Paph. dianthum 'Belinda' AM/AOC (2002).

Central Vancouver Island Orchid Society Newsletter January 2007

President: Vivian Heinsalu-Burt 753-0027
Secretary: Don McDermid 923-6006
Editor: Mike Miller 248-3478
Mailing address: P.O. Box 1061,
Nanaimo, B.C.
V9R 5Z2
email: mike.stellamiller@shaw.ca
web site: www.cvios.com

Meetings are held September through June on the Saturday before the 4th Wednesday of each month at the Community Services Building, 285 Prideaux Street, Nanaimo, in the Maffeo Auditorium, doors open at 11:30, with the business meeting starting at 12:00 noon.

Coming Meeting Dates:

January 20, February 18, March 18, April 22, May 20, June24,
September 23, October 21, November 18, December 9

Program for January 20th

Paphiopedilums – "The Ultimate House Plant"

With Terry Groszeibl of Forestview Gardens, Langley

We invite people to place pre-orders if they are interested, to ensure they get exactly what they want.
Members can view our selection at www.fvgardens.com

Coming Events:

Victoria Orchid Society Show and Sale, University of Victoria Student Union Building March 2006
CVIOS Show and Sale, Country Club Centre, April 6-9th 2006
Vancouver Orchid Society Show and Sale, Richmond Curling Club, April 28-30th 2006

Editorial:

Well folks welcome to 2007 another year to expand your horizons and do something better. There must be something you can do better. I'm not about to list what I could do better it would take a small book.

Anyhow back to something more exciting, Orchids. The Richmond Judging Centre awarded three plants in December so keep that in mid when you watch your flowers open. You to can win if you let the judges see your plants. Make sure to groom your plants for the upcoming shows as well. We start with Victoria in March so watch the small spikes as they grow out and try to keep them in the same orientation so the flowers are arranged well on the spike when they open. Clean the leaves regularly so they look great at the show and watch out for the dreaded enemy. Our little crop sharers,

slugs, snails, wood bugs and aphids. They know which is your best flower because that is the one they will sample first.

****

CVIOS November 2006 General Meeting of the CVIOS

The president Vivian Heinsalu- Burt called the meeting to order at 12:00 on November 18th 2006 with 35 members and no guests present.

1. **The minutes of the October meeting** were referred to. Moved to adopt by Hilding Franson and seconded by Dora Glover; carried.

2.**The Treasurer's Report**. The expenses and income were reported. The balance of the general account was $3582.53 and the Balance of the AOS account was $3285.14. Moved to adopt by Shirley McClare. Seconded by Terri Millen; carried.

3.**Secretary Report**. Bev Morrison was sitting in as acting secretary. Don McDermid came forward and volunteered for the Secretary position that has not been filled since last election. Thank you to Don.

4.**Sales Table**. The sales table had a lower # of plants on it than in the past.

5.**Library Report**. It was announced that the new magazines and journals will be held in a box on the top rack of the book shelf for easy access. There is also a sheet explaining the procedure for borrowing from the library.

6. **Seattle Flower and Garden Show**. Maureen Hawthorne told the meeting that there has been some response for the ETA tour leaving from Nanaimo to the Flower and Garden Show that is going to be held in Seattle on Feb. 16,17, and 18th. The tickets are $319, and include room, breakfast and tickets for the show. The tour needs at least 24 interested participants so think of signing up.

7. **December meeting**. The meeting will start at 12:00 on December 9th with setup before to put on our annual pot luck extravaganza. Members were reminded to bring a dish to share, a big and small plate, a knife, fork spoon and glass and also items for the silent auction. Also members were again reminded of the display contest where alone or together with other members a display table can be set up. They will be judged and the best presentation will be announced as the winner with an appropriate prize.

8. **Thank you**. A thank you was extended to Laurie Forbes, Harry Johnson and others for setting up and taking down the Fraser Valley Show. The club managed to acquire many ribbons and awards and congratulations were extended. 36 plants were in the display.

9. **Newsletter** Mike announced that the newsletter had been sent out late but when asked, everyone had received it in time for the meeting.

