



# The Slipper Orchid Alliance Newsletter

Volume 9, Number 3

Fall 2008

## Phragmipedium Culture

After having grown Phalaenopsis for approximately twenty years, I thought a change would be interesting. Our insulated glass greenhouse was empty and looking forlorn, so I took a few Phrags that belonged to a friend and tried my hand at growing a new genus. This was truly one of the best moves I have ever made. The color of Phrag. besseae was unusually enticing; therefore, I started trying a little hybridizing with her plants.

Phrags are exceedingly rewarding because they grow quickly and easily; plus the brilliant color that Phrag. besseae provided was going to revolutionize the color in some new Phrag hybrids. Early on, Frank Smith gave me a small compot of a selfing of a Phrag. Memoria Dick Clements that he bought from The Eric Young Foundation. The five plants have all flowered, and four have received AOS awards - one 90-point FCC, two AMs, 87 points and 86 points, and a 79-point HCC; and I still have one to go. This kind of success strengthened the heart of an old Phal. grower and whetted my appetite to learn to grow Phrags to their optimum. Now the introduction of Phrag. kovachii is making all of us go back to the drawing board to learn how to cultivate a basic-loving species. Adding lime in

great quantities to the potting mix used in the Phrag. kovachii greenhouse is now the norm.

Since I was asked to write an article on Phrag culture I will now try to get to my subject.

### 1. Water: Very pure water is essential

If your collection is extensive you may have to collect rainwater or invest in an RO system. With only a few plants, I would use distilled water. We are fortunate in that our tap water is pure enough for our plants. Phrags like to sit in water. They will thrive when set in a saucer of water or shallow tray, with the exception of the plants with long petals such as Phrag. caudatum. If you do not sit them in water, they will need to be watered every second or third day. As soon as the water in the tray/saucer evaporates, water the plants thoroughly.

### 2. Feeding:

First, water with clear water before feeding. Feed every time you water with the exception of once every month when you flush them liberally with clear water. Our plan is to feed them as near to 100 ppm of nitrogen as possible. We use 15-5-15 Cal Mag or 20-10-20 Cal Mag. With the 15-5-15 we use 1/3 tsp per gallon to obtain the desired ppm of nitrogen. With the 20-10-20 we use only 1/4 tsp to accomplish this.

### 3. Light:

Less light than Cattleyas and more light than Phals. - 1500-2500 CP

### 4. Air Movement:

You should have enough fans to keep the foliage moving 24/7. This will keep disease down, and an added benefit from the movement is that the flower spikes will become stronger.

### 5. Temperature

Ideal temperature is 50 degrees minimum and 70 maximum. With additions to our collection, we have had

## SOA Membership

If you receive a membership renewal form with your newsletter, your membership is past due or due shortly; check renewal date on your mailing label. Please fill out the form and mail it to our membership secretary, Jean Metcalf, 2323 Edinboro Rd. GH#6, Erie, PA 16509. Questions about your membership? Jean can be contacted at orchidiva@gmail.com.

to move seedlings into the Phal greenhouse. The fans and cool pads keep the temperature in there in the 60 degree to 90 degree range, and I must admit that they are growing very well. The big difference is the intensity of the flower color.

Note: Although our main Phrag house is air conditioned, we cannot attain the ideal temperature year round. My goal is to keep my plants growing in air as near to the ideal as possible. A few years ago I built a large fiberglass tub to hold the trays and installed ebb and flow plumbing. The plants were flooded twice a day and truly were thriving in it, but the weight of the tub plus the water played havoc with my rolling benches and this had to be removed.

#### 6. Potting and potting medium.

When flowering is complete, it is time to repot.

Potting medium for use in 2 ¼" pots:

6 parts seedling fir bark

2 parts medium fir bark

1 part # 3 sponge rock

1 part short fiber sphagnum

Potting medium for larger than 2 ¼" pots

6 parts medium fir bark

2 parts seedling fir bark

1 part #3 sponge rock

1 part short fiber sphagnum

When potting out of flask or repotting, always start with slightly moist medium and when finished, water it with a blossom booster, such as Peters 8-44-13, at a concentration of ¼ teaspoon to 1 gallon water, to encourage new roots.

