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My wife Aly and I have been growing many different varieties of plants for more than 20 years. We love growing plants and have also owned and operated several garden centers in Fort Lauderdale, Florida. A few years ago we sold the businesses and slowed down quite a bit. We still spend a great deal of time consulting and sharing our knowledge with the many friends we have made in the plant nursery business.

We continue to grow about twenty different species of plants including dwarf tropical trees, orchids, plumeria, spathoglottis and lilies.

We have an amazing collection of Spathoglottis Orchids and will soon start offering them on E bay in mid 2010. We also have a special collection of Dwarf Epidendrums with larger flowers than typical Epis.

We will refer to Spathoglottis Ground Orchids as “Spaths” or “Spath” for short in this writing. Spaths come in many colors, even white. This guide book will introduce you to the needs of your Spaths. The information is based on our personal experience growing them here in Florida.

Most will respond very well to the recommendations and others you may have to alter your care slightly depending on your weather, water, sunlight etc.

Introduction

Orchids are described as being Epiphytes, Lithophytes or Terrestrial. Terrestrial orchids grow in the ground or in pots with soil. Epiphytes grow on trees and Lithophytes grow on rocks.

Some are a combination of the types. I have seen some growing in the thatch of



Sable palms with very little soil if any. When purchasing your plant be sure to understand what type it is. Terrestrial orchids in general are easier to grow than the other types mentioned above.

Spath is primarily a terrestrial genus of tropical orchids with approximately 40 species. The foliage is palm like with long racemes tipped with showy flower spikes. These plants produce successive flowers over time. The flower colors range from pink, purple, yellow and even white. The leaves emerge from the base of round pseudo bulbs that multiply and grow larger as the orchid matures. One grower in homestead Florida offers a hybrid they call Chameleon because its flower color changes from a deep purple to a light pink and yellow. You must see it to believe it!

These ground orchids (terrestrial) are sometimes called "Garden Orchids", they offer year round color in warm southern landscapes and also make interesting summertime flowering patio plants for the cooler parts of the nation.

Spathoglottis plicata is one of the most frequently cultivated ground orchids in Florida and some other States. Many growers produce this plant for landscaping. This Spath produces attractive pleated (plicate) foliage and a raceme of purple flowers on an 18" stem.

The orchid is so popular that it has become naturalized in the wild. They are now not only found in gardens but also out in the Everglades and surroundings of Southern Florida. My wife and I were surprised to find *S. plicata*, growing in leaf litter inside the boot of a Sable Palm, while hiking the Florida Trail one afternoon last year. That was something we had never seen before. Now I wish we had a photo to share with you but the batteries died on the camera that weekend and in the Glades it's hard to find a 7-11. Well maybe next time.

Tip:

Do not collect plants from the wild. You can face very serious fines if you are caught collecting wild species. Well, I know in Florida it's a big deal and in many other states as well.

While outdoors take nothing but photographs. Oh and bring plenty of batteries! Should you find a species that interests you, take the photo to your local agricultural extension office and ask if they know what plant it is. Chances are they will and someone is cultivating the species legally at a nursery. Go ahead and buy it from them or buy it on line from a certified registered nursery that can ship it legally.

By the way all photos here are credited to Aly and I. We love photography as well as growing plants.

Spath-oh-glott-is:

Latin: *spatha*, a spatula

Greek: glottis, the tongue; alluding to the spatula shaped form of the "tongue" or labellum of the flower.



Amazing Factoid!

S. plicata was one of the first plants to re colonize the land around Mt. Krakatoa in 1883.

Spath ground orchids can be a bit challenging for the beginner. Many people have great success with their plants for a short while and then it's all downhill after that. Well with the help of this Digi- book those days are over!

Some of the most common problems we hear from gardeners are simple to fix. Here are some of them.

Its leaves are yellowing!!!

It won't flower!!!

It's losing its leaves or the leaves are being eaten by something!!!