10.**Floralia Order** Members were encouraged to get their Floralia orders in. So far there was an order for $364 US but need to get that to $500 in order to get it sent by Air Freight. Mike is planning to send it off by the 1st week in December. Any plants that are wanted that you know are from Brazil – try your luck. Floralia just might carry them.

11.**Discussion and announcement**. Shirley had been promoting the club and has put information about our meetings and club in the Leisure Guide. Members discussed the possibility of buying bulk items and breaking them up into smaller amounts and sharing with club members. It was stated that the orders and payment (for example-fertilizer) would need to be in before buying the item(s).
It was also announced that the plant section (which includes many orchids) of Butterfly World will be opening soon.
There were no plants sent to the AOS judging centre this month.
Mike Millar and Bryan Emery presented the Show Table plants.

12. **Programs**. This month a slide show on Fragrant Orchids was borrowed from the Canadian Orchid Congress and will be presented for members at the meeting by Bryan Emery.

Meeting adjourned: 2:30pm

IN MEMORIUM

Ken Girard, Alberta's only AOS-accredited orchid judge, passed away on December 2 after a short battle with cancer.

Ken had a lifelong passion for orchids, and was a hardworking and enthusiastic member of the Foothills Orchid Society in Calgary. He served as a judge at virtually every orchid show in Alberta in the past decade. He was also very active in promoting the regional AOS judging centre that has just been opened in Vancouver. He was in charge of the education program for the student judges. He was a very informative and entertaining speaker always delivering well planned programs. His lively company and his tireless efforts to advance the art of orchid growing will be sadly missed by all.

NOTICE

If you purchased one of the **Barkeria cycelotella x Jurusan** in the past couple of years you need to change your plant label. Apparently the Asian wholesaler made a little error and put the above name on the plants when they should have put on **Barkeria scandens x Bardendrum Terusan** (cycelotella is a syn. of scandens). The hybrid is now called **Bardendrum Nanboh Pixy.** It is a Barkeria x Epidendrum cross.

RICHMOND AOS JUDGING CENTER REPORT

December 9, 2006
From the plants were brought in for consideration to this meeting three awards were made.

Cattleya maxima 'Mem. Ken Girard', HCC/AOS
Paphiopedilum Temptation 'Chewah', AM/AOS
Pleurothallis maduroi 'Mem. Ken Girard', AM/AOS

Cultural Suggestions for the *Paphiopedilums*
Orchids for Every Admirer

(Translated from *Palmengarten* Bulletin)
By Gustav Schoser

It is not a secret any longer that the ladyslippers (Paphiopedilums) have a large and still-growing circle of admirers.

The Asiatic species ladyslippers, *Paphiopedilums,* offer a wide variety of color, form and peculiarity that cannot be beaten. They are very decorative and long-lasting. Besides, these species will tempt you with a very long flowering period. This means that we could build up a collection of plants which would give us flowering ladyslippers the year around. The leaves are so diverse in their form and coloration that even without a flower, *Paphiopedilum* species are attractive plants. They do not need a lot of room, because they like to be crowded. Of course, they are not easy to get, and growing them from seed is extremely difficult. Essentially, they multiply better by dividing them. In the meantime, however, a certain production has been started in ground, appropriately prepared for the germination of seed. Still, they are a long way from being easy to get. The so-called vegetative multiplication, the Meristem culture, is not ready to use with *Paphiopedilum** as it is with *Cattleyas* and *Cymbidiums.* Even young plants are comparatively expensive for that reason. The natural reserves of these species, in southeast Asia, have been completely ransacked in many places. We cannot condone any more the importation by the thousands of these pure *Paphiopedilum* species, because if this practice continues the plants will disappear within two or three years. That is why the orchid fancier, especially the beginner, should only obtain these species from other orchid growers, who have reproduced them from seed or by division. In no way do they lack any of the beauty of the wild plants, but they do have the great advantage of being much hardier and faster-growing than their parents from the tropical wilderness. [*The Japanese have mericloned some.]

How and Where Do Paphiopedila Grow?

Ladyslipper orchids are found in southeast Asia, from India to south China and also on the islands of Malaysia and the numerous islands of Indonesia, as well as the Philippines, New Guinea and the Solomon Islands.

