

*Central Vancouver Island  
Orchid Society Newsletter  
June 2010*



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Meetings are held September through June on the Saturday before the 4th Wednesday of each month at the Harewood Activity Centre, 195 Fourth Street, Nanaimo, in the hall on the second floor, doors open at 11:30, with the business meeting starting at 12:00 noon.

*Laelia eyermaniana* 'Adanac' CHM/AOS 82pts  
Award is provisional pending species identification  
**Exhibitor:** Don Bednarczyk  
**Photo by** Judith Higham

**Coming Meeting Dates:**

June 19, 2010

**Program for June 19<sup>th</sup>**

**Phalaenopsis**  
**By Pat Van Adrichem**

**Coming Events:**

**CVIOS Summer Picnic**, Black Creek, date and time to announced.

**Fraser Valley Show and Sale**, Langley Curling Club, October 23-24<sup>th</sup> 2010

**Editorial:**

The annual General meeting is before us. The most important part of this is the election of a new or revised leadership group for the Society. This is the time to think of what you could do for the

Society not what it can do for you. [Now that is prophetic!] Anyhow think of a job you might want to undertake. Bryan canvassed the members last month and several said they would stand for the position they now held.

I have heard some news of failures with the plants in the Japanese order. I have now suffered the loss of two one in bud when the stems just dried up and the plant toppled over. I hope most of you found success with yours. I hope to bring one of the bluish Bletillas to the next meeting. It is quiet lovely.

Cheers Mike

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Central Vancouver Island Orchid Society  
General Meeting: May 22, 2010

1. The meeting was called to order at 12:00 pm with 32 members present.
2. Mike Miller moved the minutes of April 24 be accepted as published and Hilding Franson 2nd. Motion was carried.
3. Correspondence included subscriptions: - Orchid Digest, - Orchids Australia - AOS Bulletin - Lee Valley Garden Tools (April & May)
4. Treasurer's Report: - Laurie Forbes read Shelley Rattink's report in her absence. Laurie moved acceptance of Shelley's report and Shirley McClare 2nd; motion carried.
5. Mike Miller gave a brief summary of the Vancouver show, and noted that he received the 'Best Visiting Orchid Society Display' plaque for both the Victoria and Vancouver shows. He said the use of different coloured cards for special classes made judging go more smoothly. A thank you was extended to Shirley for the pictures of the Vancouver show that were put on our website. Ralph Kirby asked if anyone had pictures of our AOS show, to please send them to him, so he can include them on our website.
6. Goodies: - Thank you to Dora, Mary and Donna for bringing goodies in May.  
- In June, Anne Hartman, Nancy Miklic, Connie Gordon-Webster, Sue Christison and Bryan Emery agreed to bring goodies
7. Elections: President Bryan Emery reminded us that our AGM is at our June meeting and election of the executive for 2010/11 will take place. He asked members to consider running for office. The following positions are open: President, Vice President, Program Chair, and Show Chair.
8. Summer Picnic: Jerry offered to host the picnic this year. Date to be announced.
9. June Program: Pat van Adrichem will join us to talk about Phals.

The meeting was adjourned at 12:20. Bryan and Nancy talked about all of the spectacular orchids on our show tables followed by a very informative discussion on Paphs by Anne and Rainer.

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**CVIOS Annual General Meeting**  
**June 20, 2009**

President Vivian Heinsalu-Burt called the Annual General meeting to order at 12:30 pm with 27 members present and 1 visitor.

**Secretary's Report** - It was moved and seconded that the minutes for the 2008 AGM be approved. Passed unanimously.

The next item on the agenda was the election of officers for 2009/2010. Vivian and Dora looked after the nominations and election. The following will be our leaders for next year.

