I want to tell you a story about one of the gardens featured during the 2008 National Convention in Asheville, North Carolina. The garden is the result of 12 years of dedicated effort by Bob and Deni Stelloh, who brought 600 plants from their previous garden in Maryland and have since added thousands more. It was one of the first gardens selected for a tour, because it is a carefully planned and executed presentation, truly representing the name selected for their home—Kairaku, which translates as ‘joint pleasure.’

During the last year, their health has not been good and maintenance work in the garden came to a screeching halt. We were all concerned about them, and Bob was concerned about their garden and how it would show to the visiting Society members. He seriously considered taking it off the tour.

At our last planning meeting, four people independently came up with the idea of having a garden day at Bob and Deni’s home. Aaron Cook announced he would bring a class of Landscape Gardening Program students (15 in all), and they would get the job done. The students received class credit and a few ground-cover plants each for their work. Bob and Deni got their garden shined up. We all got treated to a beautiful garden tour. It is a prime example of the camaraderie, true concern for fellow members, and basic sense of doing the right thing that I feel represents the backbone of our Society. Hats off to the 15 young people who gave a day to create so much good. The garden looked great.

A consortium of 11 public gardens in the Southeast started a program to preserve the old forms of azalea and camellia cultivars. The Great Gardens of America Preservation Alliance asked the Azalea Society to join them as a consulting body. Our task is to identify those azalea cultivars available and in the landscape before 1900 (or some other date to be chosen). Maarten van der Giessen and Bart Brechter agreed to serve as our contacts for the effort. Maarten estimates we will find more than 100 known azaleas and 450 camellias prior to 1900. For the fanatic collectors among us, it will be a dream come true to be able to search for all of the “ancients.”

The Society’s Board of Directors made the first step in creating an ASA Research Foundation. Jim Thornton, past president and long time supporter, agreed to chair a study group to investigate the feasibility of the project and to propose a format for the foundation. We are truly fortunate in having a template written for us by Augie Kehr shortly before his death. Augie worked with Bob Stelloh, former ASA treasurer, to earmark funds for the foundation-to-be. When formed, the foundation will be a non-profit organization dedicated to research and improvement of our favorite plants—azaleas. As such, the foundation, which has yet to be named, will be a great place to make charitable donations.
Features
28 The Making of the Margie Y. Jenkins Azalea Garden
   Regina P. Bracy
31 Couple’s Gardens Blooming After 20 Years of Hard Work
   SaraAnne Corrigan
32 Deer Lessons Learned
   Eve Harrison
33 On Various Soils and the Use of Perlite
   By Greg Moore
   Edited and Commentary by George Klump
40 Revive Your Hanging Baskets for Azalea Cuttings, Seeds, and Plants
   Mike Creel

Society News
26 President’s Letter
30 Letters to the Editor
30 In Memory
36 Society News
37 Chapter News
39 New Members
45 Azalea Mart

On the Cover
'Deni's Delight' is an open-pollinated Chop-tank hybrid seedling raised by David Dethero. It was grown, named, and registered by Bob Stelloh in honor of his wife Denise. It is very fragrant and blooms late-April to early-May, with up to 25 flowers to the truss. It has an upright plant habit, about seven feet high in 18 years, with deep red new growth.

The complete registration description is in Journal ARS, Vol. 61, Number 1 (Winter 2007), p. 50, photo p. 55.
Margie Yates Jenkins has always enjoyed “growing things.” Her mother would leave a spot in the vegetable garden so the young Margie could plant a few seeds herself. Margie felt such pride when she could pick a few beans of her own to put in the family’s bucket.

Margie’s husband, Bryant Jenkins, operated a dairy farm and grew watermelons for most of his life. After her five children (Freddie, Margie Ann, Timothy, Jeffrey, and Mark) entered school, she and Bryant started a small growing operation in the early 1960s and continued it for the next 15 years.

Many of Margie’s relatives were already in the nursery business. Her brother, Fred Yates, was married to Mr. Price McGee’s daughter, and her sister, Doris, was married to Dallas McGee’s only son. Price and Dallas McGee had opened the first nursery business in Folsom, Louisiana. Margie’s brother and brother-in-law also started their own nursery businesses. Having relatives in the nursery business gave the Jenkins’ a basic understanding of how a nursery operated.

**A Plant Person Is Born**

While attending Louisiana State University, Margie Ann (Margie’s daughter) heard about a summer course taught by Dr. Neil Odenwald, LSU Professor Emeritus and author. The course was aimed at extension workers, county agents, and others who were interested in garden design and design theory. Margie Ann persuaded her mother to take the course, which completely changed Margie’s thinking about plants. “When I came back that was my goal,” she said, “to grow things that were unusual. Of course, a lot of the old plants, too, I wanted to grow—and of course, natives.”

In 1977, Margie at the age of 56 was ready to take on the challenge of reopening the nursery to grow different types of plants. She hired six workers with the dairy paying their salaries, so she did not have to borrow any money to start the nursery. After talking with many of the big wholesalers around Folsom, Margie found that none of them were catering to customers in New Orleans or to a small contractor who was supplying the New Orleans landscape market. She decided that this was her niche: “the guys in the pickup trucks.”

In the beginning.....there was chatter among friends.

We wanted to recognize the many contributions that Ms. Margie has made to horticulture. She had lots of awards. But we wanted something lasting, something that would grow, something that would be enjoyed by many———a Garden!

An idea was born. Regina Bracy was building a new program at the Hammond Research Station. Buddy Lee was searching for a suitable tribute. Perfect, said Buddy, a garden in honor of Ms. Margie.

Her friends were enthused. Ms. Margie was hesitant... I’m not noteworthy, she said. But we thought otherwise, so after much convincing Ms. Margie agreed to lend her name to the garden.

So a Garden Party was planned and all Ms. Margie’s friends were invited. If we ask, they will give. If we build it, they will come. And so they did.....

The establishment of the Margie Y. Jenkins Azalea Garden means we will have a continuing feature at the Hammond Research Station to honor a remarkable woman. This garden will be a source of information, an inspiration, a delight to visit. ...much as Ms. Margie is and has been during her lifetime.

Front insert of Margie Y. Jenkins Garden Party program, 2006
Introduction of Robin Hill Azaleas

Azalea production in the southeastern United States in the 1970s had focused on the Southern Indian, Kurume, and a couple of Glenn Dale varieties of azaleas. As Margie was active in national azalea meetings, she knew of the hardier varieties grown as far north as New York. Always a seeker of new and interesting plants, she bought rooted-cuttings of several varieties of Robin Hill azaleas and other hybrid groups and put them in production at her nursery. Now in any process of discovery, there is a wildcard. For Margie, it was the cold blast that the area received in the winter of 1983.

Southern azaleas suffered tremendous damage during the winter of 1983, but the hardiness of these “new” varieties was demonstrated. This cold hardiness and the off-season blooming habit that Margie later observed convinced her to propagate and expand the market for new azaleas. Names like ‘Arabesk’, ‘Watchet’, ‘Janet Rhea’, ‘Hardy Gardenia’ that were on a Jenkins Nursery liner receipt in 1981 are now stock-in-trade items of southern nurseries.

When the Azalea Society of America conferred its Distinguished Service Award on Margie in 2007, the tribute acknowledged “the increased use of Robin Hill azalea cultivars and other azalea hybrid groups in the southeastern United States can be attributed to her [Ms. Margie’s] interest in growing and distributing these plants prior to other wholesale producers.”

Today, she still watches her crops with the eye for discovery that had her notice a sport of ‘Watchet’. She isolated and propagated this white sport and named it ‘Freddie’ in honor of her son. ‘Freddie’ was featured on the cover of the The Azalean Winter 2006 issue.

A Garden Is Born...

Few among us have the national contacts and recognition or the huge circle of friends, family, and admirers that Margie has.

“We wanted to do something to celebrate the many contributions this dynamic woman has made to horticulture, the Green industry, and to the personal development and education of so many horticulturists,” said Dr. Regina Bracy, professor and resident coordinator at the Hammond Research Station. “So in 2006, we threw a Garden Party for Ms. Margie and collected $53,000 for the establishment and maintenance of the Margie Y. Jenkins Azalea Garden.”

