
THE AZALEAN

Journal of the Azalea Society of America

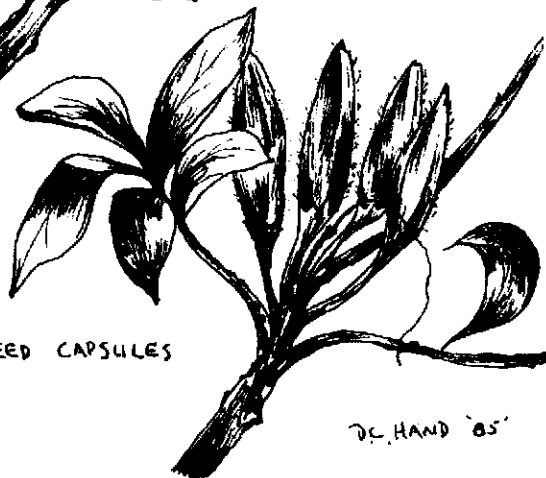
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EXBURY AZALEA



SEED CAPSULES



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The Azalea Society of America, organized December 9, 1977 and incorporated in the District of Columbia, is an educational and scientific non-profit association devoted to the culture, propagation and appreciation of the series *Azalea* (subgenus *Anthodendron*) of the genus *Rhododendron* in the Heath family (*Ericaceae*).

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THE AZALEAN

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FLOWER ARRANGING IS FOR EVERYONE

Lois Bowker
Bethesda, Maryland

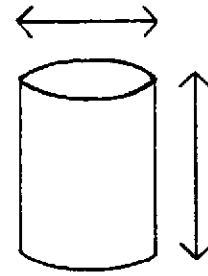
There is great joy in working with something as beautiful as flowers. In everyday life, you are surrounded by the components of design—you are familiar with lines and directions, with various forms and shapes, and the many values of different colors and textures. The thoughtful and harmonious use of these basic principles are all that you need to make a very satisfying flower arrangement.

Azaleas are so lovely in the garden that some growers are reluctant to cut them to bring into the house. However, they grow so fast and really benefit from pruning, that this could be your excuse for cutting, if only to keep your plants shaped and in bounds. You will be so pleased with the effect of even a few branches that you may become as avid an azalea "arranger" as an azalea "grower".

Azaleas are remarkably well adapted to flower arranging. Their flowers are so strategically placed that they practically arrange themselves. If there is a curve in a branch when you make your design, you can count on its remaining that way, and the stems are strong and easily placed. The only unpredictable feature (and it is predictable, really) is that what were buds will become full-blown flowers. Of course, for cut flowers, that is a real asset, as even very tight buds will open in the house, so you have a very long-lasting arrangement. However, if your arrangement is being made for a flower show and you do not wish to have all the voids filled, then you may want to remove a few of the buds.

Fortunately, the technique of arranging flowers can be fairly well mastered in a fraction of the time required in the case of most other arts. It is not necessary to devote years of concentrated effort before a reasonable degree of proficiency is attained. The practice of making "quickies" for home decoration will prove of great value. The old adage that "practice makes perfect" applies here as elsewhere, and you also have the plus of being able to enjoy looking at the fruits of your labor. The more familiar you become with the mechanics of flower arranging, the more facility is acquired in making flowers and foliage behave.

A flower arrangement begins with an idea, stimulated by some flowers you have available, a container you want to use, a flower show you are entering, or just a desire to create something beautiful and artistic. From that point there is a natural sequence to follow. First you must know where the completed arrangement will be placed. This will decide for you several of the next points of consideration—namely the size, shape, and possibly the color scheme. Now, your imagination is your only limit, unless you are entering a flower show, and then you will have rules to follow, and be sure you *follow* them.



Height = $1\frac{1}{2}$ times the sum of these 2 measurements.

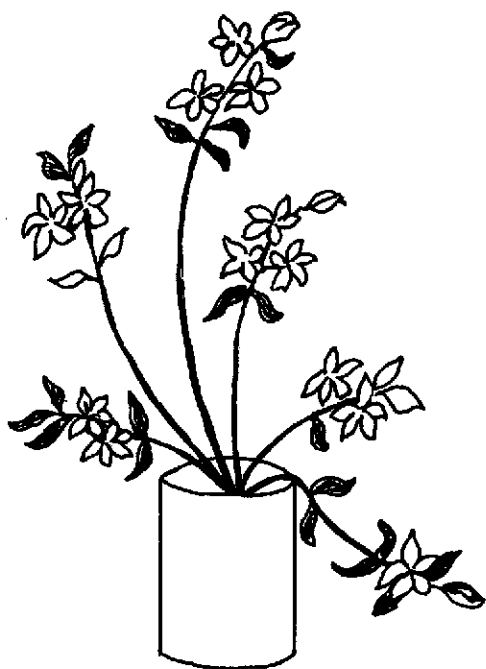
If you have a restriction on size, particularly height, your choice of container will be limited, since the height and width of your container dictates how tall your arrangement should be. Measure the container from top to bottom, and across the top at the widest point. The sum of these two measurements, plus one-half, is roughly the height your arrangement should reach from the top of the container. Your other restrictions on size are the dimensions given in the class you are entering, or the height of any background. An arrangement should come only to within one or two inches of the top of the background, and it should never touch the sides.

To create a good design with flowers, harmony is essential—within the group of plant material (i.e., you would not likely combine roses and cabbages); between the container and the flowers (a basket is more suitable to daisies than orchids); with the arrangement and its setting (a vegetable arrangement is not what you would use on a living room table); and in the pleasing combination of color.

All of this you learn through your eyes, which are as important as your hands in creating a beautiful and satisfying arrangement. The hands learn to master the mechanics of arranging and preparing flowers and containers; but the eyes are important to see the light and dark colors, movement and rhythm—because lines, gradations of color, and open areas can give a feeling of flow and action.

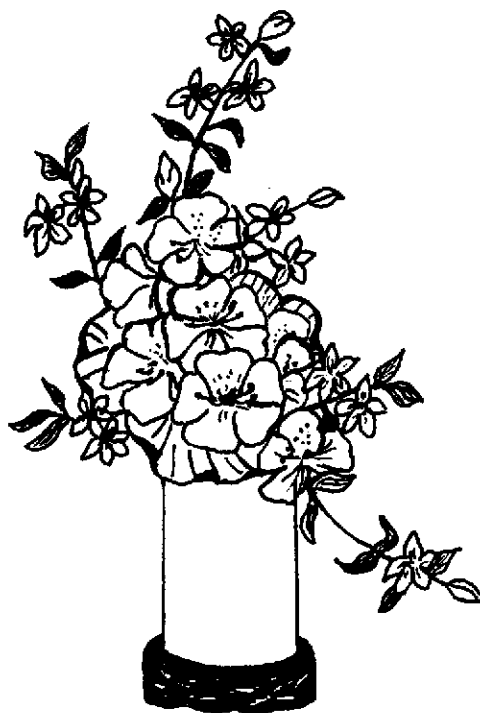
To keep them fresh as long as possible, the flowers and foliage must be cut at the right stage of development, at the right time of the day, and must receive correct and prompt handling. The cool of the evening is the best time to cut, especially in hot weather, and the stems should be plunged into room temperature water, removing any foliage which would be under water or which is not essential to your arrangement. Leave the flowers in water in a cool place overnight; if you are in a hurry, three or four hours may suffice. Split the ends of woody stems to facilitate water absorption (this is important with azaleas), and the ends of milky types should be charred in a flame or boiling water to prevent the milky sap from draining out.

A most important first step is to place a needlepoint holder in your container. If you wish to use oasis with the needlepoint holder, place a piece of nylon hose over the holder to avoid leaving bits of oasis clogging the needles. You can use floral clay or paraffin to secure the holder; the latter being necessary in metal containers to avoid tarnish, and preferable in glass, as sometimes clay does not hold securely on such a smooth surface. Be sure the paraffin has cooled somewhat before using on glass. Also, the container and holder must be absolutely dry.



Begin the arrangement by placing your background material, which will give you your upper and outer limits. From here on, working from the outside in, place your material, putting the smaller and lighter in color flowers at the top and outer edges, and the darker, brighter, and larger flowers low and center, as they are visually if not

physically heavier in weight. This helps give the arrangement the balance it needs to give it stability. The focal areas should be placed last, and while it should be the area where all lines meet, and to which the eyes are drawn, it should not be a sudden and jarring eye-catcher. Rather, at its best, the eyes are drawn gradually to the subtly placed accent. Finally, check your arrangement to see if it might be improved by either removing or adding some material, or possibly the addition of a base to go under the container might be just the final touch to make it that winning design!



Lois Bowker is a member of the Brookside Gardens Chapter. She has served as the Azalea Show chairman and as chairman of the Artistic Design Division of the chapter's azalea flower shows. Lois has many years experience in flower arranging with her talents extending into painting, stained glass, and needlework.

HOW I PLANT AND CARE FOR AZALEAS

Fred J. Demeritte
Silver Spring, Maryland

I have been growing azaleas for about 30 years and have some 2000 azaleas. My azaleas are in two areas. Around the house, where the natural flow of water has been altered due to the house and also altered by the landscaping for drainage, all of my gardens are raised beds varying in height from four to about eight inches. In the second area, the woods behind the house, I have selectively taken out trees and trimmed the limbs of the remaining trees up to about 20 feet to allow open shade. The azaleas are planted in beds between paths lined with rocks (the ground is very rocky), and the gardens themselves are not raised.

For many years I have transplanted around 150 azaleas per year. Overcrowding is the reason I move most of my azaleas, however, at the first sign that an azalea is not healthy, I will move it. Azaleas like to be moved, as moving loosens the dirt around the root ball. The proper tools are essential if you have many plants to move and if they are of a large size. I use standard spades, spades with longer, thinner blades for digging well under the root ball, spades with steel running along the top and bottom of the handle from the blade to the handle for "popping" the large azaleas out of the ground, a good mattox to cut through the roots of trees, and a pick for digging in the hard ground.

The azaleas I move are generally from two to ten feet tall, with the average being about three to four feet tall. I move evergreen azaleas anytime in the spring or summer but avoid moving them when they are blooming so as not to damage the blooms. I move deciduous azaleas only in mid-November. I never worry about moving azaleas. I can remember killing only one azalea as a result of moving. It was a small azalea, and I was in a hurry and was carrying it on the blades of a spade. It fell on the sidewalk, knocking most of the dirt out of the root ball. It died shortly afterwards. This taught me a lesson, and now I move my azaleas in a wheelbarrow.

The first step to follow in moving an azalea is to remove the mulch. (I use leaves for mulch.) It is not always possible to tell where the stem enters the ground if the mulch is not removed. The next step is to decide how far from the stem to dig. If uncertain, dig further out than the root ball, and then move in to the right place in small steps. After a little experience, one generally knows where to dig. If the ground has some moisture, it is easier to get a good root ball. No matter the size of the azalea, I use a spade or the long thin bladed spade to completely circle the azalea with a cut. I dig down and under the root ball, working around the azalea until I am well under it, careful not to put much pressure on the spade to "pry" the azalea out, as the handle of the spade may break if the azalea has root ball of any size. If

"prying" is required, I use the spade with the handle protected by steel to free the azalea. When digging an azalea, patience pays off. If the root ball is only a little larger than the spade blade, I lift the azalea with the spade into the wheelbarrow. If the root ball is larger, I put burlap under the azalea, leaning the root ball to one side to get the burlap under and leaning the root ball the other way to pull the burlap through. I then lift the burlap and the azalea into the wheelbarrow. An azalea six feet high may take two people to lift, while an azalea ten feet high will probably require four people to lift it.

