



The Slipper Orchid Alliance Newsletter

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Summer 2004

Multifloral Paphiopedilums

I like Paphiopedilums of all sorts, but my favorites are the multiflorals. A considerable number of Paph species have more than one flower per spike, but this article will concentrate on *rothschildianum*, *sanderianum*, *philippinense*, *stonei*, *lowii* and their hybrids. These multifloral Paphs put on a big show when they bloom, they stay in bloom for quite some time, and they have an extended bloom season. In typical years, I'll have at least one multifloral Paph in bloom from early January well into June. If you grow them already, I hope this article provides you with some new things to try. If you do not grow them already, I hope you decide to try a few - they're really worth it!

First I'll discuss their cultural requirements, and how I try to meet those requirements. Then I'll talk a bit about how to get multiflorals to bloom. I'll close with thoughts about some of the breeding lines that I find particularly exciting.

Growing Multiflorals

Generally, I find that multiflorals will grow just fine in more or less the same conditions that your other Paphs like. However, there are some adjustments that I make for multiflorals.

Light. I grow multiflorals brighter than my other Paphs. In my windowsill area (southeast and southwest exposure,

with very tall trees far back from the house), I put the multifloral seedlings up close to the glass, whereas I put the *Maudiae*-type Paphs well back from the glass. Once multiflorals reach about 14"-16" leaf span, they go into my greenhouse, where they receive almost as much light as my *Cattleyas*.

Temperature. My growing conditions are designed for Paphs, and I make no adjustments for multiflorals. My windowsill area ranges from mid-60s at night up to 80 in the daytime. The greenhouse is heated to 60 degrees at night and 70 in the daytime during the winter. During the summer, temperatures go up to the mid-90s in the daytime, typically in the 70s at night. I have white aluminum roll-down exterior shading on my greenhouse, and a great deal of thermal mass. During the summer I open all the windows and both ridge vents, and the greenhouse stays a few degrees cooler than outside during the day, a few degrees warmer than outside at night. By the way, I have heard from growers in Florida that multiflorals have no problems with summer heat.

Watering. My windowsill slippers get water twice a week, year round, with minor adjustments to accommodate my travel schedule. In the greenhouse, I basically follow the same schedule, but I may delay watering a day or so when it's cloudy in the dead of winter, and I may accelerate a day when it's hot and dry in the height of summer.

Water Quality. I have good water quality (64 ppm total dissolved solids). All sorts of slippers grow well for me. I understand from other growers that water quality is one reason for that. For more information on water quality and slippers, check the Reading Room at AnTec Laboratories' web site.

Fertilizer. My Paphs get water with no fertilizer once a month, and at the other waterings I fertilize lightly (about 225 ppm total dissolved solids). Periodically, when my plants are due for pure water, I'll water them a second time immediately afterward, to help flush out any accumulated salts. I use a variety of fertilizers. From talking with other growers, I'm convinced that multifloral Paphs don't need much fertilizer, don't want much fertilizer, and are relatively intolerant of salt buildup in the potting medium.

Potting Medium. I use coconut-husk-based mixes.

Membership Renewal

If you receive a membership renewal form with your newsletter, your membership is up for renewal within the next three months. Please fill out the form and mail it to our membership secretary, Jean Metcalf, 2553 Main St., Lake City, PA 15423. The SOA directory will be mailed in August, so please renew your membership promptly so that your information will be included in the directory.

Caution: I wash my coconut husk for a full week, changing the water once or twice a day. Smaller plants (up to 3.5" pot size) get a seedling mix, and larger plants get an adult mix. The seedling mix is 8 parts small coconut husk, 2 parts medium coconut husk, 3 parts small Aliflor, and 1 part small charcoal. The large mix is 4 parts medium coconut husk, 2 parts small coconut husk, 2 parts medium Aliflor, 1 part small Aliflor, and 1 part medium charcoal. These mixes work significantly better for me than the bark mixes I used previously. The plants grow faster, with more roots, and the medium lasts longer.

Pot Shape. All my slippers seem to like to send their roots deep. Accordingly, I believe in using pots that are relatively tall in comparison to their diameter, and I do not use Styrofoam peanuts or other "drainage." Instead, I use potting mix all the way to the bottom of the pot.

Repotting. I repot my multiflorals annually, but when I missed a few there were no ill effects after two and a half years (that's in the coconut husk mix; the bark mix I used earlier would go bad in a year or so). I "never" divide multiflorals; everything I've read indicates that they like to be grown large, and that it's risky to divide them. Besides, I just love to see a plant with two or three of those enormous bloom spikes! There's a rule of thumb for Paphs that advises potting them in the smallest pot that will accommodate the roots. My experience suggests that's a good rule for most Paphs, but I find that multiflorals like to have a bit more growing room than that, so for multiflorals I use one size larger pot than I would for complex or *Maudiae*-type Paphs with the same size root ball. For all Paphs, I select a pot size based on the size of the roots, without regard to the leaf span.