The garden started in a “straw stand” of pines. Straw stand refers to the small tract of pine trees that bordered strawberry fields in the area more than 50 years ago. The stands were so named because they served the purpose of providing the pine straw that was used to mulch the strawberry crop.

Dr. Odenwald, co-author of Identification, Selection and Use of Southern Plants for Landscape Design, was commissioned to design the garden layout. He laid out beds that curled and curved around the pine trees and envisioned walkways, water features, and resting areas nestled under the shade of the tall trees. Staff at the Hammond Research Station began marking out the garden design, installing irrigation lines, hauling soil amendment, and preparing the beds.

In September 2006, the first azaleas were planted in the garden. Margie selected the first group to be planted and, of course, these were her favorite Robin Hill cultivars of which she selected 13. Also included in this first planting were 23 cultivars of Encore® Azaleas, a nod to the other plant aficionado and breeder from Southeast Louisiana, Robert “Buddy” Lee.

Later the Crimson azaleas (‘Crimson Majesty’, ‘Crimson Queen’, and ‘Crimson Princess’) developed by another Louisianan, Richard Odom of Country Pines Nursery, were added to the garden. The size of the garden was doubled in 2007 with the addition of Southern Indian azaleas.

As most people who know Margie know, her love of plants is not limited to azaleas. Visitors to Jenkins Nursery are often treated to “the tour,” a ride in a golf cart with Ms. Margie. Here the visitor can appreciate Ms. Margie’s extensive knowledge of native plants while viewing an amazing collection of said plants. Ms. Margie is also known for her generous sharing of her plants, and most visitors leave with at least one interesting specimen.
Margie Y. Jenkins Garden was started in 2006 and is a young garden with good bones.

We have tried to incorporate this fun and curiosity in the Margie Y. Jenkins Garden. One can find Japanese maples, Wisteria, Hibiscus, huckleberry, Viburnum, Osmanthus, Lonicera, Abelia, Syrinx, Camellia, Hosta, Itea, Illicium, Ilex, Dianella, Leucothoe, Aucuba, Euonymus, farkleberry, and Loropetalum.

Native trees include Callicarpa, Carpinus, Catalpa, Cedarus, Chionanthus (fringe tree), Cornus, Crataegus (hawthorn), Malus, Fagus, Gordonia, Sinojackia (jacktree), Nyssa, Halesia (silverbell), Acer, Quercus, persimmon, sassafras, Ulmus, and Prunus. Magnolias include Japanese, Southern, ashei, tripetala, macrophylla, and sweetbay. Other plants include Beschorneria (false red agave), Lespedeza, Myrica, Aleurites (tung oil).

Spotlighted around a sugar kettle is Margie’s white azalea selection ‘Freddie’. Also one can find nestled among the azaleas such interesting plants as Leucothoe axillaris ‘Jenkins’, named after its developer Margie.

The Margie Y. Jenkins Azalea Garden is a young garden with a great future. It will be an integral part of the new Landscape Horticulture Research and Extension Center being developed at the LSU AgCenter’s Hammond Research Station.

The plaque at the entrance to the garden best sums up the person for whom the garden was named. “Margie Y. Jenkins...A person with a passion for plants and plant people.” With the establishment of this garden, we will have a continuing feature that will educate people about azaleas and native plants. This garden will be a source of information, an inspiration, a delight to visit....much as Margie is and has been during her lifetime.

Regina Bracy is Professor of Horticulture and Resident Coordinator of Louisiana State University AgCenter’s Hammond Research Station in Hammond, Louisiana.

Letters to the Editor

Mini-blinds not recommended for ID tags

Some time back, I read a short article in The Azalean promoting the use of discarded mini-blinds to make identification tags for azaleas. For a few years I relied heavily on this material and told others how well it worked. Well, after much disappointment in finding the writing—from both pencil and indelible Sharpie-type pens—totally or partially gone, I have personally banned the use in my garden and propagation containers.

Apparantly a layer of material from the mini-blind strips falls off, taking the writing with it. I have tried attaching the strips to plants in open air, sticking the strip into the medium along the pot edge, and placing it underneath mulch or a stone at the base of the plant. In most cases the writing did not survive. Strips covered with medium or soil did last longer than those fully exposed to air, sun, rain, and watering.

I now have too many azaleas, mostly in pots grown from seeds or cuttings, that are unknown as to variety or source due to the use of mini-blind identification tags. If you use this material I advise checking the tags weekly and being prepared to write over the information on the tag with graphite pencil or fine tip permanent marker.

For my permanent plant tags, I use either old aluminum offset printing plates cut into strips; pure copper plant tags from Lee Valley Garden tools; or thick plastic strips which are waste materials from credit card manufacturers. I have fully legible identification tags dating to 1983 that are made from offset printing plates.

I wish someone had a company where you could send a list of plant labels and have good permanent ones made.

Mike Creel
Lexington, South Carolina

Spring issue enjoyed

I received The Azalean (Spring 2008 issue) yesterday and I enjoyed reading every article. Thank you.

Yoriko Chin
Rockville, Maryland

In Memory

Tom Anderson, Major, U.S. Army retired, passed away March 8 at the age of 81. Tom was drafted at the age of 17 and continued with a military career. He saw conflict in the European Theater, Korea, and Vietnam. He was highly decorated, including the Bronze Star with Oak Leaf Cluster and the Purple Heart.

Tom was a long time member and Vice President of the Oconee Chapter.
Couple’s Gardens Blooming After 20 Years of Hard Work
By SaraAnne Corrigan—Evansville, Indiana

Last year, Steve and Beverly Knight listed an achievement that was 20 years in the making: Their property – about 50 acres in all – spanning the Gibson and Pike county lines, which they have named “The Azalea Path,” was designated by the State of Indiana as an arboretum and botanical garden and awarded non-profit status. It is also classified as a forest preserve, says Beverly Knight.

As the name suggests, there are a lot of azaleas there; the couple has long since lost count of how many, although they planted every single one of them and continue to add more every spring.

“I fell in love with azaleas many years ago, largely because of the work of Dr. H.R. Schroeder,” says Beverly Knight, an Evansville native and retired UPS driver.

The late Dr. Schroeder was an Evansville obstetrician who lived in the McCutchanville area; he began hybridizing azaleas more than 50 years ago, says Jeanne Brown, a member of the local Azalea Society and an Azalea Path devotee. Schroeder is credited with developing particularly colorful and cold-hardy azaleas that flourish in the Tri-State area, which is rather at the northern climate boundary for azaleas, she says.

“He developed 38 varieties and I am proud to say I have 37 of them on this property,” Beverly says with pride.

Beverly allows that her husband, Steve, was the proverbial late bloomer when it came to gardening and landscaping; their marriage is only 15 years old, but Beverly has owned the real estate since 1979 and began developing it on her own in the mid-1980s. She says, however, that Steve, while not yet retired (he works in maintenance for the City of Petersburg), quickly rose to the occasion.

When she bought the place “it was all woods and gullies,” Beverly recalls; the couple has done and continues to do virtually all of the work themselves, “which is why you will never see this place free of weeds,” she quips. The property is blessed with a natural creek; the Knights added two large lakes and a waterfall.

Spring, of course, is the most colorful time of year at the Azalea Path: In addition to azaleas, there are wisteria vines, lilacs, dogwoods, redbuds, rhododendrons and a myriad of unusual trees and shrubs.

“There is something of interest to see here from April through October,” Beverly says of the season during which time the property is open to the public.

“We have school kids up here in the fall and they can collect leaves from 60 different kinds of trees without ever having to walk too far off the road,” she explains, “You name a tree and we probably have it here somewhere.”

The Knights conduct guided tours, Beverly says, but they also allow individuals and groups to wander the property on their own.

“Last year, without our having done any advertising at all, we had more than 4,000 visitors,” she says. This summer will likely be much busier: The Pike County Chamber of Commerce and the Gibson County Visitors and Tourism Bureau both are promoting the site.

Eric Heindenreich, executive director of the Gibson County Visitors and Tourism Bureau and a member of the Azalea Path board of directors, says his first visit there was last fall, “when there really wasn’t a lot of color,” and he still found it to be “an amazing place—a labor of love on the part of the Knights—and a thing I really wanted (our office) to get behind.”