Paphiopedilum species will grow just as well at 2,000 meters above sea level as at sea level, if temperature accommodations have been made. That is why there are different types of treatments, which are extremely important to the growth of the plant. The ladyslippers grow in different places; at the edge of a mountain forest, where they are covered with fallen leaves and twigs, which have not begun to rot, the roots spread out flat; down to the limestone cliffs or over rapid brooks or on the cliffs above the beaches. Others grow on granite cliffs, which have a layer of moss only a few inches deep; or you will find some in very loose ground with sand and a little humus throughout. Some grow in the areas of the tropical rain forest, where there is some rain throughout the whole year, but the majority grow in the monsoon areas, which have some dry and some wet months. However, these plants should never get completely dry, since they cannot store any water. In nature, as in cultivation, they have periods of rapid growth when the plants need a lot of water, and a time of rest when growth slows down. Even during this semi-dry period the leaves do not get limp or fall off.

The planting mixture for these orchids as with others is always a problem. The rule used to be: have a good mixture of roots from ferns (Osmunda, Kingsfern, and Polypodium fern), with Sphagnum or Swampmoss, which should be green, living and growing like a cushion placed all around the plant on top of the mixture. These items are difficult to obtain. This was early utilized in Japan, which used to have an abundance of ferns and mosses, now has very little, as many of the natural habitats have been carelessly destroyed. If one wants to collect fresh, living Sphagnum, one is well advised to ask the forester for permission! Some growers have chopped ferns and fernstems and have used these

fibers with some success in different mixtures. *Paphiopedilum* growers, who have the most experience, use Pine and Fir bark in small pieces up to 0.5 cm and granulated styrofoam, flakes or chips in a 3: 1 ratio. About 10% pumice gravel should be added to the mix for plants, which in nature grow on limestone. Should you not be able to get any treated bark, take the bark and chop it real small and if possible moisten it three times a day to get the resin (sap) out and to kill off any bacteria and fungi. After the ingredients are mixed together, they should be put in a plastic bag with plenty of water. The bag should be closed and allowed to stand overnight. The mixture will absorb as much water as is needed for transplanting. For the next four weeks heavy watering can be eliminated. The plants need only to be slightly moistened. The very clever growers will bury their freshly potted plants, even the imports, up to the rim of the pot, in moss. This way the plants will have moisture on and around them, without your constantly having to dampen sensitive roots, which after transplant are not able to take up any water. To be able to take up water a new root should be formed. It is about a one centimeter white root-tip which later on will have a brown velamen coat. Few *Paphiopedila* have wiry roots, but while growing always have a white point at the tip of the root to show that there is some activity. Root formation can only come about if there is a high moisture content around the roots and the leaves, but not from direct watering. While planting, it is very important, whether there are any roots or not, to put the plant in deep enough to cover the bottom of the leaves also. It has been observed in nature that the roots will form in air which is saturated with moisture, and later on will settle in the substrate.

The experts recommend the following method: wrap a plant which does not have any roots in foam rubber and stick it in a wide-necked bottle which holds a diluted mixture of fertilizes. The plant should not touch the water, just reach into the moisture-laden air in the bottle. Since no roots will grow if any light is allowed to shine into the bottle, it should be completely wrapped in foil. There are a few exceptions.

Paphiopedila can also grow as epiphytes, *P. lowii* for instance. Some growers use the bark-styrofoam mixture and cover the pot with swampmoss, but please be sure that the sphagnum is cut so short that the heads will lay right next to each other, just as the moss is growing in nature. The swampmoss also grows toward the light, which means it has a vertical axis and does not like to be put every which way. Only then applies the old saying from the gardener, "If the moss will grow, the plant will grow." This way the sphagnum cushion is a big help to the plant. With the usual temperatures for the *Paphiopedilum*, the moss will only last six months. It will get long very quickly and fall over, but it is a big help at the start.