Getting Multiflorals to Bloom

You may think you're having trouble blooming multiflorals, but the real problem may be that it's just not time yet:

First-bloom rule of thumb. Most multiflorals will bloom on their first growth when their second growth is in its second year of growth. However, there are exceptions. Some *sanderianum* hybrids will bloom on a single growth. I have a couple of *philippinense* seedlings that bloomed when their second growths were just a couple of months old. Conversely, hybrids between multiflorals and *Parviflorum* group Paphs, and hybrids between multiflorals and *Maudiae*-type Paphs, often require a few extra years before they will bloom.

Rule of thumb for number of leaves. Most multiflorals will bloom after maturing six or eight leaves, but I've seen plants that needed ten leaves in order to bloom.

Rule of thumb for leaf shape. When the new pair of leaves is oriented vertically instead of horizontally, that's a signal that the plant is ready to send up a bloom spike.

How long does it take to mature a new growth? Most adult multiflorals require two or three years to mature a new



Paph. Berenice 'Stella' AMAOS
Marriott Orchids, Used with permission

growth. If your *rothschildianum* seedling blooms this year, it may skip a year or two before it blooms again. Soon afterwards, however, when it gets up a head of steam, it will be blooming every year, because you'll have new growths maturing every year. But there's an exception - *lowii* and some of its hybrids only need one year to mature a growth.

If it seems to be time for your multifloral to bloom, and it is not blooming, here are some things worth trying:

Less fertilizer. Frank Smith of Krull-Smith Orchids, who grows way more than his fair share of great multiflorals, stops fertilizing adult multiflorals around Christmas and doesn't start again until they bloom. He says this technique got many of his multiflorals to bloom that just refused to bloom before. Seems to me that this is another bit of evidence that water quality (i.e., low levels of dissolved salts) is critical for these plants.

Better water. Terry Glancy (Pine Ridge Orchids) says that his reluctant multiflorals bloomed when he switched to reverse-osmosis water. If you aren't ready to invest in an R.O. water system, you could mix tap water with distilled water to see if it makes a difference. Or, you could start collecting rain water.

Repot. If the mix has accumulated too many salts, or if it

Upcoming Events

Summer Slipper Seminar

Williamsport, PA

Sunday, August 15, 2004

Speakers and guest vendors. Contact Bill Wentz 609-773-0447 or Jeff Tucker 570-998-9846 to register or for more information. Article on page 10.

is breaking down, that may be holding the plant back from blooming. Actually, I believe that whenever a slipper is under-performing, repotting is a good idea.

More light. For most orchids, this would be the first suggestion. For multiflorals, I believe that this is less important than the preceding suggestions. Before I had my greenhouse, I bloomed multiflorals successfully in my windowsill area, and I have seen many multiflorals grown and bloomed successfully right beside *Maudiae*-type Paphs.

Promising Breeding Lines

Species. I'm a complete sucker for the newest, latest and greatest line-bred *rothschildianum*, *sanderianum* and *philippinense* seedlings. These are right at the top of my all-time favorites list: a great *roth* with four or five flowers and a twelve-inch wingspan, any *sanderianum* at all, or a great *philippinense v. roebelini* with five or six flowers and nine or ten inch petals. Wow. In my view, there are no finer plants in the whole orchid family.

Primary Multifloral Hybrids. Although breeders are well into third-generation breeding, I believe it's very hard to improve on the great primary hybrids. Here are my favorites:

Prince Edward of York (*rothschildianum x sanderianum*). Size, better shape, and improved vigor from the *roth* parent, plus long petals from *sanderianum*. How can you top that? In my view, you can't. Everyone should own one of these beauties. Or more.

Saint Swithin (*rothschildianum x philippinense*). I've probably seen a hundred of these, and I can count on the fingers of one hand the plants that I wouldn't be happy to have in my collection. My favorites have a tall, straight dorsal and lots of yellow color.

Lady Isabel (*rothschildianum x stonei*). Has *roth* shape and *stonei* color. Beautiful white background on the dorsal, and red on the pouch. Just fabulous. By reputation, *stonei*

is difficult to grow, but my Lady Isabels grow just as well as any other multiflorals.

Berenice (*lowii x philippinense*). *Lowii* contributes vigor and color and flower count, *philippinense* contributes petal length. The best ones have intense purple color in the petal tips and six (or more) flowers per spike. Even better, this one matures growths in one year (one of the few multiflorals that will, courtesy of *lowii*), and as a result it blooms every year, even as a young adult.

Breeders are continually remaking these great hybrids, with better and better parents. There are other wonderful primary multiflorals as well, but these four are my personal favorites.

Other Interesting Hybrid Lines. Here are some other hybrids that have me all excited:

Saint Swithin, Variations on a Theme. Want a slightly smaller, darker Saint Swithin? Try Paph. Moustache (St. Swithin x *philippinense*). How about Saint Swithin on steroids? Try Gary Romanga (St. Swithin x *rothschildianum*).