It' dead!

well, first things first

In Real Estate they say Location, Location, Location is everything. Well it's also that important with plants and especially true for Spaths.



When you are shopping for a house you think about many things that will make it the perfect place to live. You think about the many needs you have. Well, your plant has just a few basic needs. Think about light, water, nutrients and air.

Your Spath will grow best if it gets filtered/diffused light and proper watering and nutrition!

Light filtering through the canopy of a tree is great! The plant will grow in deep shade but you need to be extremely careful not to over water. More details a little later on lighting and water.

Very often over watering is more of an issue than too little water. These plants like to dry out just a bit around the surface soil before they get soaked again. It likes a little moisture below the soil but not soaked in water.

Another important issue that causes many problems is planting too deeply. This is very important!

These plants have bulbs. Well not really bulbs, they have pseudo bulbs. These are not completely buried in the soil. They should be planted just slightly beneath the soil. Planting deeply often kills the plant because the bulbs rot easily in heavy moist soil and poor air flow.

See the light!

Here in Florida nurseries grow these plants both in full sun and under shade cloth. Most varieties do well grown under 70% shade cloth. This cloth blocks out 30% of the light. You can get some shade cloth at your favorite garden center and even E bayers offer it.

Now let me give you an idea of the light measurement that full daylight sun provides. Light is measured in foot candles and also in lumens. In the metric system Lux is used. Since I am in the States, I will deal with Lumens and Foot Candles.

The sun is the source of an incredible amount of energy. Sunlight on a clear day measures between 8,000 to 10,000 foot-candles of light. To convert this to lumens, you multiply foot candles by 10.76.

One lumen is equal to the amount of light emitted by one candle falling on one square foot of surface one foot away.

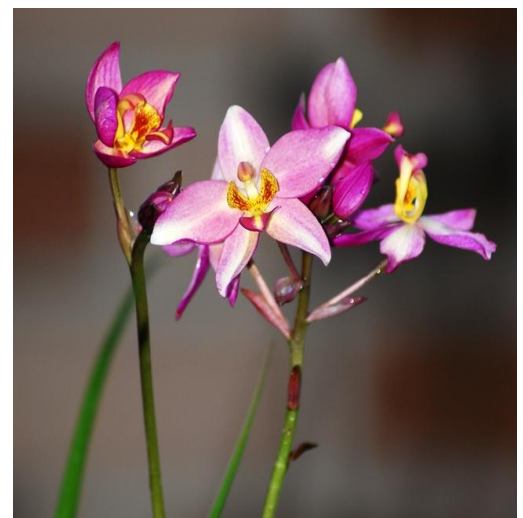
Okay the important thing to remember is that different plants have different light needs. Some are very adaptable to wide variations and others not so forgiving. To keep your Spaths growing and flowering their best think about the light and how you will use it. You can grow and flower your plants in as little as 2,000 foot candles or 21,500 lumens. Growing at 10,000 foot candles is the equivalent of 107,000 lumens. You can grow them under this full sun, but your plants will not look their best! Sun damaged leaves will be unsightly and greater water and nutrition will be required. We grow them at an average of 5,000 to 6,000 foot candles. That's 50% - 60% shade.

You can purchase an inexpensive combination light and moisture meter for around \$15.00 dollars. Having one will help you find the right area with the light needed and also help with measuring moisture.

Remember this!

The difference between a healthy or unhealthy Spath depends very often on understanding the plants needs. Good care is the difference between an average plant and a spectacular flowering one! When you meet the needs you get spectacular results.

Remember to observe your plants every few days and take immediate action when you



see problems. With time you will develop great insight into how to better grow your plants.

How to use your Spaths in the landscape

These multi leaved multi flowered plants make excellent container and landscape specimens to plant in masses. We like to introduce them into most of our landscape designs. Use them in a mass planting of 10-12 plants or more, in groups of various colors. The idea is to create pockets of color. Planting a tutti frutti mix is not as eye catching and visually appealing as color groupings. You can do the same thing by grouping containers this way out on a patio.

