



The Slipper Orchid Alliance Newsletter

Volume 8, Number 1

Spring 2007

Paphiopedilum *armeniacum*

The bitter sea turns sweet - *Paphiopedilum armeniacum* in its natural habitat
Holger Perner, Ph.D.

Dr. Holger Perner is a plant ecologist who has recently visited the border area of West Yunnan in China. He is currently trying to launch a conservation project for orchids in China. He has done fieldwork and writing for the Royal Botanical Gardens at Kew and has written in conjunction with Dr. Phillip Cribb.

When the late Dr. Fowlie tried to see the growing site of *Paph. armeniacum* in western Yunnan, China, he was stopped by the police and subsequently deported. This is why the golden yellow *Paphiopedilum* is missed in his informative series of articles on the Chinese paphiopedilums in nature. Today, more than ten years later, things have changed dramatically in China. The political system might be the same as it was in Fowlie's days, but the way this system is currently running is decidedly different. Since 1997 the region in western Yunnan close to the border with Myanmar (Burma) is open to foreigners, local authorities are promoting sightseeing, and the hotels are looking forward to receiving

foreign tourists, the more the better. My wife is Chinese, and with half of my family in China, I stay a lot in the Chinese countryside, which is a true Eldorado for a plant ecologist and orchidologist. The first few orchid expeditions already gave me a deep insight into the habitats of several cypripediums, some pleiones and members of a lot of other genera. One of the most exciting findings, however, was *Paph. armeniacum* in its native habitat, a lucky event made possible with the kind help of Phillip Cribb, deputy keeper of the herbarium at Kew and passionate slipper orchid enthusiast.

Before I go into details on the habitat and growing conditions of *Paph. armeniacum*, let us have a look on the discovery of this species. Professor Fang Yuan Liu, one of the two scientists who described the species in 1982, told me about it. In 1979 a staff member of the Botanical Institute in Kunming discovered *Paph. armeniacum* west of the Salween River near the town of Bijiang. Plants were brought to the institute for cultivation; here the specimens flowered. All flowers had golden yellow color, similar to an unripe apricot, which is especially true for the lip of this slipper orchid that resembles a yellow apricot not only in color but also in shape and size. Apricots turn orange-red when they are ripe. To differentiate it from apricot-red, Professor Liu called this *Paphiopedilum* "apricot-yellow slipper orchid" (*Xing Huang Dou Lan*). You will find this name in the Chinese text of the formal description of *Paph. armeniacum*, in which the color is also described as apricot-yellow. Unfortunately the addendum "yellow" gets lost in the Latin text and in the scientific name which led to some speculations and expectations in the West. Recently Norito Hasegawa placed the question in the *Orchid Digest* whether Chinese apricots are yellow. I can assure him they are not, at least when they are ripe!

About the habitat of *Paph. armeniacum*, it was known to lie at about 6000 feet (2000 meters) altitude in open-mountain forests. Here the plants were said to grow lithophytic, protected by shrubs and trees. In 1995, Baker and Baker published some climate data and gave some hints for cultivation of *Paph. armeniacum* in the former *AOS Bulletin*. On May 15, 1998, I visited a growing site somewhere in the

SOA Membership

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, 2323 Edinboro Rd. GH#6, Erie, PA 16509. Questions about your membership? Jean can be contacted at orchidiva@yahoo.com.

mountains east of the Salween River between Baoshan, the climate station in the south chosen by the Bakers to represent habitat conditions of *Paph. armeniacum*, and the type locality near Bijiang in the north. I can confirm that the climate information provided by the Bakers is applicable, although somewhat surprising for a *Paphiopedilum* habitat. Agaves, once imported from America, grew everywhere; the entire scenery reminded me of some landscapes in southern California or Arizona: bare soil, a few shrubs, some grass and herbs. An extensive colony of *Bulbophyllum forrestii* in full flower, growing lithophytic at the base of a bare northeast-facing slope at an altitude of 6500 feet (2200 meters) was an exciting view. But where were the forests, the snug slopes, the predicted home of one of the most beautiful paphiopedilums? If there has been a forest cover on these mountains, it was cleared generations ago. Only close by the widely scattered mountain villages a few trees were left. On the trees, as well as on the straw roofs of the farmers' houses, we saw *Cymbidium lowianum* in flower growing at about the same altitude as *Bulbophyllum forrestii*. In a pine plantation close by the village I found some young plants of a terrestrial Cymbidium, perhaps *Cym. ensifolium*.

Beside another little village the guide stopped our Jeep on the dusty trail. The farmers had created a lot of terraced fields along the steep slopes, a common sight all over the mountains in China. Under the village, water purred down the ravine in a little rivulet, providing proof that water was not that rare in the region. The summer monsoon yearly recharges the water reserves buried deep inside the mountains. But now in mid-May, the dry season was near its end and the country appeared in brownish, yellowish and reddish tones. How could a *Paphiopedilum* survive the long period with hardly any sufficient rainfall? How could it stand the burning sun without the protection of some kind of open forest?



