

AFRICAN VIOLET 101

by Karyn Cichocki

Important factors for healthy plants

1. soil
2. water & pH
3. fertilizer
5. light
6. air
7. watchful eye
8. repotting & grooming

Soil – your soil mix should be light so that the roots can breath. If you wick water then the soil should have lots of perlite it. I find it helps to know the natural habitat of the plant you are growing so you can recreate it the best you can.



The picture to the left shows *Saintpaulia* species growing on a mossy rock in a rain forest. This demonstrates that they don't need much room for roots and that any soil they are growing in should be well draining.

I like to mix my own soil so that I know what ingredients are in it. There are many commercial soil mixes that growers use but sometimes the manufacturer can change the ingredients, which may cause your plants to suffer. For hybrid plants I use 2 parts peat moss to 2 parts coarse perlite. For species I use 3 parts perlite and 1 part peat moss.

Here is *S. grotei* 'Silvert' that I had growing on a piece of Tufa rock. I took a 4" Oyama pot, placed about 2" of perlite in the pot and then nestled the rock into the perlite. The rock absorbed water from the wet perlite and I was amazed when I found the roots had grown through the rock and reached the perlite.

This was an experiment to see if I could recreate a natural habitat for the plant. As this species has a trailing habit the plant crept along the rock.



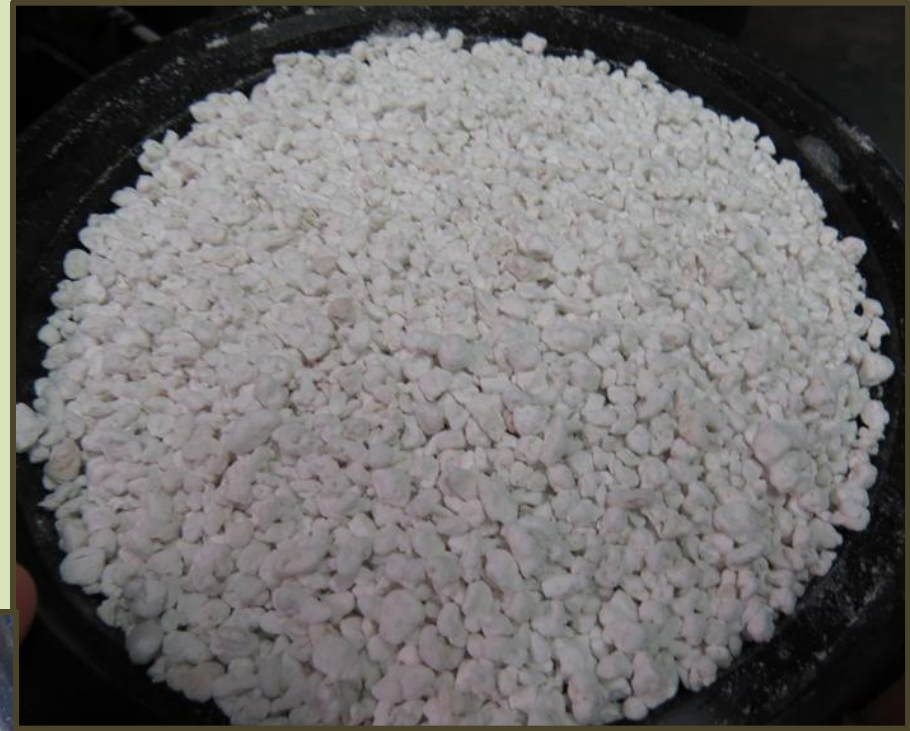


Left – my soil mix for AV species, which I call dirty perlite. It has more perlite than peat moss and is quite lite so there is good air spaces for the roots to breath.

Right – my soil mix for AV hybrids. As I mentioned it is two parts peat moss and 1 part course perlite. I used to add 1 part course vermiculite but I don't use it anymore.