- President – Bryan Emery
- Past President – Vivian Heinsalu Burt
- Vice President – \_\_\_\_\_
- Secretary – Laurie Forbes
- Treasurer – Pat Galbraith
- AOS Chair – Sue Christison (2 years)
- Directors – Library – Mary Palmer
  - Newsletter – Mike Miller
  - Membership – Bev Morrison
  - Plant Sales – Donna McDonnell
  - Program Chair – \_\_\_\_\_
  - Show Committee Chair – \_\_\_\_\_
  - Refreshments – Sandra Lathrope (Maureen Hawthorn as helper)
  - Publicity – Shirley Mc Clare
  - Website – Ralph + and an assistant
  - Directors at Large – Angie Beltane

The meeting was adjourned at 12:40 pm.

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## USE OF COCONUT HUSK CHIPS FOR POTTING MEDIUM

Bob & Lynn Wellenstein

Bob and Lynn Wellenstein specialize in paphiopedilums. They are renowned for the fine quality of their plants. They operate AnTec Laboratories and can be accessed at: [www.ladyslipper.com](http://www.ladyslipper.com)

To grow a good root system on a *Paphiopedilum*, you need to balance a number of things.

### Roots need:

- \* Adequate aeration
- \* Firm anchoring (because wobbly roots will have their sensitive growing tips damaged or even destroyed)
- \* Adequate supply of moisture (without remaining too wet too long which eliminates adequate aeration)
- \* Adequate and properly balanced mineral nutrition without excess
- \* Reasonable temperatures
- \* Suitable pH in their surroundings

Because paphiopedilums do depend on root hairs for water and mineral uptake, it is important to grow new roots frequently as the effectiveness of root hair uptake does diminish with age. We had a discussion on the phone recently with a grower who made the comment: "Well, paphiopedilums just don't grow many roots anyway," and then added, "do they?" Actually, they can fill the pot with roots when their conditions are met and will do far better for you under these circumstances, as well as be

able to weather the occasional problem that may develop. It's entirely possible to grow and flower paphiopedilums with few or even no roots through foliar feeding and good humidity, but they are much more exacting when it comes to getting them to grow lots of roots. It is also important to maintain new root growth as the root hairs along the roots lose their ability to adsorb water and nutrient as they age, so that you need to keep some level of new growth going to maximize uptake. This is why they are "easy to grow, but difficult to grow very well." You need to know what your water quality is and what it means, and then figure out how much and what to feed, the appropriate pH, and the special needs for substrate some may have.

## **Bark Based Potting Mixes**

A major problem associated with bark mixes is their rapid break down. The fine bark mixes are especially prone to this, with noticeable deterioration and resultant loss of aeration and increase in drying time in as little as three months, and significant deterioration within six months under our culture conditions. For a very small collection this is resolvable by very frequent repotting, but in a larger collection this is not feasible. And with the weather conditions found in the northeastern United States where we are located, especially in the winter when there is less sunlight and somewhat cooler temperatures in the greenhouse, we need to maintain a freely draining mix that dries within a few days.

Our goal is to grow plants under conditions that encourage maximum root mass, as these plants will be far less affected by problems resulting in root loss, and in our opinion are generally more robust floriferous plants. In almost all of the components we worked with, there seemed to be a universal, constant, inverse relationship between the air capacity and the water capacity. In other words, a mix that drained freely and allowed enough air into the mix immediately after watering held insufficient water for paphiopedilums and phragmipediums; those that held sufficient water allowed for insufficient air. Other aspects of the components that we felt were important were the ability to anchor the plant in the pot without wobbling when watered or handled to avoid damage to growing root tips. Also, we felt that stability over time, both with respect to aeration and water-holding capacity, as well as pH, was an important consideration.

## **Hydrated Small Coconut Husk Chips**

Two medium components did defy logic and have the capacity to hold large amounts of air and water simultaneously. The first is New Zealand sphagnum moss used alone. New Zealand moss will simultaneously hold more water and more air than almost any other potting medium commonly available if kept loosely packed, but therein is one problem: over pack it or allow it to pack itself over time and it holds too much water and too little air. New Zealand moss does have some drawbacks: it is also hard to stabilize a plant in its pot with a loose pack of moss, it is hard to rewet if allowed to completely dry out, and it does break down fairly rapidly if kept moist. So for some folks it is a wonder medium, but for most it's not a very practical one.