The Azalea Path “has given Gibson County a marketable group tour attraction. It’s a priority for us now—a hidden treasure that we are promoting this coming year as one of three group tour attractions in the county,” Heindenreich says, explaining that Lyles Station and the upcoming Toyota Visitors Center/factory tour site are the other two.

Alycia Church, executive director of the Pike County Chamber of Commerce and another Azalea Path board member, says that Pike County does not have a tourism office, so the Chamber handles that kind of publicity and her office is thrilled to have an asset like the Azalea Path to promote: “I went there for the first time about three years ago. I have lived around here all my life and I had had been driving by it for years, but I always thought it was just a beautifully landscaped private home.

“I was amazed to learn the Knights opened it up to the public!”

SaraAnne Corrigan is a freelance writer in Evansville, Indiana.
Deer Lessons Learned

Eve Harrison—Stanley, Virginia

This winter I learned, after nine years of gardening in a deer presence, you should probably think twice and ask further advice before going up against Mother Nature. I've used Liquid Fence® successfully for at least seven years, failing only once with a rhododendron when I didn't spray the entire plant—only the buds. Lesson learned.

This year I went confidently into winter despite living right next to the Shenandoah National Park, continuing my spraying program with Liquid Fence®. The weather had been warm right into Thanksgiving week and then suddenly dipped to 25°F two nights in a row. I thought nothing of it, instead thinking only of my pure happiness at having one of my sons and his son visit during the holiday week.

I decided that it was getting pretty expensive spraying Liquid Fence® due to the size of the ever-expanding garden, so I invited a number of hunters in to harvest a few deer, thinking that would take some pressure off the garden. What was I? Crazy? I completely forgot that upsetting the balance of the herd would only invite in new diners to take their place!

The weather warmed back up to the 40s and occasionally low 50s into December and it became time to spray the garden again. The main garden stretches 400 feet along the driveway and is on the edge of a wooded ridge and fortunately gets morning sun. My pride and joy—the shaded garden—is full of azaleas, rhododendron, sarcococcas, hydrangeas, Lenten Roses, trillium, ferns, and all manner of other shade-loving plants. The foundation background of it all is many types of aucubas, probably 13 in all.

I sprayed December 18, and the next night the deer attacked nearly the entire garden. However, they strangely neglected azaleas. Aucubas were denuded of every single leaf and a few stems were whacked off. Loropetalum was eaten by half. No deer ever went near the scratchy leaves so I never bothered to spray it. All this spring's candytuft was eaten to the ground along with any remaining rudbeckias. Hydrangeas were whacked in half. Young long-needle pines were eaten to the trunk. A huge 12-feet-tall Cryptomeria 'Yoshino' was eaten from head height to the ground! It looked like a war zone.

The pride of my gardens were five 5-foot tall Euonymus 'Green Spire' that I had carefully protected against scale for five years. Now they were denuded and beaten down to two to three feet tall.

Completely bewildered, angry, furious, and confused, I called the Liquid Fence® Company and for two weeks tried to understand how this could have happened.

Two things happened. The deer that were used to my garden—two huge does—were now gone, and their progeny were here along with several new members of the herd. The herd grew in the garden from four to 20 almost overnight.

The second, and most important thing that I finally pieced together with the representative from Liquid Fence®, was that when the temperature dipped to 25°F the bottle of concentrated Liquid Fence® was in the unheated mudroom along with the cats’ water and food dishes. I remembered that the water froze in the cats’ dish and it clicked in that, according to the representative, the concentrate had been compromised by the cold temperature.

Unfortunately, the product label does not include a warning to protect Liquid Fence® against freezing temperatures. The deed was done, so yelling at the company representative would do no good. He felt terrible and sent me three 40 ounce bottles of Liquid Fence®, advising me to spray right away and again in a week.

After two months and many sightings of deer in the garden, nothing has been touched again. I continue to be amazed that the azaleas weren’t touched—not even the Hyatt garden’s many deciduous specimens!

Another very hard lesson learned. I can only hope Mother Nature takes pity upon a fool and allows the plants to leaf out and start over. I’ll help with Holly-Tone® in March. Wish I could get stock in Liquid Fence®. I’d put a warning on the label about freezing.

Eve Harrison is president of the Northern Virginia Chapter of the ASA. She moved to West Virginia in 1999 and began gardening on the side of the Blue Ridge Mountains. In 2005, she and her husband, Bob, moved to an 11-acre farm in the upper end of the Shenandoah Valley. They relocated 500 pots of trees, shrubs, perennials, and wildflowers from their previous home to the new farm, creating an extensive garden. Deer from the Shenandoah National Park frequently wander onto their property.
On Various Soils and the Use of Perlite
By Greg Moore
Edited and Commentary by George Klump—La Crescenta, California

The question of Ericaceae plants (the heath family) and how best to grow them seems to be a perennial one which sometimes appears to require a different handling in different parts of these United States. It goes without saying that there are different materials available in different parts of the country for the same stated purpose: that of growing ericaceous plants which in this case are azaleas, a member of the rhododendron family of plants. Even including dissimilar climate conditions, soils, and available amendments for those soils, there still remains a common denominator throughout which the azaleas themselves seem to require, if they are to be successfully grown. That commonality is tied up in one word: drainage. Without this factor as part of the azalea’s requirements, the chances for failure for this beautiful plant increase almost exponentially.

There are some other factors as well, e.g., too much sun exposure and/or too little. The former can cause severe, if not fatal, leaf burn, while the latter tends to discourage the flowering of the plant. It would therefore seem that azaleas are fussy characters which must be treated in just a certain way, else they will not produce their beauty for us. Fortunately, such is not quite the case, but there is no denying that the requirements for success with azaleas do take a little more preparation than just digging a hole in the ground, setting them in it and, then, filling the hole up with dirt and walking away.

Our chapter began in the early to mid-1970’s with some experimentation having gone on well before that. We are the Southern California Chapter of the American Rhododendron Society which just last year, 2007, acquired the status of a dual chapter, i.e., we became the Southern California Chapter of the American Rhododendron Society and the Azalea Society of America. There is nothing special about this except the name, since nearly all of us have been growing azaleas for decades anyway along with our rhododendrons.

However, given our geographical spread and the number of different soils with which our membership must contend not to even mention the multiplicity of microclimates, we have been wildly successful in many respects growing Ericaceae here, especially in the face of the received wisdom from all sides, to wit, rhododendrons cannot be grown in Southern California. The support we have gotten from the nursery trade has been more or less nil. Therefore we have been forced to strike out on our own exploring areas of cultivation where even now many professionals in the plant business fear to tread.

Of the different types of soils, we have many in our general area. There is everything from heavy adobe clay to decomposed granite and sand to desert soils which are high in alkalinity. On top of this there is the problem of water, not so much the supply of it, as it is the kind of it, e.g., the amount of total dissolved solids [TDS] it may contain and/or its basic pH over the year. A high TDS reading tends to mean alkalinity, i.e., a pH above 7.0. While Ericaceae will tolerate a pH of 7.0 or even 7.5, higher alkalinity begins to bring on problems which azaleas do not appreciate and which usually result in chlorosis or some other invidious problem which usually results in the eventual death of the plant.

There are many types of soil and soil mixtures. To simplify things we will cite just three kinds of soils here. First, there is clay soil. Clay soil invariably consists of tiny particles which tend to stick together so tightly as to permit very little water circulation through it. A corollary statement could be something like this: If water cannot percolate well down through a clay soil, it is a safe bet that feeder roots of any Ericaceae will not either.

Second, there are the soils found in the desert which may be sandy and light, which is good, but the lack of rain in such an arid climate tends to lead to a buildup of salts. Only a few plants will survive that kind of soil and one sees this with cactus, ocotillo, mesquite, sage, and other plants of similar kind.