Course perlite creates air spaces
and is a good moisture barrier



Course vermiculite holds moisture



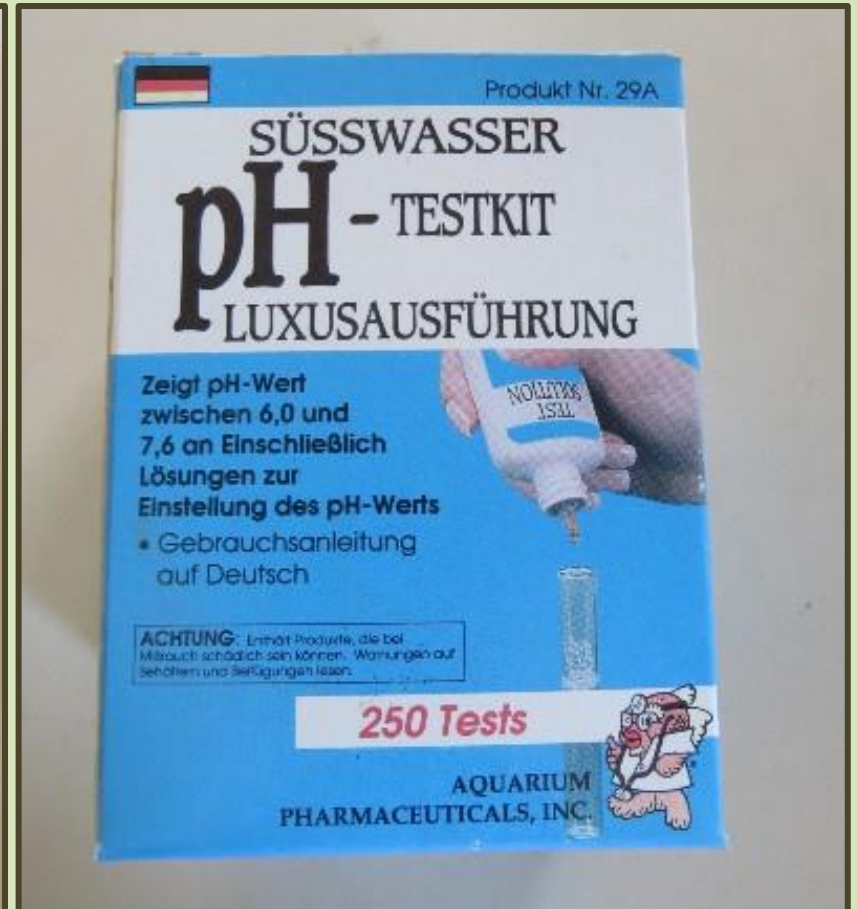
I will add this mix to my regular soil mix for crevice growing plants such as Primulina and Petrocosmea. I have not tried it for species violets.





Other additives that you can add to your soil mix; Mycorrhiza (left), which are beneficial bacteria that help the roots to absorb nutrients and Dolomite Lime that helps to increase the pH.