Note: Our Phrag. kovachii and fischeri seedlings were growing, but not growing well in a medium with a pH of 6.2. Mr. Alfredo Manrique of Centro De Jardinaria Manrique Orchid Nursery lectured at the 19th World Orchid Conference in Miami and taught us the truth about Phrag. kovachii and its growing habits. They were thriving in the rain forest on limestone with a mixture of decaying vegetation. He collected some of this material for growing his collection of Phrag. kovachii. He checked the pH of the material and it was 7.9. After several months of excellent growth, the quality of growth began declining. When he tested the pH of the medium it had risen to a pH of near 10. They were repotted in a mix of limestone gravel with 20% fir bark added, which brought the pH to 7.9, his desired number. Since we do not have limestone gravel, we add 32 oz. of dolomite lime to one cubic foot

of our standard potting mix. The growth is more than satisfactory now. Another tip for repotting Phrag. kovachii (the species, not its hybrids), is to sprinkle a little Rootone on top of the medium and water it in.

You need to know the pH of your water before bringing your medium to this level. We believe this will work best for Phrag. kovachii and fischeri and Mexipediums, but after a few months you may need to sprinkle a bit of lime on each pot and water it in.

In order to grow orchids to their optimum, it is essential to know what dissolved solids are in your water. Unless you are using RO water, I would recommend having your water analyzed. Many water companies will furnish this, or your County Agent can provide this service. Some well water contains enough calcium to grow these calcium loving plants beautifully, while other well water contains enough sodium to harm the growth severely.

Most slippers seem to grow best in a near neutral pH.

*H.P. Norton, after being hugely successful growing Phalaenopsis, turned his attention to Phragmipediums, especially hybridizing with Phrag. besseae and kovachii. His spectacular results have been recognized with many AOS awards.*

*H. P. and Katherine Norton  
Moncks Corner, SC  
www.Orchidview.com*

## CYPRIPEDIUMS - The Large, The Small, and The In-Betweens!

*Cypripedium parviflorum* is the lovely North American yellow slipper orchid. Due to a recent unfortunate but necessary name change, this group of orchids was renamed to the present "**parviflorum**" from the former "**calceolus**." These Latin names refer to the flowers of these slipper orchids.

**Calceolus** describes now only the yellow slippers of Europe. The meaning of **calceolus** is *lat.* "carrying a small shoe."

**Parviflorum**, which describes all North American yellow slipper orchids means *lat.* "small-flowered." This is a bit of a misnomer, if not an insult, as some varieties challenge

## Upcoming Events

### International Slipper Symposium

October 25, 2008

Clarion Inn, Altamonte Springs, FL

Contact: Jamie Lawson, 772-664-6549,  
jimorchids@aol.com

### Paphiopedilum Guild

January 16 - 18, 2009

Contacts: Patti James,  
flowergirlpj@charter.net; Marilyn Levy,  
levycmmj@aol.com

### Paph Forum

February 14, 2009

National Arboretum, Washington, DC

Contacts: Bill and Lynn Goldner, 410-286-2664,  
woodstream@chesapeake.net

### AOS Members Meeting

April 22 - 26, 2009

Hilton Houston North

Sponsor: Houston Orchid Society

Contacts: Melba and Jim Bulter, 281-492-1437,  
melbajim@sbcglobal.net

the European yellow slippers in flower and plant size, if not out-classing them altogether.

The different *Cypripedium parviflorum* varieties are distributed in North America, from coast to coast and from the mid-USA up into the arctic regions of Canada. Due to this large growing region, many distinct flower sizes and shapes have evolved. The mid-section of North America is the home of some of the largest plant and flower varieties. It is interesting to note that this region has also



the smallest flowered variety.

**Some interesting observations:** The tallest and largest flowering varieties are the slowest to increase in plant size, usually doubling in clump-size per season, whereas the mid-size and smaller flowered plants clump-up relatively fast, increasing more than four-fold per season. Where plants are left undisturbed, seedlings will appear close to established plants after several years. Allow some three to five years for these seedlings to bloom.

The plants shown are from Carla and Bill Bischoff's garden in Surrey, British Columbia, Canada.

The photos were taken by Judy Higham, who is the official photographer of the Vancouver Orchid Society. Thank you Judy!



