with a leaf span of only eight to ten inches. *Warscewiczii* (not *warscewiczianum* as frequently labeled) is the very dark-colored species of the group. The flowers are generally tan with very heavy overlays of burgundy, making them dark overall. The plants are medium in size with leaf spans of twelve to fifteen inches across. *Extaminodium* is a recently described species very similar to *warscewiczii*, except that it is missing the typical winged staminode. *Wallisii* is smaller generally in terms of flower size and is much lighter in color. The inside of the pouch is

also almost pure white. Flowers generally are found reaching about twenty-four to thirty inches in length. Finally, the last species of the section, which is the oddball of the entire *Phragmipedium* group, is *lindenii*. This species is one that every true *Phragmipedium* grower must have in his or her collection. *Lindenii* develops flowers with no pouch but produces a third elongated petal. The flowers tend to be a little smaller than the rest in the section and are generally lightly colored in ranges of tan and green. Unfortunately, the third petal trait is recessive and the pouch always comes back in its hybrids.

The species in this group have been heavily used in breeding especially for the long petals. Hybrids have been made with members of this section since 1870. Many notable hybrids, some made in the late 1800's, are still frequently seen today. Hybrids such as *Grande* (*caudatum* x *longifolium*) and *Dominianum* (*caudatum* x *caricinum*) are two such examples. Today, many notable hybrids have been introduced, such as *Tall Tails* (*caudatum* x *wallisii*), which seem to produce very long petals and exhibit great hybrid vigor generally lacking in their parents. As an example, a first-bloom seedling in our greenhouse produced an inflorescence reaching 73 centimeters on a plant that was only ten or twelve inches across. Also, the introduction of *besseae* into the breeding lines is creating hybrids with inflorescences nearing twelve to fifteen inches tall and flowers in fire-engine red tones. Future breeding will almost certainly include this section of *Phragmipedium*.

Overall, these five species merit room in the greenhouse. With a little attention to the native habitat that these species originate from, most growers should be successful in their culture. Also, with the introduction of the various hybrids, the plants can be even more colorful and easy to grow.

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*Eric R. Sauer, ASLA
River Valley Orchids
Lebanon, Ohio*

SOA Membership Renewal Dates

Let me introduce myself - my name is Jean Metcalf. I am your Membership Secretary, and as such I send you those annoying letters about paying your dues. I grow slippers and other orchids just west of Erie, PA.

Renewing yearly dues doesn't need to be confusing; however, the present system is. Some members have paid more than once this year. Others don't know when their dues are due. I am changing this system to revolving dates. Simply, dues are due one year after joining. If you join in

September, 2003, your dues will be due in September of 2004. The renewal date will appear on the label of your newsletter each issue. When your dues are due, I will send you a notice. Please return the form, fully filled out, with your payment to me. This way I will have all your current information.

Some of you will notice that your label indicates that you are paid up until 2005. This means you have paid twice for this year and the extra payment is credited towards your membership.

I hope this new method will clear up problems and make it easier for you, your newsletter editor, and membership secretary to provide you good service.

Book Review

Slipper Orchids of Vietnam - *With an Introduction to the Flora of Vietnam*

Despite its title, this recently published book offers the serious orchid grower a multitude of riches not limited to Vietnamese slipper orchids and should prove to be an invaluable resource. It transports us to a country little-known to most of us and provides us with a wealth of knowledge about Vietnam, orchids in general, taxonomy of slipper orchids, and in-depth treatment of the slipper orchids of Vietnam. The inclusion of 340 color photos, 28 line drawings, 34 maps and 19 graphs helps us to understand the country and the orchids' habitats. Orchids are probably the largest family in the Vietnamese flora, and the slipper orchids' diversity is unmatched in any other country within the range of the genus.

Part I delves into Vietnam itself - its geography, climate zones, flora and vegetation. Over three-quarters of the country is mountainous, and yet there is a wide range of climatic conditions, clearly explained. Many orchids native to Vietnam other than slipper orchids are discussed and pictured.

Part II defines slipper orchids and includes their morphology, life history, pollination, natural hybridization, ecology, and geographic distribution, which is especially enlightening. This section is not limited to Vietnam and gives excellent habitat information. A taxonomic table clearly groups all *Paphiopedilum* species, and although taxonomists may differ on some names, this table is very helpful to the amateur grower.

The meat of the book is in Part III, Taxonomy of Vietnamese Slipper Orchids. History sets the stage for the detailed treatment of 18 species and 4 natural interspecific

hybrids found in Vietnam. For each species there is a section on description, distribution, ecology, flowering period in the wild, IUCN status, affinities, history, habitat and variation. The habitats, with pictures, illustrations and climatological data, are so beautifully described in great depth that it is easy to visualize them, and they provide important clues for successful culture *ex situ*.