The plants look like small palms with colorful flower spikes. Most have broad leaves and are usually a deep green if grown in shade. As mentioned earlier, they flower heavily in light shade and the flower colors are very saturated and intense. Different varieties have leaves that vary in width and size. Many of the yellow flowering species have a narrower leaf with a slight purple color in the leaf. The yellow varieties seem to require more fertilizer and really suffer from overwatering. These yellow guys are a challenge for professional growers as well. The secret is to fertilize them a little more frequently and really keep them around 6,000 foot candles. Don't over water them! My experience is that they do much better when the weather cools to an average around 70- 80 degrees. Summer is brutal on them with the high humidity.

LIGHT INTENSITY

Again, we find best results at 5,000 to 6,000 foot candles or 50%- 60% shade

WATER

Spaths require a well drained potting medium. People often focus on the water and that's fine but well drained soil can be watered more often.

Here in Florida a well drained soil is a blessing in the rainy season. We switch to a slightly heavier peat concentration in the winter when the air is dry and rain is nowhere to be found for several months. It's also a good idea to repot to a slightly larger pot after your Spath has flowered heavily.

During the dry season you might need to water 2 or 3 times a week and 0 times a week during the rainy season. It's up to you! Only you can determine the watering needs. Use your best judgment based on the soil, type of pot and amount of direct sun reaching the plant and soil surface.

Keep plants a little moist. It's safer to be a little on the dry side if in doubt, especially in shade. Your Spaths will tolerate some drying periodically if in the shade, but will suffer if dry in full sun. Over watering may cause fungal problems, especially if plants are wet at night and during wet cooler weather. Young plants are more susceptible to fungal problems as well.

When watering, saturate each pot so that moisture drains from the bottom of the pot and then do not water again until the (Soil) medium becomes dry at the top one inch or so. Don't just look at the surface and think it looks dry so I will water. Stick your finger or a pencil into the soil and see how it feels below the surface. Many plants have been rotted because the surface was dry and the soil below was soggy! Be sure to use a simple moisture probe that cost about \$9.99 at your favorite garden center.

Caution: Good quality water with salinity level less than 500 ppm is recommended for your Spath.

Tip: Use rainwater collected from large containers placed under downspouts. You will be amazed at how your plants thrive!

Tip: When watering in clay pots keep an eye on the soil. Clay pots dry out faster than plastic pots. Clay pots also retain salt and mineral buildup. You need to flush them once a month. On hot dry days misting in the afternoon is a good idea.

MEDIUM

Good drainage is the key!

Using a peat based soil mix like Promix or Lamberts works well under most conditions. We find excellent results by using either one of them. Both of these mixes are peat based and lightweight. These soil mixes provide a porous texture that allows for quick rooting and optimum water/air ratio. In the rainy season we add more perlite to the mix or add a little gravel to the bottom of the container.

Some growers use bark in the mixes. We do not find bark a good additive in the soil for Spaths. The bark decomposes rapidly because it supports high populations of wood decaying microorganisms. Microbes also compete for available nitrogen and this means less nitrogen is available to your orchid.

What size pot to use

A pot that is too large is a bad idea for two reasons. The larger pot will hold way to much water for the plant. Your Spath will not grow as well as it should. The pot should be about 3 or 4 inches larger than the plant all around, so if the plants root clump is 2 inches, a six inch pot is large enough. A deep pot is better than a shallow one! Most Spaths are sold in either 6 inch or one gallon pots. A one gal pot is deeper and a better choice for growing your Spath. Roots run deep and you must keep that in mind. The one gal size works well but is often outgrown in 6 -8 months. The next size would be a 2 or even a 3 gal pot.

Be sure to maintain good drainage and pot up to the next size when the plant really needs it.