I dig a hole that is four to six inches in diameter larger than the root ball and possibly two to three times the depth. With an adequate supply of leaves, thanks to Mother Nature, I fill the hole with leaves and walk on them to compress them as much as possible. Next, I add about an inch of dirt, again packing by walking in the hole. If the azalea is large, I decide which way I want the azalea to face, tilt the wheelbarrow over into the hole, having someone hold the burlap, and let the azalea slide into the hole. Since azaleas will sink as the leaves decay, I place the root ball at least three inches higher than the surrounding ground, and with the excess dirt from the hole, plus the dirt from cutting a trench to catch water around the azalea, I mound the dirt around the root ball sides never covering the root ball itself with dirt. Using a hose, I fill the hole with water to drive out all of the air in the hole. Completing the job, I mulch the area with leaves, and the azalea will look like it has been there forever. While I never prune an azalea growing the yard, after they are moved I do trim them. The extent of trimming will depend upon whether I feel that I have damaged the root ball or not. When planting azaleas from pots, I cut the root ball using a razor blade, cutting about 1/4 inch or less to ensure that the azalea roots will grow outside the original root ball.

With regard to maintaining the azaleas, I do a minimum. At the time of budding, I spray them with Bayleton, which stops petal blight and seems also to control leaf gall. For insects, I spray with Orthene and Kelthane several times during the summer. I also spray the deciduous hybrid azaleas with Captan and Benelate every two weeks from August to mid-September to prevent mildew. I do not spray the native azaleas.

If the azalea is healthy, then I do not fertilize it. If the leaves show signs of iron deficiency, I first move the azalea and water the foliage with a mixture of Miracide (at slightly less than one tablespoon per gallon of water), iron chelate (one tablespoon of per 3 gallons of water), and Epsom salts (one tablespoon per 3 gallons of water). After mid-July, I do not use Miracid. I then use one tablespoon each of iron chelate and Epsom salts per gallon of water.

In Washington, D.C. the rains are not reliable enough, and watering is required. I have a low cost watering system with a four-way valve at the house. I am fortunate to have only a short run where the hoses must cross the lawn, so I dig a trench under the lawn for the hoses so as not to interfere with the lawn mower. Using a number of two-way valves, hoses, and sprinklers, I set up my watering system. The 15 sprinklers are about 3 feet high in order to spray the water with less interference from the foliage of the azaleas. Each sprinkler

can be moved to cover considerable area, as many are on 100 feet of hose after the two-way valve. The watering system is taken into the house every fall.

In summary, my major maintenance job with azaleas involves transplanting them to avoid overcrowding. I do only what is necessary in the way of spraying and watering.

Fred Demeritte is a member of the Brookside Gardens Chapter.

WINTERTHUR

Margaret Hensel
Stockbridge, Massachusetts

A land of rolling hills and broad meadows scored by ancient streams and studded with rock outcroppings, the Delaware Valley is a place of climatic extremes and horticultural challenges. In summer, with the air heavy and the wind still, the mercury hovers around 100 degrees Fahrenheit for weeks on end; in years of little rain, the ground becomes parched and cracked. The dog days pass with ponderous deliberation.

A winter here is short-lived and capricious. In the clarion light of a January morning, the temperature soars to 40 degrees and drops well into the teens overnight. Thawing, freezing—the earth can't make up its mind. Snow comes, weighting the trees with set flakes, and ice storms encase their branches, which tinkle, grate, and break in the wind.

Here Winterthur, the estate of the late Henry Francis du Pont, was created. Considered by many to be America's foremost example of the naturalistic garden, Winterthur is internationally famous, both for its collection of plants and for their use in the landscape. The popular reputation of Winterthur's 200 acres of display gardens lies predominantly in the spring display of the Azalea Woods. In May, some five acres of evergreen azaleas, numerous rhododendron species and hybrids, and woodland flowers create a breathtaking show of color.

DuPont was born in 1880 at Winterthur (in Wilmington, Delaware), then the property of his father, "Colonel" Henry A. du Pont, a skilled amateur horticulturist. Among the younger du Pont's first efforts in the garden was the planting of daffodils and bulbs in the area now called the March Walk. Begun in the early 1900s, the walk is paced with millions of naturalized bulbs. Father and son laid out the Pinetum in 1914; today it is one of the largest collections of rare and native conifers in the eastern United States. But it wasn't until 1927, when the younger du Pont inherited the thousand-acre estate, that development began in earnest.

Frequently in the vanguard of American horticulture during a dynamic era, du Pont, a gifted amateur, knew

many major horticultural figures of the early 20th century. He was a friend of and acquired plants from Charles S. Sargent, the creator and director of Boston's Arnold Arboretum, and Ernest Henry "Chinese" Wilson, collector for and later curator of the arboretum. Du Pont's correspondence was worldwide; he exchanged letters with some of the best horticultural minds in England, including Gertrude Jekyll and Ellen Willmott.

A notable example of du Pont's acumen is found in his visit, in 1917, to Cottage Gardens on Long Island. The nursery had purchased all of the Japanese exhibit of Kurume azaleas at San Francisco's Panama-Pacific Exposition in 1915, where they were first introduced to this country. Even though they were not in bloom, du Pont appreciated the potential importance of these evergreen azaleas as landscape material, and purchased 17 plants the nursery thought unsuitable for their purposes. Practically all the Kurumes naturalized throughout Winterthur today were grown from cuttings of the original plants, in their six- and seven-inch pots. Kurumes were growing at Winterthur even before Wilson's famous monograph on the subject and long before they were available to the nursery trade.

But Winterthur stands out as far more than a vast depository for the rare or unusual. It is, for the most part, a naturalistic garden. Though certainly extensive, it is not spread out on a table like Versailles. The elements of its design (colors, forms, juxtaposition of plants, transitions from informal to more-formal areas) are not as apparent as they are in the highly stylized garden rooms at Hidcote, in England, or even in the provincial formality of Colonial Williamsburg. The art of Winterthur is often so subtle, visitors are hardly aware of it. It was in part, however, du Pont's acquisitive enthusiasm that first lured me to Winterthur several years ago.

I found my guide to this great garden in Hal Bruce, a Delaware native, who had recently become curator of plants at Winterthur, though he had arrived there more

than 20 years before. In his early years at the garden, Bruce worked with du Pont, following Winterthur's creator through the gardens, observing and listening to his comments. Bruce recalls him fondly: "He was a man 80 years old with a lot of energy and could walk like hell. He wore me out, and I was 25."

Also to his credit, Bruce is the author of two gardening books. *How to Grow Wildflowers, Wild Shrubs and Trees in Your Own Garden* is a poetic and practical exploration of the Delmarva Peninsula, a tongue of the coastal plain that takes in northern Delaware and all of Winterthur. In this book, Bruce writes of the area's native vegetation with a poet's sensitivity and a plantsman's practicality. In 1968, *Winterthur in Bloom* (unfortunately now out of print) was published. With an appreciative foreword by du Pont, it is an excellent garden book in its own right and remains the definitive treatment on Winterthur.

I met Bruce in the visitor's pavilion. Dressed in sports coat, Western shirt, and loafers (his "go-to-meeting" outfit), he smiled, shook my hand, and invited me for an early-morning cup of coffee. Bruce has an easy, unpretentious charm, and a way of salting his speech with strings of botanical jargon that somehow, from him, become downright comprehensible. With high forehead, full beard, and broad shoulders, he is ruggedly appealing; he has the earthy grace of a lumberjack turned poet.

Cigarette in one hand, coffee cup in the other, Bruce begins talking about the subject he knows and loves. "To start off, the key word, garden, should be pluralized. Winterthur is actually several gardens. It contains both the formal and the informal. It has been called 'naturalistic,' and although I have heard people object to this term, Mr. du Pont used it for certain areas of the gardens." Winterthur, then, is many gardens linked by an underlying philosophy of landscape design.

"In the naturalistic garden, the site is king," Bruce continues, as he puts down his cup and we walk toward the door. "It determines both the form and content of the garden. Topography determines the shape and even the placement of walks and paths, the lines of massed shrubs or trees, the forms of beds of herbaceous plants."

Walking up toward the Azalea Woods, Bruce gestures along the path as it curves before us. "Du Pont never changed the character [of the site]. You don't change grades. If you make a path, you make a path as an animal would. If he developed an area, he preserved as much of the indigenous vegetation as he could: viburnums, azaleas, *et cetera*. He never took down a forest tree, he planted around it." Bruce spreads his arms as if to encompass the towering tulip trees. "You arrive at this landscape—which is fantastic—but it's as if God had planted it."

Our first stop is the Peony Garden. Its peak of bloom is in late May; it is a fine collection of single and semidouble Japanese, Chinese, and French hybrid herbaceous

and tree peonies, also featuring yellow Saunders hybrids.

From there we walk around the east terrace of the museum, to steps leading to the reflecting pool. With its long, stone stairway, bordered by pink azaleas and pungent boxwood spilling over the sharp stone edges, the architecture is formal. Midway down the stairs beside a sundial, Bruce stops to pick some dead twigs off the box and remembers with delight a story behind these steps.

"I think it was during the Depression—my uncle told me the story; he was one of the workmen for the contractor. Mr. du Pont always wore a panama and usually a seersucker or light-color suit, and carried a walking cane. He had a methodical and purposeful walk. The steps completed, the contractor and his men were waiting with bated breath while he walked up the steps, down them, up, then down, then just said, 'Too high, take them all out,' and walked away. They took them out," Hal chuckles. Though the workmen were floored by the extravagance, the story illustrates du Pont's perfectionism. Pointing to the steps and the surrounding woods, Bruce adds, "None of these things just happened. They're all born of patiently moving things around, trying new things till du Pont got the effect he wanted. For example, he moved azaleas when they were in full bloom." (Du Pont had a special system of tagging and notes to help him decide where plants should be placed or moved.)

We leave the calm of the reflecting pool to drive to the pavilion in one of the grounds trucks for lunch. To get to the pavilion we must walk through the plant shop, a bustling setting of lead toads, concrete turtles, and a burgeoning plant business featuring many Winterthur plants.

Leafing through a current Winterthur mail-order catalog, Bruce turns to me. "We want to sell things people can't find anywhere else, quality being the bottom line of our rationale. That's essentially what you find in the garden. Winterthur has one of the greatest gene pools: our own collection of Dexter hybrid rhododendrons, important for their colors (a range of yellows, apricots, and pure reds) and their hardiness. Their earlier bloom extends the season; they bloom earlier than the common Catawba, a staple of East Coast gardens. I think they should be used for breeding stock.

"There are lots of horticultural varieties of other plants here that have become obsolete in the trade—and not because they lack merit," Bruce continues. "For example, Winterthur has flowering quinces developed by Walter B. Clarke in the '20s and '30s. Connoisseurs I take through the garden rave about them, then ask, 'Why aren't they in the trade?' " Nurseries have reduced their stock for various reasons. Bruce explains. "A commercial nurseryman couldn't afford to tie up his greenhouse space with a plant that is very difficult to propagate. But we can afford to take the loss of propagating such plants. We'll just keep on it till we get enough plants to offer to the public. The yellow horn (*Xanthoceras sorbif-*

olium), for example, is very difficult to propagate and almost impossible to find; the sapphire berry (*Symplocos paniculata*) is also hard to find."

The 1960s were years of growth for Winterthur, when some 2,367 species and varieties of plants arrived there. "While not all these plants were new introductions, the number of new plants tried each year was staggering," Bruce says. In the last 10 years of du Pont's life, there was more expansion and improvement of the garden than in any other period during his lifetime.

Du Pont died in 1969, his garden uncompleted. By the recession of 1972 Winterthur's endowment, according to Bruce, "wasn't as big as everybody thought it was. Consequently there were a lot of cuts." Before du Pont's death, the gardens had operated independently, but afterwards they became a division of the museum. "He died and everything seemed to come to a screeching halt," Bruce remembers. "The staff of 100 gardeners was cut to 24 or 25." From 1971 to 1980, reduced maintenance rather than expansion was the informal policy.