### How we grow them!

The different *Cypripedium*s that we own we have accumulated over some 18 years from diverse sources. Some were blooming size plants or divisions at time of purchase. Others were seedlings, ex-flask.

We grow all in plastic pots, one gallon and larger. The pot that contains the plant is sunk into a same-size pot. This will keep the original place intact and makes returning the plant easier when it is removed to be divided or taken to shows and club meetings for others to enjoy and admire. We of course accept compliments anytime. Growing in pots minimizes damage to roots of the plant and nearby plants.

The pots are placed on a gravel bed in a raised 18" deep flower bed. The gravel is some 5" deep and has three 4" plastic drain pipes running through it. This facilitates excellent drainage, a necessity in the Pacific Northwest. The flower bed measures some 4 x 8 feet. The space



between the pots is filled with fir bark mulch. The pots are top-dressed with the same material.

A movable shade canopy is used to shield the plants from the afternoon sun or heavy rainfall.

In December, plastic sheets are placed over the whole flower bed, keeping a 12" space between the pots and the cover for air circulation. This cover is removed at the end of February. The reason for this cover is to provide a similar condition that exists east of the Rocky Mountains, where most of these orchids originated and get no rain for most of the winter.



**The planting mix:** Here, also, the West Coast weather conditions are considered, and good drainage is planned for. Also consideration is given to the soil requirements of

these orchids. Most grow near moving water and prefer a slightly alkaline soil condition.

Our mix consists of: equal parts of crushed lava rock, medium-size perlite and commercially available compost (without sand). To this mix smaller amounts of crushed oyster shells and bone meal are added. Planting is done before the medium is wetted, to facilitate better packing between the roots. To test the planting medium, place some into a pot and pack it down as if planting an orchid. Add water to the mix. If the water takes more than four seconds to disappear from the surface of the mix, more lava rock needs to be added.

**Watering and Fertilizer:** We fill a 20-gallon plastic garbage can with tap water and add one tablespoon (15 ml) of water-soluble powder fertilizer, such as Schultz Orchid Food 19-31-17. I have used other brands and found no performance differences. Some liquids, however, had some of the constituents settle out and made calculating the mix impossible. Therefore I prefer powders. The plants are hand-watered with this solution every other day on non-rainy days, when the cover has been removed in early spring and continuing during their active growth season. It is also used on all other hardy orchids in our garden. It is almost impossible to let the plants dry out at this time of the year on the west coast of British Columbia. When the first growth of orchids is visible in the spring, I pay more attention to the watering and make sure that the planting medium never becomes dry. After flowering, less water is given, usually two or three times a week and fertilizer is added only once a week or less. When the seed pods have developed, no more fertilizer is used.. Please remember, these are "wild" plants and will not tolerate over-fertilizing. If you get black or brown edges near the tip of the leaves, quit fertilizing.

**Seeds and Plantlets:** Most of these slippers develop seed pods. Since there is no control over the pollination process, nature is left to its own. If left undisturbed for several years, most pots will show new plantlets, mostly near the base of mature plants. After a couple of years, some can be identified by their appearance; others need to bloom to be positively classified. These seedlings should remain several years in this position before they are planted-on to insure re-planting success. It is interesting to note that several seedlings have germinated in pots of different species of slippers; that is, "Cyp. parviflorum" in "Cyp. reginae" pots and vice versa. None of the slipper seedlings has been found outside the special "Slipper Bed." Other orchids in our garden, especially

the *Dactylorhiza*, have colonized parts of our garden, some a fair distance from the assumed parent plants. This of course is part of another story.

**Dividing and Re-planting:** The best time to divide all slipper orchids is during blooming, or right after. At that time the plant has developed a small new shoot or several of them, depending on the species or variety. There is less chance to damage these shoots at that time because there are no new roots yet. If you wait too long, these shoots are large enough to be damaged. If damage occurs, the plant will likely activate an alternate, but smaller growth, which will take a year or longer to bloom. Just don't give up, but hope.

**Conclusion:** We have found that by growing *Cypripediums* in a separate place in our garden we have more control. The individual plants can be observed from the time they appear in the spring until they go dormant in the fall. In their natural setting there is physical support from many nearby plants, which is totally lacking in pot culture. Therefore, we find it necessary to stake some plants. The use of fir bark mulch as space filler and top-dressing has helped in preventing slug damage, especially during the early growth stage. When the plants have somewhat matured, little slug or insect damage is observed. Reportedly, rabbits and deer do not damage yellow slipper orchids.