Sanderianum, Variations on a Theme. How to get the *sanderianum* petals, in a more vigorous plant, with better color, and better shape? One good approach is Paph. Michael Koopowitz (*sanderianum x philippinense*), especially when using an extremely dark *philippinense*. Another good one is Paph. Kolosand (*sanderianum x kolopakingii*), which has great vigor and flower count, although relatively little color. Paph. Angel Hair is good also (St. Swithin x *sanderianum*). I'm excited about the back-cross of Prince Edward of York and *sanderianum* but haven't seen any in flower. A caution, however. The typical expectation for petal length is the geometric mean of the parents, which means you're relatively unlikely to get really long petals. For example, the geometric mean of a great *sanderianum* (30" petals) and a great *philippinense* (9" petals) is a bit more than 16," not the 24" plus that you dream about.

Parvi hybrids. Yes, I know they're slow to bloom, but hey. When you see Dollgoldi (*roth x armeniacum*) or Harold Koopowitz (*roth x malipoense*) or Gloria Naugle (*roth x micranthum*) on a show table, they take your breath away. I'm excited about these next-generation *Parvi* hybrids:

For yellow: Norito Hasegawa x *roth* and St. Swithin x *armeniaceum*. For that matter, St. Swithin x Norito Hasegawa (although I haven't seen that offered anywhere).

For pink and red: Lady Isabel x *micranthum*, *rothschildianum* x Magic Lantern.

For green: St. Swithin x *malipoense*, *kolopakingii* x *malipoense*.

But, you may say, multiflorals take a long time to grow up, and they take up a fair amount of space. I say, so what? So does *Laelia purpurata*, which is my other nominee for greatest orchid of all, but don't get me started on that ... I guess that I'm particularly drawn to orchids that grow slow, grow big, and really put on a show. If you like that sort of

thing, you should try multifloral Paphs. Best wishes for good growing!

Charlie Wilkins
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What Price *besseae*?

Long gone are the days when we could walk, run, climb and crawl for great distances and enjoy it. And many tales recount the labors of those in search of orchids *in situ*. Chuck Acker's *The Holy Grail of Orchids* (SOA Newsletter, 5, 1, Spring 2004) is a great example of the way to do an orchid safari. His "Death March" was in the great tradition of searching for orchids.

We assumed that the possible orchid safaris these days would have to be from an armchair, reading of the heroic treks of others (Russ) or very brief excursions (Rod). As it turned out, it is quite possible to observe from a chair (bus chair) and see a profusion of orchids *in situ* and to get close to them with a reasonable amount of strenuous effort.

Attending the February 2004 Latin American Orchid Show and Conference, Quito, Ecuador, 200+ registrants enjoyed a great program of presentations and orchid displays. Alexander Hirtz and Harry Zelenko did a phenomenal job of planning and execution. The presentations were enjoyed from comfortable auditorium seats, and the plants were seen on leisurely walks through the exhibition hall.

The Show was an opportunity to see blooming plants previously seen only in photos (well, digital images, these days) - acineta, anguloa...an alphabetical array. Although there weren't many slipper orchids, there was a magnificent *Phragmipedium caudatum*.

Some three score individuals from the Conference signed on for the brief flight to Cuenca, Ecuador and a visit to Ecuagenera. There, among many genera in the greenhouses, were some fine examples of *Phragmipedium* species and hybrids.

A special offering of the visit to Ecuagenera was the opportunity to see *Phragmipedium besseae*, *in situ* and in bloom. Ah, but there was a price to pay, up front, and on site.

Directions to the site were somewhat less than adequate, and we rode, and we rode, and we rode - no *besseae*. However, the pre-*besseae* portion of the trip was not without merit. From the bus, many large colonies of *Sobralia* could be seen. They were as prolific as sunflowers along a Kansas roadway.

Eventually, it was concluded that we indeed were lost and nowhere near the *besseae* site. However, we were seeing many orchid plants in bloom, and they could be enjoyed from the comfort of the bus or up close after a few steps to

the side of the road. Blessed with the company of an orchidist familiar with the orchids of Ecuador, we had a veritable riding safari - no walking great distances, running, climbing, or crawling. This was a small price to pay for the opportunity to see so many different plants and to get a sense of their growing conditions.

Retracing our path, we did manage to get to the site of *besseae* in bloom. Some of us (Russ) opted for the "budget view" and stayed at the roadside. From that vantage point it was possible to see, with binoculars, an intense red spot on the face of a sheer rock cliff. Great! We could see that there was a great deal of exposure to the sun, with the light broken by other growth, and we could assume that the plants received water that cascaded and flushed through the plant roots. Considering our minimal effort, it certainly was a rewarding experience.

Fewer in number, there were those (Rod) who chose the "deluxe view" and climbed and crawled to get closer to the site of the blooming plant. In addition to what we learned, they learned that the roots of the plants were on and in lycopodium fern (club moss) which presumably protects the *besseae* roots from intense sun and retains the appropriate amount of moisture to maintain the plant. Granted they paid the price of tired muscles, increased blood pressure, and fatigue, but they, too, felt that it was a good investment.

At the end of a long day, it was clear that orchid safaris can be adjusted to the needs and capabilities of the individual. It also was clear that we got real value for our individual investments.