The habitat of *Paphiopedilum armeniacum* in West Yunnan

We left the village behind us, climbed the next slope and turned to the left behind some big agaves. Another slope appeared in front of us. The soil was burnt red on the south-facing part, the vegetation sparse and the temperature above the soil close to 86°F (30°C). But when we reached the summit, a cool wind blew into our faces. In front of us a cliff fell down hundreds of feet. The bottom of the valley was hardly in sight from our standpoint. It was the north-facing part of the mountain. We stood at an altitude of exactly 6000 feet (2000 meters). Between the limestone rocks several little shrubs (*Magnolia delavayi*, rhododendrons, deutzias, barberries and scrubby oaks), herbs and some grass covered the cliff with green. However, the vegetation was not dense but open enough to see the soil here and there. And it was here in the open shade of the rocks where the soil was not deadly baked like at the southern slope, but of a dark brownish black color with a perfect crumbly structure. It was a mineral soil called rendzina in soil science, exactly the type of substrate where you can find the majority of indigenous orchids growing on a dry lawn or in a clearing if you are somewhere in central Europe.

Protected among the rocks, we found several groups of small and also flowering-size *Paphiopedilum armeniacum*, easily identified by its typical leaf pattern. The slight-

ly serrated leaf margin of *Paph. armeniacum* is not a reliable diagnostic feature to distinguish it from its close ally *Paph. micranthum*, whose leaves feel smooth to the touch and also often have a tiny yellowish line at the margin around the leaf tip, while this line is greenish in *Paph. armeniacum*. We were lucky enough not to have to rely on this questionable way of identification because several specimens were in full flower! Judging by the sheer number of single growths not so many plants flowered. But scattered between the rocks we found the fantastic bright yellow flowers gleaming in the sunshine. The leaves down on the soil between the rocks hardly got any direct sunshine, but due to the lack of dense vegetation they always got more or less open sky, which can be rather bright at a northern latitude around 25 degrees.



Paph. armeniacum between limestone rocks in West Yunnan

Upcoming Events

AOS Members Meeting May 2 - 6, 2007 Arlington, TX

The SOA is sponsoring Hadley Cash to speak about white and pink Paph breeding. Contact Jerry and Ronnie Brandenburg at jbrb66@sbcglobal.net.

Information about the meeting and registration forms can be found on the website www.AOSDFW2007.org. Local sponsors are the Fort Worth and Greater North Texas Orchid Societies.

The “apricot-yellow slipper orchid” rooted in the mineral soil between the rocks. I haven’t seen it growing in moss on the rocks, especially because there was hardly any moss around! And I also could not find it in any kind of accumulated humus or humus pockets on the limestone. A fantastic phytogeographical discovery



***Paphiopedilum armeniacum* in cultivation in Baoshan.**

expressively pronounced the terrestrial growing habit of *Paph. armeniacum*. In a distance of only six feet (two meters) from this small colony, a *Cypripedium plectrochilum*, the sister species to the North American *Cyp. armeniacum*, was growing and flowering in the same soil! This finding was not only a big surprise but also gave evidence as to how cold this northern slope must be in winter! Without a doubt *Paph. armeniacum* has to withstand occasional frosts at this growing site. The north-facing slope provides some constant moisture in the dry winter and spring season, but only at the cost of a certain hardness for the inhabitants of this locality. It is here where a subtropical *Paphiopedilum* meets a temperate *Cypripedium* in nature!

I collected some soil samples from around the roots of *Paph. armeniacum* for laboratory measurements. The pH-reading was 7.2 (measured with CaCl₂-solution), and the content of humus amounted to about 25 percent. The water content was as low as 12.5 percent, dry indeed! The way *Paph. armeniacum* deals with this shortage of water during the dry season is to spread single growths over the growing site instead of forming dense clumps like other paphiopedilums. All the growths are connected with each other, and so a mature plant covers a broad piece of soil without a big root mass. The roots can absorb water without competing with each other too much. In summer, when the monsoon brings a lot of rain, the surplus water can easily drain away from the plants due to the open crumbly structure of the rendzina-like soil.

The situation of *Paphiopedilum armeniacum* in the wild seems to be rather safe regarding the future of the habitat. The place is not in danger of being used for agriculture, nor is it in danger of deforestation, simply because it is a steep, rocky slope without trees and without any use for growing crops or grass. Even the grazing by cattle is not easily done on the nearly vertical cliff. However, I was told that the local farmers use the leaves of *Paph. armeniacum* to feed their pigs. They cut the plants, shred them and give them to the animals. A much bigger threat for the survival of the plants, however, is their collection for horticultural use. In this case, the farmers have a slightly higher profit (the dealers pay them very little money per kilogram) from collecting the plants by not cutting the leaves only, but by digging out the entire specimens, leaving behind seedlings and immature pieces of the stolon system which don’t weigh much. The local farmers already had collected about 5000 plants during the last few years. Phillip Cribb estimated the number of plants growing in three colonies at the slope in April, 1998, with 10, 30 and 1000 specimens. And just a few days before our visit farmers removed the majority of the adult plants from the big colony for trading them in the next town. Such exploitation has nearly destroyed the local *Paph. armeniacum* population, but it may have the chance to recover if the habitat is left unchanged. Reproducing the “apricot-yellow slipper orchid” from seed provides the only hope for the survival of viable populations of *Paph. armeniacum* in nature. The first artificially produced seedlings already grow in flasks in Kunming, the capital of Yunnan. In focus for the future is a mass-propagation of *Paph. armeniacum* and other showy native orchids to satisfy the international demand.