There you have it, a beautiful group of hardy orchids that are very easily cultivated in your garden. They are readily available from several sources, including local garden stores. By learning of their original homes and growing conditions you can hone your gardening skills to adjust your settings to their needs. You also will help keeping plants alive that are more and more endangered in nature. Above all, these slippers will add a very exotic flavor to your home and garden, for many years to come.

Finally, we wish you much enjoyment in growing native slipper orchids, as much as we had and still have. Thank you for letting us show you some of the pictures of our special friends.

Happy growing, from Carla and Bill Bischoff.

*Carla and Bill have been active in the Vancouver Orchid Society for over 20 years. Bill has been treasurer, Vice President and President. Every spring they invite members of the orchid societies in their area as well as members of local garden clubs to an open house to view the orchids. They have won numerous AOS awards for their plants. Their garden has been featured in "Gardens West," a well-known West Coast horticultural periodical*

*and was included in a fund-raising organization's garden tour, which was attended by 250 visitors.*

*William Bischoff  
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wbischoff@telus.net*

## 11<sup>th</sup> International Slipper Symposium

The Slipper Orchid Study Group of Florida and Krull-Smith are continuing their tradition of an annual Symposium, which this year will be held on Saturday, October 25 at the Clarion Inn of Altamonte Springs, Florida. The one-day Symposium, featuring the latest trends in slipper orchid hybrids, species and culture, will include three speakers, lunch, sales tables, auction and Florida Champagne BBQ. On Sunday morning, October 26, Krull-Smith will host an open house and breakfast. A visit to the greenhouses, where you will marvel at Frank Smith's culture, is an opportunity not to be missed.

Registration includes lunch, snacks and BBQ. The first 50 registrants will receive a free slipper seedling at the door, courtesy of Krull-Smith. To access the web-site and get the registration form, go to <http://home.cfl.rr.com/slipperorchids>. For questions contact Jamie Lawson, 772-664-6453 or [jimorchids@aol.com](mailto:jimorchids@aol.com). Registration is \$60 before October 1; lunch, BBQ and snacks are included. After October 1 registration will be \$75, or \$100 at the door. The Champagne BBQ on Saturday night will be held at Krull-Smith and will be followed by an auction.

For hotel reservations, contact the Clarion (formerly the Holiday Inn of Altamonte Springs), 230 West State Rd 436, Altamonte Springs, FL 32714; phone 800-226-4544 or 407-862-4455, ext. 522; and quote "Paph Symposium" or "Slipper Symposium." Reservations must be received by October 7, 2008. Thereafter, reservations will be taken on a space and rate available basis only. A special rate has been arranged at \$69 for a poolside room per night, or \$89 per room in the new building per night..

Hadley Cash will be speaking on "Complex Pink/White Slippers by Marriott Orchids." He has been collecting and breeding orchids for over 25 years and today is recognized as one of the top complex Paph breeders in the world. While he breeds exceptional species and all color types of complex Paphs, he has a special love for and has had tremendous success with the pink/whites.

“Contemporary Phrag Hybrids” will be Jason Fischer’s subject. Jason was raised in his family’s orchid business, Orchids, Limited. After spending several years in Japan where he studied the language and culture and got married, he returned to the family business. He is interested in opening up the Japanese orchid market to the U.S. and the U.S. market to Japan.

Olaf Gruss will present “News of the Slipper Orchids – Species and Hybrids.” Since 1990 he has been a member of the editorial board of the journal of the German Orchid Society, and he has written extensively about Paphiopedilums, Phragmipediums and Phalaenopsis. He has also written about albino forms of Paphiopedilums.

A highlight of the Symposium is the Slipper Orchid Culture Round Table, where attendees get to ask questions of top world-class experts. This year it will be moderated by Doris Dukes, well known for her outstanding culture and many awards to her slipper orchids.

This is a weekend packed with orchid education, camaraderie and fun.

## SOA Website Developments

Over the summer, some user-friendly changes have been made to the SOA Website. The site has been moved to a new host site, and structural changes have been made that allow the Webmaster to add and update features on a more timely basis and with greater ease.