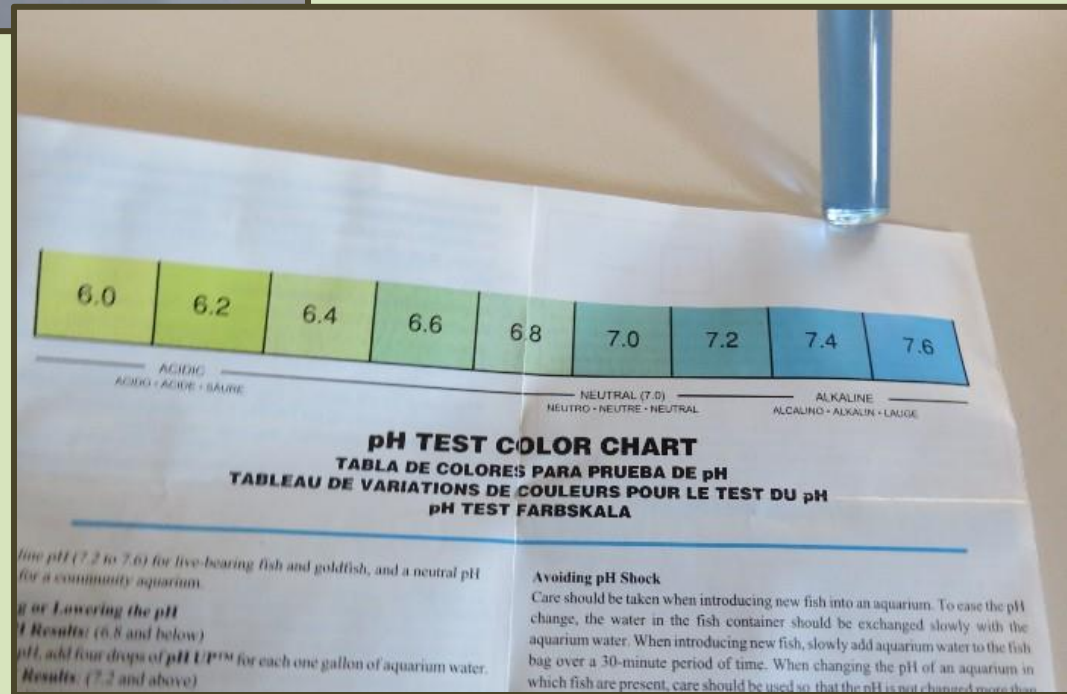
pH is very important for healthy violets, which should be between 6-6.5. If you repot your plants on a regular basis then I feel the pH of your soil isn't as important as that of your water. Below are pH testing products for testing your soil mix (left) and water (right).





The water testing kit comes with solutions to increase or lower the pH of your water as well as the testing solution.

You put your water in the test tube and then add the drops of the testing solution, then compare to the color chart. As you can see here the pH of my well water is between 7.4 and 7.6. I have found using Miracle Grow Tomato fertilizer lowers the water pH.



Use pH (7.2 to 7.6) for live-bearing fish and goldfish, and a neutral pH for a community aquarium.
 Raising or Lowering the pH
 If Results: (6.8 and below)
 pH, add four drops of pH UP™ for each one gallon of aquarium water.
 Results: (7.2 and above)

Avoiding pH Shock
 Care should be taken when introducing new fish into an aquarium. To ease the pH change, the water in the fish container should be exchanged slowly with the aquarium water. When introducing new fish, slowly add aquarium water to the fish bag over a 30-minute period of time. When changing the pH of an aquarium in which fish are present, care should be used so that the pH is not changed more than

If you have town water then you need to contact your water authority and find out if they are using Chlorine or Chloramines in the water. With Chlorine, you fill your jug up and leave it to set for 24 hours, to dissipate the Chlorine, however this method will not work with Chloramines, so you need to either set up a filtering system to rid the water of them or purchase a product such as AquaSafe (right) that will neutralize the Chloramines in the tap water.

Some people use rain water but you need to test the pH before you use it.

Whatever type of water you use, you should test the pH on a regular basis.



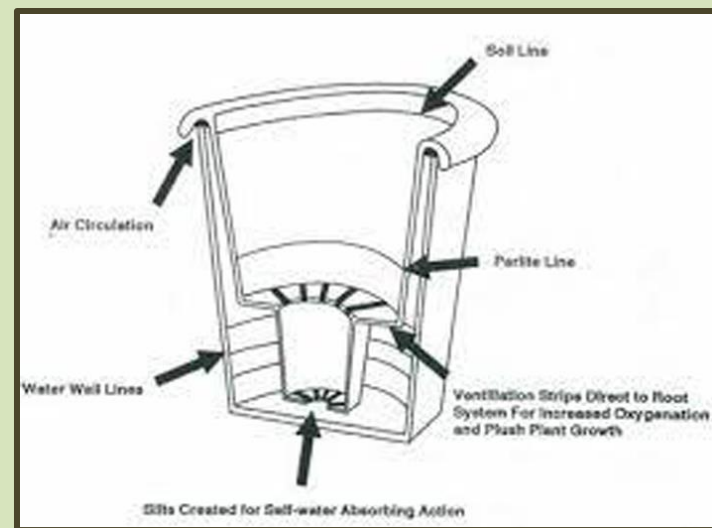
There are many methods to water African violets;