In Part IV, Conservation, the sad story of decline and extinction of slipper orchids in the wild is explored. Deforestation for development purposes and widespread commercial collecting are the main factors in their rapid present day decline. Despite the government's designation of some officially protected areas, the future of slipper orchids in Vietnam is not bright. The authors express the hope that "knowing the plight of these orchids in the wild, growers will exercise restraint in buying wild-collected Vietnamese orchids."

The four authors based their book on fieldwork over a period of more than twenty-five years. Professor Leonid Averyanov (Komarov Institute, St. Petersburg, Russia) is an authority on the Vietnamese flora and the author of the standard account of them. He has undertaken many expeditions, in collaboration with his co-authors, in Vietnam and has discovered many new orchids there. Dr. Phillip Cribb (The Royal Botanic Gardens, Kew) specializes in the systematics of tropical orchids and is the author of many scientific papers and books on orchids. He is the author of monographs of the genera *Cypripedium* and *Paphiopedilum*. Professor Phan Ke Loc (Professor of Botany, Vietnam National University, Hanoi) is an authority on the Vietnamese flora and has taken a leading role in cataloguing its extraordinary diversity. He has led several government-sponsored field surveys and is the author of many scientific articles on the plants of the country. Dr. Nguyen Tien Hiep (Institute of Ecology and Biological Resources) has held many senior scientific positions in Vietnam, is an authority on the Vietnamese flora and has led many botanical expeditions throughout Vietnam since the 1980's.

This book will be a welcome and important addition to any slipper lover's library. For those growers who have not seen live plants and flowers of some of these species because of their illegal CITES status, this book is of special import. It is very well organized, is fascinating to read and provides a wealth of information, especially on habitats, not found elsewhere.

Published by Timber Press. 308 pages

Barbara Tisherman

Articles, Anyone?

One of the most significant characteristics of orchid lovers is their willingness to share enthusiastically their knowledge and expertise. They love to talk about their favorite plants and how to grow them. To keep the SOA newsletter as informative and interesting as I know you all want it to be, we need more people to put their thoughts on paper and submit them for publication. Many of you have written articles for your local society newsletter or have presented to an orchid group a talk that could be the basis for an article. Or you have read an article or heard a talk by someone who could be approached to write for our newsletter; we will gladly make the contact if you would prefer. Authors do not have to be members of the SOA, although we hope that after they learn about us they will join. If you have never written an article or if you are worried that it will not be perfect, do not be concerned – we will check it for spelling, grammar, etc. Inside all of us is a wealth of information and experience. PLEASE SHARE - WE NEED YOU!

The most important aspect of the SOA is the newsletter – it is our face to the orchid community and the main reason most of our members belong. We want to include articles that pertain to slipper orchids in diverse aspects, and many of these articles the reader could not find in any other publication. But to provide this multitude of information, we need authors.

As I hope you have noticed, we are including color pictures in every issue. If you do not have access to an appropriate picture(s) to include with your article, we will try to find one.

Another way you can help is to suggest topics that you would like to read about.

Following are some ideas for articles that may appeal to you or to someone you know, but these are just some of the possibilities.

Announcement of upcoming event involving slipper orchids Culture (Practices that you have found to be especially helpful. Or do you grow under unusual or difficult circumstances?)

Growing under certain conditions – outdoors, windowsill, basement, etc.

Slipper orchid organizations in other countries

Detailed information on a species or hybrid

What is your favorite slipper orchid and why? How do you grow it?

Analysis of a line of breeding
 Visit to a special orchid nursery
 Collecting experiences
 History
 Meeting, event or show attended
 Trends in hybridizing
 Newly discovered species
 New hybrid
 Outstanding flower you have seen or own
 Judging standards or issues
 Conservation issues
 Personal profile (I am sure you can think of many individuals who should be recognized for their contributions to hybridizing, knowledge about or outstanding growing of slipper orchids. This could be a regular feature, if we get enough input. Please feel free to suggest names, even if you do not want to interview the person and write the article.)
 Article in another publication, perhaps an historical one (Permission to be requested from author and publication, which we will do if you prefer after you give us the details.)

I am particularly interested in hearing from slipper growers in other countries. Do they utilize different culture? What are current trends in hybridizing? What are the favorite types of slipper orchids grown? What subjects are growers discussing? Potential authors need not be concerned about perfect English or possible errors; we will gladly edit as necessary.

Please contact Barbara Tisherman (btisherman@aol.com or 5145 Beeler Street, Pittsburgh, PA 15217) and/or editor, Janette Harris (jaharris@surry.net or 1947 Jackson Road, Westfield, NC 27053) to let us know how you can contribute to the newsletter. E-mail attachments are fine.