On the Welcome Page, there is a link - **Members Newsletter** - to the archived Newsletters. All of our quarterly Newsletters from the first one in the Spring 2000 through Summer 2008 are available in pdf format. You must have the [free Adobe Acrobat Reader](#) installed on your computer in order to view the Newsletters. If you do not already have it installed on your computer, click the **Get Adobe Reader** image. You also need a **Username** and a **Password**. All SOA members will use the word Newsletter as their username. The current password will be changed quarterly and printed in each newsletter. Our first password is Phrag and that will function until you receive the December newsletter. If you have questions or problems you may email the SOA Webmaster at [webmaster@slipperorchid.org](mailto:webmaster@slipperorchid.org). Please note that it may take a day or two for him to reply to your request.

Also new is a Cumulative Index to the articles from each issue. It may be accessed on the **Members Newsletter** page. For now, there is no search engine associated with the Index. SOA Members can scan the Index to find a topic of interest, and then open the issue(s) in which the topic was addressed. A temporary alternative is to e-mail the SOA Secretary (currently the Index manager) at [indexmanager@slipperorchid.org](mailto:indexmanager@slipperorchid.org) specifying one or more topics (key words) in which you are interested. In response you’ll receive an Excel file of the Index that permits sorting.

**YOU, OUR MEMBERS**, are invited to send high quality images of slipper orchid species and hybrids for inclusion in our web-site gallery “**SOA Members’ Plants**.” Share with us your favorite or awarded plants. The webmaster can also set up special galleries (temporary or permanent) for a collection of pictures of a particular orchid show or event. All images should be sent in digital format to him at [webmaster@slipperorchid.org](mailto:webmaster@slipperorchid.org), at the highest resolution you can send; they do not have to be JPEG.

It is also expected that in the near future our Directory will be included on the web-site in a members’ only section. This will allow for timely updates and considerable financial savings.

In the process of adding the Archive and Index, it was great to see the breadth and depth of the information contained in our newsletters. Explore and enjoy.

Rod Knowles, Webmaster  
Russ Tyler, Secretary and Index Manager



*Paph. delenatii* forma *vinicolor*

***Paphiopedilum delenatii* forma *vinicolor*, a newly described color form**

Some years ago some unusual plants of *Paphiopedilum delenatii* appeared on the market. The leaves are a striking dark green, edged round with black. Sepals and petals of the flowers are white, sometimes reddish-suffused on the margins and the base. The labellum (pouch) is red-purple, and the staminode is colored at the center with intense red-purple.

The reproduction of these extraordinary clones was started immediately by seed. It showed that this vivid coloration is hereditary. The young plants were sold under the name *Paph. delenatii* 'dunkel.' The German word "Dunkel" means dark.

Apart from the typical form also, the true albino form was known and described by Dr. Guido Braem as forma *albinum*.

Some months ago the dark-colored form was described in the Italian journal *Caesiana* **29**: 4-5; 2007 as *Paphiopedilum delenatii* GUILLAUMIN forma *vinicolor* GRUSS et ROETH. The description was based on a plant that was in culture over some years in the nursery of N. POPOW in Wolfsburg, Germany.

Olaf Gruss  
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Photographs courtesy of Olaf Gruss



*Paph. delenatii* forma *vinicolor* plant



*Paph. delenatii* forma *albinum*

## Art Nouveau Paphiopedilum Brooch

This gorgeous, sensuous and exotic orchid brooch is part of the “Imperishable Beauty: Art Nouveau Jewelry” on view at the Torf Gallery in the Boston Museum of Fine Arts, July 23-November 9, 2008, according to [artdaily.org](http://artdaily.org).

The Art Nouveau movement at the turn of the 20<sup>th</sup> century found its fullest expression in the decorative arts, and a new type of jewelry design flourished that preserved the beauty found in nature. More than 100 of these dazzling miniature works of art were organized into this exhibit. The movement began in France and swept through Europe in the late 19<sup>th</sup> to early 20<sup>th</sup> centuries, reaching its peak around 1900. Pieces were celebrated more for their artistry than their intrinsic value.