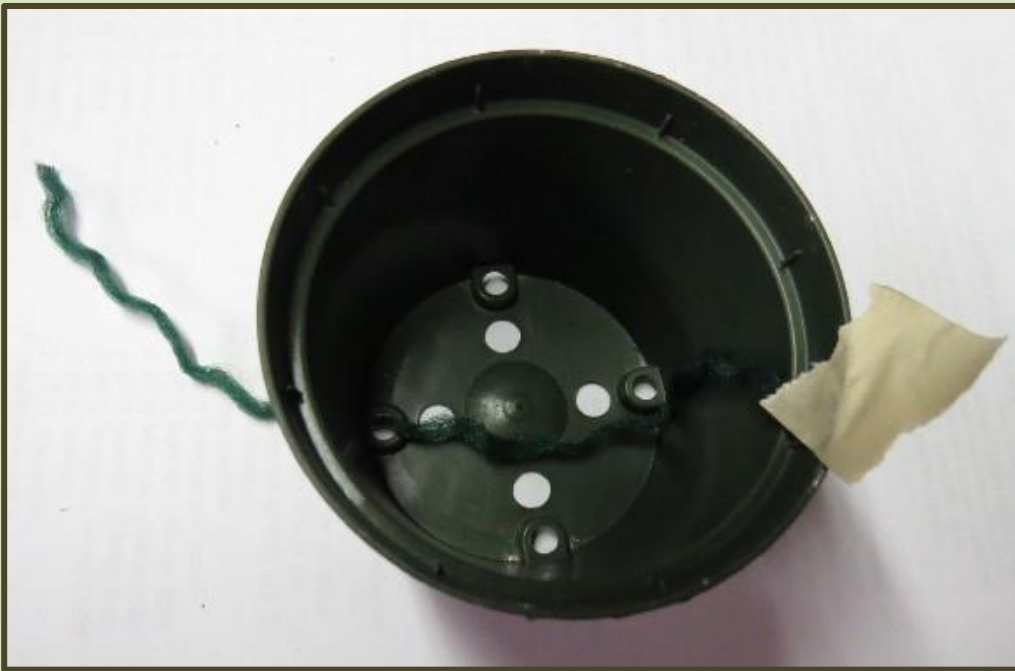
Top watering - just be careful if plant is in sun not to get water on the leaves or in center crown. This will cause burning. Also if the air temperature is cool it could cause leaf damage.

Bottom watering - a layer of perlite is put in the bottom of the pot before the soil is added. The pot is placed in a saucer and water is placed in the saucer, which is absorbed into the pot. The perlite at the bottom of the pot acts as a buffer for between the water and soil so if any water remains in the saucer the soil mix won't remain soggy. The "Texas method" involves putting a couple of rows of holes along the bottom edge of the pot so help with aeration.

Wick watering - this is the method that many growers use and involves putting a wick through the soil and out the bottom of the pot. The wick and soil are wet so start the wicking action and the pot is set on a reservoir with the wick going through a hole in the top into the fertilizer water.

There are self watering pots that accomplish this such as Oyama pots, as seen in the diagram. There are other brands of self watering pots, but you have to be careful to make sure they conform to AVSA's pot rules for exhibiting your plants.





If the pot is 3" or larger I will run the wick along the bottom of the pot. For smaller pots I just run it up the side of the pot. I usually just hold the top end of the wick with my finger but some do so with a piece of tape.



Wicks used are made of man made material such as acrylic. Natural material will just rot if used.

About a 1/4" of perlite is placed at the bottom of the pot.