The second was coconut husk chips. It's able to hold approximately the same level of air immediately after watering and as it dries out over a 5-day period in 2.5in rose pots as the equivalent sized fir bark, it also holds substantially more water. After six months under greenhouse conditions, fine fir bark had broken down and dramatically lost its air-holding capacity and stayed quite soggy, while the small coconut husk performed essentially as it did when new. We'll discuss some



quantitative aspects of coconut husk chips later in this article, but first we discuss its preparation, use, and some of our qualitative observations.

## **Hydrated Medium Coconut Husk Chips**

There are several coconut products for potting on the market: coir, which is ground up husk; coconut husk fiber, which is stringy material made by somehow "unraveling" the coconut husk; coconut husk charcoal; and coconut husk chips, which are chunks of the husk. Coconut husk chips are analogous to Sequoia bark, whereas coir is analogous to peat. We are using the husk chips, cut to surprisingly uniform size. The three sizes available correspond quite well with the sizes of Sequoia bark.

We use the compressed bales of coconut husk chips from Crystal Company of Saint Louis, MO (there are several suppliers of their product in the U.S.). These have been prewashed and pressed by the company a couple of times to reduce the amount of leachable salts contained in the product which can vary greatly and be quite high from some sources. When hydrated, each bale will swell to about 6 to 7 cubic feet of husk, so we divide each bale into two 32gal containers (plastic garbage cans) for hydration. The coconut husk from these bales has been extremely clean with relatively little dust and quite uniform in size. There will be a small amount of fines after hydration, but the amount has been so small as to present no problems.

## **Washing Coconut Husk Chips**

To prepare the husk, we first hydrate the bale in two 32gal containers at least overnight, and then transfer the hydrated husk and excess water to a second container that has had a large number of holes drilled into the bottom and about six inches up the sides. After the husk drains, a steady stream of water is washed through until it appears to run clear from the container. Then the husk is again transferred to the solid container and again covered with water at least overnight. The draining and washing procedure is repeated for two cycles total for the medium size and three cycles for the fine husk. At this point measurements have revealed virtually no significant leachable salts and a pH just slightly below neutral.

## **Potting with Coconut Husk Chips**

Coconut husk chips can be somewhat firmly packed in the pots, but not tremendously so, as it has a springy substance, and will change slightly in size as it loses water and then is rehydrated. It hydrates very rapidly, even from the completely dry state, and essentially instantly from the partially hydrated state it would be in your pot when you water it. It contains the water within itself like a sponge: if you squeeze a piece that is even partially hydrated, water will come out of the cut fiber end even when the outside of the husk appears dry. The exterior of the husk chips does dry very rapidly when exposed to air flow, so that the tops of the pots appear to dry out very quickly, but just half an inch further down there can still be a considerable amount of moisture. This takes a little getting used to in judging when to water, but has the benefits of discouraging fungus gnats (the larvae tend to live in the top half an inch of the medium and prefer very moist conditions) and lessening the chance of rot starting in the lower leaf fans, especially if they are potted slightly lower than they should be.

Aliflor is a kilned clay pellet that is roughly round in shape and available in three sizes. It is added to the mixes to open them up a little and to add weight to the mix, which helps to anchor the plant in the pot. It is an additive in a class that is frequently referred to as lightweight aggregates. Other common lightweight aggregates are expanded shale and lava rock. We have settled on the aliflor due to its uniformity in size and availability. We add aliflor and charcoal to the husk, and for phragmipediums also a bit of heavy aggregate (#1 crushed sandstone). Our formulas, which will probably be tweaked a little over the next year, are listed later in the article. For larger pot mixes, #2 charcoal is added to the mix; for smaller pots #4 charcoal is added to the mix (yes, charcoal size

numbers are the reverse of spongerock and aggregate numbers). My scientific background makes me wish to be able to give a quantitative or at least sound theoretical reason for the addition of the charcoal, but I do not have one. Lynn's observations have convinced her it is a valuable addition, and I have learned that her observations are uncannily accurate, even when they might go against logic (more on this later).