"Recognize the gardener by his watering" is another old saying. One could knock on the clay pot to see if water was needed or not. The callouses on the knuckles were the sign of the expert breeder, who treated his plants individually. He could also tell by the color of the pot, if water was needed or not. Today, the plastic pot is dominant. It would be of no use to knock on it. Resourceful gardeners have, at least on an experimental basis, tried putting plastic pots on a scale. A heavy pot indicated that the plant had enough water, while a lightweight one meant that the plant needed water. Today a pipe which emits water like a sprinkler is popular. The water pours out fast and does not have to be carried in small cans by the second man through the garden. Unfortunately, most of the time the water rushes too fast through the sieve instead of going through the atomizer. Many of the fragile plants drown. Here too, as always in a nursery, let the plants enjoy the water that is available in the vicinity, until they signal that they need water again. One has to look at and live with the plants. A torrent of water should never disturb the quiet peace of the ladyslipper in the greenhouse. Besides, at our latitude, it is enough to saturate the *Paphiopedila* once a week. Two or three hours after receiving water, they should have a liquid fertilizer during the summer months while they are growing. An easy to dissolve fertilizer is advisable: NPK 30: 10: 10 in a .01 % solution. These are very moderate ingredients, but should be applied regularly. *Paphiopedila* are very moderate consumers. Besides, plants in plastic pots do not dry out quickly, therefore they do not need much water. Naturally water consumption *is* higher on sunny days than it is during the dark winter months.

The light requirements for *Paphiopedilum* is almost the same for the whole year. On the average it amounts to 7500 lx (Lux). To get a picture of the required intensity, a clear day in the middle of summer in Central Europe will measure 75,000 lx. That is ten times the amount *Paphiopedila* need for full utilization. On the other hand it has to be taken into consideration that in the winter months, especially November and December, the light intensity on a cloudy day with smog is very often only 750 lx, which is only one-tenth of the requirement for the plant to survive. The total requirement for the plant per day amounts to about 100,000 lxh (Lux-house) which means 10 hours with each 10,000 lx, or about 14 hours of 7,500 lx. This rate applies to most species, especially those with thin and spotted leaves. The species with hard leaves need about 25% more light. The blossom of the *Paphiopedilum* is not dependent on the duration of the light period per day. The formation of the blossoms is obviously influenced through lower temperatures.

The need for warmth by *Paphiopedilums* is likewise very clearly dependent on the origin of the plants. Lowland species need tropical temperatures. Highland species need correspondingly lower temperatures. The general temperature level lies about between t=15° C (59° F) and t=30° C (86° F). Only a few species are content with t=12° C (53.6° F) as minimum temperature. These are the ones: *P. insigne, P. fairieanum* and *P. druryi.* According to recent examination and observation, it seems to be most favorable to have four temperature levels for *Paphiopedilums:* warm - t=22° C (71.6° F) as minimum night temperature; moderately warm - t=18° C (64.4° F) as minimum night temperature; and, moderately cold - t= 15 ° C (59° F) as minimum night temperature.

For cultivating, most of the wild species and all hybrids like moderate warm to warm temperature; therefore, the temperature level should be kept at t=18°-22° C (64.4° F-71.6° F) at night and 30°-35°C (86°F-95°F) for days. Low temperatures retard the growth. The blossoms appear weeks late, and the flower stems stay short too. *Paphiopedilum* plants are grateful for constant light-air circulation around the leaves.

Transplanting is another important aspect in raking care of the plants. It is usually done once a year, between February and April. Since *Paphiopedilum* does not have any bulbs and its growth is sympodial, this has to be done very carefully. Sympodial means that new sidebuds will form from the leaf-root base, and thus originate a bunch of vegetative growths. A bunch like that should not be pulled apart. Should you want to do so anyway, start weeks before the transplant, and make an incision with a sharp knife on the part that you would like to separate. That will stimulate new root formation and cut down the loss significantly. But under any circumstances, you should avoid cutting them into two different pieces at this stage.

Large plants are less susceptible to errors in watering, etc., than small ones. For good root formation peat moss in the right combination is important. It should have a weak acid reaction. Be extremely careful while watering in the beginning. Now the third suggestion: the peat moss must be open evenly on the surface. If a blue-green covering (blue algae) develops, it will seal the surface hermetically, and the roots will decay. That covering has to be removed immediately and replaced by a new one, which will ensure some air from above for the rootball. While taking the plant out of the old container, shake out the roots. The root formation is now visible, and you notice whether or not they are healthy. Roots that have either died or rotted should be cut off very carefully with a small sharp scissor up to the wooden root stump. They are of no use to the newly set plant. On the other hand, the plant will have to be repotted very securely so as not to disturb the root formation. In this case you take the plant and wedge it firmly in the substrate, or take a small bamboo stick and tie it to the plant before putting the plant in the peat moss substrate. It should be covered with live moss tops, which we have talked about before, and this is a big help.