Spaths are easy to repot. Luckily these plants are not bothered when carefully removed from the container. Even when roots are damaged they grow back within 30 days during the summer. They will take much longer in the fall/winter unless indoors and kept warm.

The best time to repot is after all flowering has ended. Always remember, that to minimize root damage, a warm water soak for 10 minutes is a smart move. The soak helps to minimize root damage when removing from the container. When repotting because of root rot, pour some 3% Hydrogen peroxide mixed 50/50 with water and let it soak ten minutes. This helps kill the bacteria. Also be sure to use

clean sterile pots cleaned with soap and rinsed with a disinfectant like Physan.

People often ask us if they should use clay or plastic pots. We use both kinds. The thing to remember is that clay pots breathe and dry out quicker than the plastic. Both can work well if you know how to control the moisture. It takes a little time to get a sense for the water/moisture.

PH RANGE

5.5-6.5 preferred

TEMPERATURE

For fast growth and best flowering these plants require 75 degrees up to 85 degrees. Plants may drop leaves and go dormant with extended temperatures below 40° F. Spathoglottis will not tolerate freezing.

PESTS

Like other plants they are susceptible to most common pests. Watch for spider mites. When considering using a pesticide, contact your agricultural extension office for current recommendations.

DISEASES

Fungal or bacterial crown and root rots are particularly concerning to the health of your Spath. Other diseases include stem rots, rust, and petal blight. Anthracnose, and to a lesser extent, other leaf spotting diseases also may develop. To reduce disease incidence be sure to water when moisture can dry quickly from foliage and flowers.

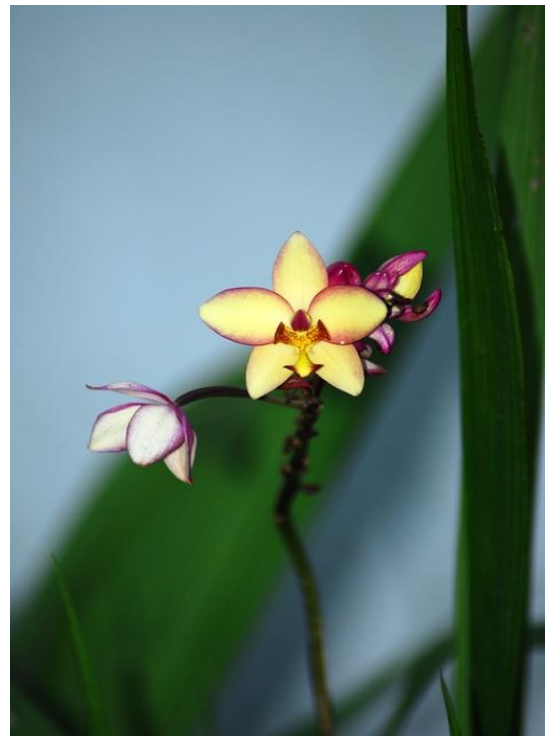
Do your best to keep your plants in areas that will provide good air circulation to help prevent fungal and bacterial diseases.

FLOWERING

Plants bloom relatively non-stop when conditions provide warmth, bright light, and good nutrition. Flowers open in groups at the top of the spike. The spikes can last for several months.

NUTRITION/FERTILIZER

Spathoglottis are fast growing plants that need a much higher than average nutrient supply. These plants benefit immensely from foliar feeding. Peters 20, 20, 20 is fantastic. You can also use a slow release fertilizer like a 13, 13, 13. Be sure to use a little bit of organic fertilizer around the roots when repotting. Your Spaths will thrive and grow quickly when you fertilize regularly. Be sure to spray fertilizer, both on the leaves as well as the roots. Use a balanced water soluble fertilizer. Good fertilization will produce remarkable plants and flowers. Slow release fertilizers like Nutricote are best used when planting by placing it around the roots in the planting media. There is some controversy on using Osmocote on Orchids. Some growers report problems due to the fact that Osmocote is released by temperature and humidity. This can release too strong a quantity and kill or damage your orchids. So far we have not seen a problem using Osmocote.