Bibliography

Chen, Sing Chi and Fang Yuan Liu. 1982. Notes on some species of *Paphiopedilum* from Yunnan. *Acta Botanica Yunnanica* 4 (2): 163-167

Cribb, Phillip, Luo Yi-Bo and Gloria Siu. 1998. *Paphiopedilum armeniacum*, its natural habitat in western Yunnan. *Orchid Review* 106:271-273

Hasegawa, Norito. 1998. *Paphiopedilum armeniacum*, a marvelous *Parvisepalum* slipper orchid. *Orchid Digest* 62 (1): 43-46

Dr. Holger Perner
Huanglong National Park
Sichuan, China
holger_perner@hotmail.com

(This article was printed in *Orchid Digest*, 1998 and is reprinted with permission.)

Postscript:

Since I wrote this text in 1998 I have visited other growing sites of *Paph. armeniacum* in Western Yunnan. One such site is very close to how the natural habitat of this slipper orchid must have been before severe changes were made by man. At this site there was a forest cover left on the slopes, at least partially. But *Paph. armeniacum* didn't grow in the shade of the forest under the trees. Instead it was found only at the upper rim of cliffs, where the plants received a lot of light and yet were protected partly by shrubs and trees. In the most favorite of such conditions thousands of growths, perhaps belonging to just a few clones, covered the ground right above precipices. Here they even formed big clumps. Where denser shrub covered the plants they were less numerous and the runners spread wider. Yet in such more

shaded conditions the plants occurred at the edges of steep slopes where at least a few sun beams reached the leaves and more important, the flowers.

I have visited the site described twice so far, in early June 2004 and in early June



Here *Paph. armeniacum* grow in soil thinly covered with *Selaginella*. Note the crumbly loam visible between the *paphiopedilum* leaves

2005. In 2004 I was in Yunnan with a German friend, Oliver Vossler, and my brother-in-law, Yongjin Gan. It was an exploration trip in preparation for guiding a botanical study tour with orchidists from Germany in 2005. A dealer of oriental cymbidiums from Dali, whom I knew from national orchid shows, had offered to show us new localities for various orchids in the wild. His collectors not only gather oriental cymbidiums but any other plants recognized as orchids, so they know many sites. One such collector we picked up after several hours of travel on country roads northwest of Dali. He led us toward the Mekong River.



Oliver and Yongjin climbing up with me to *Paph. armeniacum*. Note the strips of agaves at the valley bottom



Dense colony of *Paph. armeniacum* above a cliff

Already 20 km or so east of the Mekong he pointed to the slopes above the road from time to time and said, there would be a thousand *Paph. armeniacum* growing, there 5000. Some 10 km east of the Mekong we drove into a small side valley, and after a couple of kilometers we stopped and climbed the steep slope above the unpaved road. Claspings the tiny stems of shrubs we lifted ourselves up. When we reached the lower

part of the slope's crest, our guide said that some golden slipper orchids were around there in the shrubs. And like that farmer six years before above the Salween, this fellow now uprooted the first *Paph. armeniacum* in flower he encountered to show it to us. We asked him to let us search for more plants by ourselves. Soon we found scattered groups of non-flowering growths and a few flowering stems, which allowed for taking close-up photos of the flowers.

Not far from this slope the guide showed us a much larger colony on the opposite valley side, like the first one at an altitude around 2000 m, perhaps a little lower. Here the plants were growing right above a vertical rockwall. The wall was around eight meters high in places and allowed for good observations of the paphiopedilums without much effort. In 2005 the orchidists from Germany could rather conveniently take photos of the plants, although close-ups of flowers were not possible at this site because the steep wall couldn't be climbed. However, it is certainly possible to reach the paphiopedilums from above, and sooner or later a local orchid collector might do so in order to strip the entire colony. Still, every year several ten thousands of wild-collected *Paph. armeniacum* are smuggled out of the country. There are still many colonies on the slopes near the Mekong; perhaps the ones above the Salween, from where the type collection was made, are already diminished a lot. However, in a matter of a few years the eastern populations also might be destroyed so much that *Paph. armeniacum* will no longer be freely available in the flower markets in southern China.

In cultivation *Paph. armeniacum* is not an easy one to flower. In fact, it is one of the more difficult paphiopedilums. Often vegetative increase of newly purchased plants is good during the first years. But too often the plants rarely flower. *Paphiopedilum armeniacum* experiences probably the coldest winters of all paphiopedilum species and they are true terrestrial plants, growing frequently in soil (sometimes also on rocks covered in a thin layer of soil and moss), which could explain why they often cease to grow well after a couple of years in regular paphiopedilum growth mixes. Although they can adapt to warmer winter conditions, like those usually provided to cool-growing paphiopedilums, and do even increase vegetatively, they need cold, dry winter conditions to successfully induce flower buds. Keeping them as cold as possible during winter (temperatures should ideally be around 4 °C or so during nights) is an important aid to insure flowering.

Phragmipediums

Part three of a series by Helmut Rohl

Correction: In my article on phragmipediums in the SOA Newsletter 7(4):6, I stated in the last sentence of the description of *P. besseae* that the plants of Ecuadorean provenance are now classified as *P. dalessandroi*. This sentence should be replaced by: In Ecuador a somewhat similar population now classified as *P. dalessandroi* produces branching and more floriferous inflorescences bearing more star-shaped flowers with slender segments and a more elongated and vertically positioned pouch. Another distinction is that *P. besseae* has much wider petals.