Through these difficult years at Winterthur, Hal had been doing consulting work part-time, advising Head of the Gardens Wally Pentroll on the garden's needs. "One day they made me an offer and I came back, because the garden needed me," Bruce says. In August 1981 he became curator of plants.

Petroll and Bruce had served as apprentices in the early '60s together. According to Bruce, Petroll, the first college-trained horticulturist at Winterthur, deserves a large part of the credit for holding things together through the tenuous '70s. In 1980, things began to look up as grants, gifts, and other methods of raising revenues brought in much-needed money.

Returning to the truck, we drive down along Garden Lane, past the entrance to the Azalea Woods and March Walk, to the Sundial Garden. Along with the East Terrace and Peony Garden, the Sundial Garden is formal, but well incorporated into the larger naturalistic setting. It was designed in 1957 and 1958 by landscape architect Marian Coffin. What were once tennis courts is now a square grassy lawn enclosing four inner-curved beds planted with a dwarf evergreen, *Lonicera pileta*. Four outer beds are densely planted with pink-flowering almonds, white spiraea, and pink- and salmon-flowering quinces.

In the heat of the afternoon we sit down on the steps leading to the Pinetum and listen to cardinals in the dawn redwood. The blazing sun must have prompted me to wonder aloud how much time du Pont and his wife actually spent here in the summer. "By the time I came here, in the later part of du Pont's life," Bruce tells me, "he had a definite itinerary. They were here until New Year's, then to Florida, where they stayed until late March or early April; spring was spent here. Then in June, when it got hot, they split for Southampton on Long Island. As a consequence, summer color was pretty much neglected here. It became a spring garden." In

the spring of 1951, the museum opened to the public, and as Bruce explains, "Mr. du Pont started turning his attention away from the museum with the idea of providing a public garden which was opened in the late '50s. In the late '50s and early '60s the garden was only open six weeks, in the spring. But, as Hal explains, du Pont realized that later bloom was missing and set about developing other areas.

On our second day, Bruce and I head to the Azalea Woods, the heart of Winterthur. Bruce refers to it as "one of the finest horticultural displays in the United States." Since the spring he has spent considerable time pulling the woods into shape (much of it was planted in the '30s and '40s, and that, combined with the severe 1981-82 winter, left it badly in need of restoration). Some of the tenderer Kurumes were killed at the snow line; plants that had been growing there for 50 or 60 years lost whole branches. Specimens of 'Debutante', a favorite of du Pont's (some with trunks or branches four inches in diameter), were killed at the ground. Some had gotten out of hand, others simply couldn't compete with more-aggressive native plants. Needless to say, the spring display was sadly reduced.

Bruce explains his role as curator in solving such problems. He must always keep in mind du Pont's original intents. My job is to keep the collection in the same condition of excellence of health, growth, and look of the plants as when he was alive—given limitations of help and finances," he adds with a resignation. "There are constant problems that come up. If du Pont were alive, he would make the decisions.

"I wish he'd written more down. You have to arrive at his garden philosophy by trial and error. He did leave a set of gardening instructions, but they dealt more with practices. But it's good now to have even that. I worked with him and remember certain things he insisted on doing," Bruce continues. "I'm like an art historian, trying to understand what Rembrandt was trying to achieve with a certain brush stroke."

"I do not wish the character and varieties of shrubs and trees changed. . . nor their arrangement," du Pont wrote in 1945, "and I do not wish any new kind of shrubs or trees put anywhere unless some calamity occurs which completed destroys all the present growth." In 1962 he added, "Should any trees or shrubs die, I want them replaced by trees or shrubs of the same kind."

"One of my concerns," wrote Bruce, "has been that the garden in time may lose much of its high style if it does not keep pace with the rest of the horticultural world. I think that Mr. du Pont's comment gives us a certain leeway in eventually replacing certain of the plants which die or are showing obvious signs of senility with new varieties, as long as we observe certain rules: that is, we keep the total effect in mind, we do not tamper with spatial arrangements, and we realize that each collection has its own criterion. For example, in the Azalea Woods the Kurume azaleas should never be replaced because of their historical importance and because of

the skillful blend of colors in each group. This means that we should always have young plants of these azaleas in the nursery, because many of them are no longer commercially obtainable, being replaced by 'improved' varieties which really aren't that much of an improvement."

The rhododendrons and azaleas that run like a theme throughout the development of the garden are at the center of Winterthur's importance as a botanical collection. As Bruce put it in a position paper to Winterthur's Garden Advisory Committee, "It would be no exaggeration to say that during the first half of this century, du Pont tried just about every new evergreen azalea that became available. . . . The species, clones, and hybrids of evergreen azaleas grown at Winterthur today number 250, and this of course does not include cultivars whose names have been lost."

Bruce elaborates, "One of the favorite criticisms of this place is that it isn't a botanical collection. But this isn't strictly true. When du Pont found a plant, he went around looking for its relatives; he would search them out, plant them, and test them; plants that are genetically related can make for subtleties in the landscape. You go to an average botanical garden and you find something like *Rhododendron pentaphyllum* and you're fascinated by it, because it's rare and beautiful—but if you see it at Winterthur, it's incorporated into the landscape. Here you see lots of these, planted along the edges of saucer magnolias, which bloom at the same time in pinky shades." Bruce once described *R. pentaphyllum* in a paper on deciduous shrubs: "It makes a large shrub with slender, coppery-brown branches at whose tips whorls of fresh green foliage poise elegantly. Here it blooms very early, close on the heels of *R. mucronatum*, and its large pink flowers are very beautiful."

The origin of the Azalea Woods is a good example of impromptu development; the story delights gardeners used to the fickleness of nature. In the early 1900s, chestnut blight swept through Delaware. What had been a dense woodland was, by 1920, marred by gaping spaces where entire stands of huge American chestnuts had been hauled away. Du Pont turned the gaps into nurseries and filled them with young Kurumes, propagated from those purchased on Long Island. As the plants grew and bloomed, du Pont, not one to miss the potential of something begun in such a random manner, began to visualize the area as a garden. Under his direction, plants were arranged according to his principles of color, beds were enlarged, and paths were cut through the woods. Existing vegetation was pruned selectively; many of the native plants such as dogwoods and wildflowers were left. With the addition of both native and exotic plants, the Kurume nursery rapidly became a garden. In the 1930s, several flats of seedlings of rhododendrons from the noted breeder Charles Dexter were added and repositioned as they bloomed. Today, the Azalea Woods looks much as it did when du Pont planted it.

"Coming down the pavilion, this is the first spring display you see," explains Bruce. "You come up this path, with low azaleas and bluebells like steps before the entrance to the Azalea Woods. Then you come into the hallway of wall-to-wall azaleas," he says of the entrance to the woods. "Torch azaleas, *Rhododendron Kaempferi*, in the last part of April first part of May. They're 12 feet tall. They've been pruned back, but they should be taller, about 15 feet. See how closed in it is?" He gestures, his arms outstretched, almost touching the walls of this azalea corridor. "Then on the other side of the path, you have four others, all the same pink, planted to block you that way too; du Pont didn't want you to look out over the hillside."

This brilliant corridor urges you farther into the woods. There is no turning back—Henry Francis du Pont has grabbed your attention and is not about to let you go. At the end you pause, glance right, then left, and once again you are without a choice; you make a decision to turn left simply because what you see is so spectacular.

From a thick spread of *Trillium grandiflorum* (in bloom with the Kurumes in May) surge tulip poplars, their trunks etched with shadows and light. Being under them is like standing in a cathedral, with a massive ceiling of trees and a great silent space around you. Beyond rise beeches, their newly opened leaves spread in transparent layers, mirrored in season by clouds of pink- and white-flowering dogwoods. The Kurumes are ahead of us.

"We've pruned the azaleas down so when you walk through you don't have a corridor effect," Bruce says. "Du Pont wanted you to walk through up to your neck, so you can see over them. He didn't want you to feel enclosed. The Kurumes had grown roughly 6 feet tall. Now they're 4½. What he wanted was for you to be able to look through to the end of the woods—to the sky out there."

Moving on, Bruce points to a small plantation of Gable hybrids put in in 1964 and 1965. "That was the last area du Pont planted, and half the plants have died out, mostly Gable hybrids, different colors. The rest are very straggly, because dogwoods shaded them completely. So we took 12 dogwoods out. In du Pont's notes it says, 'If the dogwoods shade the rhododendrons and azaleas too much, the dogwoods go. If the large trees shade the other plants too much, then the canopy should be cut up.' You either have dogwoods and straggly rhododendrons, or strictly rhododendrons, or fewer dogwoods," he adds, pointing out the stumps of dogwoods amidst the sad-looking rhododendrons.

Stepping into a planting of gnarled, tree-like Dexter hybrids, Bruce leans down to observe some new growth. "These are 40- or 50-year-old plants. A lot of Dexter hybrids grown open like this. Du Pont wanted that kind of form here, not mounds the way Catawbas are. The old man didn't mind it, so I don't think we ought to mind it either. Now that one," Bruce says, pointing to a particularly unhappy specimen, "looks ratty for many

reasons. The plant is not thrifty—it has problems getting nutrients; it suffers stress and strain of one kind or another." Bruce stops to remove debris from a clogged sprinkler head, part of a system du Pont installed throughout the Azalea Woods in the early '60s. He expresses concern over the lack of rain; the year is already proving to be a particularly dry one throughout the Delaware Valley.

"The thing about the Azalea Woods," Bruce says, "is that it offers something to everybody. If you're a member of the American Rhododendron Society, you look at this"—he points to a specimen of *R. vernicosum* labeled Rock #18139. "this is one of those things that Joe Gable (a Maryland plant breeder) got from Joseph F. Rock, the great plant collector. It's one of the few Chinese rhododendrons that are hardy here. It's hardy to Zone 6 and has large, frilly flowers, of a deep apricot-pink; very unusual." As Bruce points out, visitors who don't know a plant can appreciate a rarity in the landscape and go on to the next sight. Plantsmen can appreciate both the plant and its placement.

If you're not interested in masses of azaleas, you might immediately be drawn over there to two English Fortunei hybrids, rhododendrons 'China' and 'Goldfort', because you see their huge yellow blooms from a distance. Your eye always rest on those big blobs of rhododendrons rather than on azaleas or the more ethereal sheets of windflowers.

"The difference between rhododendrons and the big azaleas," Bruce continues, "is that it doesn't matter how close you are to an azalea. From a distance, it's a blob of color, and when you come close to it, it's still a blob of color. But the closer you get to a rhododendron, the more architecture you see: fluting of the blossom, the way the blossoms are held."

Bruce leads the way out of the wood. "The next area is open, and the exit suggests a theme that is going to open up, like the last movement of Beethoven's Ninth." He directs my attention over the tops of shrubs to a sweep of fields and meadow. "Du Pont planted those trees along the edge there"—Bruce point left to the woods next to the meadow—"dogwoods, viburnums, and things like that, so you wouldn't walk along here and just look out at the meadows." Looking out, you see leaves against the sky, but mostly your attention is still in the woods.

Perhaps because the Azalea Woods is so intense, du Pont prolonged and played upon the exit in this lyrical

transition that allows our senses time to regain a sense of equilibrium. "There's another effect. Can you smell it?" Bruce asks, glancing at me with a gleam of delight in his eye. "*Viburnum Carlesii*: the fragrance lures you on." Farther down the path, when the large rhododendrons on the side are past blooming, the visitor rounding these masses of dark green has his attention drawn to a planting of deep-red azaleas against Ponderosa pine and Norway spruce—a dramatic contrast and the last echo of the richness of the Azalea Woods. The shade lightens until, in a blaze of sun, Garden Lane rolls into view.