A third type of soil is decomposed granite. Decomposed granite or DG is usually quite porous because, unlike clay soil, it consists of relatively large irregular particles which make for spaces between them. We would surmise therefore that larger particles do not cluster together. When DG is mixed with sand, which is also a soil with larger particles, it seems to make for a good general soil base which permits water to penetrate well and drain away. It is this factor which encourages natural microbial and bacterial activity in the soil and which provides a way for soil nutrients to be converted into water-soluble forms which the plant roots, in this case the small feeder roots of Ericaceae, can use. It is this action of soil bacteria, the right kind, of course, which is necessary to the food chain essential to Ericaceae. If water cannot penetrate the soil, one can almost rest assured that oxygen cannot.

Having said this we turn now to our main subject, i.e., various soils and the use of perlite. This article stems from a lecture which Greg Moore gave to the Southern California Chapter of the ARS/ASA in June of 2007, a lecture which was serialized over three issues of that chapter’s newsletter by its editor, George Klump. Mr. Moore, himself an expert soil chemist, gave his explicit permission that his material could be edited and paraphrased as needed for that purpose and that, if opportunity arose permitting the further dissemination of his presentation, he would be most happy.
to see this, too. His insights into planting techniques involving Ericaceae seem so pertinent to the many problems expressed on the azalea yahoo line group, that we felt it appropriate to pass on his thoughts. The following is by Greg Moore in paraphrased form.

The question is often asked: Just what is perlite? How does it differ from vermiculite? Perlite is a lightweight volcanic mineral [a subgroup of rhyolite] that is composed primarily of silicon dioxide [c.73 percent] and various amorphous silicates, e.g., aluminum, calcium, and potassium silicates. It has essentially no crystalline silica [as opposed to sand which is 99 percent crystalline silica.] There are several forms of crystalline silica, primarily quartz, cristobalite, and tridimite, all of which are harmful if inhaled.

Perlite in rock form has a bulk density of 63 lbs./cubic foot. Because there is water bound up in the rock, it can be heated in furnaces up to 1,600 – 1,750 degrees Fahrenheit to expand it, at which point it becomes a lightweight material, i.e., a bulk density of 2.5 – 10 lbs./cubic foot. It’s chemically inert, has a neutral pH, is sterile and is available in a variety of sizes ranging from flour consistency to ½-inch particles.

Due to its inherent sharpness, it creates particle interference in media and thus generates voids. This provides dimensional stability in a soil, i.e., it resists the tendency of soils to fall prey to interstitial marrying of the fine and coarse particles which clog macro pore space. Perlite acts as a physical wedge to create macro pore space between particles, while it possesses multiple and deeply fractured cavities on and in the surface [high micropore space] that trap air and water.

Pumice and scoria also provide macro pore and micropore space and maintain long lasting physical wedge action. However, they are abrasive and have much higher bulk densities [c. 30 lbs.& 40 lbs./cubic foot respectively]. They are not as widely used as perlite in propagation because they pack down and can create conditions for rot and can also break delicate transplant roots. In addition some pumice has a high salt content.

We mentioned vermiculite earlier. Vermiculite is not used much anymore in horticulture for many reasons. One is its inherent molecular accordion structure which flexes mechanically under cycles of hydration/desiccation. Before long, the mica plates separate with an attendant loss of airspace as it collapses. Another reason is that vermiculite is expensive. It holds twice as much water as perlite at the same volume, grade for grade. Beyond this there was some asbestos which evidently came from the mine in Libby, Montana—which mine is now closed. Vermiculite does possess some base cation, e.g., magnesium, potassium, and iron, so that it does have some Cation Exchange Capacity [CEC].

There were some peat-perlite blends with various permutations of the two ingredients and of different grades of perlite. The blends could be tailored to a wide variety of propagation needs, e.g., adjusting the pH with calcium carbonate [fine grind lime for a quick reaction] and dolomite. Redco II added a wetting agent for easier and more reliable wetting of the peat. Wetting agents come in many flavors, e.g., the focus being the material to be wetted [organic or inorganic] and whether or not a cationic, anionic or non-ionic agent is to be used. Moreover, ester-based agents provide early [but low residual] wetting, but the ester-based agents provide less initial wetting [but better residual effects].

Another consideration was surface tension. Surface tension is the tendency of molecules to adhere to each other. The basic idea is to lower the surface tension of the liquid and chemically penetrate the hydrophobic surface of the peat or wood residual product. [Ed’s note: This is why we use the coarse peat moss, since hydrophobic penetration is far better with it than with the finely milled peat moss which eventually can become almost as impenetrable as cement.]

Some of Redco II’s principal clients were avocado/citrus growers and outdoor ornamental propagators. The former group typically used a 2/3 perlite – 1/3 peat mixture or an 80 percent perlite – 20 percent peat mixture as a growing medium for the primary seed as well as the nurse graft and etiolated interstem section on clonal rootstocks. The conventional outdoor growers used the 2/3 – 1/3 perlite, peat moss mixture or the 90 percent perlite mixture which latter eventually became known as the Saratoga Horticultural mixture. Good results were achieved with this formulation.

There is a uniform, intermediate size grade of perlite [1/16th-inch – 1/8th-inch] which is used in growing plugs as well as for a seed mulch for selected plant varieties. This is called Provosil® 31-T. As a seed mulch, it has several advantages over vermiculite. Specifically, it holds less water which discourages root bridging [from one plug hole to another at the top]. It also discourages rot and it reflects light around the seedlings which promotes stockier seedlings.

Most of the soil mixes today are variations of the old Cornell University or University of California mixes which included different permutations of sand, bark, peat, vermiculite, and perlite. Today the most common bedding plant

“Most of the soil mixes today are variations of the old Cornell University or University of California mixes which included different permutations of sand, bark, peat, vermiculite, and perlite.”
mix is comprised of peat, perlite [usually 20-50 percent perlite] or peat, perlite and fir bark, and/or redwood bark.

[Ed’s note: We came on to a mix of equal parts of coarse peat moss, perlite, and redwood bark about 28 years ago, i.e., 1 – 1 – 1 by volume. With orchid bark substituted for redwood bark, which E. White Smith of Bovees Nurseries in Portland, Oregon, says is really Douglas fir, the bark should be doubled in volume, i.e., 1 – 1 – 2. We have found that redwood breaks down far more slowly than most any other wood and at the same time the enzymes with the tannic acid from the redwood bark seem to be anathema to most bugs and insects who willingly stay away from the plants in droves.]

There are also plant growth regulators [PGR’s] which are commonly used with bedding plants, seedlings at emergence or earlier to control “neckiness” that appears at the cotyledon stage and is thereafter a permanent condition. One must be careful here with these, since overuse can “pygmatize” the crop. Some names include A-rests™ and Bonzi®.

There are also polyacrylamide gels which are not a real solution to water retention problems either. They disintegrate in ultra-violet light of which we in Southern California have more than our share. These gels are expensive and they push soil up and out, when the soil is fully hydrated. Beyond that they may be dangerous because their basic monomer constituent is a powerful neurotoxin. [Ed’s note: It has been observed that ultra-violet light down at the root level is not a real consideration. However, in the application of polyacrylamide gels some will, naturally, be first on the soil surface and possibly the leaves of the plant thereby exposing it to ultra-violet light.]

Some nursery tests show that a combination of potassium salts of indole butyric acid [IBA-K], which is a prime ingredient of “Dip N’Grow,” and naphthalene acetic acid [NAA], may achieve the best rooting results promoting both root initiation and subsequent root growth for ornamental propagation.

With respect to alkalinity and sodium, many irrigation conditions promote alkaline drift unless treated. Alkalinity is primarily a function of the presence of carbonates and bicarbonates in water. As these increase in concentration, they tie up calcium and magnesium which in turn magnifies sodium problems. This is measured in a higher sodium absorption ratio [SAR]. As this occurs, available phosphorus can increase, while available iron decreases.

[Ed’s note: The following is a case study in what alkaline water can do to your plants and why gypsum to increase soil friability, perlite to keep it that way, ammonium sulphate and/or soil sulphur to promote a lower soil pH, are helpful ways to offset both soil and water problems.] A typical interior Ventura County [Santa Paula] water analysis could show water with a pH of 8.5 – 9.5, alkalinity of 150 ppm and sodium [Na] of 90 ppm. These raw water conditions [as with all high alkalinity conditions] require treatment with various combinations of Reverse Osmosis [R/O] particularly for seedlings and/or acid buffering. Carbon filtration for gross particulate and aromatics can augment this.

