The Hybridization Process

By Pat Hancock Middletown, Ohio

Sometimes, it is hard to get the cross you want to "take" when hybridizing African violets. Double flowers are much harder to cross than singles or semi-doubles, and sometimes it is better to use the pollen from the double and the semidouble for the seed parent. Certain blossoms will not produce seed, no matter what you do. But don't get discouraged.

Pollen to Pistil

There are many ways to harvest pollen and get it onto the pistil, and I have tried most of them. When I first started trying to make seed, I used my finger to transfer the pollen, but none of my efforts took and I was discouraged. But after getting tips from others and plenty of practice, I found methods that worked for me. Here are some tips on pollinating I've learned over the years:

•**For the Seed Parent:** Choose a blossom that has been open for two or three days. The first blossom on the stem usually is ripe when the second blossom on the same stem begins to open. The stigma will look slightly wet and shiny.

•**For the Pollen Parent:** Choose a blossom that has been open no longer than three to four days. The pollen should appear powdery and should almost cover the blossom when the anthers are opened.

•**Cut off the flower** you choose for the pollen parent. Cut out the anthers from the seed parent and discard them.

•**Cut the tips** of the pollen flower's anthers and flick them with your finger or the scissors to spread the pollen over the face of the pollen flower. (You can take that flower with the pollen on it and touch the stigma with the flower itself.) Gently touch the stigma of the seed flower to this pollen flower or use your finger or a Q-tip cotton swab to put the pollen on the stigma. If the stigma is receptive, the tiny grains of pollen will stick to it and might even seem attracted to it. Be **very gentle** so you do not jam the end of the stigma.

•**Vibrate the stem.** About a year ago, a friend sent me a new tool called a VegiBee (made for vegetable growers) that vibrates the stem and collects the pollen in a small spoon, making this step easy and giving you a lot more pollen. I've demonstrated use of the helpful tool at club meetings.

Demonstrating how to use the VegiBee at an AVS Dayton meeting. Photo by Linda Lloyd.

•**Pollinate in this way,** with the same pollen, as many flowers on a single stem as possible. Seed pods seem to enjoy company and do better with several on a stem. Your chances of the crosses growing to maturity are better with several flowers. Never use different pollen on a single stem; it could be very confusing.

•**Immediately mark the stem** with the name of the pollen parent and the date of the cross. A piece of painter's tape works well, or you can purchase small tags attached to string and wrap a tag around the stem.

•**For the next four to six months,** maintain high humidity and ensure there is no mildew or thrips. Don't let the mother plant get too wet or too dry. Don't repot or do anything to disturb the plant.

•**The first indication that the cross** "took" will be the flower dying very quickly. Then the stem will start to crook and hide its head under a leaf. This is probably Mother Nature's way of protecting the seed pod.

•**If the pod matures and stays viable** for at least four months, you probably will have seed in it, perhaps 200 or more. When the pod starts to wilt, remove it and place it in a glass jar or envelope and store it in a dry place. Leave it until thoroughly dry (about two weeks). After that, it can be kept in the refrigerator for about three years or planted immediately.

Planting the Seeds

When all these steps go without a hitch, you will be ready to plant your seed. Your planting medium needs to be very light; I use Fox Farm's Light Warrior seed starter. I place it in a container with a clear top, (with holes punched in both the top and bottom). Salad containers that come from any fast food restaurant are perfect.

Place the seed pod over a light piece of paper that has been folded twice across the center to create a pocket, and then opened. The seed that falls onto the paper will look like black pepper.

> Be very gentle so you do not jam the end of the stigma.

Sprinkle the seeds gently over the moistened prepared bed, spreading them out as best you can. (Don't sneeze!) Put the lid on the container and place it so the seeds are about 4 to 6 inches from your light fixture. You should see seeds sprouting in about two to six weeks.

Do not let the seedlings dry out. They can be transplanted to Solo cups in a very short time and they will surprise you with their sturdiness. I have never lost a transplanted seedling.

It's great to have a goal but do not be disappointed if you get something completely different from what you expected or planned. There are a great many recessive genes in African violets and they often have a mind of their own.

Long-time Hybridizer Closes Shop

Former African violet hybridizers and friends of AVSA closed their nursery's doors last summer. Behnke Nurseries in Beltsville, Maryland, still had a thriving business, but no family members willing to take over the company. Rose Behnke is listed as hybridizer of 28 African violet hybrids registered between 1949 and 1969. Her interest in African violets began with a friend's gift to her daughter Sonja.

The Behnkes also participated in AVSA local clubs and contributed articles to AVM. Albert and Rose Behnke established their nursery in 1930 and sold outdoor plants and houseplants. Rose died in 1997. When the nursery closed last summer, the family chose not to sell the 10-plus acres to a developer, but to find a way to develop the property to benefit the community.

Meanwhile, Behnke Nurseries lives on in regular blog posts and gardening tips from Rose and Albert's grandchildren. They also visit and write about other plant nurseries. You also can search the site (behnkes.com) to read more about the history of Behnke's and the couple's love of African violets.