“Art Nouveau jewelry is regarded by many as the most beautiful and technically sophisticated jewelry ever created. It was flamboyant, fantastical, sensual, and poetic,” said Yvonne Markowitz, the MFA’s Rita J. Kaplan and Susan B. Kaplan Curator of Jewelry. “The talented artists who created these jewels achieved their extraordinary results through fluid, undulating forms and audacious, emotionally charged curves – the trademark whiplash line that characterized the movement.”

Evocative of the natural world were trees, creeping vines, exotic orchids, and delicate wildflowers, as well as leaves, blossoms, and berries, which were incorporated into Art Nouveau jewelry. The orchid, with its sensuous overtones, was a favorite flower among Art Nouveau jewelers.

Those who are fortunate to view this fantastic exhibit should have a new appreciation for the art and talent of the jewelers and for the beautiful flowers that served as some of the subjects and inspiration, all truly “gems.”



## *Paphiopedilum wardii* SUMMERHAYES PART 1

Abstract: *Paphiopedilum wardii* SUMMERHAYES, 1932, was discovered by the last of the great British plant hunters, Frank KINGDON-WARD (1885-1958) in northernmost Burma (Myanmar) in November, 1922 and first imported alive to Europe in 1931. The species is distributed from the Tami River in North Burma to the region around Tengchong, West Yunnan, China. The suspicion that it might be the natural hybrid between *Paph. sukhakulii* and *Paph. venustum* has been proven to be incorrect; it is in fact a good species. A synonym is *Paph. microchilum* Z.J. LIU und S.C. CHEN, 2001. Some ten years ago an unusual intense red-brown form of *Paph. wardii* appeared in collections on Taiwan. Recently a similar plant was found in West Yunnan and will be published as a new form by Fang-Yuan LIU and Zhu-Fa ZHAO. *Paph. wardii* is an easy grower and flowers freely if its demands, a warm summer (night-time between 18-20 °C) with copious watering and a cold dry winter (night-time around 10 °C or a little lower) with the root zone not allowed to dry out, are met with.



Frank Kingdon-Ward on horseback in China of the early 20<sup>th</sup> century. From Cox et al., 2001

The British naturalist Frank Kingdon-Ward (1885-1958) has entered the annals of botany as among the last of the famous plant hunters in China of the first part of the 20<sup>th</sup> century, along with Ernest Henry Wilson (1876-1930) and George Forrest (1873-1932). While Wilson mostly worked in Sichuan, and Forrest jealously took care that no serious competitor would dare to work in his territory, the province of Yunnan, Kingdon-Ward dedicated his work mainly to the more western regions of Burma, Tibet and Northeast India. Frank Kingdon-Ward was born on November 6, 1885, as Francis Kingdon Ward (initially without hyphen). His second family name, Kingdon, derived from his mother's maiden name. She was born as Selina Mary Kingdon. His father, Harry Marshall Ward, was professor of botany at the University of Cambridge. He died early at the age of 58. Due to financial restrictions young Kingdon-Ward finished his studies of natural sciences, commenced at the Christ's College in Cambridge in 1904, prematurely in 1906, shortly after the death of his father. A friend of the family offered to arrange a post as teacher in a public school in the British stronghold of Shanghai for Kingdon-Ward, who since his early years had dreamt of the Far East.

After only two years in a job painfully boring for him, the passionate naturalist got the chance to join a zoological expedition heading up the Yangtze, conducted by an American. This first expedition was followed by several more into the Chinese hinterland. After the publication of his first book, *On the Road to Tibet*, in 1911 he was elected to become a member of the Royal Geographic Society in London. Subsequently Arthur K. Bulley (1861-1942) from Liverpool, who made his fortune in the cotton industry and was a passionate plantsman with his own commercial nursery, became aware of Kingdon-Ward. He had already contracted George Forrest for his famous nursery, Bees Limited, and now hired Kingdon-Ward to search for new garden plants in Yunnan and Tibet. This first collection trip yielded 200 species, 22 of them new to science. Beside seeds for Bees Ltd. he collected a lot of herbarium specimens for the Royal Botanic Gardens, Kew. Many expeditions on behalf of various sponsors would follow within the next 45 years. Even at his 68<sup>th</sup> birthday on November 6, 1953, he was in the field and climbed the 3350 m (10,100 feet) high Tagulam Bum, to have a last panorama view of the ice-covered peaks in Northern Burma. Meanwhile, four-wheel drive cars, trains and even airplanes had made his expeditions easier, and he could continue collecting trips up to 1956. His plans for new expeditions were abruptly swept away on April 6, 1958, when a stroke hit him at his home in London. Two days later Frank Kingdon-Ward, the last of the great plant hunters, died at the age of 72.