THE HYBRIDS

The *Phragmipedium* hybrids discussed below are informally divided into four groups:

- Hybrids without *P. besseae* and *P. schlimii* ancestry
- Hybrids with *P. schlimii*, but without *P. besseae* ancestry
- Hybrids with *P. besseae*, but without *P. schlimii* ancestry
- Hybrids with *P. besseae* and *P. schlimii* ancestry.

In addition to these groups another one will be examined, namely the nothogenus *Phragmipaphium*.

The first phragmipedium hybrid ever to appear on the scene is *P. Dominicanum* (*caricinum* x *caudatum*), registered in 1870 by J. Veitch. It started, what might and should be called, the classical period of phragmipedium breeding. This period, which formally ended in 1906 with the registration by Le Moinier of *P. Turconiense* (*caricinum* x *Lemoinierianum*), produced a total of thirty-seven registered hybrids with known parentage. In addition there are seven hybrids registered with unknown parentage. Since there was a rash of registrations without stated parentage between roughly 1905 and 1915, the proposed ending date of the classical period is somewhat uncertain. There may have been two reasons why the classical period ended so abruptly. One is that only a single species *Phragmipedium schlimii*, had a round a full flower presenting the flower shape most desired at that time. The other one is the rather limited color scope – from creamy yellow and green to dark brown exhibited by the *Phragmipedium* species known at that time.

The perhaps most influential grexes stemming from this era are:

P. Dominianum (caricinum x caudatum), registered in 1870 by Veitch;

P. Sedenii (longifolium x schlimii), registered in 1873 by Veitch;

P. Conchiferum (caricinum x longifolium), registered in 1881 by Bowring,

P. Grande (caudatum x longifolium), registered in 1881 by Veitch;

P. Cardinale (Sedenii x schlimii), registered in 1882 by Veitch;

P. Schroederae (caudatum x Sedenii), registered in 1882 by Veitch;

P. Calurum (longifolium x Sedenii), registered in 1883 by Veitch;

P. Nitidissimum (caudatum x Conchiferum), registered in 1888 by Cookson;

P. Giganteum (caudatum x Grande), registered in 1894 by Veitch;

P. Urgandiae (lindleyanum x longifolium), registered in 1896 by Mantin.

This list indicates, and a more thorough search verifies, that the dominant phragmipedium breeder during this period of time was J. Veitch. The reasons why the classical period ended so abruptly seem to be twofold. One reason is that the full and round flower shape so much desired during this period shows up only in one species known at that time, namely *Phragmipedium schlimii*, and the often large flower size did not compensate sufficiently for the rather narrow flower segments. The other one is the rather limited color scope - ranging from creamy yellow and musty green to dark brown - fell out of favor quickly.

It took about seventy years before the next phragmipedium hybrid, *P. Praying Mantis* (*longifolium* x *boissierianum*), registered in 1975 registered by Stewart Inc., started what should be called the modern period of phragmipedium breeding. During the late 1970s and throughout the 1980s a handful of additional phragmipediums were registered, the most notable one *P. Sorcerer's Apprentice* (*longifolium* x *sargentianum*), registered in 1986 by Cole. The bandwagon began to roll in the early 1990s, and has picked up speed ever since.

It was the discovery and availability of *Phragmipedium besseae* that led to the current volume of phragmipedium hybridizing. The first hybrids involving it - all registered in 1991 - are

P. Eric Young (*besseae* x *longifolium*) by Eric Young O. F.;

P. Hanne Popow (*besseae* x *schlimii*) by Doll;

P. Mary Bess (*besseae* x *caricinum*) by Hegedus (Brunner);

P. Ecu-Bess (*ecuadorensis* x *besseae*) by Orchid House (Kunisch).

Since then there has been a deep and wide stream of such hybrids floating by us. Let us examine them in more detail.

HYBRIDS WITHOUT *P. BESSEAE* AND WITHOUT *P. SCHLIMII*

The category discussed here excludes not only the species in the title, but by implication also excludes *P. fischeri* and *P. kovachii*. The latter two are not mentioned in the title to fit it into one line.

Images of these hybrids can be seen in Ledoux (2003b) and in OrchidWiz (2005). The cited article also contains a table of the pertinent species tabulating their uses in hybridizing.

In the list at the beginning of this section there are two grexes belonging to the current group that are responsible for several noteworthy progeny. I list them as well as some additional ones.

P. Conchiferum (*caricinum* x *longifolium*), with its small to medium size flowers in subdued tones from yellowish green to dark brown, produced 8 offspring and 13 progeny. Among them there is only one of some prominence:

P. Nitidissimum (*caudatum* x *Conchiferum*), registered in 1883 by Cookson. It earned 6 HCC/AOS, 6 AM/AOS, 1 FCC/AOS, 2 CCM/AOS and 1 CCE/AOS. Obviously it had sunk into oblivion for quite some time as its 4 offspring and 5 progeny were registered only after 1988.