A layer of soil mix is placed on top of the perlite layer



The plant is then placed in the pot



Soil is placed to the top of the pot. You can gently tap the pot to settle the soil, but care should be taken not to compact it too much. Remove the tape holding the wick if used. Then water from the pot making sure the wick is completely wet. (Dale Martens pre-wets all her wicks prior to using) Place the wick into the reservoir which is filled with fertilizer water. I always sprinkle Marathon on top of the soil when I'm repotting plants, which helps to prevent Mealy bugs.



In an issue of the AVM, Pat Hancock wrote an article about her method of wick watering and I've adopted this method.

Pieces of PVC pipe are placed in a tray to hold up the plastic grating as seen in the top picture.

Acrylic felt is cut to fit the inside of the tray with tails at each end.

The felt is soaked in water and then excess water is squeezed out. It is then placed on the plastic grating with the tails down into the tray. The tray is filled with fertilizer water.

Pots with wicks are placed on the felt. The wick absorbs water from the damp felt.

I tried eliminating the felt and just putting the wicks through the grate but the wicks kept drying out.



Above are some popular water soluble fertilizers used for African violets. Many growers suggest using fertilizers that have even numbers. Take care not to use fertilizers whose nitrogen (first number) has a high urea content, which may burn leaves. The middle number is for phosphorus and the last number for potassium.

Nitrogen – needed for photosynthesis

Phosphorus – helps the plant convert nutrients into usable building blocks

Potassium – improves how well the plant grows



Violets require good bright light. If growing in a window a north or west window is good. East or south facing windows would require some shading in the summer to keep plants from getting burned. Plants would also have to be protected from cold windows in the winter.

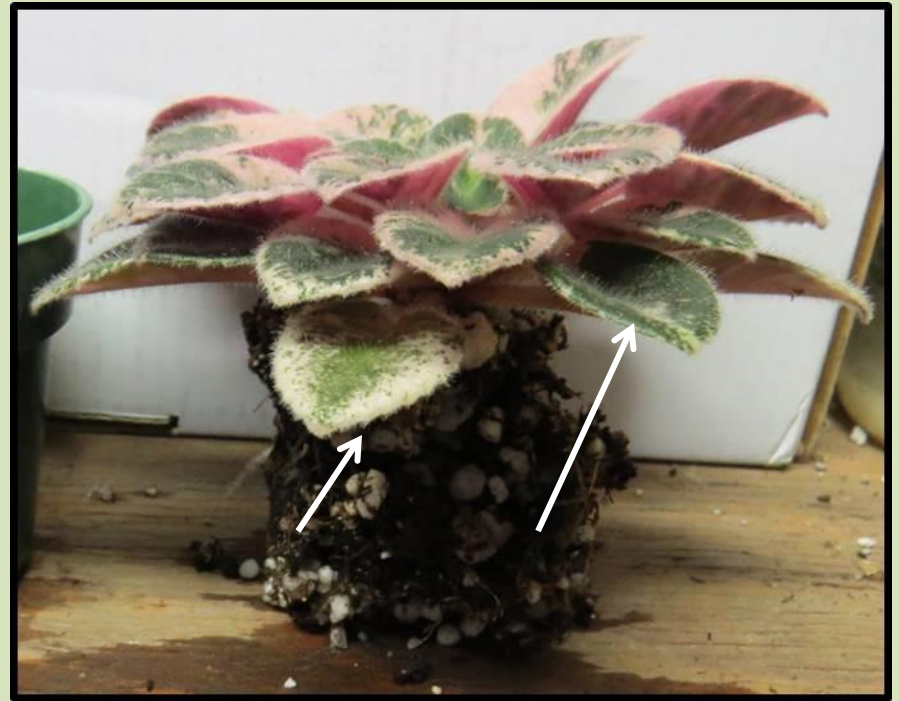
I use a 3-tier plants stand with 2-tube fixtures, which originally used T12 fluorescent bulbs. As the ballasts burned out I replaced them with those for T8 bulbs. I use a timer and the lights are on for 10 hours a day all year round.

I did try using T8 LED replacement bulbs and before I stopped using them the lights were on for 6.5 hours per day. I found girl leaf and some variegates were not happy with the LED lights.

