

After a rattlesnake was discovered somewhere in the grass, roaming about the bald slowed down a good bit. This was OK, because everyone had seen about everything there was to see, and it was time to head down the mountain. Although not used, the snakebite kit was a good idea.

The hike down took three and a half hours. Along the way we observed many of nature's wonders: mosses, ferns, fallen logs with rhododendron seedlings growing in them, mushrooms, and voles, and the streambed with waterfalls and three log bridges to cross were interesting and beautiful. When we got down, Rosa sat on the first log she came to. Her right knee froze and Bob was sent for the car. With a little ice and a rubdown Rosa was as good as new the next day. Everyone was absolutely delighted with the hike to Gregory Bald!

Rising for an early departure for home, we found that Don Hyatt had put a CD with all the great pictures he had taken on the windshield of everyone's car. Thus, Don assured that all took home wonderful memories of our trip to share with those who could not be there. We, along with all those who made the field trip, are indebted to Don Hyatt for the hours of planning, preparation, and perfect execution of this fantastic field trip.

The maps, briefings and list of cell phone numbers Don provided the group assured that no one was lost or without help if needed. His knowledge of native azaleas and their habitat and his attention to detail resulted in our having an unforgettable azalea experience. Don's sense of humor tickled everyone. Returning from Johnson City with his new glasses he arrived in the restaurant with large

black-rimmed glasses including a big nose and thick mustache. This gave everyone a good laugh.

There must and will surely be future trips back to Roan Mountain and Gregory Bald. There are now a number of persons qualified to plan and lead such an expedition. If you have not been there and seen them first hand, look for the next opportunity and take it. Bob will loan you the bear repellent.

We laughed all the way home as we recounted the week's activities and how we enjoyed the good company of friends (old and new). As Dale and Carol Flowers put it, "the thing we liked most about the trip to Roan Mountain were the amazing vistas, which you don't see from the overlooks along the scenic drives. It was like the mountain shots in the movie *Sound of Music*, except even more beautiful." Everyone felt the same.

We extend our sincere appreciation to everyone on the field trip for making it one of our most memorable trips ever. We hope that the Ben Morrison and Potomac Valley chapters will find more fun and interesting things to do together in the future. Happy azalea trails till we meet again!

*Bob McWhorter is a retired Maryland State Trooper and Rosa McWhorter is a retired IT project manager for the Department of the Navy. They joined the ASA in 1997. Their collection of azaleas and rhododendrons and the friendships made have enriched their lives and helped make Rosa Gardens an exciting place to spend time together and with family and friends. Bob is past president of the Ben Morrison Chapter of the ASA.*

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# *How to Achieve a Color Explosion: Grow Evergreen Azaleas from Seed*

Robert (Buddy) Lee — Transcend Nursery, Independence, Louisiana

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*[Reprint of article from American Nurseryman, used by permission, Ed.]*

## **Introduction**

Evergreen azaleas can be grown relatively easily from seed. Although the process can be meticulous and time consuming, it can be extremely rewarding. There are no absolute correct or concrete guidelines for this process; however, there are overall accepted procedures and conditions that can be successfully incorporated into most situations.

## **Evergreen Azalea Seed**

The seed capsules of evergreen azaleas can be inconspicuous and almost undetectable among the leaves (Photo 1). A developed seed capsule is usually green in

color and approximately 1/8" to 1/4" long, depending on the cultivar. Later in the growing season, the seedpod starts turning to a brown color as it matures (Photo 2). The actual azalea seeds are located inside the seed capsule. Some azaleas, such as 'Formosa', are sterile and will not produce any seed capsules. On the other hand, the cultivar 'Hinodogiri,' will usually set numerous seed capsules. Because azaleas in commercial production are usually shaped by shearing after they have bloomed in the spring, most, if not all, developing seed capsules are also removed from the plant by this shearing process. Even in established azalea plantings in the landscape, azalea seed cap-

sules may be difficult to locate because many evergreen cultivars just do not set that many seed capsules.

Pollination must occur if a seed capsule is to develop with viable seeds. Open pollination occurs when pollen (male) from a flower of one azalea cultivar or species is carried by insects or wind to the pistil (female) of a flower of another azalea cultivar or species. If the pollen tube successfully moves down the style to the egg nucleus, successful pollination should result in viable seeds. Controlled cross-pollination occurs when pollen from a selected evergreen azalea is placed upon the stigma (tip of the pistil) of another selected evergreen azalea. These are brief descriptions of pollination steps. A more detailed study would be advised if someone would like to venture into azalea breeding. Any plant-breeding program can be expensive and lengthy, but it would save time, energy, and disappointment if a person would become knowledgeable with the species and cultivars of the plant group of interest.

### Preparing the Germination Medium

Evergreen azaleas thrive in loose, well-drained soil composed mainly of organic material that helps to promote root growth and also retain moisture. A soil acidity level of 4.5 to 6.0 pH is also important for evergreen azalea survival. For growing healthy azaleas, I prefer a soil and irrigation water supply to have a pH of 5.0 to 5.5. These conditions for growing healthy azaleas are also critical components for germinating azalea seeds. For the germination tray, I use a standard 10" x 20" tray filled with medium-ground pine bark to 1/2" from the top of the tray. The remaining portion of the tray is filled with pre-soaked peat moss and distributed evenly across the tray to make a level surface where the azalea seeds can be sown. Watering the peat moss "in" will also help to level and smooth the top surface. Later, as the seedlings in the tray germinate and grow, their roots will grow through the layer of peat moss into the pine bark. The pine bark used to fill the bottom of the tray is the same type of potting soil that will be used later in transplanting the seedlings to bigger containers. This process of using pine bark in the germination tray should help reduce transplanting stress, since the seedlings should already be adjusted to the pine bark potting soil.