"By May, those big magnolias (*M. x Soulangeana*) at Magnolia Bend [planted in 1875 by the Colonel, five years before Henry Francis was born] and the cherries are finished blooming, so you just see the line of the road, which is really your main architectural feature, looking from here," Bruce says. "In early May, when you come out, you pass those red azaleas and you come down into this hollow, which is usually shaded, even when the road is blazing in the midday sun. You see lavender azaleas, Persian lilacs, cut-leaf lilacs; lavender against green. The shade back there," he explains, pointing beyond the lavenders, "pulls you right into it. Great little touch," he adds, with undisguised admiration.

"Lavender and coolness are hallmarks of du Pont's designs," Bruce says. "The use of lavender in the transition zone between the sun and shade takes the red, the harshness, out of lavender. Somehow you see it from a sunny area and looking into the shade makes it very cool. It's always a pale lavender, not a purple, and light enough so it's not a heavy transition from the sun."

It was June as we stood there imagining the effect, the magnolias long gone and the lilacs past. It was late in the day; we hadn't seen a visitor in hours. Pale beams of sunlight pierced the woods; the gardens were quiet. A flash of yellow in the underbrush caught Hal's eye—"a female redstart," he said. We watched it flit from branch to branch, then fly away in a burst of song. The early-evening songs of catbirds and cardinals filled the thickets, while from a tall oak a scarlet tanager sang out.

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JUDGING AZALEAS: TOWARD A STANDARD APPROACH

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Despite efforts to introduce objectivity into essentially a subjective process, the recognition and selection of "quality" in competitive activities, like azalea shows, remains a function of evaluator experience and subjective opinion. Objectivity, deemed a desirable aspect of competitive shows, is only theoretically possible and its pursuit beyond practicality constitutes a costly exercise in diminishing returns. The deduction of "points" in accordance with an elaborate point system, a favorite tool in the quest for objectivity, is itself a subjective exercise which limits the degree of objectivity that is achievable overall. This is because a system is only as objective as its most subjective element permits. To be "objective" such systems have to be sufficiently detailed to address every potential for subjective input. Computers and sophisticated point systems, employed to provide structure, maximize equity, and minimize the effect of judges' subjectivity, have never proven satisfactory. In general, the additional "process" and gains in objectivity are realized only at the expense of time and logistics considerations. The primary case for maximizing objectivity is that in an "objective" system untainted by subjective influences, independent panels of judges would be expected to arrive at essentially the same decisions. . . a significant plus if equity is the only consideration. To my knowledge, that degree of consistency has never been achieved in any azalea judging system, and the cost or burden of the additional layers of complexity in its pursuit is as unjustifiable as it is significant (1). The quest for more objective judging is best relegated to the realm of the theoretically desirable but realistically unattainable, and the efforts expended in that direction would be better utilized toward education and preparing the judges.

After all the theory and despite the process, ribbons and "Best in Show" awards result from consensus and reflect the aggregate quality, biases, prejudices, and experience of the individual judges regardless of how many layers of objective procedure are overlaid. In the final analysis, the quality of any evaluation is only as good as the quality of evaluators (individuals with the requisite knowledge base to serve as judges) and the quality of the criteria (standards) against which the evaluation is made. To function effectively, judges should operate from a common understanding. In the absence of a common perspective, a classical blind men and elephant situation exists, undue dependence is placed on the individual preferences of the judges, and the quality of the review suffers (2).

What denotes a superior entry? What criteria should the judges be measuring? What characteristics constitute "a quality specimen"? These are the questions that should be answered in any standard which is to serve as

a basis for evaluation in an azalea show. The judging criteria, standards, and weighting system which follows was developed for the Brookside Gardens Chapter Azalea Show and has been in use since 1984. Four broad categories are identified in this simplified approach, and weights are established to show the relative importance of the categories. After a proper orientation, the rest is up to the judges.

AZALEA JUDGING CRITERIA, STANDARDS, AND WEIGHTING SYSTEM

1. Presentation: 30 percent

The overall appearance, condition, or physical state of the specimen at the time of judging. The number, arrangement, balance, and fullness of presentation of the flowers with the foliage. Consideration should be given to the fact that certain groups like the Kurumes are given to full presentations while other groups are not. A full specimen of the latter groups therefore represents a superior specimen.

2. Foliage: 15 percent

The condition of the foliage; specifically the absence of leaf damage and imperfections, including but not limited to poor color, non-specific debris, insect damage, and leaf gall.

3. Flower: 25 percent

The condition of the flowers; specifically the absence of flower imperfections, including but not limited to insect damage, petal blight, water spot, and spent flowers. An excessive or unreasonable number of buds or unopened flowers constitutes a fault.

4. Representation: 30 percent

The degree to which the specimen is a superior example of the cultivar. Criteria include flower size and color, color variability, flower form, foliage, secondary color characteristics (e.g., blotch). A specimen selected from a vertical branch (the blotch is up) is superior to another specimen selected from a lateral branch (blotch other than up). REPRESENTATION is not a critical element for new, unintroducted, or unestablished cultivars which would not be expected to have established standard characteristics.

ADDITIONAL CONSIDERATIONS:

1. The criteria and standards pertain equally to sprays and potted specimens.
2. No ribbon may be awarded to any specimen which, in the opinion of the judges, has not been prepared in conformity with generally accepted standards of grooming and specimen preparation.

NOTES AND REFERENCES

1. A well documented experiment in the utilization of a computerized judging system was conducted by the Portland Chapter of the Rhododendron Society and reported in "An Experiment in Computer Assisted Judging", Jones, J. W., Journal American Rhododendron Society, Vol. 38 No. 2 Spring 1984. Thirty minutes into the judging only three classes, some sixteen entries, had been evaluated. Had the experiment not been terminated, it would have taken nearly 14 hours, at the indicated rate, to complete the judging of the 467 entries.
2. A group of blind men were asked to examine and describe an elephant. The resulting descriptions

differed by which portion of the elephant each man examined. The blind man who examined the leg said that surely an elephant is like a tree trunk. The blind man who examined the ear described the elephant as being like a fan. The blind man who examined the side of the elephant likened the elephant to a wall and so on. While each of the descriptions was accurate, none of them was useable by itself because of the non-uniform perspective.

Bill Miller has served since 1984 as chairman of the Horticulture Division of the Brookside Gardens Chapter Annual Azalea Flower Show.

"Azalea Classic"

Dr. Henry T. Skinner (1907-1984)

Among the leading horticulturists lost to us in 1984 was Dr. Henry T. Skinner, who died in Hendersonville, North Carolina. It was perhaps appropriate that Henry Skinner should end his active years in the mountains of North Carolina where the hillsides are replete with the native plants he knew and loved so well. One of the my last journeys with Henry was to see the stands of *Rhododendron vaseyi* at a place called Pilot Mountain, not too distant from Hendersonville. Modest, gentle, and always the reflection of the English gentleman, Henry came to use around 1927 after graduating from Wisley School of the Royal Horticultural Society. He came to the Arnold Arboretum to be a student assistant to E. H. Wilson, where he remained from 1927 to 1929. From then until 1940, Dr. Skinner was a student and instructor at Cornell University, where he concentrated on the tree and shrub collection begun by Dr. Donald Wyman. In the latter years and while he was at the Morris Arboretum (1940-43), Dr. Skinner began his serious work on the native azaleas. After a stint in the army during World War II, he returned to the Morris Arboretum, where he continued his work with native azaleas and received a Ph.D. degree in Botany from the University of Pennsylvania in 1952.

At this time, Dr. Skinner was selected to be the Director of the National Arboretum, where he was to remain until his retirement in 1972. He distinguished himself by developing the research and educational program of the National Arboretum, including the acquisition of the famous Gotelli dwarf conifer collection, Fern Valley, and the development of the beautiful administration building. Under his leadership, the National Arboretum grew from infancy to a mature institution of national and international stature. Despite the complexity of a Federal institution and its operations, Dr. Skinner rarely allowed the ups or downs to affect his wry sense of humor and

patience, which certainly was tested on many encounters with the public, his devoted garden club ladies, and demanding employees.

During his career, Dr. Skinner was an avid writer, publishing over 250 research and popular papers, one being the present reprinting. He was responsible for the United States Department of Agriculture Plant Hardiness Map, which is a standard for rating hardiness of plants. He named several important horticultural plants, including 'Cornell Pink' azalea, 'Morris Midget' boxwood, and 'Lydia Morris' holly. In other words, Dr. Skinner was a true plantsman, skilled in propagation, knowledge of plants, and he had a great sense of humor when it came to handling people and situations. His most profound display of anger was an occasional "Drat" or when frustrated a low "Darn".

Dr. Skinner was the recipient of most of the top awards in American horticulture but probably the one that pleased him most was the awarding of the Veitch Memorial Medal by the Royal Horticultural Society in 1984. Prior to his death, Dr. Skinner was still carrying on breeding and selection of deciduous azaleas here in Hendersonville and apparently planned to name some of his most outstanding seedlings. It was during these last years that Dr. Skinner took up the cause of preserving the name *Rhododendron japonicum* for that Japanese azalea. Indeed, his vigorous pursuit of that cause probably weighed heavily in the decision to consider retaining this azalea name. We will all miss his presence sorely, but the many contributions he made to American horticulture will command our attention for many years to come.

John L. Creech
Hendersonville, N.C.

IN SEARCH OF NATIVE AZALEAS

Henry T. Skinner
Washington, D.C.

The following notes are set down as an abbreviated record of a rather extensive collecting trip in search of native azaleas. Besides telling something of the journey and the plants encountered the following pages will also include information concerning the plant specimens collected on this trip so that a record will be available to others who may chance to study these specimens at a later date or who may wonder in what woods, on what mountaintop or along what stream a special azalea grows. But first an explanation.

Our native azaleas or "Bush Honeysuckles" were a source of admiration, frequently recorded, to the first European travellers on this continent. Several species found their way to Europe at an early date, were known to Linnaeus and were used in hybridization with the European Pontic Azalea* (*Rhododendron flavum*) and Oriental *Rhododendron molle* to produce the many-colored and very hardy Ghent hybrids which have graced our gardens for many years. But while a few species such as the Pinxterbloom (*R. nudiflorum*), Flame Azalea (*R. calendulaceum*) and Sweet Azalea (*R. arborescens*) have been cultivated to some extent in this country it seems strange indeed that until very recently no real attempts have been made either to select the better wildlings for garden cultivation or to use them as parental breeding stocks for the production of finer hybrids than the old Ghents. There are excellent potentials for a new race which might well offer strong competition to the "Japanese" azaleas with which our gardens are now filled. These native azaleas have a color range from white to pink, red, and yellow, they may be dwarf or very tall, single stemmed or more stoloniferous than a raspberry bush—and certain of them root readily from cuttings. What other characteristics could be desired? Perhaps evergreen leaves, but this is not impossible to the breeder.

It was a realization of these facts, plus an awareness of the marked limitations of our present knowledge of the botany, genetics or even geographic distribution of the native species which led to the planning of a research project at the Morris Arboretum calculated to provide more accurate information about our native azaleas, their natures, their natural occurrences and their behavior. A project with these objectives called for a study of the literature on azaleas, a detailed examination of herbarium materials assembled at various institutions and extensive study and collection in the field to determine more accurately the nature and distribution of the individuals comprising the taxonomic units as we now know them. The collection of many specimens at the same location provides data on variability which the single existing herbarium specimen cannot give, and

this kind of information was essential for constructing a picture which may still require many years of examination and analysis to develop in its full clarity.

The project was initiated in 1950 in cooperation with the Department of Botany of the University of Pennsylvania and the Academy of Natural Sciences and was greatly advanced by a grant from the American Philosophical Society which made possible the field collecting trip of present concern and as undertaken by the writer during a leave of absence from regular duties at the Morris Arboretum. While this writer is indebted to many persons for assistance at all stages of this native azalea project, he is especially appreciative of the continuous guiding interest of Dr. W.H. Camp who was so largely responsible for the initiation of this venture, and to Dr. J.R. Schramm who, as Director of the Morris Arboretum, so effectively smoothed the way to make it possible.