AIR: There should be good air circulation around your plants. Crowding can cause powdery mildew to form especially during the spring and fall when day/night temperatures are not consistent. Some growers use fans to help with air movement but this could help to spread mildew and other fungus spores around. As to temperature, violets are happy with the same temperatures that are comfortable for humans - 70-80°F during the day, and around 65–70°F at night.

Watchful eye – those growers who are always checking their plants are the ones that have the least problems. Pest and fungus problems are always easier to take care of if caught early. Once the problem has been diagnosed sometimes it is better to just throw the plant out. If it something that can't be easily placed than take leaves, wash them well in insecticidal soap & water, pot them up and place in a baggy or covered container to watch for any continued problems. If you have a Chimera that can't be propped by leaves then treat it and place in a baggy or covered container until you know that it is free of pests or disease. (Note: if the plant has been infected with a virus, then it needs to be thrown out in the garbage [not compost pile] as it can never be made virus free.

All new plants should be isolated in either baggies or lidded containers until it is determined they are pest & disease free. You do not want to bring someone else's headache into your collection.



It is recommended that you replot your violets at least every 5 months but every 3 months is better. By replotting more frequently you don't have to worry about fertilizer salt buildup as much. The above plant is a semiminiature 'Cajun's Lil Joy', but the process is pretty much the same for a mini or standard. I generally remove any baby and damaged leaves before I remove the plant from the pot. I removed the above plant from the pot before grooming so that you could better see that there are many leaves that need to be removed, as indicated by the arrows.



Because I let the grooming go for so long on this plant, there were many leaves to remove as you can see from the left picture. I've already prepared a **clean** pot with a wick, perlite on the bottom and a layer of soil. I place the groomed plant into the pot to see if I need to remove and soil from the bottom of the plant.



I determined that I needed to cut some of the root ball off the bottom so that the plant will fit into the pot allowing for soil to be placed just under the bottom leaves. The right picture shows the plant ready for potting up.



Once the plant is placed in the pot then the pot is filled with the potting mix. You can gently tap the pot to settle the soil but it should not be compacted too much. You want air spaces for the roots to breath.

The finish plant on the right shows the yellow electrical tape that I use for labeling my plants. Besides the plant name, type of plant I also put who I got the plant from, the month/year I originally got the plant and the date it was repotted. The tape can easily be removed and placed on a clean pot when repotting.



Cajun's Lil Joy before (left) and after (right) repotting & grooming



A very happy Cajun's Lil Joy!



I'm constantly grooming trails by removing leaves that might be shadowing a crown as well as leaves that are a different size from the rest of the plant. Above is a semiminiature trailer prior to repotting.



Although trailers have to have a minimum of three crowns, you don't want the plant to be too crowded or light won't be able to get to the crowns and they won't grow properly. As this is a bunchy growing trailer I'm going to remove the smaller crowns.

I've finished grooming the plant and it is ready to be potted up.





These are some of the crowns that I removed that I will pot up to start new plants. I use bobby pins or plant pics to hold the crowns in place until they develop roots to anchor them to the soil.



The groomed plant, which has a more open and pleasing shape. I put it back into a 4" pot because I really groomed it heavily. I grow some of my trailers in 5" pan pots.

What size pot should I use?

Miniatures – depending on the hybrid no bigger than a 2” pot. Maximum size of plant is 6”.

Semiminiature – 2” to 2.5” pot. Maximum size of plant is 8”.

Standards – 4” to 5” pot are the usual sizes. Some growers like large plants which may require a large pot. Some growers use pan pots.