Fertilizer

Table 1

N	Nitrogen	Green Foliage Nitrogen provides plants with the ability to produce more chlorophyll, which in turn allows plants to grow quickly.
P	Phosphorus	Strong Roots and Flowering
K	Potassium	The Guardian Fights diseases and aids in drought protection and cold tolerance

Spathoglottis need plenty of fertilizer to be the best they can be.

It's worth repeating this! Fertilize your Spaths regularly and they will develop stronger flower spikes, greener thicker leaves and more robust roots. Use a complete fertilizer with a 1-1-1 ratio. That means 13-13-13 in low light and or 20-20-20 in full sun.

When fertilizing we use a liquid fertilizer mixed at the rate of 1-1/2 tsp per gal and sprayed once a month to work quite well during the summer months.

Plants that are grown in lower light need less nitrogen. Use a balanced slow release (pellets) like a 13-13-13. Alternate method is to use 20-20-20 liquid foliar spray once per month mixed at the rate of 1 to 1-1/2 tsp/ gallon of water. Osmocote 14-14-14 or Dynamite 13-13-13 should be applied at rates of 1 tsp. per 6" pot every two to three months.

You can instead fertilize once per week, so long as you dilute to ¼ strength. "Fertilize weekly weakly"

Slow release type fertilizers, such as Osmocote, Pro-Gro, Dynamite, release nutrients very slowly, the rate of release being dependent on temperature. Although their initial cost is higher, one application every two to three months is adequate and plants will be continuously fertilized during that time.

These requirements depend greatly on the light, pH and temperature conditions.

Soil, Water, Fertilizer and now introducing.....

The secret factor that is so often overlooked!

pH and what it is:

pH is a direct measurement of the balance between acidic hydrogen ions (H+) and basic hydroxide ions (OH-), and can be measured with a pH meter. The pH of a solution can range between 0 (very acidic) and 14 (very basic). At a pH of 7.0, the concentrations of H+ and OH- are equal, and the solution is said to be neutral.

We grow our Spaths at an average pH of between 5.5 and 6.5. This for us seems optimal and it is the recommended range. The pH range is important because too high or too low a pH will interfere with nutrient uptake.

Your water should be right around 7.0, and that is neutral.

Test your soil pH with a simple test kit or read the soil label. Pro Mix BX is a peat based media. The pH range of Pro Mix varies between 5.5 and 6.5.

Let's say you have a soil pH measure of 6.5 and you want to bring it to 5.5. You find your water measures 7.0 as it should. You now add pH down formula to lower the measure of the water to 5.5 and water your plant. Test the soil again in 24 hours and see how you did.

One way to easily measure the pH is to pour the water into your plants pot and let it drain into another container. Take the pH test from the water collected.

Practice this on soil with no plant growing in it until you know you have it figured out!

When using fertilizer in the water test the solution as well and adjust accordingly.

To increase or decrease pH be sure to use a commercially formulated product instead of mixing your own homemade solutions. Acids and Alkalis can be dangerous! You can get a pH adjusting formula from your trusty garden center.

To test the pH in the water you can also use an electronic test pen. Check with your garden center and pick up an inexpensive test kit. Understanding and not underestimating the value of optimal pH and using it effectively, is the key to growing the finest plants.

Now that you understand the importance of pH you will be able to provide optimal fertilizer and other nutrients for maximum growth and flowering.

Tip:

Never fertilize a plant that has dry soil. Be sure the soil is moist to avoid burning your plant with too strong a fertilizer application.

For faster growth and excellent flowers these plants do not really need extra trace elements or even special bloom mixes etc. Too much manganese and Iron can cause phytotoxicity.

Tip: Are you buying a Spathoglottis or a Bletia?