When transplanting, use as small a container as possible. A small pot is highly conducive to root formation. While transplanting, it is beneficial to put something for good drainage in first, about 1/4 or 1/3 deep with pieces of bricks or lava gravel in the pot. Hold the plant with the roots in the container so that the leaf base is even with the edge of the pot. The peat moss material should be very carefully put between the healthy roots. Every so often hit the pot lightly on the planting table in order

that the material will be evenly disbursed among the roots. It is not necessary to press the mixture down. It is a disadvantage for the formation of the roots to place the plant too high or too low in the pot. After potting, it might be helpful to cover the plant with a plastic bag with holes in it to insure high but not sticky air-moisture.

When the Flower Is Growing

When a new shoot has formed, it is like a guarantee that one of these days a blossom will appear. But first the shoot has to be fully grown. It should be the size of the parent shoot. It might even be larger. At this stage, at least with several species, it could influence the flower formation, if there would be a one or two month period when the night temperature could be lowered 3°-4° C (37.4°-39° F). After elevating the temperature back to normal, a few weeks or months later appears a pointed triangle sheath on the newest sprout. The plant is now at a dangerous stage, because if any water is left in the crown, it could mean the loss of the flower. At this time the plant needs to be watered very carefully. If possible, the temperature should not be lowered any more at night. Then it would form longer shoots.

At this time the growth of the plant spike should be especially fast. We distinguish between three types of flowers: 1. One flower on the stem; 2. Two flowers; 3. Ever-flowering. On the last one, one flower after another opens up on the same stem. The flowering of the consecutive blossoms continues for about nine months.

All orchids have six members of the corolla. The three in the outer circle are called sepals, while the three inner parts are called petals. A tremendously big change occurred with the evolution of the ladyslippers. The outer circle consists of two sepals; the dorsal sepal or the flag and the synsepal (under the shoe), which consists of two pieces which have grown together. The inside parts consist of both of the more or less horizontal situate petals, and the modified inferior petal, resembling the shape of a shoe. The fertilizing organs are sitting on the same column as the sepals and petals. The column closes off in the flower with a characteristic column plate, which is called the staminodium in technical terms. On both sides of the column plate are the wax-like pollen package, the pollinia. At about a right angle to the column extends its three piece, grown together organs into the shoe. This way nature assures herself of pollination. The insect that lands on the column plate will fall into the trap, the shoe. The only exit is between the column and shoe rim. While leaving the trap the pollen that the insect brought along will be unloaded on the scraping margin, which stands in the way and/or new pollen will be taken by the insect, deposited as it leaves the flower.

In cultivation pollinization has to be helped along a bit. From old experience, the wax-like sticky pollen has to be kneaded to be adherent (after Prof. Burgeff!). To be very sure, some breeders remove the shoe for pollinating. A well-nourished flower is going to collapse in a few days, and the fruit pod will get bigger with pollinization. It is going to take from ten to fourteen months for the seeds to mature. While in the seedpod, the seeds have a restraint factor against premature germinating in the last stages; therefore, the germinating in' especially prepared ground would take a long period of time. For that reason, many growers used to water the seed with a special adapter. Today, in the age of cell culture, after six months they harvest the yet green seedpod ("greenpod"). By that time the fertilizing cycle should be complete.

The planting is done under sterile conditions. Ehrenfried Lucke has contributed greatly toward simplifying the procedure. The period of time for germinating is very indefinite and erratic. It is not unusual for the seeds to lie for a whole year in the sterile medium before germination begins.