Acid buffering can entail the use of acid forming fertilizers and/or acid [H2] treatment. In the foregoing Ventura County example, R/O would likely be used for the seedling house and sulphuric acid for the general irrigation to push the pH down to around 6.5 [but not lower than that, generally, with sulphuric acid alone]. Acid-forming fertilizers would likely also be used [ferrous sulphate {FeSO4} by the way has little value, when added to a dry soil mix]. An ideal pH would be close to 6.0.

In field work in high alkaline and in high sodic areas [not necessarily the same areas] of the West, sulphuric acid is more effective in the short term than any form of gypsum [calcium sulphate {CaSO4}] in improving electrical conductivity and SAR values in the leachate. More rapid water infiltration, then, ensues. Moreover, gypsum is safer and easier to handle and in the longer term quite effective in improving these parameters, i.e., drainage and proper water retention.

To wit, gypsum flocculates the soil, i.e., the calcium [Ca] in gypsum aggregates clay micelles, while the sulphate ion [SO4] combines with the sodium [Na] in the soil to form sodium sulphate [Na2SO4], a water soluble salt which is easily leached out in the now more flocculated soil. Gypsum leaves a neutral pH [ unlike lime which is also used to flocculate clay soil where acidity is prevalent].

Sodium [Na] is bad news for any soil because it damages the soil and the plants. For example, it corrodes plant roots, burns plant leaves [seen first at the leaf margins] and smears or disperses [sodizes] soil. This results in crusting and low infiltration rates [low permeability] and unusable soil. Therefore a high SAR is characterized by having calcium [Ca] and magnesium [Mg] tied up by high alkalinity [bicarbonates] and thus unavailable to mitigate damaging sodium [Na] at least to the degree that it is present. On a sidebar, members of the Ericaceae family of plants often require soil to have a high calcium-magnesium ratio of close to 4:1 versus the typical 2:1 ratio of most plants.

And as a background note, the competitive ion effect is at work here in all of this. Namely, the Hoffmeister or ionic series denotes a hierarchy of ion adsorption to clay colloids in which higher valent cations are more tightly adsorbed than lower valent cations at the same concentrations [meq./liter]. So, for example, trivalent aluminum [Al++++] or divalent calcium [Ca++] is more tightly adsorbed than monovalent potassium [K+] or sodium [Na+] and will displace these monovalent ions, if they are available. Ergo, the importance of soil treatment/amendment to free up calcium and magnesium to do their work of displacing sodium.

Besides, the more conventional approaches described above in addressing these issues, the more organic or bio-dynamic approaches imply green cropping, sophisticated compost sprays and many other more sustainable techniques.

The Azalean / Summer 2008 • 35
We have found everything articulated here by Mr. Moore to be most helpful. Some of us have been using the coarse peat – perlite – redwood bark mixture for years and have yet to experience a plant failure because of it. In fact we have found that the faster the drainage, the less tendency for such diseases as phytophthora to get started. The organisms which break down the wood in the mixture appear to be predators of the phytophthora organisms and we have nothing against that. In addition the wood chips tend to provide for space which water and oxygen both need in order to get down to the plant roots. At the same time it makes for an excellent organic mulch which decomposes slowly over time and helps to ensure the general stability of the pH.

It is the drainage factor which tends to forestall any phytophthora or other soil diseases from getting started in the garden. Perlite seems to be a major element in assisting with drainage as well as air space down in the root zone which at the same time promotes the increase of the microbial and bacterial populations which are so essential to a healthy soil and therefore to healthy plants. We have found that Ericaceae will take just about all the water they may receive so long as it drains away from the roots just about as rapidly as it comes in. It has been recently noted that phytophthora is now arguably the most destructive plant disease in the world. A fast draining soil discourages phytophthora. Perlite promotes fast drainage and soil stability. That seems like a good combination.

George Klump is a resident of La Crescenta, California, a musician by profession, a concert organist and teacher of orchestral and choral ensembles as well as a church musician. He came to gardening naturally through his paternal grandmother and his father; also a musician and banker; who raised more than 100 roses plus camellias, fuchsias, poinsettias, poinsettias, chrysanthemums and cannas among other plants. He has always had an interest in azaleas and rhododendrons, the parent family. He has been a member of the Southern California Chapter of the ARS [as of the spring of 2007 also a dual chapter, i.e., ARS/ASA] for 30 years and for three years was its president. He currently edits the chapter newsletter and is vice-president for chapter projects and publications. His own collection of plants includes many rhododendrons, lepidote and elpidote, as well as azaleas, including Satsukis, camellias, chrysanthemums, fuchsias, hibiscus and roses.

**Society News**

**Alliance formed to preserve old azaleas**

The Great Gardens of America Preservation Alliance has formed to identify and preserve ancient camellias and azaleas (those propagated before 1900) and historic ones (plants from 1900 to 1960).

The alliance (greatamericangardensalliance.org) believes there are about 470 ancient and historic camellias but only about 100 azaleas. The group is starting its search in public gardens and wants to save, catalog, propagate and preserve the DNA of vanishing breeds that may have fallen out of favor but represent the history of the plant, which first came from China to Western Europe 300 years ago.

**Group studying idea of research foundation**

The ASA Board recently established a committee to study the feasibility of creating an azalea research foundation.

Past ASA President Jim Thornton is chairing the committee. Members include former ASA Treasurer Bob Stelloh and ASA President John Brown.

The committee is also charged with investigating and making recommendations as to the form and format of the foundation, if its creation is recommended.

The committee is expected to make its report and recommendation to the Board by the end of the year.

For more information, e-mail jimpatsy@comcast.net.

**Call for articles**

*The Azalean* needs more good articles about azaleas, their care, and their use in the landscape. Ideas for topics include:

- Articles describing new public gardens or special azalea collections being created in your area.
- Descriptions and photographs of Society members’ gardens.
- Current research on azaleas.
- Information about azalea festivals and sales.
- Historic garden restoration stories.
- Articles about noteworthy azalea hybrid groups or new species or cultivar introductions.

Articles should be submitted as Microsoft Word documents. Illustrations are highly encouraged. Photos should be 4 x 6 inches at 300 dpi resolution.

Submit materials to:

Pam Fitch
Editor, *The Azalean*
10006 Homestead Ave.
Lubbock, TX 79424
E-mail: theazalean@gmail.com.

36 • The Azalean / Summer 2008
Efforts are underway to re-organize the Alabamense Chapter. Bob Kelly attended the May 4 ASA Board meeting and agreed to spearhead efforts to revitalize the chapter. He is preparing to call a chapter meeting to elect officers and take other necessary action.

For more information, e-mail bkelly66@bellsouth.net.

Ben Morrison
Harold Belcher, President

Tony Dove was the guest speaker at the Ben Morrison Chapter’s March 9 meeting in Annapolis. He provided several wonderful examples of azalea companion plants, including:

- **Iris reticulata** (dwarf iris): Very early blooming, usually late winter or early spring. Be sure to plant 6 inches deep.
- **Eranthis** (winter aconite): It’s difficult to determine which end of this bulb should be planted down. Soak 24 hours before planting, then plant on its side so which end doesn’t matter. Mulch on top. Blooms in late winter or early spring.
- **Galanthus nivalis** (crocus and snowdrops): Adds late winter or early spring color to gardens.
- **Adonis amurensis**: Blooms in January; nice yellow flower and very hardy.
- **Helleborus**: Deer proof. Very early blooming, many species. H. niger ‘Maximus’ (Christmas rose) and H. orientalis (Lenten rose).
- **Asarum europaeum** (European ginger): Blooms late winter; good ground cover.
- **Rohdea japonica** (sacred lily of China): Evergreen perennial with wide leaves growing from a single base and red berries on a stalk; tolerates damp soil and is cold hardy.
- **Mertensia virginica** (Virginia bluebells): Blooms early spring; 18 inches tall.
- **Uvularia grandiflora**: Blooms in spring; white flowers; good ground cover.
- **Sanguinaria canadensis** (bloodroot); S. canadensis ‘Multiplex’ or ‘Flore Pleno’ (double bloodroot): bloom in early spring; white flowers.
- **Trillium grandiflorum**: Grows well in light shade and moist soil; mid-spring bloom.
- **Tricyrtis hirta** (toad lily): a nice fall blooming plant; height 18 to 24 inches.
- **Paeonia obovata** (Chinese woodland peony): Blooms early; dark red berries in the fall; 24 to 36 inches tall; full sun or partial shade.
- **Hamamelis intermedia** ‘Jalenda’ and **Hamamelis mollis** (Chinese witch hazel): Bloom late winter and are fragrant.
- **Sarcococca hookerana** ‘Humilis’ (Himalayan sweet box): Low 18 inch tall shrub that has very fragrant flowers in late winter or early spring followed by black berries.
- **Daphne odora** ‘Aureo-marginata’ (winter daphne): Variegated foliage; small white/pink flow- ers; very fragrant. The plant is best ignored; do not water, prune or fertilize.
- **Viburnum carlesii**: Dark green foliage; red to black berries good for birds; flowers pink to red-dish white; highly fragrant.
- **Viburnum carlicephalum**: Large clusters of fragrant white blossoms; blooms late spring; red to black berries good for birds; dark green foliage; good reddish purple leaf color in the fall.
- **Viburnum judi**: Nice green foliage; white snowball flowers; highly fragrant; reddish to black berries in fall.
- **Mahonia bealei** (leatherleaf mahonia): Native to China; evergreen leather thorny leaves; likes shade and acid soil; tough plant; small yellow flowers in late spring; glossy green leaves.
- **Nandina domestica** ‘Alba’ (heavenly bamboo): Good shade plant; not as invasive as many species of bamboo; small white flowers; nice berries for birds in late winter.
- **Camellia oleifera** ‘Lu Shan Snow’ (fall blooming camellia); cold hardy.
- **Acer japonicum** ‘Sango Kaku’ (coral mark maple).

Louisiana

Dr. Allen Owings, President

The Louisiana Chapter meet at Jim Campbell’s home in Covington on Sunday, April 27, for a crawfish boil. The group made final plans for those attending the convention in Asheville, North Carolina.

Many members of the Louisiana Chapter participated in the camellia open house held at the Hammond Research Station earlier this spring. Regina Bracy and Allen Owings at the Hammond Research Station have completed most of the azalea plantings in the new Margie Jenkins
Azalea Garden at the station. The latest addition is the planting of ‘Freddie’, a vegetative white sport of ‘Watcher’ propagated by Margie Jenkins and named after her son.

Northern Virginia

Eve Harrison, President

The Northern Virginia Chapter met on February 3 at the George Mason Library in Annandale with 23 members and three visitors in attendance. Chapter members were honored to have Jon Wallenmeyer, president of the Potomac Valley Chapter of ARS, in attendance.

A business meeting was held, during which the following chapter officers were elected: Eve Harrison, president; Rick Bauer, vice president; Rosie Field, secretary; and Dave Nanney, treasurer.

Norman and Jean Beaudry provided an interesting program and slide show of their eclectic gardens in Maryland. Don Hyatt generously brought everyone planted pots of seeds of calendulaeum and vaseyi.

The Chapter participated in the annual Virginia Arboretum spring sale, commonly known as the “Blandy Sale.” Members sold azaleas and handed out membership applications.

The hugely successful azalea auction that was held last year at the Fair Oaks location of the Merrifield Garden Center will be repeated this year on August 24 from 1 to 5 p.m. Lots of food will be available to keep everyone nourished as they place bids for hybrid azaleas. There will be a digital show with music and expert explanations of each variety before bidding.

Oconee

Ruth Mellon, Secretary

The winter meeting of the Oconee Chapter was held January 13 at the Rockdale County Extension Office in Conyers, Georgia. Twelve members, one guest and the guest speaker attended the meeting.

Frank Bryan introduced the speaker, Luis Pita, LE, MBA, CEDT. Luis gave an interesting and informative session on digital photography with an emphasis on photography of flowers. Tips for better photographs included:

- Take plenty of pictures, but show only the best ones.
- Get close. As a rule, the closer you get to the subject, the better your pictures will be.
- Hold your camera steady. Shaky hand pressing the shutter release may give you fuzzy pictures.
- Set your subject slightly off-center. Remember the “Rule of Thirds.”
- Camera instruction manuals clearly explain what your camera and software can and can’t do. Take time to read that little booklet. You’ll get more satisfying pictures.
- Cameras don’t take pictures, people do. It’s up to you to compose your picture carefully, make sure the lighting is just right, and press the shutter button at exactly the right moment.
- Photograph whatever you see as soon as you arrive.
- Keep looking at pictures everywhere. Study different photographs (or paintings) to see what you like or dislike about them.
- Keep your pictures as simple as possible. Carefully observe both the background and the foreground in your viewfinder before you take a picture.
- Correctly exposed flash pictures must be made within the flash-to-subject distance range of your camera, usually 6 to 12 feet.
- Use fill-in flash on bright days to remove dark shadows. Flash makes people look younger. Side lighting make people look older. Use it carefully.
- Watch the direction of the light. Light from the side or from the back of your subject may be more effective than light from the front.
- Keep moving to see things from different angles.
- Before each photo session, make sure your battery is fully charged.
- Don’t delete too fast. Many images can be improved in your computer.
- Download photos as soon as possible after a photo session.
- Store files safely. Your computer’s hard drive isn’t a permanent archive.

Vaseyi

John Brown, Secretary

Twenty-two members and guests attended the March Vaseyi Chapter meeting and enjoyed the ramblings of Ed Collins. He wove a tale that stretched from New Jersey south along the Blue Ridge Parkway, stopping at the R. maximum red max and continuing on to FS711 and Copper Bald. We saw photographs of the azalea stem borer, its habit and habitat. We saw the release of the red max. And, we saw azaleas, boy, did we see azaleas.

There were slides of a group of what must be hybrids found along the trail between Burning Town Gap past the shelter on the way to Copper Bald. These are all multi-colored and magnificent. We saw some of the R. vaseyi found along Highway 215 between Pilot Mountain and the Blue Ridge Parkway.
New Members

Alabamense
Carol Bantle
163 Sunshine Acres Trail
Royal, AR 71968-9790
ccbantle1@aol.com

At Large
Jon E. and Joni Jones Arnett
206 W. Center Ave.
Sebring, FL 33870
jarnett@boksanctuary.org

Ben Morrison
Grey Hautaluma
4535 Camp Roosevelt Dr.
Chesapeake Beach, MD 20732
410-257-4598
harleygrad@hotmail.com

Brookside Gardens
Betty C. Bieberly
10603 Bucknell Dr.
Silver Spring, MD 20902-4253
301-649-4426

Carol Bantle
163 Sunshine Acres Trail
Royal, AR 71968-9790
ccbantle1@aol.com

William and Karen King
6204 Tilden Lane
Rockville, MD 20852

Lake Michigan
Edwin (Ted) Nyquist
29W520 Schick Rd
Bartlett, IL 60103
630-215-5022
t.nyquist@sbcglobal.net

Louisiana
Madeline and Epney Brasher
21549 Old Covington Hwy
Hammond, LA 70403
985-543-4125
yachen@agcenterlsu.edu

Richard G. Odom
P.O. Box 460
Forest Hill, LA 71433
318-748-4517
Richard@cpnsy.com

Oconee
Ron Brechter
3229 Springdale Forrest Circle
Gainesville, GA 30506
770-539-9365

Jill Fuller
950 Lake Dr.
Pine Mountain, GA 31822

Southern California
Gary Striker
500 Pier A Street, Berth 161
Wilmington, CA 90744-6433
gstriker@portla.org

Tri-State
Phillip and Linda Ahrens
P. O. Box 415
Huntingburg, IN 47542
812-536-4135

Steve and David Schroeder
1216 E. Hillsdale Rd.
Evansville, IN 47710
812-867-3367

Hal and Jamie Wade
1377 McDaniels Rd.
Clarksville, TN 37043
jwade67@aol.com

Vaseyi
Thomas Alford
155 Bula Carver Road
Old Fort, NC 28762-6725
whitewolf33@yahoo.com

Bob Head
2375 Blue Ridge Blvd
Seneca, SC 29672
headornamentals@bellsouth.net

Jeff Jones
455 Research Drive
Fletcher, NC 28732
336-407-110
jeff_jones@ncsu.edu

Todd Lasseigne
523 S. Bunker Hill Road
Colfax, NC 27235
336-337-6919
faxodium@mindspring.com

Kimberly Pegram
7702 Old Fairground Rd
Benson, NC 27504
kimapeg@yahoo.com

John Weems
19 Cothran St.
Greenville, SC 29605-1705

WANTED
AZALEA ARTICLES!