PREPARATIONS AND DEPARTURE

Plans for the collecting trip were laid early in 1951 and one of the first steps consisted of the preparation of a map of the eastern United States which could show by letter and color key the geographic distribution of wild azaleas likely to be in flower during each week from mid-March to mid-August, as discovered from numerous herbarium specimens previously studied. The canvas backing of this little map became very worn before the trip was over, for at every point this was the guide for direction of the next day's travel to catch azaleas in bloom. Then there was a large Rand-McNally atlas with location data for previously collected species. From a glance at this map one could tell where azaleas once grew, where collections had *not* been made and which points perhaps needed revisiting to clarify some question concerning the original collection.

These, plus endless additional maps, were the guides. The equipment was interestingly diverse, consisting of piles of presses, blotters, newspapers and a specially designed electric drier for the pressed specimens; of digging tools, shears, burlap and packing materials for handling the living plants, of the inevitable cameras, labels, tags, and notebooks and of course one's personal living needs for a matter of at least a month or so at a time. For transportation the Arboretum had provided a Chevrolet delivery truck which was most happily selected for size, speed and rideability as was repeatedly proved during the succeeding 5 months of continuous

"Azalea" is here used as the popular name for all deciduous or semi-evergreen members of the genus *Rhododendron*, in which genus they have been combined with the full evergreen rhododendrons in current botanical practice.

travel over everything from first class roads to trackless hillsides, through the freezing spring floods of the Mississippi or through summer drought at 104 degrees. Into this truck were piled these many supplies in time for a mid-afternoon departure from Philadelphia on Saturday, March 17th. The goal was Florida, for the first azalea on the time schedule of our map.

The first run south provided the customary thrill of this rapid journey into springtime: from Pennsylvania winter to quinces and daffodils in Richmond; wisterias in bloom with the exotic azaleas of Charleston; and then in Georgia the potently delightful scent of the Jessamine thicket (*Gelsemium*) on the damp of the evening air. It is no wonder that this Jessamine is a southern favorite; it is a wonder that it so seldom seen in Washington or Philadelphia where its Virginia representatives would almost certainly succeed.

A FLORIDA START

The first azaleas or "Pink Honeysuckles" as a native of the South will always call them, were found with no little excitement along the edges of damp woods on the Florida side of the St. Marys River, along U.S. Route 1. They were plants whose flowers had deep pink tubes and pale to medium pink petals. The corolla tubes and often their supporting pedicel were covered with numerous little pin-head glands and the bud scales and unfolding leaves were hairy with a matted, silky pubescence. The only southern azalea with these several characters is *R. canescens*, the Florida Pinxter or Hoary Azalea and this indeed was it—as we (Chevvy and I) were destined to follow it for several weeks and over enormous distances.

At an appropriate spot, where azaleas were plentiful, my first "mass collection" of 25 or 30 flower-shoot specimens was made by random selection from as many different plants. Each specimen was recorded by number in a notebook; flower measurements were taken, flower colors, plant heights, location and growing conditions were recorded before the specimens were placed between newspapers of the collecting press. During the evening at some tourist court they would be rearranged before placement in the electric drier. Wherever possible, quantity collections of this sort were made at intervals of some 60 miles, with intervening "county collections" of a mere 5 to 8 specimens as more detailed indicators of distribution. A few run-of-the-mill small, living plants were taken at intervals for later study, just as were pieces, when detachable, of the unusual specimens with likely horticultural potentialities. Bundles of dried specimens or packages of accumulated plants were expressed to Philadelphia each week or so.

Quest of this early azalea led south as far as Putnam and Alachua Counties in the general vicinity of Gainesville, Florida, but apparently no farther. Just south of here the high dryness of Ocala National Forest was

explored with considerable thoroughness but without return, other than in a still vivid experience of driving the truck down a steep sandy and rutted road to a crossing of the Oklawaho River, only to find that the bridge had been washed out in a previous storm. The only negotiable return lay by slow stages through undisturbed woodland with both darkness and the bottom of the gasoline tank staging a neck and neck approach. Ultimately a logging trail was discovered and the rest was of chief significance in teaching a lesson in preparedness which stood us in good stead on several later occasions.

At Gainesville I took the opportunity to check native azaleas in the herbarium of the University of Florida and also to spend several instructive hours with Dr. H.H. Hume in search of azaleas and hollies of the area before again following *R. canescens* northwest. Apparently skipping the coastal counties of Lafayette, Taylor, etc., it reappeared in fine quantity on the banks of the Suwannee River near White Springs, where on a warm day it was being worked by honey bees, bumble bees and butterflies. It reappeared very conspicuously with dogwood on crossing the Fall Line in Madison County and it became evident that southward occurrences in this region are only, in fact, in very localized pockets, often widely separated. Still travelling west, this azalea reached perhaps a peak in quantity on the banks of the Yellow River in Okaloosa County where bushes became small trees of 15 ft. or more with heavy, branching trunks. It reached a second peak across the Sabine River in east Texas where the flowers seemed somewhat larger, their tubes longer and the leaves less hairy than in Florida and Georgia. Pure white forms and deep purple-red ones, those with large flowers and small ones with yellow blotches or with delightful scent—all were found during the next six weeks which eventually revealed a distribution of this species from the South Carolina coast around the Gulf to the Trinity River in Texas and north across Arkansas and Mississippi to southern Tennessee and southern North Carolina. It clearly covers an enormous area whose only major gaps are the neutral soils of the Mississippi Valley, the Red Hills of Mississippi and Alabama and a few regions not generally suited to ericaceous plants.

A YELLOW AZALEA

The first westward trip with *R. canescens* brought my introduction to the yellow Florida Azalea, *R. austrinum*, on March 26th near Geneva, Alabama, and in enormous quantity a few hours later along a woodland edge just south of the Florida-Alabama border. Apart from flower color, the general characters of this azalea are rather similar to those of *R. canescens* but it is more glandular. The little glistening red, pin-head glands cover pedicels and often vegetative shoots, as well as flower tubes. The flower may be wholly a clear, golden yellow or, more often, the petals may be yellow and tubes a variable

strawberry red, giving one the impression that this red tube belongs more properly with *R. canescens* and has perhaps been acquired by *R. austrinum* after flowering at the same time along the same streamsides and producing a proportion of those unmistakably anemic buff-colored hybrids for many years past. As the banks of the Yellow River grow luxuriant *R. canescens* so elsewhere they are appropriately covered with masses of the yellow "Florida" Azalea which was subsequently found to occupy a sizeable portion of western florida, southeast Mississippi, southern Alabama, and southwest Georgia—about as much territory outside of florida as in.

Later collections of *R. austrinum* were made on the return from Texas on a more northerly swing. Spring was advancing and *R. canescens* was in collecting condition as far east as Georgia's Altamaha River where it occurs in masses of rich pinks almost across from Old Fort Barrington and the former haunts of the long-lost *Franklinia*.

AND SOME VARIATIONS

Several curiosities had shown up: we had seen pure white *canescens* but in southern Alabama there were whites and pale pinks with yellow blotches and with the lemon scent of *R. alabamense*, yet they could not be identified as this species. At one point a woodland glade was surrounded by a bizarre display in yellow, orange, white-pink, salmon and every intermediate color one might name. Several of these plants were sent back earmarked as progeny from an apparent triple union between *R. canescens*, *austrinum*, and *alabamense*. On a quick return across central Georgia and Alabama a curious break in *R. canescens* was found on the hills of northwest Alabama and across into Mississippi in which the flowers were somewhat smaller, of uniform color (lacking the red tube) and were often yellow blotched and scented. Through later collections, this variable assortment, typical of nothing in particular, was traced as far north as Cumberland County on Tennessee's Cumberland Plateau. Obviously they had points in common with the hybrid swarms above, but they are widespread, much older and almost certainly contain a dash of *R. nudiflorum* rather than the *austrinum* of the last mentioned mixture.

Rains had been heavy during the course of a too early search for *R. alabamense* proper and it was a mud covered Chevrolet that approached Atlanta, Georgia on the 20th of April to collect mail, replenish supplies and permit a brief pause for scheduled meetings with Jesse C. Nicholls, the azalea-conscious salamander purveyor of Murphy, North Carolina and with W.P. Lemmon of nearby Marietta, student of southern azaleas and authority for three recently described species.

THE RED AZALEA OF GEORGIA

A few miles southwest of Atlanta our attention was momentarily caught by a splash of brilliant orange in a

woodlot not far from the road. Brakes were promptly applied and subsequent investigation revealed an assortment of plants, 2-3 ft. high, in oranges, orange-reds, salmons and strong pinks. Unlike our collections to this point, these flowers were distinct in being almost totally devoid of pin-head glands, just as the leaves seemed nearly hairless on their undersides. Only one Georgia azalea fits a description of this sort and that is "red-flowered" *R. speciosum*, the Oconee Azalea, which during the next day or so was pursued from here to north of Atlanta, across central Georgia to Augusta, and down the Savannah River to Clio in the vicinity of its original place of discovery by Andre Michaux at Two Sisters Ferry. Not particular as to habitats in central Georgia, the Oconee Azalea is a rather confused species in this region. One can guess that it has been on too familiar terms with aggressive *R. canescens* for some time—with results becoming evident through individuals with large, salmon or strong pink flowers with small red flowers with orange blotches or with variability in their possession of pin-head glands or leaf tomentum. Such variants thrive on level ground in warm, sunny places. On the Savannah River a more uniform Oconee Azalea remains an inhabitant of the fairly shady red clay bluffs of the west bank where specimens may be found in excellent deep Saturn red—a red of the Coastal Plain which is unlikely to fade under cultivation. At Two Sisters Ferry the present farm owner told me that he gave up the last ferry boat about thirty years ago. The old road to the river has long since grown up to brush but some aged orange-flowered specimens of *R. speciosum* still grow near the boat landing, just as Michaux saw and described them in 1787. This is a handsome azalea which has already become so scarce that protective measures might well be considered by those who love the wild plants of Georgia.

BY THE ATLANTIC TO VIRGINIA

Descent of the Savannah River in search of the Oconee Azalea had also led by design towards Beaufort County, South Carolina, which lies across the river on the Atlantic coast, due east of Clio; but to cross the river one must necessarily travel very nearly to Savannah itself, which happened to be convenient for dispatching plants and for procuring labels and other needed supplies. Beaufort County, South Carolina, is the "type locality" for the Coast Azalea, *R. atlanticum*, which according to our map should be in flower at the end of April. Our lead was correct for on April 27th the first plants were found in quantity not far from Burton where they held splendid pink blossoms knee high above fern and inkberry in the moist soils of cutover oak woodland. From this point, and with sundry detours, the Coast Azalea was followed in constant flower through the coastal counties of the Carolinas and Virginia and, with a week or two's break, to its most northerly distributional point on the Delmarva peninsula in Delaware. Here in Delaware it is still a low growing azalea; it is generally

white flowered and often highly glandular with pin-head glands on leaves and shoots as well as on the flower parts; the leaves may be glaucous beneath. It would seem likely that such plants as these are most akin to the original form of this azalea and that the pink flowered and less glandular representatives of South Carolina and Virginia may imply a measure of genic interchange with pink flowered *R. canescens* and *nudiflorum* of these regions.

In late April and early May the Coast Azalea makes truly a splendid sight as a multihued understory to the open pine woods of the coastal Carolinas. Since it is highly stoloniferous it recovers promptly in the wake of the brush fire or roadside trimming or grazing so that the year following will again see hundreds of upright flower clusters on wiry, knee-high stems borne by one plant an acre or more in extent. A mass collection of separate clones may necessitate covering a considerable territory to be sure that the 25 or 30 specimens are indeed different.