Our next safari? Although orchid trips to Ecuador can be arranged at any time, it is anticipated that there will be a great opportunity in 2007. "Rumored" is a tri-city show - Quito, Cuenca, and Guayaquil. We can handle "the price."

Russell M. Tyler
 Rodney L. Knowles

Notes from Quito

"Madame President" - the words came from behind me as I was looking at an exhibit at the Latin American Orchid Show and Conference in Quito, Ecuador, February 5-8, 2004. I turned around to find two SOA members, Russ Tyler and Rod Knowles. (I admit to a thrill at hearing this special greeting.) During the next several days, jam-packed with attending excellent lectures and social events and perusing the exhibits again and again to see all the plants, I was delighted to discover even more SOA members thoroughly enjoying all the activities: Geary Baese, Christine Chowning, Dennis D'Alessandro, Joe and Rosalie Dixler, Steve Drozda, Terry Kennedy, Harold Koopowitz, Karen Muir, and Marica Romick. Surprisingly, our attendees comprised about 10%

of those registered from the United States!

The Quito Orchid Society was very hospitable and had done a good job of organizing the event. The show was somewhat smaller than I had expected but included many gems - loads of tiny plants and species new to our North American eyes. I was surprised that there were few slipper orchids, the outstanding one being a *Phragmipedium warscewiczianum* with a very dark pouch from Panama.

There were several lectures that were of special interest to slipper lovers. Mark Chase explained genetic boundaries, using slipper orchids as his prime examples. He was one of the first plant taxonomists to apply DNA data to problems in plant taxonomy and currently has a molecular laboratory at the Royal Botanic Gardens, Kew. He made two points particularly important to us. According to his analysis, *Mexipedium* is a distinct genus, and *Phragmipediums besseae* and *dalessandroi* are separate species. I hope his view will get wider distribution and end the controversy over these issues.

Harold Koopowitz, Editor-in-Chief of the *Orchid Digest* and well-known authority on *Paphiopedilum* species and hybrids, presented a history of *Paphiopedilum* breeding over the last 150 years, his ideas on future directions in breeding, and problems with CITES. He mentioned that pot plants have been taking over the *Paphiopedilum* market, and very few orchid nurseries are doing *Paphiopedilum* breeding.

The first Executive Director of Selby Gardens and founder of the Orchid Identification Center there, Calaway Dodson is now an adjunct Selby Senior Scientist and Senior Curator at the Missouri Botanical Garden. His explorations and studies of orchids in Ecuador began in 1957. He gave a scathing review of CITES, saying that it has never saved a single plant, much less a species. Unfortunately several countries in the Andes have an additional protocol that hinders exports of orchids.

In the last issue of the SOA Newsletter I reported on Alfredo Manrique's talk on *Phragmipedium kovachii* in nature and cultivation.

I feel extremely fortunate to have been able to attend this meeting and show. It was an intense, educational and enjoyable experience, made even more fulfilling by the people I met from many countries.

After the conference, many of the attendees extended their trip by visiting Ecuagenera. *Orchids* magazine had an article about this amazing orchid nursery in the January 2004 issue of *ORCHIDS*. Trying to see the contents of twenty greenhouses is overwhelming, as each is packed with thousands of plants at different levels and on all surfaces, many hanging on wire stands and walls. I heartily recommend a visit, but plan on as much time there as you can.

Barbara Tisherman



Paph. Orchilla 'Chilton' FCC/AOS
Photography by Tom Larkin

SOA Trophy Winner

John & Debbie Dolen of Omaha, Nebraska won the SOA trophy at the Springfield, Missouri Show on March 12-13, 2004, for a beautifully bloomed Paph. Orchilla 'Chilton,' FCC/AOS. John and Debbie are superb growers of Paphs / Phrags and Phals as well as some other genera, and are recipients of several AOS quality awards. They exhibit under the name of Prairie Orchids. John did not belong to the SOA prior to winning the trophy at Springfield, but quickly submitted his membership fee and purchased a T-shirt for Debbie. We are glad to have John and Debbie among our members.

Tom Larkin

Wichita Meeting SOA Trophy Winner

Phragmipedium caudatum 'Barbara Ann,' grown by Tom and Barbara Larkin of Whippoorwill Orchids was a big winner at the show in Wichita during the AOS Members Meeting there on April 22, 2004. Not only did it win the SOA trophy, but it also received an AM of 84 points and was named the best plant in the show! Congratulations to our SOA Vice President!



Phrag. caudatum 'Barbara Ann' AM/AOS

Photography by Tom Larkin

Tom continues this article with the story of this exceptional plant.