We need articles, photographs, letters to the editor, and chapter news briefs for upcoming issues of The Azalean.

Send materials to:
Pam Fitch, Editor
10006 Homestead Ave.,
Lubbock, TX 79424
E-mail: theazalean@gmail.com

Fall issue deadline is July 1.
Winter issue deadline is October 1.
I recycle any and everything that “might” be put to good use in gardening and propagation. For my purposes hanging baskets are like “pure gold” in the refuse strata.

Hanging baskets of any size—used, discarded, and often in like-new condition—can be “revived” for growing azalea cuttings, seeds, and plants. Just about everywhere you look in today’s world abounds with idle hanging baskets—your own yard, friends’ houses, road sides, nurseries, stores, and recycling centers. Black plastic nursery pots are routinely recycled, but hanging baskets are frequently discarded. I often find hanging baskets in the “pot” recycling bins at my local recycling center. Dollar stores often have new, inexpensive baskets on sale.

These usually “aerial” flower pots can be put to many innovative uses by azalea propagators. If the basket has lost its hanger, use it as a ground pot or add a new hanger. Cuttings can be rooted in hanging baskets, and rooted cutting can be grown larger. Hanging baskets are also good for starting seeds. And a number of azaleas with a weeping habit can be displayed in hanging baskets.

Tools Needed

Many gardeners already have the tools I use daily in azalea propagation:

- Potting bench—I easily assembled a treated pine bench using large lag screws and racheting socket wrench.
- Lightweight, high-speed electric drill with 3/4-inch holesaw bit—Used to enlarge and add drain holes to the pots.
- Small awl like the one on some pocket knives—Used to pierce plastic pots to install hold-down wires or make drill starter holes.
- Pocket knife or small utility knife—Used for making a starter cut in plastic bottles being converted to humidity domes.
- Sturdy pair of scissors—Used to cut an even line around the circumference of plastic bottles to create domes.

Materials Needed

Most of the materials I put to use in propagation are recycled, but a few may have to be purchased:

- A sturdy, wind-resistant shade enclosure with a shade cloth cover capable of reducing sunlight by 64 to 70 percent.
- Pots, hanging baskets, and containers adaptable for plant culture.
- Clear plastic screw-top bottles with a fairly wide diameter.
- Flexible, rust-resistant wire or wire mesh pot covers.
- Wire mesh, also called hardware cloth, in 24-inch width and 1/4-inch mesh.
- Soil-free organic materials, such as finely-milled and composted pine bark.
- Fresh humus fines collected from healthy azaleas.

DomePots & Other Propagation Pots

The term “DomePot” covers several propagation devices I make for rooting cuttings. A DomePot is a container with an attached humidity dome made from a clear or translucent plastic bottle. I call DomePots made from hanging baskets “HighRises.” It is possibly the most effective device I use for rooting azalea cuttings. HighRises are durable, accommodate larger domes, and hold a respectable number of cuttings.

Most of my propagation pots for azalea cuttings and seeds have several common features:

- Fast drainage due to enlarged and added drain holes.
- Exceptionally porous medium filling the pot not more than halfway.
- Two small holes along the top rim for securing either a humidity dome or a pest-preventing wire mesh “varmint cap.”

A HighRise propagation pot has multiple uses. It can be hung under a shade cloth with a sealed humidity dome with cap left on to root cuttings; hung in part shade with the vent cap removed to root cuttings; or hung in full sun with the dome removed to grow out rooted cuttings or seedlings. I also use HighRise pots on the ground or my concrete pad, protected by a shade cloth. Placing pots on a short pedestal or stand helps maintain good drainage and prevents earthworm entry, which would compact the medium.

The standard plastic hanging basket drains too slowly for azaleas so it must be converted. I remove the bottom drip tray and any interior drainage baffle. These may be turned upside down and used later as a pedestal.

With a 3/4-inch holesaw bit and high-speed drill I enlarge the bottom drainage holes to 3/4-inch diameter. I also make one or two new staggered rows of drain holes.
new pattern of larger drain holes mimics the fast drainage that nature provides in many gardens and in most wild azalea habitats.

I have tried using other types of drill bits, such as spade and forstner, but I have found an inexpensive holesaw bit for wood and plastic works best. I prefer thick-walled molded baskets over the thinner-walled vacuum-formed ones because they last longer outdoors and are easier to drill without cracking or tearing. Metal frame baskets with cocoa mats can be used as is for seedling and cuttings if fast-draining medium is added.

I advise drilling pots on a warm day so the plastic is not brittle and prone to crack. Drilling new and enlarged drain holes in plastic pots with a holesaw bit requires a little practice and a light touch, particularly with thin-walled pots. Sometimes I warm pots up with a blow dryer to make drilling easier.

Shade Enclosures

To provide all-season sun protection for my “en-root” cuttings, I contrived two shade enclosures: one permanent and one movable. Both are covered at a height of 4 feet with a sheet of forest green, medium-density Coolaroo shade cloth, which reduces incoming sunlight by 64 to 70 percent. The forest green cloth allows rain to pass through, watering the pots, and blends in with my piney woods. The Coolaroo medium density cloth also comes in black, sandstone, and terracotta.

The larger shade area—covered with a 6 x 15 foot sheet of shade cloth that can be rolled up—uses the downhill half of a sloping 14 x 16 foot concrete pad (formerly my bird dog pen). I built a 4-foot tall frame around the concrete pad with 6-foot treated 4x4 posts. I place fully rooted pots on the uphill “sunny” half of the concrete pad, watering once a week for 30 minutes if there is no rain.

The smaller shade enclosure is a 4 x 4 foot cube made by fitting together twelve 45.5 inch lengths of 1-inch PVC pipe and four right angle corner joints. I recycled the PVC pipe after it was discarded from an old well repair. The area is covered with three sheets of shade cloth attached with cinch ties. The enclosure is secured to the ground with tent pegs. The entire structure can be easily taken apart and reassembled at another location.

Shade enclosures can be “camouflaged” by using green or black fabric and by using a frame of treated wood or dark painted plastic pipe.

Potting Medium

I use the same medium in pots for rooting cuttings or planting azalea seeds. I mix 6 parts of pine bark soil conditioner, one part of pine bark mini-nuggets, and one part Fafard 3 or any equivalent moist soil-less mix that contains no fertilizer. I mix the ingredients in a large, low pot using a large trowel, which mixes more uniformly than a tined cultivator. The medium is well mixed once you see the vermiculite from the soil-less mix and mini-nuggets uniformly distributed. If the bark soil conditioner contains enough larger bark pieces, the mini-nuggets are not needed, so mix 5 to 1. Keep it moist and friable until it is put into a drilled pot, but do not allow it to become waterlogged.

Fill the pot with the medium to a level about two inches above the upper drain holes. If the medium fills the pot more than halfway, it tends to become waterlogged, which prevents cuttings from growing roots. Too much water also kills seedlings and causes plants to grow slowly or die.

Before sticking cuttings or planting seeds in a drilled pot, test the drainage. Sprinkle the pre-moistened medium well with a watering can to make sure it will drain thoroughly. Water should vanish from the medium surface in “one eye blink.”

Exact materials that I use in my medium may not be available in all areas, so gardeners may need to improvise.
Mike Creel recycles hanging baskets to grow azalea seedlings. The wire mesh cover prevents squirrels and birds from disturbing the seedlings.

and find similar equivalent components. As long as fast drainage is maintained, the medium should work.

Humidity Domes

Many types and sizes of clear bottles can be used for humidity domes on DomePots, but they must not become brittle with exposure to outdoor conditions like sunlight and cold. Some plastic bottles—often blue tinted—are prone to degrade outdoors.