The course from Savannah to Norfolk, Virginia in search of *R. atlanticum* sounds very direct as just described. It is a distance of 500 road miles which was actually logged on the speedometer at a little more than twice this amount or 1200 miles—which is a fair illustration of the difference between plant collecting and just driving from one point to another! In this particular case the more inland pink azaleas of the Piedmont, *R. canescens* and *nudiflorum*, were also in flower so that the interior counties of the Carolinas were covered in a fairly thorough fashion on a zig-zag route which hit back to the coast at intervals instead of merely following it.

These side excursions were productive of many specimens and several valuable pieces of information. In South Carolina they yielded material from hybrid swarms obviously involving both *R. canescens* and *atlanticum* which are interesting as an indication that a measure of gene exchange does occur between these species; also in South Carolina it was discovered that the inland red clay hills of the Piedmont, which lie roughly between Columbia and Greenville, support very few azaleas. These hills grow excellent red cedar and have a soil pH often in the vicinity of 7.0, which is doubtless the explanation; and finally, in southern North Carolina, was discovered the interesting area of geographic overlap between southern *R. canescens* and northern *nudiflorum* as represented by pink flowered azaleas whose morphology might well test the patience of any precise taxonomist (and as they doubtless have).

A VIRGINIA TRANSECT

Saturday, May 5th dawned a soft, spring day amid the attractions of Colonial Williamsburg; but it was an unusual tourist who departed as early as he had arrived late, having spent time to enjoy no more than a bed and a passing view of the Palace Green in his hurry to catch

as many as possible of the "honeysuckles" now blooming from here to Alabama and the mid west.

Of immediate concern was a planned sampling of the Virginia population of *R. nudiflorum* as it extends from Chesapeake Bay and the habitat of *R. atlanticum* to the Blue Ridge and the mountain home of the northern Roseshell Azalea, *R. roseum*. Variation in the Pinxterbloom Azalea had already posed some questions upon which a transect sampling of this kind was expected to shed light. Mass collections of *R. nudiflorum* were made in Gloucester County at the mouth of the Chesapeake and were continued across the state at intervals of approximately forty miles to the base of the Blue Ridge near Sperryville. From this point collections were made at each 500 ft. increase in elevation to the top of Pinnacle Peak in the Shenandoah National Park, permission to make such collections in the National Parks and Forests of the East having been obtained during the planning stages of the expedition. One of the exciting finds was at the start of this run, not far from Gloucester, Va., where among some cut-back Pinxterblooms near the roadside was one with perhaps the most remarkable coloring I saw anywhere. It was a large blossom in an intense plum purple with strong yellow blotch. There was only one flower head which I cut for a specimen and after measuring, recording and pressing the collection I returned to dig the plant for horticultural use. But unhappily my "find" was already a loss for the small plant could nowhere be found in the heavy brush. Henceforth I learned to dig first and cut afterward—or mark the plant!

At the western end of this transect, azaleas were only just coming into flower at low elevations of the Blue Ridge on this first visit on May 7th. On a return on May 21st, similar azaleas were collectible to two-thirds up the mountain. Completion of the transect at the highest elevations was not possible until June 2nd, or in other words an elevation increase of approximately 2400 ft. delayed flowering by almost a month.

By this time (May 8th) *R. alabamense*, an azalea on which more information is needed, was surely coming into flower in Alabama. This, therefore, was the direction chosen after a brief stop for packing and mailing a good batch of specimens. This time the route kept to the western edge of Virginia and the Carolinas to secure one more coverage of *R. nudiflorum* and *canescens* before striking into Georgia where the latter species was now just about over. A call was made at the University of Georgia in Athens before heading north via Gainesville to the mountains of Lumpkin County for a check on Flame Azalea in the vicinity of Neel Gap. Early *R. calendulaceum* was full out in clear yellows to deep orange in Vogel State Park; it was also seen in exceptionally large flowered specimens in a small ravine just north of Gainesville. One or two of these had such brilliantly red color that one instinctively thought of the

Oconee Azalea growing not too far south—and wondered whether this red in Georgia *calendulaceum* might have a rather special significance.

Again heading southwest, it was on May 12th that the first true *R. alabamense* was found in full flower on the same hilltop in Marshall County of North Central Alabama where they had been seen in tight bud almost a month earlier. It was a real thrill to find this beautiful little white azalea with its dainty, thin-tubed flowers, yellow blotched and deliciously lemon scented. In its "best" individuals this azalea of the Alabama hills is also low growing and quite stoloniferous, it bears foliage which is often glaucous beneath—and as glandular as that of white flowered, low growing and stoloniferous *R. atlanticum* of coastal Delaware.

R. alabamense is obviously later flowering than *R. canescens* but the two have nevertheless hybridized to produce numerous intermediate individuals, intermediate in flowering time, often taller growing than the true Alabama Azalea and varying in color from pure or yellow-blotched white to pinks, often without the deep pink tube of *canescens* proper. As it is followed through Cullman and Winston Counties the Alabama Azalea is found very much on the fairly dry hilltops and often on the eastern slopes where it seems tolerant of considerably more shade than *R. canescens*. Still white flowered but taller growing and in less "pure" form, it leaves the wooded hilltops to flow down sunny slopes to the Sipsey River in a mantle of May snow, as far as the eye can see. In such places, though without such pronounced fragrance, this is unquestionably the clearest and showiest of all white native azaleas.

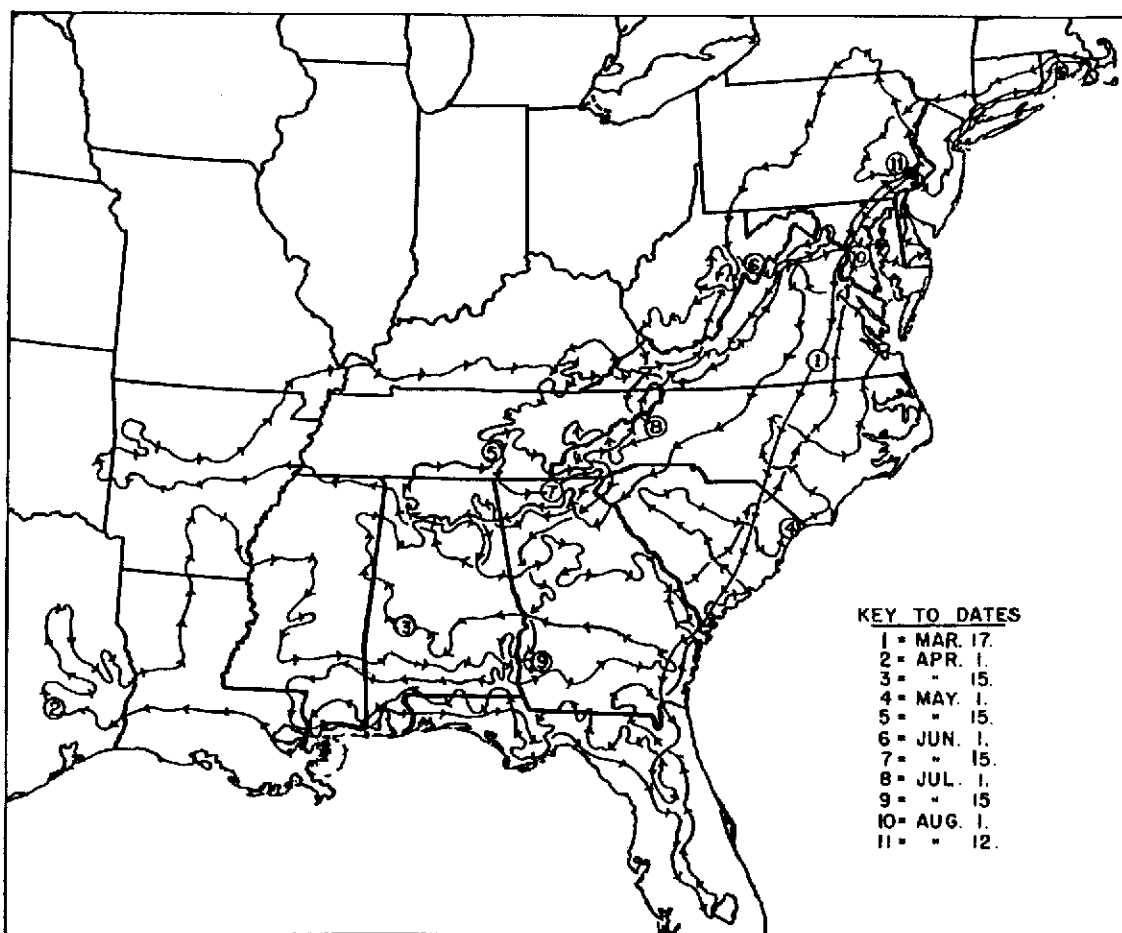
Much as one would have liked to linger in this intriguing collecting area, the azaleas of the north were now calling much too loudly—*calendulaceum*, *atlanticum* north of Virginia, *roseum* and *nudiflorum* in Pennsylvania and New York, and so on; and none of them would wait. But information was still needed on the early azaleas of Tennessee. A route was consequently taken due north across the Tennessee River in the vicinity of Mussel Shoals, then east through southern Tennessee to the rising escarpment of the Cumberland Plateau. Other hills of northern Alabama were covered with the confusing *R. canescens-alabamense* complex mentioned earlier but good *R. canescens* was again found in the occasional sphagnum bogs which are scattered across the red soil land of southern Tennessee. These red soils are interspersed with limestone outcrops, and produce abundant black locust and red cedar, but few azaleas, except in these upland bogs. If these boggy areas are followed northeast from Fayetteville towards McMinnville, Tennessee, their azalea populations undergo a hesitant transition from *R. canescens* towards *nudiflorum*, settling down as relatively "pure" *nudiflorum* in the lowlands of Cumberland County. But the picture is quite different if we proceed directly east from

Fayetteville and ascend the escarpment of the Cumberland Plateau. From below Sewanee the lower limestone strata are overlain with sandstone and beyond this point azaleas are immediately abundant in a confused complex reminiscent of *R. canescens*, *nudiflorum* and *alabamense*—all thoroughly mixed together and varying in flower color from pure white to lavender, pale pink with pale tubes and pink with deep red tubes, many of the plants being highly stoloniferous. On the plateau this complex again extends north for 70 miles or more to Cumberland County, just as we have already followed it across northern Alabama from Mississippi.

On the southern edge of the Crab Orchard Mountains in Cumberland County a small detour was taken to explore Grassy Cove, a limestone sink of such proportions that farms and a small village are found on the level fertile floor of the huge hole sunken many hundreds of feet below the present level of the plateau. It has its own meandering river which flows northwest to disappear into a gaping cavern, and then changes its direction beneath a mountain whose lowest pass is 1000 ft. above the cove floor. It eventually reappears as the Sequatchie River flowing south towards Chattanooga. This was but one of so many marvels of scenery whose exploration and enjoyment was a constantly fascinating accompaniment to this quest for azaleas.

From Grassy Cove the route lay down the scenic Sequatchie Valley with side excursions to the plateau ridges on either side. On the upper sandstones azaleas remained abundant but on the limestone valley floor they occur only along occasional streamsides amid sandstone boulders washed from the upper slopes. It was repeatedly observed that azaleas grow in limestone areas, often abundantly, but detailed observation invariably reveals a situation like the above or a restriction to leached hilltop soils a few inches or a few feet in thickness as they cap the limestone ridges of Virginia, Kentucky and Tennessee.