This plant was the last of a group of seedlings grown from flask that was purchased several years ago. Marilyn LeDoux and I would purchase select flasks and share them. This flask was purchased as a selfing of a 'sanderæ' variety, but all that Marilyn and I bloomed turned out to be the standard caudatum type. Over the years many of the seedlings were sold at various stages of growth, but we retained approximately six plants to bloom. Once the plants bloomed I was left with too many caudatums for our size collection, so each year at our "Orchidfest" one of them would go on the 'block' and be sold in full bloom. (We have a couple of superb caudatums in our collection, 'Windy Hill' & 'San Carlos,' so I had no special need for more.) Each year at our "Orchidfest" one of these would be set out on display, elevated to allow full extension of the petals, and each year the selected one would be sold, the price ranging from \$85 to \$125, depending on the size of the plant and number of inflorescences. No special grading of these remaining six plants was accomplished; I would just pick the one each year that struck my fancy. Subconsciously, though, I believe I was avoiding this particular plant in the process of selecting a candidate to go on the block. Finally this year at our 7th annual "Orchidfest," this was the only plant left, and Barb said, "surely you are not going to sell this plant." Soooooo this plant became a display plant at the "Orchidfest" and stole the show.

With the Wichita show just a few days after our "Orchidfest" Barb thought it a great idea to take the plant with us since we were staging an exhibit for our local orchid society. That's where I put my foot down. Barb knows I don't display the long-petaled Phrags outside the greenhouse. "It is guaranteed frustration to travel only to have the petals damaged, and I will not expose myself to this automatic disappointment." We have never taken the caudatum group, including Grande types, to a show or judging because of this; the flimsy, tissue-like petals make it a sure bet for failure. A day later Barb approached me with her idea of a packing job that would all but guarantee safe arrival of the plant and blossoms. So I agreed, and Barb proceeded to instruct me

on the packing. The elevated pots for the plant were already duct-taped together, so the unit was placed in a 12" x 12" box cut down to about 8" deep. The plant/pots were then steadied by stuffing the box with crushed newspaper up to within an inch or so of the petal ends. Over the paper Barb carefully placed sheets of cotton batting (that is used to line quilts) and layered it up until the petals were touching and curled up a bit to avoid swaying from the motion of the car. The plants (since she did so well I decided to also take caudatum 'Windy Hill') firmly in their individual traveling garb, were placed carefully in the van for the trip to Wichita. The rest is history! They obviously arrived without a "scratch" as the slogan goes.

We use no special cultural techniques on our caudatum types, other than that they are in usually smaller pots than other phrags might be, given their size. We use pots just barely large enough to hold the root mass on the caudatum types and water less frequently (allowing them to dry a little more) than other Phrags. Instead of going into much detail on culture here I would rather refer you to either our website cultural sheet (www.wiplark.com) or to the Volume 67, #4 issue of the Orchid Digest (the Phrag Issue), in which Marilyn LeDoux has a superb article on Phrag culture. I refer folks to this since Marilyn is responsible for the refined techniques we use, and our methods pretty much parallel hers. (Yes, we are close friends.)

Tom Larkin

Hadley's Way

The first time that a First Class Certificate (FCC) was awarded in Pittsburgh, Pennsylvania was way back in 1973. That award went to Vuylstekeara Cambria 'Plush.' Then in March of 1979 Beallara Tahoma Glacier 'Olga' received this distinction. After a twenty-five year wait, in March, 2004, lightning struck twice as the acclaim was bestowed upon two orchids, Paph. Winwine 'Dark Spell' and Paph. Macabre 'Dark Dominion' at the Orchid Society of Western Pennsylvania show. Both were Paphiopedilums exhibited by Hadley Cash of Marriott Orchids and were the first FCCs that Cash has won for his Paphs. The judges were so impressed with his plants that they awarded a Judges Commendation to his exhibit for a "25-square-foot exhibit of unusual educational and aesthetic value with eighteen superior quality individual entries of the genus Paphiopedilum, including species, primary hybrids, secondary hybrids, complex hybrids and primary by complex hybrids; awarded for extraordinary quality of all entries, including two FCCs, six AMs, and one HCC awarded at this judging."

Marriott Orchids is located in Oak Ridge, North Carolina, nestled between Winston-Salem and Greensboro. Hadley Cash, who is the affable proprietor of Marriott Orchids, smiled broadly when asked about how he chose the name for his orchid enterprise. He insisted that he had no relationship with hotels that share the name. The name "Marriott" was his mother's maiden name. Since there were



Paph. Winwine 'Dark Spell' FCC/AOS

Photography by Hadley Cash



Paph. Macabre 'Dark Dominion' FCC/AOS

Photography by Hadley Cash

no surviving male heirs to carry on that family name, Cash decided that a nice way to honor the name was to use it for his business venture. Unfortunately, a problem with the name is the all too frequent telephone calls for room reservations. It seems that directory assistance occasionally gives his phone number to those inquiring about the hotel.

Cash is a familiar person at many of the orchid events in the eastern United States. After twelve years as a graphic artist, he entered the orchid business full-time in 1998. Before that, orchids were his hobby - he acquired his first orchid about twenty years ago. His early interest in Paphiopedilums, particularly "complex Paphs," is an interesting tale.