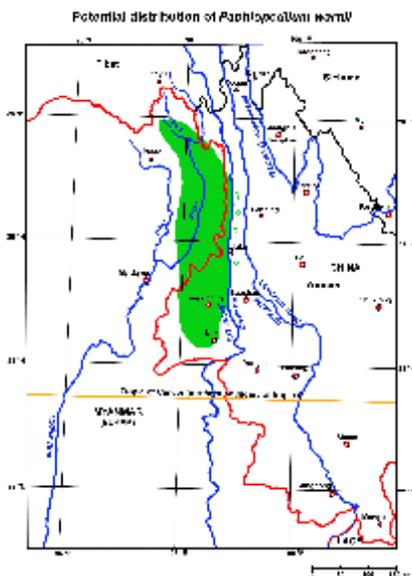
In June, 1911 Kingdon-Ward had discovered a new *Cyripedium* species in the border area between Yunnan, Tibet and Burma, subsequently named *Cyp. wardii* by Robert Allen Rolfe in 1913. Eleven years after this discovery Kingdon-Ward found a very different slipper orchid a mere 100 km southwest in North Burma, in November 1922. On his arduous journey from the collection site to nearby Fort Hertz, today known as Putao, he simply lost the specimen. All that was left for him were his memories about the plant. He wrote about it in *Gardeners Chronicle*, May, 1932, page 366: "When coming from China, in the winter of 1922, I found on one of the higher ranges west of the Tamai, a solitary *Cyripedium* [remark H. Perner: meant is a *Paphiopedilum* here] in flower. This flower I collected but lost in the course of the march, and no record of it was preserved, beyond a vague memory that the flower was chocolate. But I never forgot it entirely, or whence it came, and in 1926 I searched the same hill range, all up one side and down the other, beside the path, for the missing orchid. That was in April, and in August and September I passed and repassed this way, and not once did I set eyes on the plant! On this journey [1926-1927, remark H. Perner], however, I had high hopes in finding it again, on the seventh march from Fort Hertz, in its original locality. It might well be in flower, since it was at the end of November that I had collected it in 1922. But I was certainly not prepared to re-discover it on the third



Type specimen of *Paph. wardii* depicted by Lilian Snelling.  
From Cribb, 1998.

march, and thenceforward at intervals all the way to the Nam Tamai [i.e. Tamai River, remark H. Perner], and some distance up the valley as well! This gives it a much wider range than first seemed likely.”

On his trip to the region in winter 1930/1931 Kingdon-Ward would collect a number of living specimens, and in 1932 one of the plants given to the Royal Botanic Gardens, Kew, flowered and was painted by Lilian Snelling for publication in *Curtis Botanical Magazine* (t. 9481, vol. 160, 1937). Still, in 1932 Victor Summerhayes published it in honor of Frank Kingdon-Ward as *Paphiopedilum wardii* in *Gardener's Chronicle*, ser. 3, vol. 92, page 446. After this it became silent around the plant for a full 58 years. North Burma as well as the bordering Southwest China became increasingly inaccessible. Until 1981 no new introduction found its way to the growers and botanic gardens; fortunately careful cultivation of the original introduction by Kingdon-Ward secured the survival of the species in the greenhouses. In 1980 the species had become so rare that it was offered in the United States for not less than \$500.- a division! In 1981 the Burmese Fred Thien Pe published a report on its rediscovery in *Orchid Digest* (Pe, 1981). The first re-introductions, offered in the same issue for \$295 - by R.J. Rands, California, followed its rediscovery immediately.



Map showing the potential distribution of *Paph. wardii*, i.e. within the green shaded area it is possible to encounter the species in appropriate habitats.