The easily grown and easily flowered, highly popular grex *P. Grande* (*caudatum* x *longifolium*), with its very long petals and attractive colors ranging from green to dark brown, is credited with 29 offspring and 48 progeny. It received 22 HCC/AOS, 34 AM/AOS, 1 JC/AOS, 17CCM/AOS and 2 CCE/AOS. From the formidable progeny I select (based on the number of awards and on the size of progeny):

The up to 3-flowered inflorescences **P. Mont Fallu** (*longifolium* x *Grande*) bear large flowers with apple green sepals and petals striped dark brown and an apple green pouch suffused brown. It was registered in 1992 by Eric Young O. F. It was awarded 3 HCC/AOS and 4 AM/AOS, and has 4 offspring and 4 progeny.

P. Giganteum (*caudatum* x *Grande*), registered in 1894 by

Veitch, produces 3-flowered inflorescences with very large

flowers. Sepals and petals are creamy yellow striped green to maroon, the pouch is creamy yellow overlaid brown. It garnered 2 HCC/AOS, 3 AM/AOS and 2 CCM/AOS, and bred 3 offspring and 3 progeny.

The grex **P. Les Dirouilles** (Sorcerer's Apprentice x Grande), registered in 1999 by Eric Young O. F., has up to 3-flowered inflorescences with large flowers. Sepals and petals re light green with darker venation. The pouch is mahogany externally and light green internally. The record shows 3 HCC/AOS and 2 AM/AOS, with 3 offspring and 3 progeny.

P. Penns Creek Cascade (Grande x *wallisii*) makes up to 4-flowered inflorescences with large flowers whose ivory to lime green sepals and petals show darker venation and whose pouch is light green suffused darker green. It was registered in 2001 by Goldner (Woodstream). This grex garnered 1 HCC/AOS and 1 AM/AOS, with 0 progeny.

P. Praying Mantis (*longifolium* x *boissierianum*), registered in 1975 by Stewart Inc., produces up to 6-flowered inflorescences with large, bright chartreuse to lime green flowers. Dorsal sepal and synsepal show greenish to rose-brown tessellation, the pouch is slightly darker with olive green margin. It has 2 HCC/AOS, and 9 offspring and 10 progeny to its credit.

The up to 4-flowered inflorescences of **P. Tall Tails** (*wallisii* x *caudatum*), registered in 1999 by LeDoux, bear very large flowers with sepals and petals pale lime veined tan. The white pouch is overlaid tan, internally spotted maroon. The staminode is chartreuse. The grex received 5 AM/AOS and 1 CCE/AOS. There is no progeny.

The cross **P. Demetria** (*caudatum* x *sargentianum*) was registered in 1990 by Mellott (Hegedus). The up to 5-flowered inflorescences present very large flowers with light green sepal and synsepal. The petals are light green with burgundy margins. The pouch is yellow green overlaid brown, and the staminode is pale green. The grex earned 5 HCC/AOS, and has 2 offspring and 2 progeny.

P. Paul Eugene Conroy (*wallisii* x *longifolium*), registered in 1995 by Harbinger (O/U), produces up to 4-flowered inflorescences with very large flowers. Sepals and petals are light chartreuse striated green, the petals come with light mahogany margins. The pouch is light chartreuse with darker striations, internally spotted mahogany. The

staminode is light green. The cross garnered 1 HCC/AOS, 2 AM/AOS and 1 CCM/AOS. There is no progeny.

P. Mem. Garren Weaver (*wallisii* x *pearcei*) was registered in 1994 by Harbinger (O/U). The up to 4-flowered inflorescences bear very large flowers with moss green sepals and petals striated darker green. The pouch is creamy, internally spotted burgundy. The staminode is moss green. The awards are 1 HCC/AOS and 1 AM/AOS. There are 2 offspring and 2 progeny.

P. Red Lightning (*sargentianum* x *warscewiczianum*), registered in 2000 by Ledoux. The up to 5-flowered inflorescences carry large flowers. Sepal and synsepal are yellow green striped mahogany. The petals are yellow overlaid rose-red. The pouch is tan, internally veined red. The staminode is tan. The cross received 1 HCC/AOS and 1 AM/AOS. There is one progeny.

HYBRIDS WITH *P. SCHLIMII* BUT WITHOUT *P. BESSEAE*

Images of these hybrids can be found in Koopowitz (2003) and in OrchiWiz (2005).

The list at the beginning of this section contains three grexes that produced numerous progeny and belong to this group. I begin with with an old timer

P. Albopurpleum (Dominianum x *schlimii*) was registered in 1877 by Veitch. The grex grows 3-flowered inflorescences bearing large, iridescent flowers with a darker pink pouch. It received 1 AM/AOS and produced 2 offspring and 2 progeny.

Next I present **P. Carol Kanzer** (*pearcei* x *schlimii*), registered in 1980 by S. L. O. The up to 6-flowered inflorescences produce large, pink flowers with dorsal sepal white flushed pink, synsepal pale pink, and deep rose pouch with darker venation. The grex has 3 HCC/AOS, 1 AM/AOS and 1 CCM/AOS and bred 3 offspring and 3 progeny.

The grex **P. Silver Eagle** (*schlimii* x *czerwiakowianum*) has up to 8-flowered inflorescences bearing medium size, cream to pale green flowers with a white blushed pouch veined rose-pink. It was registered in 1998 by Larkin (Hegedus). It received 5 AM/AOS, and has 6 offspring and 6 progeny.