Bletia and Spaths look very similar and are often confused with each other. These two plants are like kissing cousins that got too close if you know what I mean!

New hybrids are the product of many years of breeding.

Bletiaglottis (Blgts) = Blettia X Spathoglottis

Bletia Florida is found from Jamaica to Cuba.

The 30 plus members of the Bletia genus are almost always terrestrials found on grassland hillsides from sea level to 6000 feet and are spread from Florida south to Brazil growing in well draining soil.

They are distinguished by basal corm with apical, thin strongly veined leaves with a basal inflorescence arising from the side of the corm.

TIP: *When ordering plants from other countries a CITES document is often required.*

This document is for compliance with the CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA. Wow, that's a mouthful!

Many governments have determined that trade must be controlled in order to avoid use that is incompatible with the survival of the plant and to protect threatened or endangered species.

Because the trade in wild animals and plants crosses borders between countries, the effort to regulate it requires international cooperation to safeguard certain species from over-exploitation. CITES was conceived

in the spirit of such cooperation. Today, it accords varying degrees of protection to more than 30,000 species of animals and plants, whether they are traded as live specimens, fur coats or dried herbs.

CAUTION:

When ordering plants by mail internationally be sure you get this CITES document or you may end up losing your plants and your money!

Selecting your Spath

Your Spath should have dark green leaves and minimal spots or tears in the leaves. Be sure and inspect carefully. Look for actively growing shoots emerging around the base of the pseudo bulbs. How does the soil feel and can you see the pseudo bulbs or do you see only leaves at the soil line? Remember too deeply planted Spaths will either die or look very poor and even yellow for a while if they survive. You need to be careful that the plant has not outgrown the pot. Look for roots circling the pot on the surface and avoid those plants. Some roots outside are okay but if you see too many growing in the container, double check to make sure the plant is not root bound. Gently pull the plant out by the leaves and inspect the roots. Do you see white or slightly yellow roots? Do you see brown mushy roots? Brown mush is bad! Don't buy it! Should you discover a severely root bound plant and it otherwise looks healthy you can easily divide it and increase your collection.

FYI: Spaths have vigorous root systems and require a deep container. Do not use shallow pots like Azalea pots.

Tip: Don't kill your Spath! First Aid

Every so often you should inspect your own plants and especially look at your roots. If you see yellow, weak droopy leaves you have a problem. You are definitely overwatering your Spath!

The solution to an over watered Spath is as follows. Cut away all the dead brown yucky nasty roots and repot with fresh soil. Spray the remaining roots with 3% hydrogen peroxide. Place your plant in diffused light if it was in full sun and hold off watering for a week.

Make sure it is far, far away from the healthy ones while it is in recovery mode. Start watering lightly only twice a week for the next two weeks and your plant should recover. Too much water is a real problem for Spaths. Drier is a safer bet than thinking you are killing them without water. Of course your weather and temperature play a critical role.

Sometimes your Spath is too far gone and the fungus spreads like a cancer. After trying to save your plant and positive results seem to be futile the best thing is to toss the Spath away.

Humidity & Air Movement

Good air movement is very important. A gentle breeze helps to keep leaves dry and also strengthen the root system.

TIP: Do not use Eucalyptus or Pine bark on any orchids! In many cases they retard the growth of orchids! Pine bark and Eucalyptus contain sap that will most likely cause your orchids to suffer toxic effects.

Pest & Disease

Caution: Always follow directions on all labels for safety to you, the environment and other people around you when spraying or applying any pesticide, chemical fertilizer etc! Protect your eyes, lungs and skin by taking appropriate safety measures.

Keeping your Spath healthy is not difficult if you keep this information in mind. Healthy plants are far more resistant to pest and diseases than weak plants. Therefore, good cultivation methods are essential if such problems are to be kept to a minimum.