Paphiopedilum Forms, Varieties, and Species in Nature

The number of species and the disclosure of new habitats in southeast Asia have created a violent dispute among *Paphiopedilum* taxonomists. One group, the "splitters," likes to divide. They prefer to declare a variety of species, without showing specific differences. The other group comprises the "lumpers." They only want to acknowledge a few species, without being able to prove their assertions. We still do not know much about the places of discovery, the propagation of the species, and even less about their origin. In the area around Kew Gardens are the "lumpers." At home in the USA are the "splitters." Maybe here, too, the right way would be the golden middle.

Cool Growing Species

P. insigne from the Himalayas is known for its many shapes. It was used very early in cross-breeding. The leaves are light green and firm. The flower stem is 30 cm. long, sometimes with two flowers. The color of the blossom varies, but is usually yellowish-green. The flag has a white background with purple-brown spots. The petals have a wavy edge. It is a winter bloomer.

P. fairieanum from Assam is a small plant with deep green leaves. The flower stem is about 20 cm. long. The flower is relatively small, but pretty. The flag has a white background, yellow-green on the base, purple stripes, wavy on the edge. The petals bend downward, are hairy, and the point turns upward. The lip is green, with a red overcast and purple veins. It is a fall-winter bloomer.

P. druryi from south India Travancore grows at about 1,800-2,000 m. elevation. Relatively scarce, the leaves are strap-shaped, medium size and deep green. The flower stem will grow to 30 cm. The flower is medium size, the flag is oval yellowish, the petals gold-yellow, spotted on the bottom with an almost black stripe in the middle. The lip is yellow. Its qualities impart to progeny well. Spring, early summer bloomer.

Paphiopedilum Species for Moderate-Cool Culture

The wild forms of this group all belong to the subgenus *Neuropetalum,* with the type *Paphiopedilum insigne.* First of all *P. exul* and *P. gratrixianum* should be enumerated first.

P. exul from Thailand has a slightly smaller leaf than *P. insigne*. The flag is yellowish-green with purple spots and a broad wide edge. The petals are yellow with purple stripes, the lip is transparent yellow. Early summer bloomer. It grows at sea level in Thailand, very hot and humid and is the exception in culture of this group.

P. gratrixianum from Annam Vietnam has a dark green leaf, almost twice as long as that of *P. insigne*. The flower is a little larger, the flag is covered with round black spots, petals and lip are greenish-yellow-brown. Early summer bloomer. It grows at 3,000 ft. elevation in Laos.

P. hirsutissimum from Assam in India exists with its related species, *P. esquirolei* from south China and north Thailand, as an independent species. The leaves are small, uniform, green, up to 20 cm. long. The flower stem grows up to 35 cm. high and is hairy. The flowers are large, with lashes, greenish coloring suffused with purple. Edges are wavy, lip is green-brown-purple. Spring bloomer.

P. villosum from Moulmein Burma, Laos, and Thailand is in alliance with *P. boxallii* from Burma, with leaves up to 20 cm. long. On the bottom of the leaves are purple spots. The flower stem is 30 cm. long with white hairs, quite often hanging with large flowers. The flag is greenish with white edges, the base brown-purple. (In *P. boxallii* the base of the flag has dark purple spots.) The petals are yellow-brown, the lower half lighter, the lip brownish-yellow. Winter and early spring bloomer.

P. spicerianum from Assam India has green leaves up to 20 cm. long. The flower stem grows up to 30 cm. high, very often hanging, with one flower. The flag is white with a green base and a purple stripe in the middle, the petals are pale green with purple markings, the lip is brownish-purple. Winter bloomer.

P. venustum from north India has gray-green spotted foliage, purple underneath. The flower stem is about 20 cm. long. The flag is greenish-white and has purple stripes. The petals have purple spots, the lip is yellowish with green veins and a slight purple overcast. Spring bloomer.

Paphiopedilum Species for a Moderate- Warm Culture

Multiflowered *Paphiopedila* with *P. philippinense* from the Philippines with its relatives, *P. bodegomii* from west Irian, *P. randsii* from the south Philippines, also *P. roebbelinii* and *P. laevigatum* from the Philippines. They do have leaves like leather up to 39 cm. long. The flower shoots are up to 50 cm. long and have two blossoms at the same time. The ground color is yellowish-white, with brown and purple stripes, the petals are hanging, quite often twisted, yellowish-purple shading. The lip has a yellow ground color and brown or purple markings. Summer bloomer. (Needs about 25% more light.)