## **Results with Coconut Husk Chips**

When we first started experimenting with coconut husk chip mix on some plants, we would unpot a portion of them every week to inspect the roots. We were impressed at both the speed of initiation and the number and substance of new roots on the plants that had been switched. Because we continue to see this, we have been working to switch all plants from seedlings to stud plants over as quickly as possible to this new mix. We have repotted several plants that had lost all of their roots while in our standard bark mix and were "circling the drain." In the new coconut husk chip medium, we have watched them revive and initiate new roots faster than we would have believed possible for *Paphiopedilum* to respond to such improved 'conditions. A few plants that we feel would have certainly died otherwise due to their poor root health have been revived using this new mix. We have also seen a similar pattern in our phragmipediurns. While it is much easier to maintain good root systems on phragmipediums than paphiopedilums, our phragmipediums seem to have immediately picked up when put in coconut husk, perhaps due to the greatly increased reservoir of water contained within their pots while still maintaining a high degree of aeration. Our plants of *Phragmipedium besseae*, which have always suffered with the heat and have had to go under the bench have spent the entire summer on the bench top in very bright light and heat and are not showing any of their usual summer stress. We have also switched some root distressed phalaenopsis to the new medium (with some different proportions of medium components, including a greater percentage of aliflor) with the same response as the paphiopedilums and phragmipediums - nearly immediate and vigorous root growth. It also appears to be working well with our agar-on composting technique for both paphiopedilums and phragmipediums.

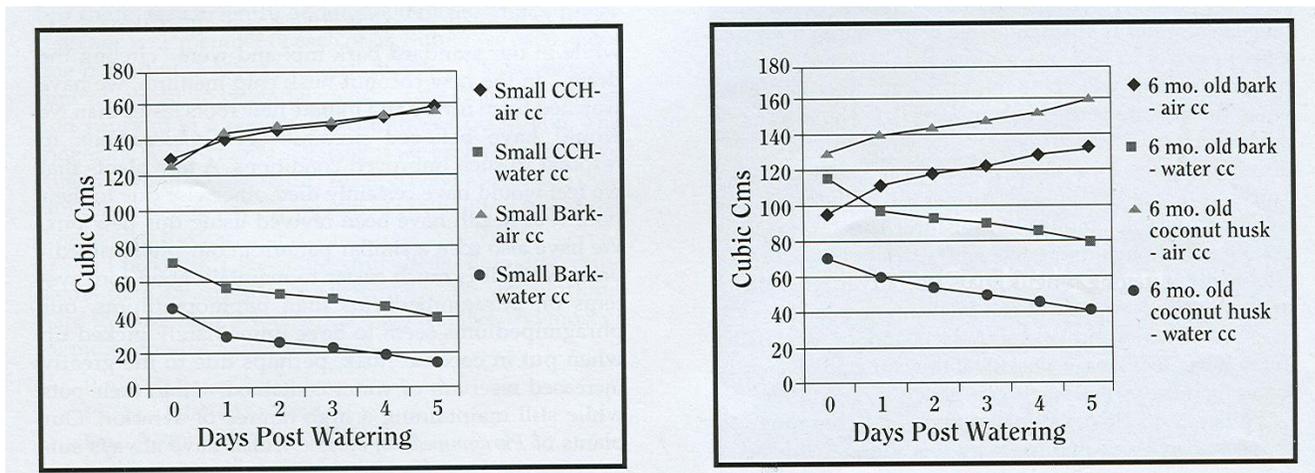
One of the most encouraging signs that the plants like the coconut husk chips is that when we unpot them, all of the new roots are attaching themselves firmly to the cut fiber end of the husk chunks, as if they are seeking out their personal water and nutrient reservoirs. While we would find roots attached to bark chunks also, the rate with the husk chunks is much higher.