Spaths like other Orchids are susceptible to a variety of pests, such as aphids, mites, mealy bugs, and scales, and to various bacterial and fungal diseases if the environmental and cultural condition warrants it.

Spaths in the landscape with sandy soils are very susceptible to nematodes

Now hear this!

Always sterilize your tools when cutting off leaves roots, stems etc. One way is to use a mini torch and heat up the sharp blade of your cutting tool for about 20 seconds. Pass the torch all around the blade on both sides. The last thing you want is to spread diseases to your plants.

The only occasional problem we encounter is during the summer months. In the rainy season the Spaths might have a problem with various bacterial and fungal problems that shows up as black streaks and large spots on the leaves. This happens because of too much water. Get a good fungicide at the local nursery to combat it. Spray the whole plant, especially both sides of the leaves once weekly until the new

leaves do not show the spots any more. Wet leaves and cool weather cause many problems with fungus.

Be sure to water and leave plenty of time for leaves to dry before nightfall's.

These other pests are not often a problem but sometimes they show up. Here are some solutions for you to consider.

More First Aid:

Spider mites. (Kelthane or wettable sulphur)

Ants, scale, mealy bugs and thrips. (Diazinon or Malathion)

Snails love to eat your Spaths leaves. Treat for them by using Escar-Go insecticides or similar.

Aphids: Use insecticidal soap or Orthene 75 percent WP (wet able powder), thoroughly covering flower heads and new growths. Follow the directions for repeat applications.

Orthene has a very nasty odor. Be sure to keep the can sealed tight and then put it in two plastic bags. **Follow all label directions!**

Pruning

Tip: Cut off the flower stems after it finishes blooming. Remove dead or rotted foliage regularly.

Remove dead flower spikes and yellow leaves down to the base. Again, always sterilize your pruning tools to avoid infecting your orchids with diseases.

Propagating your Spaths

To make more Spaths is easy! You can increase your plants by these methods:

Division:

Many plants can be separated from the large clump and can be planted in individual pots.

Seed:

Forget it! Takes way too long and germination is extremely difficult. Soils lack essential symbiotic fungus spores for seed to germinate.

Okay, but you have the urge to grow one by seed and prove me wrong. Okay then, maybe you will get lucky if you have the patience to wait several years. Here's the way it might work. Take your seed capsule and slice it open. Spread those millions of tiny powdery seeds all around the base of one of your most established container grown Spaths. You might have the right fungus around the base of the pseudo bulbs and germination may occur. Let me know how it turns out. Hey, you never know and it might be an amazing new hybrid. Or you can send your

seed capsule to a lab that will culture it for you and send you a flask with your new babies.

The fast way to get more of the same plants!

Divide your plant by doing the following:

Get a large sharp knife and sterilize the blade carefully with a torch for about 20 seconds. Take your pot and if plastic, lay it sideways and squeeze the pot gently. Pull slowly as you roll the pot on the work table or on the ground.

To remove from a clay pot you should try and carefully insert two or three fingers of each hand and pull the plant out. Breaking the pot is another option, be careful not to cut yourself either way you do this!

With your plant lying sideways, take the knife and slice into the soil. You can often get 3 or 4 new clumps to plant from a very full one gal pot.

Sterilize your razor blade or other sharp cutting tool with a torch for 20-30 seconds on each side of blade.

Alternative method for dividing:

Instead of using a knife, use your hands and pull apart the pseudo bulbs. Plant at least three of them in a four or six inch pot. Make sure to leave the base of bulbs slightly above the surface so they won't rot with either method.

Keep your new plant in a little shade and water lightly for about 3 – 4 weeks. You want to use a well drained soil and keep it moist, not saturated. Keep the divided plants in diffused light for about two

months. You can begin to fertilize and water as needed after the second month or when you notice new growth. Use only the time release fertilizer 14-14-14 or similar balance, for the first three months. A weak foliar feeding can begin on the fourth month.