Before he made his first cross in 1985, Cash found it difficult to locate quality plants that could be used to begin his complex Paph-breeding program. At that time, vinicolor Paphs were just arriving on the orchid scene, and they were extremely popular with the orchid-buying public. A few years after the vini's became all the rage, two other events caused a shift in the orchid buyers' tastes and spending habits. The newly introduced Chinese parvisepalums, especially *Paph. armeniacum*, *Paph. micranthum* and *Paph. malipoense*, began to compete with the vinicolor and complex Paphs for bench space in greenhouses. The complex Paphs began to wane in popularity even further. A new treaty to limit trade in endangered species was also signed, and the impact of CITES began to be felt by slipper orchid enthusiasts worldwide. At that point, there was a sudden rise in the demand for anything species-related.

When his breeding program was just beginning, Cash found that most of the other commercial growers around the country were tailoring their breeding to meet the demand

for vinicolors, species and primary crosses. At that point, Hadley Cash chose to go in a different direction. His fondness for the complex Paphs, coupled with their relative scarcity, moved him to make them the focus of his breeding program.

After dabbling in hybridizing for a year or two, Cash decided that his efforts could become a successful side business or even a full-time activity. He began to seek higher quality plants for use in hybridizing. To locate high quality stud plants, Cash bought twenty years of back issues of the *Awards Quarterly*. He scoured them, issue by issue, award by award, marking any of those awarded Paphs that would be valuable in his hybridizing program. Then he began his phone calls, as he used the information provided in the award descriptions to locate the owners of the coveted Paphs.

Cash said that at first he was embarrassed to call those orchid people. "Here's Hadley Cash, who's barely got his feet wet in orchids, especially slippers, calling people who are getting AOS awards, and they're probably wondering why this guy, whom they've never heard of, is calling and trying to get a piece of their plant?" Fortunately, as is generally the case in the orchid world, the vast majority of the people that Cash contacted were kind and generous in sharing information, knowledge and encouragement. More often than not, Cash was able to acquire the plants that he was seeking.

Cash registered the Paph. Winwine (Winston Churchill x Joanne's Wine) in 1993. It was one of his early crosses, made in about 1985, when he was just starting out in vinicolor breeding. Paph. Winston Churchill, he knew, was highly respected as a parent for complex Paph breeding. Meanwhile, Paph. Joanne's Wine was one of the finest vinicolors that he had ever bloomed. The first time that the cross was made, the Winston Churchill selected as the pod parent was only a one and one-half growth plant. The yield from the cross was only half of a flask, that is, about a dozen seedlings. The cross was remade the next year, using the same, albeit more mature, parents and the cross yielded about sixteen flasks! The experience showed the difference in germination that results from using a pod parent that is strong and vigorous versus a relatively weak, immature plant. Now Cash will not use a first-bloom seedling as a pod parent, no matter how phenomenal the flower.

When the Paph. Winwine cross was made, Cash was not selling flasks. He shared a greenhouse and his bench space was limited. After six months of growing all of the Winwine seedlings, those seedlings that did not show the dark red-purple pigmentation at their base were discarded. After the culling, only one-quarter of the original Winwine seedling population remained. Cash justified his decision with the observation that when making a complex-vinicolor cross like Winwine, the goals are the glowing, dark color with nice complex form. The seedlings without the visible



Hadley Cash at the Orchid Society of Western Pennsylvania Show

Photography by Steve Drozda

pigment could not reach those goals.

Looking to the continuation of his hybridizing, Cash noted that he used the Winwine 'Dark Spell' clone in a cross with a particularly nice Paph. *bellatulum*. The cross has resulted in only one flask of seedlings. The purpose of the cross is to round out the flower's form. The cross will likely shorten the inflorescence as well as reduce the size of the flower, but when *bellatulum* is crossed to highly colored things, the tendency is to intensify the color even more. It is uncertain if the color of 'Dark Spell' could be intensified, but wider petals and a rounder form, even with a smaller flower, would be a really great thing, Cash believes.

The problem with the Winwines is that they are probably all triploids. According to Cash, Paph. Winston Churchill is believed to be a tetraploid, and the Paph. Joanne's Wine was a diploid. Therefore, he could safely assume that the Winwines are all triploid. To illustrate this further, Cash noted that the Winwines have never been successful as a pollen parent, only as a reluctant pod parent. That's a typical trait of a triploid parent.

A challenge to hybridizers, like Hadley Cash, is the occasional dead-ends that can be faced. "Sometimes, you find a plant that is a reluctant breeder and produces only a portion of a flask, maybe eight or ten seedlings." However, those next generation seedlings may actually be quite fertile. To illustrate, Cash crossed Paph. Miller's Daughter (Chantal x Dusty Miller) with Paph. Skip Bartlett (*godefroyae* x F. C. Puddle). Paph. Skip Bartlett was the greatest breeder from the mid-1980's to the mid-1990's, while Paph. Miller's Daughter, for twenty years, was the best formed white/pink Paph anywhere in the world but not considered to be a good breeder. His cross yielded only one flask of seedlings. With

the cross of the two, Cash hopes to create exceptional white/pink seedlings that will also be very fertile.

With all of the discussion of complex Paph hybridizing, it is easy to lose track of the timing involved in the process. Hadley Cash waits from seven to nine months from pollination to pod harvest. Once the seeds are flaked, the waiting time is about eighteen months. After being planted, the first few seedlings begin to bloom at four and a half years with the average plants blooming at around five to five and a half years. Adding it all up, the period from pollination to flowering is about seven years.