Keep the bottle cap, because it serves as a ventilation cap. It can be screwed on to seal in humidity or removed to harden-off newly-rooted cuttings to outside air. The bottoms of plastic bottles, if not too “tippy,” can be used as “perches” for pots.

My favorite bottles are one-gallon Hawaiian Punch®, one-gallon Deer Park® or Poland Springs® water, three-liter clear soft drink, two-liter clear soft drink, and some clear one-gallon spring water bottles.

Domes should either be one-and-a-half inches smaller or larger than the diameter of the pot it will be used in. Two-liter drink bottles fit most gallon pots and small hanging baskets. Three-liter drink bottles fit two-gallon pots and some hanging baskets. One-gallon bottles fit medium to large size hanging baskets.

To convert a clear bottle into a propagation dome, remove the label and cut a level line around the bottle. With one gallon bottles, I cut off the lower two inches. With taller bottles, such as three and two-liter soft drink containers, I cut off the bottom half.

Attach the humidity dome to a pot using a length of flexible wire. I use recycled three-wire residential electrical wire or inexpensive electric fence wire. The wire must be long enough to loop once around the bottle end under the cap and down the sides of the bottle. Secure the wire through the two holes in the pot rim. (Note: Using the awl on my pocket knife, I make two holes on opposite sides of the pot rim to attach the hold-down wire.)

Even a vented DomePot with the cap removed cannot be exposed to direct sunlight because it is prone to overheating, which will kill or boil the cuttings, rooted or unrooted. Cuttings can, however, be rooted in a vented DomePot that is in partial reliable shade.

Principles

DomePots work because the clear dome captures humidity rising from the moist medium while allowing filtered sunlight to reach cuttings and permitting internal heating to promote growth of buds, leaves, and new stem.
The dome is protected from overheating by the shade cloth which reduces sunlight by 64 to 70 percent.

Water enters the medium though the open perimeter of medium outside the dome along the pot rim. Most of the water passes through the medium, and some rises up into the dome, keeping the humidity high. Cuttings initiate top growth with leaves and stems, and bottom growth with entirely new roots along the scarified lower stem.

Once leaves are fully expanded and near maturity, the vent cap is removed while keeping the DomePot in a shaded area. If leaves do not wilt after 24 hours, the cuttings are rooted enough to leave the vent cap off for four to six weeks, allowing the cuttings to harden to the drier outside air.

Once leaves are fully matured and are not prone to wilting, the dome can be removed and the pot moved to full sunlight. Cuttings may be left to grow for an extended period in the original pot or may be re-potted. The use of drilled pots half filled with a coarser medium is recommended to ensure good drainage.

**Cuttings**

In zone 8A, it is possible to stick azalea cuttings in outdoor DomePots year round. When preparing to stick azalea cuttings in DomePots, it is advisable to have several pots with matching domes available. Put medium into the pots just before sticking cuttings.

For deciduous azaleas, I prefer to use Y-shaped, or jointed, woody stem cuttings of one to 3-year-old wood. For evergreen azaleas, either wood or half-ripe cuttings work well. I often stick larger, well-branched cuttings to create advanced plants that flower early.

I do not treat the stems with rooting hormone, but I do sprinkle a thin layer of fresh azalea humus on the medium surface prior to sticking cuttings. I also remove both flower and leaf buds from each cutting and leave only mature leaves, cutting each one in half diagonally. I remove leaves from the lower two or three inches of the cutting to insert into the medium.

Woody cuttings have the advantage of being available any time of the year—in winter as leafless dormant stems; in early spring with soft leaves and new growth removed; in summer with fully expanded leaves; and in fall with leaves starting to change color and drop. Juvenile soft green cuttings are not suitable for most outdoor DomePots, but may work using long-fiber sphagnum moss in a colander DomePot if the cutting can be maintained without wilting.

**Summary of DomePot Use for Rooting Cuttings**

1) Collect fresh cuttings and stick them immediately or store in inflated plastic bags with no added moisture in a cool place such as a refrigerator vegetable drawer.
2) Add medium to the pot, filling it halfway but not more than two inches above highest drain holes.
3) Sprinkle fresh, locally collected azalea or rhododendron humus onto the medium surface.
4) Prepare woody cuttings by removing terminal buds and lower leaves; make a fresh angled cut at bottom; scarify one side of cutting in lower two or three inches; cut leaves in half at a crossways angle. Preparation should be done prior to refrigeration or mailing.
5) Make two identification labels including the date stuck and variety. Push down into medium at edge of pot.
6) Stick cuttings down into medium, covering the scarified stem. I do not use rooting hormone.
7) Water the cuttings with a soft spray head or watering can.
8) Cover the stuck cuttings with humidity dome, centering it. Secure dome to pot with wire.
9) Allow DomePots to drain for 30 minutes before placing it inside the shade enclosure. Avoid direct sun.
9) Ensure DomePots can be easily watered.

Hanging baskets adapted to improve drainage have azalea culture uses beyond that of DomePots to root cut-
tings. Baskets are good for growing seedlings, rooted cut-
ting, and displaying adult flowering plants.

**Seed Pots**

Unlike most serious azalea growers, I regularly plant seeds in pots kept out of doors all season long. This has several advantages because it allows seeds to germinate, harden off, and mature on their own schedule without the need for climate control. My climate zone (8A) exposes the seeds and seedlings to a variety of temperature changes between 10 and 105 degrees F. Seeds planted in late summer or fall often germinate in winter and survive, as if there were antifreeze in the youngest leaves. Seeds planted in mid-winter usually germinate in the spring when the weather warms.

I surface-sow azalea seeds onto the same fast-draining medium I use for root cuttings. But I replace the humidity dome with a 1/4 inch hardware cloth flat wire mesh cover attached to the pot with flexible wire to keep squirrels, birds, and other varmints out. I always sprinkle humus from a local healthy azalea onto the medium surface before sprinkling seeds onto the medium. If a converted hanging basket is used, it can be hung in full sun or set on the ground. Leaving the hanger wire on the basket makes a good carrying handle.

Azalea seedlings grown in outdoor pots can be re-potted for more growing room as soon as the first set of true leaves mature and stems become woody. I recommend using fast draining pots, filled half full with coarse medium (two parts pine bark soil conditioner and one part pine bark mini-nuggets). However, if I am short on time and the seedlings seem happy, I will let seedlings grow in the original pot for up to two years.

**Azalea Display in Hanging Baskets**

Azaleas with a weeping or low spreading habit can be grown in hanging baskets that have been adapted to improve drainage. Off-the-shelf hanging baskets drain too slowly for azalea culture. A coarser medium, as described above, works well, and regular feeding with a water-mixed fertilizer like Miracid® or an organic fertilizer like Holly-Tone® is advised.

The James Harris azalea ‘Pink Cascade’ grows well in a hanging basket. Satsukis with a low, spreading habit and other azaleas with limp stems also perform well.

**Conclusion**

Almost any gardener can try out the ideas discussed in this article with minimal resources and expenditures. When the pansies in your hanging basket perish this spring, just convert it for azalea culture with an electric drill and plant a seed pot perhaps. Screen wire from an old door could make an effective “vermint cap.”

If drilling drain holes into a plastic pot is a bit much for you, white plastic colanders at the local dollar store make a great, fast draining propagation pot. I often use colanders for DomePots for rooting cuttings and growing seedlings. My regular bark-based medium or long-fiber sphagnum moss can be used in the colander pots. Recently I have had some half-ripe cuttings of Western Azalea root well in long-fiber sphagnum.

One thing I have not tried yet is growing azalea seeds covered by a dome instead of wire mesh. They should take off.

Mike Creel’s first loves are his family followed by the two family felines, but after that, he turns “green,” venturing to a seven acre native garden and the wilds of South Carolina to propagate, preserve, and share every worthy native plant he encounters. He considers propagation a critical tool of native plant conservation. A 1977 University of South Carolina journalism graduate, he recently retired from state government as writer and photographer on environment and natural resources. Through workshops, web correspondence and U.S. mail he shares his simple propagation techniques and plants with people across America and abroad.