### Harvesting and Preparing the Seeds

Some azalea breeders suggest waiting until late autumn or even after the first frost to collect the mature capsules. A seed capsule consists of five chambers, with each chamber containing numerous seeds. If the seed-pod is left on the plant too long, it will dry out and the capsule will split open to form a star-shaped opening, which will allow the small seed to fall to the ground, as nature intended. I collect seed capsules around the first of August and have had very good germination success. Maturation of evergreen azalea seeds usually occurs approximately 90 days after successful pollination. Some

years I have harvested the seed capsules as early as mid-July and have had good results; however, the date of pollination on these seed capsules probably occurred in March and April.

When the seed capsules are collected, they need to be placed in a paper cup and placed in an area that will allow them to become dry and freely split open, releasing the seed. This drying out process usually takes approximately seven days. There may be as many as 500 or more seeds in each capsule; however, in some cases the seed count may be fewer than 100, depending on the cultivar or environmental factors. Once the capsule has split open, the seed can be removed from the capsule chambers by shaking the cup. This motion will cause the seed to fall out of the chambers. After the contents of the cup are emptied onto a sheet of paper, all the old capsule parts and other debris (chaff) from the seed should be removed. I prefer to sow the azalea seed immediately after cleaning them. From my experience, I find that the seed germinate faster and have a higher rate of germination when they are sown in the fall. Some azalea breeders, however, prefer to save the seed until the following spring. Over-wintering seedlings in geographic areas of extreme cold weather probably is a major factor in waiting to plant the seeds the following spring. The cleaned seeds are sown by carefully sprinkling them from a cup or sheet of paper onto the prepared germination medium, making sure to sow them evenly and not too thickly.

### Caring for the Seedlings

After the seedlings have been sown, they are placed in a 10' x 20' open-sided greenhouse. The seeds are moistened by using a mist water nozzle, making sure that the medium does not become too wet or too dry. Within 7-14 days, the seeds will start to germinate (Photo 3). The open-sided greenhouse allows a more natural environment for azalea seed germination. Its main purpose, while the temperature is still warm, is to protect the seed from the direct sun and pounding rains. No supplemental lighting is used in the greenhouse. During the time when the seeds have initially been sown and until they start germinating and growing, the nighttime temperature is in the lower 70°F range, while the daytime temperature is in the lower 90°F range. Later, as the temperature grows colder, the open sides of the greenhouse are closed with plastic sheeting. Then I use propane heaters when needed to keep the greenhouse above freezing temperatures. Seedlings are fertilized weekly starting in March with a half-strength solution of liquid fertilizer that is recommended for azaleas. Controlling plant disease and pests is extremely important. Sticky paper placed above the trays is great for controlling some insects. Applying a light application of multi-purpose fungicide about every 10 to 14 days can control most fungal diseases such as web blight (*Rhizoctonia solani*), which can appear in the seedlings with little notice and can destroy an entire tray of seedlings. Applying insecticide



around the greenhouse periodically can help to create a barrier to stop insects. Germinating seeds and young growing seedlings are very fragile and need to be monitored frequently. Problems need to be addressed immediately before fatal damage can occur.

### Transplanting the Seedlings

When the seedlings become approximately 1" in height, they can be transplanted into individual grow cells. This initial transplanting usually occurs in late May or June of the following year after the seeds were planted. I like to use the standard 72-cell size for the initial planting (Photo 4). I transplant all the seedlings of each cross at this stage and continue to fertilize with half-strength liquid fertilizer weekly until the seedlings have rooted into the soil. Then I will apply a light application of granular nursery fertilizer as recommended or as needed. As the plants grow larger, the more vigorous and healthy seedlings are transplanted into 4" containers and fertilized as with any 4" size azalea. At each transplanting stage, the less vigorous seedlings will be discarded. Later the seedlings in the 4" containers will then be transplanted into 6" containers and grown to blooming size.

This is the most exciting and rewarding phase of the seedling growing process for most azaleas breeders. Not only are plants mature enough at this stage to evaluate growth habits and many other characteristics, but also the plants are mature enough to give an explosion of color during their blooming season (Photo 5).

### Suggested References

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*Robert (Buddy) Lee is the current president of the Azalea Society of America for 2004-2006. He has been a member of the Louisiana chapter of the ASA since 1983, serving as president of the chapter from 1990-1992. A true promoter of the azalea, he coordinated two national conventions for the ASA, one in New Orleans (1991) and the other in Charleston, South Carolina (2000). He owned and operated Savannah Spring Nursery, a wholesale plant nursery specializing in container-grown azaleas from 1973-1986. Along the way he found time to develop the multi-season-blooming Encore™ Azaleas now marketed through Flowerwood Nursery in Loxley, Alabama. In 2000, the Louisiana Nursery and Landscape Association recognized his significant contribution to the industry by awarding him a Professional Achievement Award, presented during the Gulf States Horticultural Expo in Mobile, Alabama, in 2000. He is presently active in the development and testing of new azalea varieties through Transcend Nursery.*



(All photos by Buddy Lee). 1. Developing seedpod. 2. Dried seedpod and seeds with coin for size comparison. 3. Azalea seedlings germinating on peat moss. 4. Transplanted azalea seedlings. 5. The color variations from a group of Buddy Lee's evergreen azalea seedlings.