Finally a discussion of the important progeny of **P. Sedenii**. Three of *P. Sedenii*'s progeny have been mentioned already: *P. Calurum*, *P. Cardinale* and *P. Schroederae*. Another noteworthy offspring of *P. Sedenii* is *P. Elisabeth*

March with both *P. besseae* and *P. schlimii* in its ancestry (see below).

P. Sedenii (*longifolium* x *schlimii*) bears up to 8 flat flowers with sepals and petals white flushed green to pink and deep rosy carmine pouch veined carmine on branches inflorescences. It produced 23 offspring and 58 progeny. Its AOS awards are 4 HCC/AOS, 4 AM/AOS, 1 JC/AOS and 9 CCM/AOS.

P. Sedenii sired several noteworthy progeny. Here are some:

The grex **P. Ainsworthii** (*longifolium* x *Sedenii*) produces 3-flowered inflorescences with medium size, rose-pink segments and green venation on the dorsal sepal. It was registered in 1879 by Ainsworth. It received 1 CCM/AOS.

P. Calurum (*longifolium* x *Sedenii*), with up to 7 medium size to large, cream to chartreuse flowers bordered and striped purple on stately inflorescences, bred 11 offspring and 15 progeny. It earned 2 HCC/AOS, 3 AM/AOS, 1 JC/AOS and 2 CCM/AOS.

The best offspring of *P. Calurum* is *P. Lemoinianum* (*Calurum* x *Sedenii*), registered in 1888 by Lemoinier. It makes up to 7 pink to rose, medium size flowers on branched inflorescences. It produced 3 offspring and 3 progeny.

Another noteworthy *P. Calurum* hybrid is *P. Flying Fortress*, a cross involving both *P. besseae* and *P. schlimii* (see below).

The grex *P. Cardinale* (*Sedenii* x *schlimii*) produces up to 10 medium size, ivory white flushed green to pink flowers with a dark pink to rose pouch on branched inflorescences. It has 15 offspring and 19 progeny. It accumulated 2 HCC/AOS, 2 AM/AOS and 3 CCM/AOS.

The best of the *P. Cardinale* progeny is *P. April Fool* which has both *P. besseae* and *P. schlimii* in its background (see below).

It is smart to remember that the cultivars *P. schlimii* 'Birchwood' and *P. schlimii* 'Wilcox' are mislabeled and are most likely *P. Cardinale*.

P. Schroederiae (*caudatum* x *Sedenii*), registered in 1882 by Veitch. The grex received 9 HCC/AOS, 14 AM/AOS and 6 CCM/AOS. The cultivars produce 3- to 5-flowered inflorescences with large flowers. Sepals and petals are creamy green to pink and rose. The pink to dark rose pouch has darker veins and its infolded side lobes are dotted dark reddish. It had not been used in hybridizing until lately, and its 3 offspring and 3 progeny were registered after 1999.

Phrag. *kovachii* Update

The SOA newsletter has published two articles concerning the *Phrag. kovachii* seedling flasks being offered for sale by some of the Peruvian nurseries. The first by Jerry Fischer was published in 2005 about his trip to Peru with Chuck Acker to purchase some flasks. Last summer we published a follow-up article by Chuck Acker about his experiences growing the seedlings from flask.

There are now some serious questions being raised as to whether or not these seedlings are truly *Phrag. kovachii*. There has been an ongoing discussion on the Slipper Forum concerning this. (www.slippertalk.com/forum/) We urge our readers to check out this discussion as Jerry Fischer has promised to keep everyone informed of developments. This is a letter from Jerry which was posted on the Slipper Forum at the end of February:

I went down to Peru with Chuck but I purchased several different *kovachii* sibs and hybrids. One particular *kovachii* sib cross appears to be different in leaf habit so Chuck and I are now doing DNA sequencing on the one in question plus some other *kovachii* sibs as well. This testing is being done by 2 different labs. The tests have not been completed yet and the interpretation of them should reveal the true identity. I must say though that the sequencing results are not always 100 percent correct and I will explain this later in an upcoming post. We are confident that the tests will help us understand what this particular cross is or is not.

Fortunately I have enough of some of the other sib crosses that I know to be true so substitutions can be made if indeed there is a problem. Chuck did not want to wait for the results as he is heading out of the country on vacation about the time he was to release the first plants. Chuck really only had the one sib cross that did well for him so he does not have the option of replacing them with another sib cross, at least not at this time. If there were mistakes Manolo has said to us that he will stand behind his sale and get us true *kovachii* replacement plants for those we received which may be wrong. Unfortunately it will may be spring before Chuck and I will have the replacement plants.

This is most frustrating for Chuck and I but especially for Chuck. He was so excited to go down with me to get these flasks. I have known Chuck for a long time. It was his father Walter who was really there for me in the beginning of my Orchid Business in the late 1970's. He supplied me

with beautiful Cattleyas and other plants. I used to visit their nursery 10 to 15 times per year in those days a trip of 450 plus miles from my place.

I will certainly post when we find out what the results of these tests really are.

Jerry Lee Fischer, Orchids Limited

MY Orchid

My Mom threw out the coffee pot.

I had to have coffee. I had to go get it.

I was visiting Richmond, Virginia, from Ft. Lauderdale, for the first time in 18 years in April 2006.