## **Comparison of Air and Water Holding Characteristics of Bark and Coconut Husk Chips**

Perhaps the most valuable improvement the coconut husk chip offers over bark is its resistance to breakdown and ability to maintain its characteristics over a long period of time. Coconut husk durability stems from having a lignin content five times that of bark. The other components we use, aliflor and charcoal, also have quite good resistance to breakdown. The data and charts presented here for fresh media components, and a comparison of fine bark and fine coconut husk chips as a fresh product and after six months of greenhouse conditions and watering, offer a striking difference between the two. The bark and the coconut start out essentially the same, both with excellent aeration characteristics and with the coconut husk at an advantage in water capacity, but within six months in a pot in the greenhouse with regular watering, the fine bark has rapidly broken down, holding too much water and not drying out, all at the expense of its ability to hold air. The coconut husk chip is still performing essentially the same as it did when fresh. As a result there will be far fewer complications when using coconut husk fiber if repotting is delayed; in fact, we feel the only reason for annual repotting when using it will be to pot up because of the vigorous root growth we see with it.

The chart below details some experimental findings with various media and medium components. All of the data were collected using 25in SVD "rose" pots (deeper than they are wide) in our greenhouse conditions. Relative humidity was in the 70% range during the test, with daytime

temperatures in the low to mid 80s and nighttime temperatures in the mid 60s. The capacity of this pot is 246 cubic centimeters (cc); the numbers listed in the first chart show cubic centimeters of air and water retained in the pot with various mixes and mix components immediately after a thorough watering and then at the intervals listed.



We present detailed tables of data on our website ([www.ladyslipper.com](http://www.ladyslipper.com)) from which a lot of information can be gained from careful analysis, but that goes beyond the scope of this article. One important point we would like to emphasize is that the data on a mix component gathered from testing it alone will not always be predictive of its behavior as a minor component of a mixture of components. A case in point was experimentation with the #1A sandstone. Lynn had made the observation that when it was added to the CCH mixes, even in fairly small amounts, it caused the mixes to dry out more slowly. Bob didn't feel this made any sense, as it held very little water itself, and suggested that this was just an illusion due to the increased weight of the pots. However, when the mixes were tested, the mix with stones dried out more slowly than that without. As a result it is now used only with the phragmipediums.

### Mixes Currently in Use

Note on the mixes for paphiopedilums: if they are to be used for calcicolous or ultrabasic growing paphiopedilums, approximately 1/2 cup of pulverized dolomitic limestone is added to each 2 cubic feet of mix. The pulverized dolomite adheres quite nicely to the surface of the coconut husk chips, whereas it did not adhere well to bark.

#### **Paphiopedilums Seedling Mix, 25in pots and under:**

- 8 parts small coconut husk chips
- 2 parts medium coconut husk chips
- 3 parts small aliflor
- 1 part #4 (small) charcoal

#### **Adult Paphiopedilums Mix, 3.5-in pots and under:**

- 3 parts small coconut husk chips
- 1 part medium coconut husk chips
- 2 parts small aliflor
- 1 part #2 (large) charcoal

#### **Adult Paphiopedilums Mix, 4-in pots and up:**

- 4 parts medium coconut husk chips
- 1 part small aliflor
- 2 parts medium aliflor