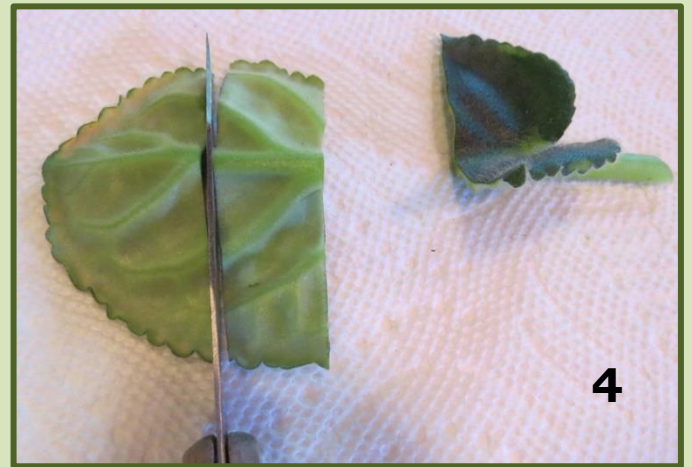
Trailers – there are miniature, semiminiature and standard trailers. Pots can range from 2” up to 5”. Many plants do well grown in pan pots.

When exhibiting African violets, the exhibitor can lose points by having the plant under or over potted. The size of the pot should be in proportion to the size of the plant.

Propagation – African violets can easily be propagated by leaves and crowns. Plants that have Chimera flowers or leaves must be propagated from suckers or flower stems to have the flowers and/or leaves of its parent.

If leaves are limp, place them in luke warm water with a drop of Super Thrive and cut the stem while the leaf is under water. By cutting the leaf under water it will draw water instead of air which hinders rooting. I let the leaf soak about 15-20 minutes depending on how limp it is. If the leaf is large I will cut it up into pieces. The stem is cut at a 45° angle on the topside of the leaf stem.

The following slides demonstrate how I cut up a leaf to get the most out of it.





Above you can see that the leaf has been cut up into six pieces. The tip has been cut off so that piece of leaf won't continue to grow.

I use an old acrylic sweater box for my prop box. I put a layer of about 1" of moistened perlite on the bottom and top dress with shredded moistened sphagnum moss. The moss and perlite should be too wet or it will cause rot. The leaves are nestled into the moss as shows in the top right photo. Arrows point to the babies coming from the leaves in the bottom right photo.





This picture shows the babies growing at each vein on a *Cyrtandra* leaf. Once the babies are big enough and have roots they can be removed directly from the mother leaf or the leaf can be cut with the baby.



My good friend, Jill Fischer, is the queen of growing in baggies and she starts many of her violet leaves in them. This is great if you don't have a lot of room to have pots of leaves. Place a layer of your moisten soil mix or perlite into the baggy, place the prepared leaves into the medium, include the label and seal the baggy. These can be hung from the light stand with clothespins or clips. If you don't have a plant stand then they can be clipped to curtains or blinds. If growing in a window make sure the sun won't hit the baggy. Check for moisture build up and open baggy for a couple of hours. Add water if needed with an eye dropper or syringe.



The above pot contains two leaves with stem as well as the tips that were cut and planted.

The two leaves with stem have formed a single plantlet (top right) as did the one leaf tip.

I separated the largest plantlet. As the mother leaf is still healthy, I recut the stem and re-planted it.





The plantlet potted up. As it was fairly large and it is a standard, I placed it in a 3" pot.

The picture on the right, shows the label that I put on my pots using the yellow electrical tape. I also added the date 9/28/21, when I did the repotting. Masking tape is also easily removed, but I find that it isn't reusable like the electrical tape is. This tape also comes in white.

Miniatures

Right – Precious Red

Left – Imp's Christmas Wrap



Semiminiature

Left - Jitterbug Black Magic

Right - NK-Klurnielinir Kapleik (NK-Strawberry Cupcake)





Standards

Top left – Harmony's Little Stinker, a leaf chimera.

Top right - Lilian in Lace, a small standard with mosaic variegation.

Bottom - Steffano's Early Frost.



Trailers

Top left – Carolina Jubilation, semi

Top right – Tiny Moon Goddess, mini

Bottom - Vallarta Cappanes Morados, mini



Left - *S. diplotrichus* 'Parker'



Right - *S. grotei* 'Silvert'



S. magungensis

Thank you

Questions?