It was 8 A.M. The sunlight through the new growth, light green tree leaves was breathtaking.

I decided to pull over and sip my coffee as I also drank in the aroma of a small tract of woods near Mom's home, take a stroll, and feel the energy of a crisp spring Richmond morning.

Having moved only about 30 yards from where I had parked – happily fighting the undergrowth, the briars, the fallen limbs – the whole ambience was a delight – I saw a bloom on the woods' floor.

What the H. is that?? I remember distinctly uttering under my breath. Looking closer, I saw a strange fellow – it appeared to be an orchid. An orchid? In Virginia?? Thirty-six years living here - traipsing the woods from Richmond to the Shenandoah – I do not recall ever seeing – an orchid! In the woods!

Yet this orchid was strange. It had a “bag” on it. I don't know a “prom orchid” from a yellow Dendrobium. (I have a huge slew of those growing in my tree in Florida. They had just finished blooming; there must have been 80 stems.) All of the other components of an orchid were there – its delicacy – the size – the shape - the over-all appearance. But, it was growing in the ground. Don't they all grow in trees? I later returned to the site – and looking more diligently, saw a good one hundred or so of these fragile beauties.



Being a good documentary photographer (oh, I took my camera at the last minute, just to shoot that sweet light coming through the tree canopy) I lay on my stomach and shot a few frames. Satisfied, I brushed off – and decided, I'll take one home. Whoops! I think I have found out that was the wrong thing to do!

As I excitedly told my Mom about this unexpected treasure found just around the corner (I came home primarily to see the spring flowers of Virginia – she knows I'm a flower nut!), she indulged my excitement and thought it was a great flower as well. We had plans to nestle this strange orchid in a safe container for a comfortable flight back to Florida.

Then – in comes my Stepmother, to whom I also verbalized this great find. In her infinite wisdom, she said, "What if??? It's a rare breed???"

That got my mind to racing. What if? Maybe I had better do some research. Now mind you, I was on vacation. Research was not my thing to be doing. Mom had a computer – she had moved easily into the electronic information age - and she is a very young 78.

I found a bunch of orchids on-line – but nothing that looked like this. Dead-end on research. It didn't have to be – I was going to the Lewis Ginter Botanical Gardens in Richmond the next day. I had already been to the Japanese gardens of Maymont, also in Richmond. I just knew I would find someone who could identify this image in a 1" by 1 ¼" screen.

Sure enough, the on-site librarian at Lewis Ginter knew what she was looking at. I apologize; I forgot to get her name. She was a gracious lady. We looked up some information. She used the words – rare/ endangered. She had me feeling awfully bad for digging up this beauty – but I DIDN'T KNOW! I did NOT tell her what I had done. I was ashamed.

Ok. I had something. I still was not quite sure what. I had some e-mail addresses and a passionate urge to find out more. Hearing the words rare/ endangered, I was determined to find someone who knew more about this strange entity – and find a way, if need be, to preserve them or the land they were on. My shame for picking one was now an all-out endeavor to find out more and find out what could be done.



As the e-mails flourished I began to find some answers. What I had "discovered" was a Pink Lady's-slipper, *Cypripedium acaule* - not known to normally exist in an urban setting – a treasure so close to highly developed areas of a major metropolitan area.

What I have learned – first and foremost: *Cypripediums* - pink, yellow, or otherwise - in general are close to extinction and should be looked at but never touched, transplanted or mowed. Even though abundant in Virginia woods they are priceless – finicky and fragile. Simply put, they are not social - they like to be left alone! Other lady's-slippers can be raised by experts, but not the pink one. It's nearly impossible to achieve propagation. Only a few have ever been successfully raised from seed to bloom – and that, for the most part, takes a scientist to accomplish. And still, not growing in their native environment, they generally will not last more than a couple of years. Once they are dug up, they are doomed, period. If the land they are on is to be developed, trying to move them will not solve a thing. At best, conservation of the habitat is encouraged so the naturally occurring species has a chance to survive and flourish.

My Richmond contact has been Barbara Noe of The Orchid Alliance of Richmond, Virginia.. Barbara has been a dream! She was excited that I was excited. After I was sure I was talking to someone who genuinely cared, I gave Barbara explicit directions to the site of what I now considered to be MY orchids. What Barbara gave me were articles previously posted in *The Richmond Times Dispatch* and HOPE for survival.

Through late spring storms and mud, Barbara trudged according to my instructions and found the site, blooms now gone - and promised to look after this area. And what are the odds – she actually knows the owner of the property and will know if and when the property should face development or sale. Not on her watch - not if she can help it! (Barbara also knew my Dad – but that's a different novel!)



Barbara also promises to keep me up-to-date. I trust she will. Her latest update in mid-July was this: *“The site remains the same and has had no special attention lately... none is needed!!...this is the time of ticks and snakes and other unpleasant critters so nobody is eager to visit the area.”* I love her candor!

I have to be working back in Florida, but I need to know that this colony of orchids, my orchids, although not rare, yet...“a rare find”...will flourish protected and nurtured by those whose passion is their safety and continued propagation in the wild. For this, I give kudos to Barbara and her kind, groups of dedicated and caring individuals who look after God’s precious gifts of bloom – which can make a simple man gasp in astonishment as he traverses the nature around us.