Leaving the Sequatchie Valley by striking east over the Walden Ridge the road descended into the Great Valley of the Tennessee River. It crossed the river and valley in a south-easterly direction and ascended the foothills of the southern Appalachian Mountains in the vicinity of the Cherokee National Forest. Apart from the appalling vegetational desolation resulting from copper smelting in the Copperhill-Ducktown region of Polk Co., Tennessee, the uplands of this southern mountain area present some of the finest scenery and most luxuriant forest cover discoverable in the East. Across into North Carolina the great National Forest of Nantahala is named for the Indians' "Land of the Noonday Sun." Here the valley sides are so steep that direct sunlight is soon lost, while an annual rainfall of over eighty inches is only matched on this continent in local areas of the Pacific Northwest. Within this forest an initial visit was made to the summit of 5400 ft. Wayoh Bald, native habitat of *R.*



Itinerary of the Trip

arborescens var *Richardsonii* as recognized by Rehder. But the mountain is populated by only late flowering azaleas, none of which were yet open. However, typical large flowered *R. calendulaceum* was found in full flower at lower altitudes on entering North Carolina and was thus followed to Asheville and well up into Virginia. A half day pause was made at Asheville and the Biltmore Estate to examine a part of Louis Shelton's diversified charge—the Beadle collection of native azaleas, which without question is the finest anywhere assembled. The visit was especially enjoyable in the instructive company of Sylvester Owens, who assisted in collecting the many hundreds of plants and in whose immediate understanding care they fortunately remain.

THE VIRGINIA MOUNTAINS

Back in Virginia *R. roseum* and *nudiflorum* were still in flower and in the Jefferson National Forest on a hill slope near Konnarock a collection was made of an interesting group of triple hybrids involving these two species and *R. calendulaceum*—which would imply the somewhat puzzling combinations of two diploids and a tetraploid if published chromosome counts have actual application in the wild. The hybrid progeny included small, sweet scented pinks with yellow blotches all the way to salmon yellows of the same flower size as normal Flame Azalea.

Farther North a second especially interesting stop was at Peaks of Otter in the Blue Ridge where a transect was run down the west side of Board Top Mountain. This transect took five hours to accomplish and was decided upon after brief analysis of intermediate elements of a continuous azalea cover which runs from elegant, highly glandular *R. roseum* on the mountain top through transitional stages of vari-colored, stoloniferous individuals to "good" *R. nudiflorum* at lower elevations conveniently reached by a gravel road sharply descending from the much-traveled Skyline Parkway.

Taking a somewhat westerly detour, the next main stopping point was a return visit to the Shenandoah National Park for further collections on the Pinnacle Peak transect after obtaining maps and much helpful advice from Park Naturalist Paul Favor. This was on May 21st and time was passing. With the last specimen tucked away—around 6 p.m. it seemed increasingly imperative to reach Delaware as soon as possible for a last collection of Coast Azaleas. The road lay via Washington and the Annapolis ferry, the new Bay Bridge being as yet under construction. With a pause for a joint gas tank and personal refueling in Washington the one hundred and twelve miles to Annapolis was completed still in time to find lodgings for the night.

Crossing the Chesapeake by ferry early next morning a search was begun for Choptank Mills, Delaware, this being a remembered collecting locality of Philadelphia's Witmer Stone in 1904. Exclusive of type localities this was one of the few occasions on which a former collecting site was deliberately sought, in this case to save time. But the opposite results were secured. Choptank Mills was not on the map; by telegraph inquiry it was unknown to the State Police of Delaware, Maryland or Virginia or even to the Postmistress of Choptank—after a lengthy drive to locate this tiny unhurried village at the mouth of the Choptank River in Maryland. No Coast Azalea was seen and only one clue remained to investigate: the Choptank River did have a source in Delaware as a small stream in the vicinity of Sandtown. By this time we were driving the Atlantic side of the peninsula and a few azaleas had been located; at Sandtown, however, they suddenly appeared in such abundance in pure white to pale pink flowers for roadside miles that at

least the ghost of Choptank Mills of 1904 must surely be nearby! Most of this was splendid dwarf, stoloniferous and highly glandular *R. atlanticum*, the kind of plant one could easily regard as a prototype of the rather confused *canescens*—friendly representatives of its South Carolina "type locality"—and a single plant of it would have been well worth the time and mileage of the search to find it.

Back to Philadelphia that evening and the enjoyment of three whole days of complete relaxation, only passively devoted to checking specimens, restocking supplies and generally preparing for the last short haul of another nine or ten weeks in the field.

(To be continued in the June *Azalean*)

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"**Azalea Classics**" are articles published in the past which *THE AZALEAN* staff deems worthy of being brought to the attention of today's azalea enthusiasts.

THE LINWOOD HARDY AZALEA STORY

Theodore S. Stecki
Marlton, New Jersey

In 1951, Charles Fisher, Jr., present owner of Fisher Greenhouses in Linwood, New Jersey, started crossing tender azaleas with hardy varieties. His goal was to develop hardy azaleas that could be grown in the field, as winter greenhouseing of Belgian Indicas and other tender plants was becoming too costly.

With more than forty varieties of Indicas, Rutherfordianas, Pericats, Kurumes, etc., to work with, he obtained many seeds. If it bloomed, he pollinated it. At the end of four years however, three-quarters of the grown-on seedlings had been winter killed, and the rest produced plants that did not meet Fisher's standards.

In 1953, G. Albert Reid joined Fisher Greenhouses and was given the assignment to continue what Charlie had started. Al worked hard and kept excellent records, and since that time the breeding and production of the Linwood Hardy Azaleas has been "his baby". Al worked for Fisher Greenhouses for fifteen years, and during those years many crosses were made and thousands of seedlings were grown-on. The largest crop numbered over 6,000 seedlings resulting from crosses of just one year. Al made the comment that as a result of Fisher's goal to establish plants for the floral trade to sell (that is, ones with better flowers, fast growth, compact habit, that are easily forced and good keepers) many plants that were discarded were ones that he wished he had kept.

One of Charlie's earlier crosses (A-3) proved very valuable in later crosses as a seed parent. The one azalea most responsible for putting hardiness in the Linwoods was in a group purchased from Bobbink and Atkins of East Rutherford, New Jersey, identified only as K28. A Mr. White, who was part of the Bobbink and

Atkins organization, thinks that K-28 is the same as 'Mrs. L. C. Fisher', but their breeding records are blank on this. Many people who have seen both azaleas believe that K-28 is the same as the one Robert Gartrell found in a roadside market and used to put hardiness in his crosses.

When Al retired from Fisher Greenhouses in 1967, he decided to produce better garden-type azaleas with larger flowers that would last longer in bloom. This program automatically eliminated all single-flower plants. All Linwood Hardy Azaleas are either double, semidouble or hose-in-hose flowers. These more complicated flower types extend the blooming time of individual plants to three and in some cases four weeks.

The Linwood Hardy hybrids show a diversity of plant types. For example, there are prostrate growers, tall growers, and compact growers. There is a fall bloomer, a red-white variegated, and early summer bloomers. There are no common ancestors in the Linwoods. They are a conglomeration of crosses of Belgian Indicas, Rutherfordianas, Pericats, Gables, Kurumes, and others followed by back crosses, sib crosses, crosses on crosses, and even selfs with the underlying goal of trying to get something better.

Due to poor health, Al discontinued his nursery operation in 1983. One of his goals before retiring was to develop additional fall bloomers such as 'Opal'. Crosses that were made prior to his retirement, which make up the S, T, and V series, have not proven to be fall bloomers. Plants of the T and V series are under evaluation at my nursery. A few plants of these series are turning out to be real "eye-catchers".

REGISTERED LINWOOD HARDY AZALEAS

'Bess Hallock' (0-9) - (Parents unknown) Flowers 2" x 1", hose-in-hose, semidouble, Spirea Red o25/¹ (HCC). 12" tall x 24" wide in five years. Hardy to 0°F.

'Carol Kitchen' (0-25) - (Parents unknown, cross 1967, introduced 1980) Flowers 2¼" x 1½", hose-in-hose, Red purple group 57C (Rose Bengal with 57A dorsal spotting). Upright, rounded, branches well, 30" tall x 24" wide in ten years. Blooms mid May. Hardy to -10°F.

'Dimsdale' (S-3) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 2" x 1½", hose-in-hose, Red Purple Group 68A (Roseine Purple) with 67B dorsal spotting. Upright, rounded, branches well, 36" tall x 36" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Dr. Franklin West' (0-5) - (Parents unknown) Flowers 2½" x 1", double, Delft Rose o20 (HCC) with purple blotch. 14" tall x 18" wide in four years. Rabbits like it. Hardy to +10°F.

'Doctor James Hitchner' (S-57) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 2¼" x 1¼", hose-in-hose, Red Purple group 68B (Roseine Purple) with 1½" x 1" blotch and spotting 63B (Spirea Red) in dorsal 3-lobe sector. Upright, branching moderately with stiff branches, 30" tall x 30" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Dr. Thomas McMillan III' (S-13) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 2" x 1", double, Red Purple group 68A (Roseine Purple) with Red Purple group 64A (Magenta Rose) blotch in throat. Rounded, branching moderately, 30" tall x 30" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Edward M. Boehm' (L-18) - (A-3 x E-9) Flowers 2¾" x 1¼", hose-in-hose, Solferino Purple 26 (HCC) with large blotch streaked with brown. 18" tall x 30" wide in six years. Hardy to -5°F.

'Edward W. Collins' (S-55) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 1½" x 1", hose-in-hose, double, Red group 52C (Carmine Rose) with no markings. Upright, branching moderately with stiff branches, 30" tall x 36" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Emma Reid' (0-19) - (Parents unknown) Flowers 2½" x 1¼", hose-in-hose, double, China Rose o24/¹ (HCC). 12" high x 14" wide in four years. Hardy to -5°F.

'Evelyn Hart' (S-2) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 1¼" x 1", hose-in-hose, double, Red Purple group 68B (Roseine Purple) no markings. Upright yet broad, branches well, 36" tall x 48" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Garden State Garnet' (0-12) - (Parents unknown) Flowers 2¼" x 1¼", hose-in-hose, China Rose o24 (HCC). 30" tall x 40" wide in six years. Hardy to 0°F.

'Garden State Glow' (E-26) - ('Salmon Spray' x 'Hino Crimson') Flowers 1¼" x 1", hose-in-hose, China Rose o24/¹ (HCC). 26" tall x 24" wide in four years. Hardy to 0°F.

'Garden State Pink' (E-30) - 'Dawn' x 'Hino Crimson') Flowers 1¼" x 1", hose-in-hose, China Rose o24/¹ (HCC). 20" tall x 18" wide in four years. Hardy to +5°F.

'Garden State Red' (N-3) - (L-21 (Linwood seedling) x E-9 ('Hexe' x 'Vervaeneana') Flowers 2¼" x ¾", hose-in-hose, Solferino Purple 26/¹ (HCC). 15" tall x 24" wide in six years. Hardy to +5°F.

'Garden State Salmon' (C-36) - ('Koenig' x 'Orange Cup') Flowers 1¾" x 1½", hose-in-hose, Blood Red 820/³ (HCC). 20" tall x 16" wide in four years. Hardy to 0°.

'Garden State White' (H-11) - ('Salmon Glow' x A-3) Flowers 2¼" x 1½", hose-in-hose, white with light char- treuse blotch. 18" tall x 24" wide in four years. Hardy to 0°F.

'George School' (S-X8) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 2¼" x 1¼", hose-in-hose, Red Group 55A shading to 55C in throat (both Neyron Rose) with Red Purple group 61C (Tyrian Purple) blotch of spotting in dorsal 3-lobe sector. Upright, branching moderately with stiff branches, 30" tall x 24" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'James Dunlop' (0-13) - (Parents unknown) Flowers 2¼" x 1¼", hose in hose, semidouble, Red Purple Group 66C (RHS). 20" tall x 18" wide in five years. Hardy to -5°F.