A good simple mix to use for your divided spaths is the following: Mix potting soil and perlite equally and place in a pot between 4 to 6 inches in diameter.



Once your pot is ready with the soil, water it and then gently place your fresh divisions in it and secure them by gently tamping the soil around the roots and pseudo bulbs. You can even plant pseudo bulbs without roots but need to be more cautious not to over water them until roots develop. Again, don't plant them too deeply.

One step solution for Pests and Fertilizing

If you want to save time and keep your plants looking their best with a minimum of effort, here's the secret.

Ortho and Bayer both make products for roses that work very well with ground orchids. Ortho makes Ortho Rose Food and Systemic Insecticide. We find it to be very effective! This product comes in several sizes; you can get it at most garden centers. You can also purchase Merit Systemic insecticide. Most commercial growers use Merit alone instead of the more consumer oriented blends.

We sprinkle it according to the directions around the base of the plants every two or three months. Water it in, and you're done! This is a very efficient way to fertilize the plants for three months and also treat them with a pesticide that will keep the nasty bugs away.

These products are called systemic treatments and they will be most effective while your plants are actively growing. The fertilizer and pesticide is absorbed into the plant. When the bugs munch out, they die before any serious damage can be done to your Spaths. The fertilizer provides a steady supply of beneficial vitamins and minerals for healthy growing plants. Try it you'll love it!

Cinnamon as a fungicide

Powder:

Apply normal, household cinnamon powder directly to the affected part of the plant by dusting heavily. Do not apply broadly to roots, as it may slow, or stop growth.

Spray:

I like to prepare a cinnamon spray using alcohol as the solvent. The alcohol offers insecticidal properties as well. This is my preferred method, and has been effective at eliminating all sorts of fungus problems, including damping-off. Add 3 tablespoons of cinnamon powder in a pint of rubbing alcohol. Shake well and let the solution sit overnight. Filter the Solution by using a paper towel or even better use a coffee filter to separate the sediment and use the liquid as a spray. Filtering helps to keep the solution from clogging up your sprayer head.

Have you tried using Neem Oil to control scale?

Note: Use the Neem oil spray within 8 hrs, and don't use while the sun is shining. Neem oil has caused many problems when used improperly. Spray every side of the plant and pot. Repeat after 10 days a number of times for best results. Use Neem oil with minimum 1,500 ppm Azadirachtin content.

Quick Culture Summary

Temperature: Variable, prefer warm but will grow well in intermediate and even cool, down to 50's (10C) though won't grow at that temperature or flower.

Light: Diffuse light/Shade.

Water-Humidity: Keep a little moist not soaked! Humidity is not as important as with most orchids.

Fertilizer:

For strong growth and general health use a Balanced 13-13-13 or 20-20-20 formula.

Once every six months, give them Calmag or other mineral formula at ½ recommendation on label to strengthen cells and help them endure. Do not over do this! They are sensitive to trace elements in large quantities!

Some others to add to your collection

S. plicata alba (white)

S. plicata (lavender)

S. gracillis (yellow)

S. kimballiana (yellow) The largest flower of the spathoglottis family

S. Parsonsii has pink or mauve flowers.

S. Peach has yellow to orange flowers.

S. vanoverberghei, has impressive golden yellow blooms from Winter through Spring.

In Closing

We hope you have found our information helpful.

The next generation of Spathoglottis hybrids will surely offer many surprises. New colors and variegated leaves are on the horizon.

As of this writing many growers are experimenting with new crosses that will offer us plants with larger more colorful, fragrant flowers. The future is shining brightly on the development of new ground orchids like the Spaths.

Aly and I wish you much happiness and please share the joy of nature and gardening with a friend or relative.

Be sure to scroll down to the bottom to get your special offer.

Disclaimer Notice:

The use of this E-book/Digi-book is intended as an introduction to what has worked for us as growers. It should not be treated as a definitive guide, nor should it be considered to cover every area of cultural practices.

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