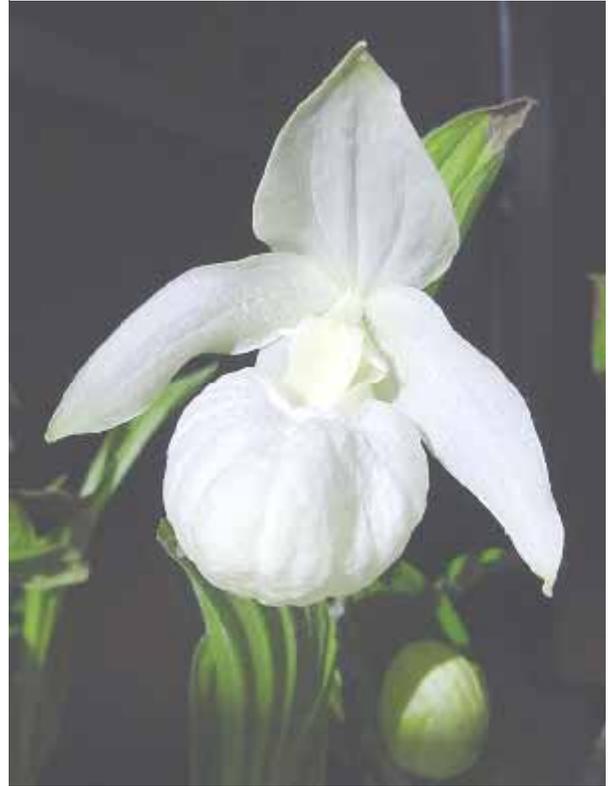
I’ll keep making photos – and figure, that this may be my grandest chance shot – and thank my God, for giving me the sight and insight to find and follow-up on an early morning treasure.

Steven Shires

A White Cypripedium

The white cyp. is *Macranthos Alba*. Technically, it could have some *calceolus* blood in it which would make it *x ventricosum alba*.

Paul Perakos



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
 Fairwood Orchids, Ed Diamond
 Fishing Creek Orchids, Stephen Male
 Flasks by Chuck Acker, Chuck Acker
 Fox Valley Orchids, Ltd., Tom Kalina
 Glendale Botanicals, Robert Gennari
 Gunzenhauser Orchids, Ernst Gunzenhauser
 Gypsy Glen Orchids, Dennis D'Alessandro
 Herb Windom
 Hilo Orchid Farm, James Fang
 James L. Newsome, MD
 Marlow's Orchids, Jim Marlow
 Marriott Orchids, Hadley Cash
 McLellan Botanicals/Taisuco America
 Michael L. Ault, MD
 Nicky Zurcher
 Orchid Inn, Ltd., Sam Tsui
 Orchidaceae, Mark Srull and Joan Bateman
 Orchidbabies, LLC, Earl and Phyllis Bailey
 Orchids Limited, Jerry and Yoko Fischer
 Orchidview Orchids, HP Norton
 Paphanatics, unLimited, Norito Hasegawa
 Pinecrest Orchids, Leon Blumreich
 Piping Rock Orchids, Glen F. Decker
 rePotme.com, Ruth and David Shapiro
 R. K. Gems, Rod Knowles
 Ratcliffe Orchids, LLC, Paul and Mary Phillips
 Seagrove Orchids, LLC, Linda Thorne
 Slipper Orchid Study Group of Florida

Steve Helbling
 The Slipper Orchid Forum
 Tindara Orchids, Frank Coppolino
 Tyler Orchids and Tropicals, Russell M. Tyler, Ph. D.
 Whippoorwill Orchids, Tom and Barbara Larkin
 Windy Hill Gardens, Marilyn and Brian LeDoux
 Woodstream Orchids, Bill and Lynn Evans-Goldner
 Zephyrus Orchids, John and Nicole Doherty

SOA DIRECTORY

President: Barbara Tisherman, Pittsburgh, PA; (412) 683-0207; btisherman@aol.com

Vice President: Steve Drozda, Pittsburgh, PA; (412) 854-1862; sdrozda@adelphia.net

Secretary: Russ Tyler, Brainerd, MN; (218) 829-4840; mtyler@brainerd.net

Treasurer: Linda Thorne, Seagrove, NC; (336) 879-6677, orchidlinda@rtmc.net.

Director: Sam Tsui, Bloomington, IL; (309) 662-2386; samtsui@orchidinnusa.com

Director: Thomas Larkin, Rogers, AR; (501) 925-2228; wiprLark@cs.com

Webmaster: Rod Knowles, Brainerd, MN; (218) 829-4840; rkgems@brainerd.net

Newsletter Editor: Janette Harris, Westfield, NC; (336) 351-3945; jaharris@surry.net

Membership Secretary: Jean Metcalf, Erie, PA; (814) 866-3437; orchidiva@yahoo.com

Do you love Cymbidiums and Paphiopedilums?

The Cymbidium Society of America invites you to join

Membership includes six issues of the colorful CSA Journal magazine

Current annual dues: US\$30.00 (includes overseas surface postage) - add \$20.00 for overseas airmail

[VISA, MASTERCARD, JCB or checks in US funds only]

c/o Jose Rodriguez, Membership Secretary, 172 River Run Circle, Sacramento, CA 95833