Barbara Tisherman

Quito Show and Conference

Quito, Ecuador will host the largest Latin American orchid show in history, the Quito Orchid Show, February 5 - 8, 2004. The Quito Orchid Society along with the Marie Selby Botanical Gardens, the Royal Botanic Gardens, Kew, and the Latin American Orchid Congresses have engineered this show to be diverse and extremely informative. It will be held at the Cultural Center of the Catholic University of Ecuador. The conference will feature talks in English and Spanish with translations. CITES and Phytosanitary certificates will be available for plants purchased at the show.

The speakers at the conference will be: Roberto Agnes, Mark Chase, Sandro Cusi, Calaway Dodson, Moises Behar, Phillip Cribb, Stig Dalstrom, Robert Dressler, Michael Fay, Eric Hagsater, Lou Jost, Andrew Maduro, Gustavo Romero, Philip Seaton, Gunter Gerlach, Wesley Higgins, Harold Koopowitz, Monica Navarro, Eduardo Sanchez, and Morris Williams.

Several different packages are being offered for travel after the conference to see the orchids in Ecuador and Peru. For more information, contact Harry Zelenko, zzz@uio.satnet.net or log on to <http://www.aoq.info/pages/1/index.htm>.

Supporting Members

In each issue of our newsletter we like to recognize and thank our supporting members. Each one of these businesses continues to support our efforts to have an outreach program for all slipper growers. If you are interested in becoming a supporting member, please contact Jean Metcalf at orchidiva@yahoo.com. We also hope that each of our members will support these businesses.

Antec Labs, Bob and Lynn Wellenstein
 B & B Orchids, Bob Ellis
 Barron's Greenhouse, Jack Barron
 Berkshire Orchids, Ann Levine
 Celebrate Orchids!, Barbara Noe
 Curved Air Orchids, Kevin Porter
 Flasks by Chuck Acker, Chuck Acker
 Fox Valley Orchids, Ltd., Tom Kalina
 Gypsy Glen Orchids, Dennis D'Alessandro
 Hilo Orchid Farm, James Fang
 Kingswood Orchids, Tony Whitaker
 Marriott Orchids, Hadley Cash
 New World Orchids, Glenn Lehr
 Orchid Inn, Ltd., Sam Tsui
 Orchidaceae, Mark Srull and Joan Bateman
 Orchidbabies, LLC, Earl and Phyllis Bailey
 Orchid Inn, Sam Tsui
 Orchids Limited, Jerry and Yoko Fischer
 Orchidview, H. P. Norton
 Paphanatics, unLimited, Norito Hasegawa
 Pinecrest Orchids, Leon Blumreich
 Piping Rock Orchids, Glen F. Decker
 R. K. Gems Orchids and Tropicals, Rod Knowles
 Ratcliffe Orchids, LLC, Paul and Mary Phillips
 Seagrove Orchids, LLC, Linda Thorne
 Slipper Orchid Study Group of Florida
 Tindara Orchids, Frank Coppolino
 Tonkin Orchids, Inc., Valerie Tonkin
 Tyler and Associates, Orchids and Tropicals, Russell M.
 Tyler, Ph. D., L. P.
 Whippoorwill Orchids, Tom and Barbara Larkin
 White Oak Orchids, Scott Dallas
 Windy Hill Gardens, Marilyn and Brian LeDoux

Woodstream Orchids, Bill and Lynn Evans-Goldner
 Zephyrus Orchids, John Doherty

UPDATES TO DIRECTORY: Here are some CHANGES to the membership directory you just received.

Pg. 24, Max Thompson and Bryon (not Byron) Rinke, Corrected phone # 620-221-1856, Fax: 620-229-6112.

Pg. 17, Joanne McHale should not be listed with Eugene Moore. Gene lives happily with his wife Norma, and doesn't know the lady. Joanne's correct address is: 356 Main St., Hampstead, NH 03841

Pg. 23, please change phone numbers for Mark Srull (Orchidaceae) to 509-625-9566, Fax: 509-525-3835. His zip code should be: 99362, not 98362.

SOA Officers and Directors

President: Barbara Tisherman, Pittsburgh, PA; (412) 683-0207; btisherman@aol.com
 Vice President: Thomas Larkin, Rogers, AR; (501) 925-2228; wiprLark@cs.com
 Secretary: Dr. Albert Svoboda, Santa Barbara, CA; (805) 969-4536; Asvoboda@earthlink.net
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 Director and Webmaster: Richard Grundy, Santa Rosa, CA; (707) 570-2828; richardgrundy@att.net
 Director: Kevin Porter, Santa Maria, CA; (805) 349-7337; CurvedAir@msn.com
 Newsletter Editor: Janette Harris, Westfield, NC; (336) 351-3945; jaharris@surry.net
 Membership Secretary: Jean Metcalf, Lake City, PA; (814) 774-4932; orchidiva@yahoo.com

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E-mail: cymsociety@prodigy.net