1 part #2 charcoal

**Phragmipedium Mix, 3-in pots and smaller:**

6 parts small coconut husk chips

4 parts medium coconut husk chips

1 part small aliflor

1 part #1A crushed sandstone

1 part #4 charcoal

**Phragmipedium Hx, 3.5-in pots and up:**

4 parts medium coconut husk chips

1 part medium aliflor

1 part #1 crushed sandstone

1 part #2 charcoal

## Adjusting Mixes and Culture

Remember that you should adjust any mix to your growing conditions, pot sizes, light intensity, heat availability, and genera grown. We currently use a mixture of two sizes of coconut husk chips and amendments consisting primarily of two grades of aliflor (small and medium) and two grades of charcoal. Some folks can grow quite successfully under certain conditions in pure coconut husk chips. Others, because of their different circumstances in growing, need to amend the mix (i.e., add either more or less coconut husk chips or more or less aliflor) to alter its air and water-holding characteristics and its drying characteristics. We listed the current mixes we are using; no doubt they will undergo some alterations as we move along and gain more experience with the coconut husk chips under our conditions. There is nothing magical about these formulations, they are just a starting point that works for us.

While we use a rather standard formulation for a given pot size for seedlings, we can actually custom-tailor the mix slightly for larger pot sizes. One size does not fit all. We've communicated recently with folks who switched to a coconut husk chip mix because they were losing plants after bringing them indoors from growing outside (where they were not potted in coconut husk chips) over summer. After some questioning it was determined that they were basically all potted as a "one size pot and mix fits all," and outside the plants got along okay, but then when put back under the HID lights, three to four days after watering, some pots were bone dry and some were still wet. Some repotting in different size pots to suit the size of the root system (and not the size of the top growth) and mixes more suitable to the artificial light condition will hopefully remedy this situation. It should be noted that plants under fluorescent lights will dry out considerably faster than those growing under HID, due to the heat generated by the former, and the plants generally being placed much closer to the light source (several inches versus several feet). Thus, plants grown under fluorescent lights may need less aliflor, while those grown under HID's may need more aliflor. If you are careful, it is possible to unpot the plant gently if you are not sure how well it is growing; this will allow you to check the root system to see whether there are any new roots tips forming.

We also think it is important when using coconut husk chips to be aware of the total salt concentrations of your irrigation mixtures, and to water very generously and flush periodically, not only to reduce salts, but because of the increased capacity of the coconut husk chips to absorb and hold water. Water thoroughly and alter your mix to suit your conditions.

The pH of the coconut husk chips mix we use is also closer to neutral than bark mixes, and this has been useful in allowing us to control the pH of our root environment. Most phragmipediums (with perhaps the exception of *Mexipedium xerophyticum*) seem to like acidic conditions, while the paphiopedilums tend to be a group split between those that grow in somewhat acidic conditions and others that grow in calcareous or other basic rock substrate.

It's been suggested that the coconut husk chips mix is suitable only for higher heat conditions found in Florida or California. Candor, NY, is not the tropics, with nearly six months of dark and

chilly winter. While we maintain a modest minimum winter temperature in the greenhouses, a simple adjusting of our watering schedule allows the coconut husk chips mix to perform admirably. Again, it is a matter of making the appropriate adjustments to the mix: one size pot or one type of mix does not fit all conditions. We feel that you can probably use and get better results from coconut husk chips for anything for which you would use a bark mix; you just have to perhaps make up the mix a little differently. In warmer conditions, we suspect you may be able to use coconut husk chips where bark is unsuitable due to rapid breakdown, and even under our cooler conditions it is superior also because it does not change characteristics rapidly.

Watch your plants, pay attention to detail, and if in doubt, unpot and check your roots. Your plants will thank you for the extra attention and will reward you with superior growth and blooms.