Recently he has noted a sizeable increase in interest in the complex Paphs. In his experience during the last three years he has found that at shows he will sell two to three complex types to every one Maudiae or vinicolor type. Interestingly, if he has reds with spotted dorsal sepals at a show, despite a variety of other colors on his table they are the first to sell out.

His breeding is always evolving, partly as a result of what he sees a demand for and partly in directions that he thinks will be interesting and worth exploring. Initially, his mainstay was white and pink crosses, and they are still what he does more of than anything else by far. However, over the past several years, he has made a lot more crosses with complex greens, golds, reds and reds with spotted dorsal sepals. While currently about half of the seedlings on his lists are pinks or whites, the rest are all of the other colors plus species and novelties. Over the next few years, Cash anticipates that his offerings will be about one-third whites/pinks, one-third other complex colors and one-third species and novelties. He states that he has always loved the species but has not done a lot of breeding with them because there are a lot of excellent breeders working with them. At the Pittsburgh show he did receive awards for two species, primulinum and moquettianum. He feels that his brachypetalum breeding is one of his strongest areas. As an example, he has been line-breeding niveums for about seventeen years, and a third generation niveum received 86 points, the highest AM awarded to a niveum.

As the breeding program at Marriott Orchids continues to progress, there will be something other than buyers' tastes, fashions, and current award winners that will determine the directions he will take. Cash feels that while meeting a demand in the orchid market place is necessary, his motivation will be new looks in his complex Paph seedlings. He stated, "While size is an important factor in judging Paphs, I find that the forefront of what I'm trying to create is new and different looks." He continued, "When I see things that pop up in my offspring that have unique qualities, even though they may not have award quality form, I then often try to move in that direction in order to create a

population that has that rare characteristic of either color or markings."

While tastes of slipper orchid growers will continue to change, the factors that will be influencing that change will include the imagination and creativity of Hadley Cash. When those "new looks" begin to appear on sales tables and in judging centers around the world, that will be Hadley's way.

Steve Drozda

SOA Auction Donations

We are extremely grateful to the following members who contributed plants or orchid related items for the very successful auction we held during the Paph Forum in Washington, D.C., February 21, 2004: Hadley Cash (Marriot Orchids), Jerry Fischer (Orchids Limited), Tom Larkin (Whipporwill Orchids), Marilyn LeDoux (Windy Hill Gardens), Barbara Noe (Celebrate Orchids!), Gordon Slaymaker, Linda Thorne (Seagrove Orchids), Bob Wellenstein (Antec Laboratories), and Charlie Wilkins.

At the AOS Members Meeting in Wichita, Kansas on April 24, 2004, we held a brief auction following the speaker we sponsored, Glen Decker. Lois Dauelsberg, Glen Decker (Piping Rock Orchids), Norito Hasegawa (Paphanatics), and Tom Larkin (Whipporwill Orchids) gave plants which were snapped up by the audience.

Auctions are a great way to raise additional funds to help us sponsor speakers and color pictures in our newsletter. At the same time those who bid have the opportunity to get some super plants, many awarded and most not otherwise offered. We plan to continue holding an auction whenever we sponsor speakers. Our members' generosity is very much appreciated.

Barbara Tisherman

Summer Seminar

On Sunday, August 15, 2004, Bill Werntz is presenting the 12th Annual Summer Seminar near Williamsport, Pennsylvania. It should be of special interest to many slipper lovers. Speakers will be Valerie Lowe (Baltimore, Maryland) on AOS Awards to Phragmipediums, 2002-2003; H. P. Norton (Orchidview, Moncks Corner, South Carolina) on Phragmipedium Culture Under Lights; Hadley Cash (Marriott Orchids, Kernersville, North Carolina) on Flask to FCC; Bob Wellenstein (Antec Laboratories, Candor, New York) on Phragmipedium Culture; and Bill Werntz (Lambertville, New Jersey) on What Becomes a Legend Most – Phragmipedium Jason Fischer, 60 Award Slides.

Plants for sale will be offered by H. P. Norton, Marriott Orchids, Antec Labs, Marsh Hollow Orchids (Ontario), and Tony Whitiker (North Carolina).

The Seminar is scheduled for 9:00 a.m. to 5:00 p.m., and the registration fee of \$20 includes lunch. For more information and directions for getting to the Seminar, please contact Bill Werntz at 609-773-0447 or Jeff Tucker at 570-998-9846.

discomfort grew. When he heard about an Orchid Police raid at a local grower's greenhouse, he decided to dispose of the plants and all of the paper trail that led to them. Then he remembered that certain facilities had been designated as Rescue Centers. He learned that there was an arboretum in his state that was a rescue center, so he depotted the seedlings, carefully packed them in moist sphagnum moss, and mailed them from a post office in another town, using a fake return address. Inside, each little bundle was labeled with the correct name and a short message that said:

ILLEGALLY IMPORTED PLANT!!!!
PLEASE RESCUE!!!!
CONTACT US FISH & WILDLIFE PEOPLE FOR
INSTRUCTIONS.