Also multiflowered are *P. parishii* from Moulmein, Burma and *P. haynaldianum* from the north Philippines. The leaves on these are also like leather, dark green about 30 cm. long, the flower stem is up to 50 cm. long and has 3-7 blossoms. In *P. parishii* the flag is yellowish-green with green veins. The petals hang and are up to 12 cm. long and twisted, small with dark spots and purple shading. The lip is yellowish with green shading. Summer bloomer.

P. haynaldianum has a pink to yellow-green flag with brown spots. The petals are 10 cm. long, standing horizontal with sloping ends, the lower half yellowish-green with brown spots, the ends purple. The lip has a slight purple overcast. Spring bloomer.

Under the same condition, but with normal light-intensity the following should be cultivated: *P. appletonianum* from the hinterland of Laos; *P. wolterianum* from western Cambodia; *P. amabile* from west Kalimantan; *P. robinsonii* from central Malay Peninsula; *P. sublaeve* from Kedah Peak Malaysia; *P. volonteanum* from Mt. Kinabalu, Sabah, north Borneo. They have medium sized flowers, greenish flag and a

white edge, with lavender-mallow colored petals, with green shading, green-brownish lip. Spring, early summer bloomer.

In the group of hairy ones these are included: *P. barbatum* from west Malaysia; *P. callosum* from the hinterlands of Cambodia and Thailand; *P. wardii* from Burma; *P. sukhakulii* from north Thailand; *P. tonsum* from Sumatra; *P. ciliolare, P. hennisianum,* and *P. acmodontum* from the Philippines. All of these have more or less marbled leaves, the flower stem is about 30 cm. long, the flags have a white background with different stripes, the petals are also striped and are very hairy on the edge, the lip is brown-purple. Winter-summer bloomer.

P. charlesworthii from Burma is a small plant with small leaves. The flower stem is about 20 cm. high, the flag is white, pink and very broad, with relatively small petals and lip, which are yellowish-brown. The column plate is white. Summer bloomer.

Also in this culture group belong *P. bellatulum* from Thailand and Burma and *P. concolor* from Burma to Vietnam, and the variation in size is just as large. Both belong to the species, respectively subgenus, of *Paphiopedilum* with an egg-shaped lip. The overall shape is diminutive, the flower stem on the first one is just a few centimeters long, the other one grows up to 15 cm. The leaves are fleshy and spotted, the ground color is whitish-cream, but the other one is yellowish-white. *P. bellatulum* usually has large red-purple spots. *P. concolor* has red speckles. Early and mid-summer bloomer.

Paphiopedilum Species Requiring a Warm Culture

From the sub-species of the multi flowered plants the following should be included: *P. stonei, P. rothschildianttm, P. praestans, P. wilhelminiae,* and *P. lowii,* from Borneo and New Guinea; *P. victoria-mariae, P. chamberlainianum, P. glaucophyllum, P. primulinum,* etc., from Sumatra and Java. *P. lowii* also grows in Sumatra, Java and the Celebes. *P. stonei* and the others have dark green leathery leaves up to 40 cm. long, the flower stem is just as long and has 3-5 flowers. The background is whitish to yellowish, with dark red stripes, mostly longer petals hanging or horizontal and twisted. The lip is whitish yellow with pink to red shading. They need a high light intensity about 10,000 lx. Summer-fall bloomer.

From the *Barbata* subgroup are the following: *P. mastersianum,* from the island Ambon; *P. bullenianum, P. hookerae, P. linii,* and *P. volonteanum* are at home all around the south Chinese Ocean as are *P. javanicum, P. virens, P. purpurascens, P. curtisii, P. superbiens, P. violascens, P. bougainvilleanum, P. lawrenceanum, P. argus, P. purpuratum* and *P. dayanum.* All of these have marbled leaves. They have less light requirement than the previous group. Even here changes are going to be made in the systematic order through continuing investigation. The flower stem has one flower. The prevailing colors are white, green, brown and purple, mostly summer bloomers.