Today *Paph. wardii* is part of the standard range in offers of *Paphiopedilum* species and is available propagated from seed for moderate prices (nevertheless, wild

collected plants are still sometimes smuggled out of their home countries to be sold illegally abroad). We now know that the species occurs not only on the Burmese side but in adjacent China as well. The distribution stretches from the Tamai River in northernmost Burma over the area of the Nmai River into the region bordering in the south around Tengchong in Yunnan (see map). An experienced orchid dealer from Dali, Yunnan, told me that he personally saw *Paph. wardii* and *Paph. armeniacum* growing together in the same locality north of Baoshan. I don't think it is unlikely that in appropriate sites east of the Nu Jiang (Salween River), which would include the region north of Baoshan, *Paph. wardii* might occur. However, it is not proven by field botanists yet. For sure is that the distributions of the two species do border each other. *Paph. wardii* was found in Burma at altitudes of approx. 1200-1400 m (4000-4600 feet), growing on slopes under shrubs and in open forest, sometimes at the foot of tree trunks, in decomposed leaves, in humus pockets on rocks, but usually in moss on rocks. Sometimes it is found at sunny sites, but becomes stunted under such conditions and is usually at home in shady sites with good water supply. From Yunnan it is reported at even higher sites up to 2000 m (6560 feet). *Paph. armeniacum* grows in Yunnan in comparable conditions at altitudes between 1300-2100 m (approx. 4300-6900 feet); however, the growing conditions are usually somewhat brighter and drier. The development of runners and narrow leathery leaves is an adaptation to such sites. Should there truly be mixed populations of the two species, e.g. on the eastern slopes of the Gaoligong Mountains, I don't think that the formation of natural hybrids is likely. The flowering times do not overlap much, if at all, and should specimens of late flowering *Paph. wardii* stay side by side with some early flowering specimens of *Paph. armeniacum*, it is



A certain variability in the leaf patterns of *Paph. wardii* can be seen in the greenhouse of Hengduan Mts. Biotechnology, Chengdu, in January 2006.

most likely that the pollinators of the two species are as different as the shape and colors of their flowers and wouldn't cause cross-pollination.

There is just moderate variability in *Paph. wardii*. The boldly mottled leaves have a certain amplitude of patterns. Even nearly plain green leaves can be found, but a lot of



***Paph. wardii* has flowers of simple elegance, a characteristic of many natural species**

other *Paphiopedilum* species have a comparable variability. In shape and color of the flowers there is little true variation. Only the horticulturist might find sufficient characters for a grading if a larger group of plants is at hand; with this usually the most intensely colored flowers of good size and shape are preferred. According to my observations the variability is higher in some other species if compared to *Paph. wardii*. However, about ten years ago clearly aberrant specimens appeared in collections in Taiwan. The plants had the typical *Paph. wardii* leaves,



**Slight variability in the flowers which have a natural spread of 10 cm (4 inches) in the plants depicted.**

but the flowers, instead of having the regular green pouch heavily suffused with chocolate brown, showed an intense maroon pouch. The petals as well were maroon colored down to the base. I don't know what happened with these plants in cultivation, but in 2004 a similar specimen, collected in the Nu Jiang (Salween River) area in West Yunnan, opened its flower in the collection of Hua-Mu Zhao in Guangxi. According to Zhao the plant was collected at an altitude of 2000 m (6560 feet) in limestone rocks within the distribution area of *Paph. armeniacum*. I saw the plant in Mr. Zhao's collection after the flower had passed. The leaves were typical for *Paph. wardii*, but the flower, as depicted in photos shown to me, let me spontaneously think of a natural hybrid with *Paph. purpuratum*, because the coloration was so similar to the latter. If the color is ignored the flower shows mainly the characteristics of *Paph. wardii*, despite the lip being somewhat more squat. Based on the plant in cultivation, a new form of *Paph. wardii* was published by Fangyuan Liu and Zhu-Fa Zhao (son of Mr. Zhao) in *Die Orchidee* 58(1), page 119-121. It was named *Paph. wardii* forma *ying-xiangii*, named after the professor of Mrs. Liu. By the way, Hua-Mu Zhao is identical with Hua-Mu Chao. The latter name is an unofficial transliteration of his Chinese family name. In *Die Orchidee* 50(5), page 495 Hu-Song Hua published *Paphiopedilum chaoi*, a taxon dedicated to Mr. Zhao. It is, however, not a new species but a pale form of *Paph. henryi*, already known as *Paph. henryanum* forma *christae* (Braem) P.J. Cribb.

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Part 2 of this article will be in the Winter edition of SOA Newsletter.

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