The arboretum has been caring for the plants. Those seedlings can never be sold, but there are enough of them to get a good batch of plants for breeding and the resulting offspring CAN be sold. The head of the Rescue Section figures that the upcoming flasks, compots, and plants can eventually be sold with the funds going to expand the Rescue Section's facilities. In the meanwhile, Yoshi who is on the board of directors of the local orchid society, has convinced the board that It Would Be A Good Thing for the board to make a donation to the arboretum's rescue center.

Katie Pleasance

Short Story about Illegal Orchids

(Editor's note: The following stories are fiction, used here to illustrate the workings of CITES and the United States regulatory organizations whose job it is to enforce the CITES laws.)

Joe's vietnamense

Joe had bought some flasks of Paph vietnamense and vietnamense crosses during a large orchid show. The transaction had taken place in the vendor's hotel room. The plants have been growing happily in compots in Joe's greenhouse. Thinking himself clever, he had put phony names on the labels. Joe felt safe. He knew that he could connect the phony name with the real name. Over time, Joe became more and more concerned about the Orchid Police. Then, he heard at an orchid society meeting that the Orchid Police could do DNA tests on his plants and determine if they had been legally obtained from Antec Lab. His

2004 Paph Forum

Slipper orchid lovers were greeted by a beautiful winter day at the U.S. National Arboretum in Washington, D.C. for the 24th Annual Paphiopedilum Forum held on Feb. 21, 2004. The featured speakers this year thoroughly illuminated the genus Phragmipedium. Once again the Forum was sponsored by the National Capital Orchid Society and was an American Orchid Society sanctioned event with AOS judging. The Slipper Orchid Alliance conducted a number of activities including an auction, sales of t-shirts, and presented the "Peoples choice Award."

Olaf Gruss of Germany began the program with a slide presentation of the currently known Phragmipediums. Olaf is well known in the United States for his editing work for the *Orchid Digest* publication of the "Checklist of the Genus Phragmipedium." Phrag connoisseurs appreciated his in-depth descriptions and insights, since many taxonomic changes have occurred in the genus in recent years. Mr.

Gruss then screened slides of new and innovative Paphiopedilum hybrids from hybridizers around the world. His photographs supported his conclusion that many of these hybrids do not exhibit characteristics of the listed parentage. Audience members were provided an opportunity to join the *Orchid Digest* and were able to have their copies of the *Digest's* Phragmipedium issue personally signed by Olaf.

Paula Bannon of Virginia presented a beautifully organized digital slide presentation of recent Phragmipedium awards. She recognized Frank Slaughter and the AOS's award slide scanning project for their assistance in providing digital images for her presentation. Following lunch, Paula and her technical assistant and husband, Bill Bannon, treated everyone to a delightful multimedia display of recent Paphiopedilum awards, complete with music.

Glen Decker, of Piping Rock Orchids, spoke about his experiences while orchid exploring in Peru. The audience was rapt as he described his small group's encounter with the newly described Phragmipedium known both as Phrag. kovachii and Phrag. peruvianum. His presentation also gave insights into the discovery, introduction, and description of this exciting new species. (While the species name *kovachii* was the first to be published, the controversy surrounding the type specimen's introduction, description, and publication casts doubt on which name will prevail.) Glen and his party observed that the flower continues to grow after opening, taking several days to reach its unusually large size for the genus. The flower is known to approach eighteen centimeters in overall width! This interesting characteristic revealed itself during the efforts of Angela Mirro, noted botanical artist and member of the exploring party, who painted the orchid during their exploits. She discovered that the flower was larger at each "sitting," requiring numerous restarts and corrections.

Numerous ribbons were presented by AOS judges whose deliberations also resulted in eight flower quality awards. The Slipper Orchid Alliance "People's Choice Award" went to Phrag. Noirmont 'Woodsteam's Red Raja' AM/AOS, exhibited by Bill and Lynn Evans-Goldner of Woodstream Orchids. The Memoria Bud Mellott Award for Best Culture went to Kirk King's superb specimen of Phrag. Sorcerer's Apprentice 'Alisa Ann,' which carried seven inflorescences. The Memoria Howard King Award for the Best Plant In Show went to Paph. (White Legacy X Skip Bartlett) 'Shimmer Dust,' exhibited by Hadley Cash of Marriott Orchids. This lovely white complex hybrid also received an AOS Award of Merit of 85 points.

Capping off a very full day of slipper activities and busy sales tables, Merritt Huntington and Bill Goldner shared the spotlight for the traditional and much anticipated critique of the exhibit tables, which were packed with nearly 300 flowering Paphs and Phrags. Door prizes and the exhibitors' raffle were the final activities before thanks were offered to

many National Capital Orchid Society members for their help throughout the day.

Gordon M. Slaymaker
2004 Paphiopedilum Forum Co-chairman
Springfield, Virginia



Phrag. Noirmont 'Woodstream's Red Raja' AM/AOS
Photography by James Osen

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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.

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