Among the broad-leaved species are: *P. niveum* from the islands around northern Malacca; *P. delenatii* from Vietnam; and *P. godefroyae* from the Birdsnest Islands of Thailand. The shape of the plant resembles *P. bellatulum* or *P. concolor. P. niveum* and *P. delenatii* have a flower stem of about 20-25 cm. long, which occasionally has two flowers. The background color could be white or pink with delicate spots. The lip is in the shape of an egg. The main blooming season is early summer.

Paphiopedilum Crossbreeding

For 110 years there have been hybrids of *Paphiopedilum.* The first one was introduced by John Dominy as *P.* Harrisianum. It originated from crossing *P. villa sum* with *P. barbatum.* It bloomed in 1869, for the first time. Hybridizing is a very interesting territory. We still know very little about the most important traits. Almost every flower, even out of the same seedpod, is different from the others.

All of the several thousand crossbreedings cannot be described. There are two classes: 1, the Primary hybrids (two species); 2, Secondary hybrids (primary hybrids together, or with species).

Editor's Note: The taxonomy of this group has changed since 1981 and you should check with a modern source for current specific names.

Orchid Digest, September-October 1981

What Did I Do Right?

By Mike Miller

Being in charge of the societies plant orders a large number of people talk to me about their experiences with their new plants. I hear about wonderful flowering successes and crispy failures. With other members settling somewhere in between. Lately I have heard too many tales of crispy dead plants. It got me to thinking about my own experiences over the last 35 years or so of bringing in bare root plants from Thailand, India, Brazil, Japan and Australia as well as the club orders from the Philippines, Australia, Brazil, Ecuador and the United States. Unless the order has been through the deserts of hell or the polar wastes I have always had at least 80% of the plants eventually thrive and prosper. Why the difference?

I've been growing orchids for about 45 years now and I have always liked unusual species and to get them I started importing. I'm not going to tell you that all went well and every plant flourished. You'd all stop reading and I wouldn't blame you a bit. No, I killed a lot of plants in the beginning and tortured others for years, but some of them did flourish, many even flowered for me. Some I still have thirty years later still doing fine. So what did I do right? Why is my death rate now very low?

Well I think its tied to patients and the manana syndrome. I don't always do today what most people think should be done today often putting off until some tomorrow [manana]. Could be thought of as slothful or lazy or forgetful, but maybe it works better.

FIRST – Never pot up a new bare root import as if you were just repotting one of your own plants.
SECOND – If you want to slab the thing DON'T DO IT like you want to or think it ought to be done right away.
THIRD – When new plants arrive if they are on the dry side submerge them in a sugar/Thrive Alive solution for one to four hours. I said submerge not floating merrily! Put a bit of light wooden board on top to keep all parts under the surface. This is a foliar feeding / reviving technique and if they're not submerged it won't work as well. If they are only just tired looking you could get away with a heavy shower of the solution otherwise it's a deep tub. Don't be afraid to re-submerge for a second or third one to four hour session. It's amazing what dry dead looking tissue will plump up and look between OK and great.
FOURTH - Now after the soaking I usually place each plant in a plastic pot on the large side and lightly fill it with moist fluffy live sphagnum moss. Then place the pot in a spot really too shady for the plant. Ever seen an Intensive Care Unit in a hospital brilliantly lit? No, subdued light is best, less stress and desiccation this way. If there are a number of smallish plants they can be grouped in a seedling tray with the moss. I have been known to keep plants at this stage for over six months and keep checking for root growth. I water the moss to keep it happy and it can take a light fertilizer as well.
FIFTH – When new roots growth is showing I start to think about potting them for real. [Finally you say.] If it is a small flat slab-growing type of plant I either lay it on a bed of moss or make a thick matt of moss on a slab and tie the plant in a temporary manner. Again put in a low light area. Again when new roots show slab the plant permanently. If the moss looks fresh all the time then you are doing it right. It hates to be really soggy and should be airy and fluffy as well as moist. Fluff it every couple of weeks to keep lots of moist air around the root base of the plants.

This system can be done with a plant you have had for a while and somehow it lost all it's roots. It now has no way of taking in water or nourishment so give it this treatment and you should be able to save it. Just remember GO SLOW. There is always tomorrow.