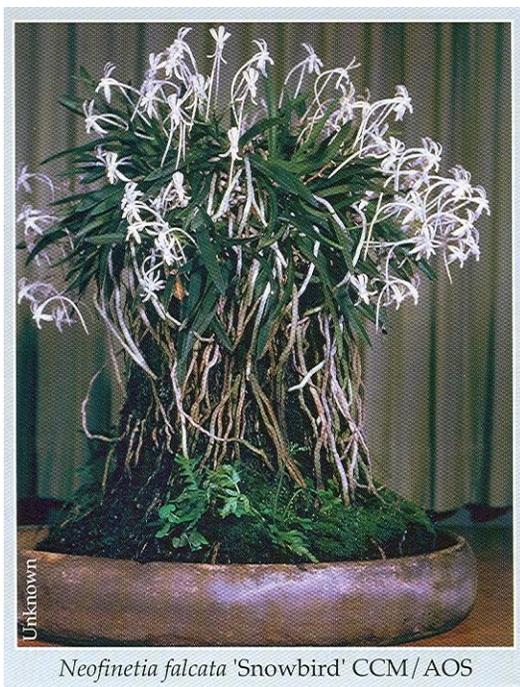
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## CULTIVATION OF *NEOFINETIA FALCATA*

*Courtesy of: New World Orchids*



**Light:** Neofinetias prefer medium light levels, from 1500 - 3000 footcandles. If you are growing under fluorescent lights, keep the plants about six - eight inches from the tubes. Under high-intensity lamps, grow approximately four feet from the fixture. This plant can be grown on windowsills, given an east, south, or west exposure. Plants may be grown outdoors in the summer with filtered sunlight.

**Temperature:** This plant can tolerate a wide range of temperatures. In spring and summer, day temperature should be 70° F or above, with a 10 to 15 degree drop at night. During winter months, day

temperatures below 65° F are preferred. *Neofinetia falcata* will tolerate winter temperatures in the upper 30's!

**Humidity:** should be kept from 40 to 60%. Use humidity trays or a small room humidifier when growing on windowsills.

**Water & Fertilizer:** Use clean water, such as rainwater, distilled or reverse osmosis water if possible. Flush the plant regularly, especially if using municipal or well water. Never use artificially softened water. Let plants dry out between watering. Use ample water in spring and summer while the plants are in active growth and in flower, reducing quantities during cooler winter days. Use a balanced fertilizer year-round, preferably urea-free. If using rain, distilled, or reverse osmosis water, add some municipal or well water to supply the necessary calcium and magnesium. Fertilize very lightly every other watering during the growing season, once a month during the winter rest period should do.

**Flowering:** Neofinetias bloom mostly from spring through fall. The inflorescence may have from three to fifteen flowers. Most forms have white flowers with a long nectary (spur). They will last from one to two months, and are extremely fragrant both day and night. There are also pink, green, cherry-red and yellow-colored forms, as well as those with variegated leaves and different growth habits.

**Repotting:** Preferably done in the spring and early summer, every two to three years. Clay, plastic, or net pots, or wood baskets, will work.

If potting in moss, use a good-quality, long-fibered sphagnum moss, and place the root ball over a small amount of moss. Wrap the root ball securely in sphagnum moss, so that the plant does not wobble. Keep the base of the plant higher than the rim of the pot. Plants can be similarly planted using osmunda fiber.

Possible recipes for potting media are:

A: 3 parts sphagnum, 1 part perlite or #3 sponge rock, 1 part medium tree fern fiber

B: 3 parts fine fir bark, 1 part perlite or # 3 sponge rock, 1 part fine tree fern fiber

C: 3 parts fine fir bark, 1 part perlite or #3 sponge rock, 1 part chopped sphagnum

Any of the above mixes can be used, or something similar; these plants are not very particular. You want to have an open mix that will drain freely. Pot as you would most other orchids, keeping the base of the plant above the top of the media.

When growing in a basket, line the basket with a thin layer of sphagnum or coconut fiber to keep the mix from falling through the slats. Plants may also be mounted on cork or tree fern plaques, or on wood branches like oak, sassafras, etc. You can mount the plants with a little sphagnum or osmunda to help keep them moist. If humidity is adequate, some growers plant *Neofinetia falcata* on rocks with live moss.

*Guidelines provided courtesy of:* New World Orchids

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Tel: (734) 428-8182, Email: NewWOrchid@aol.com [www.newworldorchids.com](http://www.newworldorchids.com)

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