'Janet Rhea' (N-4+) - (A sport of N-4 (sister of N-3)) Flowers 2½" x 1", hose-in-hose, semidouble, Solferino Purple 26/¹ (HCC) with each petal having ⅛" to ¼" white edging. Flower is like Belgian Indica 'Vervaeneana', one of the grandparents. 16" tall to 24" wide in four years. Hardy to 0°F.

'John Brockett' (S-1) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 1½" x 1¼", semi- double, Red Purple group 61D (Rose Bengal), 68C (Roseine Purple) in throat with prominent blotch of spot- ting 57D in dorsal lobe sectors. Broad yet upright grow- ing, branches well, 24" tall x 48" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Linwood Charm' (0-2) - (Parents unknown) Flowers 2¼" x 1¼", hose-in-hose, semidouble, Phlox Pink 625/¹ (HCC). 18" tall x 30" wide in six years. Hardy to 0°F.

'Linwood Lavender' (H-1) - ('Salmon Gow' x A-3) Flowers 2½" x 1½", hose-in-hose, semidouble, Fuchsia Purple 28/² (HCC) with purple brown spotting. 24" tall x 24" wide in five years. Hardy to 0°F.

'Linwood Lustre' (H-4) - ('Crimson King' x A-3) Flow- ers 2½" x 1", hose-in-hose, semidouble, white with char- treuse spots blending into blotch. 20" tall x 18" wide in five years. Syn. 'Improved Linwood White'. Hardy to -5°F.

'Linwood Pink Giant' (K-11) - (A-3 x C-14) Flowers 2½" x 1¼", hose-in-hose, Tyrian Purple 727/³ (HCC). 48" tall x 60" wide in seven years. Syn. 'Improved Linwood Pink'. Hardy to -10°F.

'Linwood Ruby' (0-7) - (Parents unknown) Flowers 2¼" x 1", hose-in-hose, semidouble, Spirea Red o25/¹

(HCC). 30" tall x 36" wide in six years. Hardy to 0°F.

'Linwood Salmon' (K-10) - (A-3 x C-14) Flowers 2½" x 1½", hose-in-hose, frilled edges, Delft Rose o20 (HCC). 22" tall x 28" wide in six years. Needs full shade. Hardy to -5°F.

'Linwood White' (H-5) - ('Salmon Glow' x A-3) Flowers 2¼" x 1½", hose-in-hose, double. 40" tall x 30" wide in seven years. Flowers will sunburn on edges in full p.m. sun. Hardy to 0°F.

'Lorna Carter' (S-56) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 1½" x 1", hose-in-hose, double, Red group 54B (Spinel Red) with minor dorsal spotting, Red Purple group 67B (Fuchsia Purple). Broad yet upright growing, branching moderately, 36" tall x 48" wide in 12 years. Blooms early May. Hardy to 0° to -5¼°F.

'Lotta Burke' (S-54) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 2¼" x 1½", hose-in-hose, Red group 52C (Carmine rose) with heavy red Purple group 57C (Rose Bengal) spotting on dorsal 3-lobe sector. Broad, yet upright growing, branches well, 30" tall x 36" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Mary Elizabeth' (O-24) - (Parents unknown) Flowers 2½" x 1", hose-in-hose, Phlox Pink 625 (HCC). 24" tall x 20" wide in four years. Hardy to 0°F.

'Opal' (L-1) - (A-3 x K-28) Flowers 2½" x 1¼", double, Fuchsia Purple 28/² (HCC). 24" tall x 24" wide in four years. In full bloom October 1st until first hard freeze. Frozen flowers and foliage give plant poor appearance during winter but plant revives and blooms again in May. Hardy to 0°F.

'Orchid Beauty' (E-52) - (Bobbink and Atkins 'Glory' x Gable 38-G) Flowers 2¼" x 1¼", hose-in-hose, double, Tyrian Rose 24/² (HCC). 20" tall x 18" wide in four years. Hardy to -10°F.

'Peach Fuzz' (L-34) - (A-3 x K-28) Flowers 1½" x 1" double, Empire Rose o621 (HCC). 20" tall x 30" wide in five years. Hardy to -10°F.

'Pink Pincushion' (L-8) - (A-3 x K-28) Flowers 1¾" x 1½", hose-in-hose, double, Spirea Red o25/² (HCC). 26" tall x 24" wide in four years. Hardy to +10°F.

'Reid Red' (O-1) - ('Hershey Red' x unknown) Flowers 2" x 1½", hose-in-hose, semidouble, Rose red 724/¹ (HCC). 20" tall x 18" wide in four years. Hardy to +10°F.

'Salmon Pincushion' (L-4) - (A-3 x K-28) Flowers 1¾" x 1½", double Geranium Lake 20/² (HCC). 20" tall x 22" wide in four years. Hardy to 0°F.

'Theodore S. Stecki' (S-26) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 1¾" x 1", hose-in-hose, double, Red Purple group 61D (Rose Bengal) with no markings. Upright, rounded, branching moderately, 36" tall x 36" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'Thomas Rose' (S-43) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 2" x 1¼", Red group 47C (Delft Rose) with Red Purple group 60B

dorsal spotting. Upright, rounded, branches well, 24" tall x 24" wide in 12 years. Blooms early May. Hardy to 0° to -5°.

'Tiny' (L-28) - (A-3 x E-9) Flowers 1" x ¾", hose-in-hose, double, Solferino Purple 26/² (HCC). 9" tall x 16" wide in seven years. Hardy to -5°F.

'Victoria Hohman' (O-3) - (Parents unknown) Flowers 2½" x 1¼", hose-in-hose, double, Solferino Purple 26/¹ (HCC). 14" tall x 16" wide in four years. Rabbits like it. Hardy to 0°F.

'Walter Kern' (S-X2) - ('Nellie' (C-4) x 'Opal' (L-1) cross 1970, introduced 1982) Flowers 1¾" x 1¼", hose-in-hose, double Red Purple group 68A (Roseine Purple) with no markings. Broad, branches well, 18" tall x 24" wide in 12 years. Blooms early May. Hardy to 0° to -5°F.

'White Squatter' (O-22) - (Parents unknown) Flowers 2½" x 1", hose-in-hose, wavy lobes, White group 155D with 149C blotch across three dorsal lobes (RHS). 10" tall x 18" wide in four years. Hardy to +5°F.

PATENTED PLANTS, NOT REGISTERED

'Dr. Curtis Alderfer' (C-24) - ('Crimson King' x 'Konig') Flowers 2¾" x 1", semidouble, red. 16" tall x 12" wide in three years. Greenhouse type. Hardy to +15°F.

'Linwood Pink' (C-28) - ('Salmon Special' (Bobbink and Atkins) x 'Mother of Pearl' (Tingle)) Flowers 2¼" x ¾", hose-in-hose, medium pink. 14" tall x 12" wide in three years. Greenhouse type. Excellent for Easter forcing. Hardy to +15°F.

'Nellie' (C-4) - ('Prince George' x 'M.R. Mulford') Flowers 2" x 1", hose-in-hose, semidouble, medium pink. 12" tall x 12" wide in three years. Greenhouse type. Forces easily for Christmas. Hardy to 0°F. Flower buds hardy to +15°F.

FLORIST TYPE PLANTS, NOT REGISTERED

'Linwood Blush' (E-4) - ('Jean Haerns' x 'Salmon Spray') Flowers 2¼" x 1½", soft salmon pink, hose-in-hose, double. 12" tall x 10" wide in three years. Hardy to +15°F.

'Linwood Lilac' (E-15) - ('Albion' x Gable 38G) Flowers 2½" x 1", hose-in-hose, deep lavender. 14" tall x 10" wide in three years. Hardy to +15°F.

OTHER LINWOODS NOT REGISTERED

'Hardy Gardenia' (L-30) - (A-3 x E-9) Flowers 2½" x ¾", hose-in-hose, double, white. Low plant, 14" tall x 30" wide in eight years. Cannot be registered because of its name. Hardy to -10°F.

'Linwood Pink #2' (D-2) - (C-14 x A-3) Flowers 2¼" x 1", hose-in-hose, medium pink. 12" tall x 14" wide in three years. Hardy to 0°F. Named #2 because some wholesale growers as a result of its hardiness were substituting it for the patented 'Linwood Pink'.

'Slim Jim' (L-14) - (A-3 x K-28) Flowers 2½" x 1½", very double, light pink. Shape is round in the open but shoots up tall if confined. Will make 36" or more in four

years. Foliage is poor but the beautiful flower makes it worthwhile as a background. Hardy to 0°F.

UNNAMED LINWOOD SEEDLINGS USED IN BREEDING AND DROPPED

A-3 Parents unknown

C-14 'Rose Greeley' x K-28

E-9 'Hexe' x 'Vervaeneana'

L-21 ('Hiawatha' x 'Glacier') x A-1 (Parents unknown)

K-28 A Bobbink and Atkins unnamed seedling.

Ted Stecki operates Hillhouse Nursery where he is growing all of the Linwood Hardy Azalea varieties from the original seedlings and is also evaluating two of Al Reid's latest crosses, the T and V series.

ASA NEWS AND VIEWS

THE PRESIDENT'S COLUMN

As I write this on a cold bleak January day my thoughts are continually turning toward that time of year which is just around the corner. In just a few short weeks in this part of the country we will start to see the first evidence of the miracle of spring. The Carolina Jasmine which grows wild throughout the woods is already showing a few flowers, especially in protected areas. It will not be long before a mass of yellow will be along fence rows, on roadside embankments, and in bushes and trees. Then the first of the azaleas—'Festive' followed by 'Early Lavender', 'Elegans', 'Amoena', and several of the Kurumes will tell us that spring is arriving. The redbuds and dogwoods put on their massive displays as each day becomes warmer. By the middle of March, the Southern Indicas tell us "look out here we come". They do just that with their large blooms and solid masses of brilliant reds, pinks, violets, and white. What a wonderful time of the year. With two azalea flower shows scheduled for the later part of March and early April, Louisiana members will have their hands full. Several of us, however, are looking for a second spring as we think about the National Convention in New Jersey in May. Malcolm Clark and his group have planned a wonderful time for us. Do plan to attend if at all possible. The "Robin Hills" should be at their peak according to Malcolm.

I am sure that by now most of you who have ordered Fred Galle's book *Azaleas* should have your copy. It is indeed quite a book. Thanks again, Fred, for giving us such a fine book. I know you had many pitfalls and obstacles along the way. For those of you who have not seen it, let me urge you to do so soon.

There are also two other new publications that would be an asset to anyone's library; the new Ortho Book, *All About Azaleas, Camellias and Rhododendrons* and Jim Darden's *Great American Azaleas*. All of us in the azalea world are grateful to the authors for such fine reference materials.

John U. Rochester
President

SOCIETY NEWS

1986 *Azalean* Cover Artist

Our 1986 cover illustration is by Donald C. Hand, supervisor of Horticulture at the National Gallery of Art of the Smithsonian Institution in Washington, D.C. Donald is a member of the Brookside Gardens Chapter and resides with his wife and three daughters in Monrovia, Maryland. He has been drawing and painting for most of his 40 years but "my art has been devoted to the media of pencil and pastels during the past several years. My subject matter is primarily landscape, leaning heavily upon the rural setting of Frederick [County, Maryland] for my inspiration."

Donald has a degree in Ornamental Horticulture from the University of Maryland and before returning to the National Capital area taught horticulture at the Norfolk Botanical Gardens in Norfolk, Virginia. Recently he has "fallen in love with azaleas" and has begun a collection of hardy azaleas for breeding, propagation, and production.

THE AZALEAN staff congratulates Donald upon the selection of his outstanding drawing for the 1986 cover illustration and invites society members to submit black and white inked drawings for consideration as the cover art for *THE AZALEAN* in 1987.

8TH ASA CONVENTION

The Robert D. Gartrell Chapter and the Headquarters Plaza Hotel in historic Morristown, New Jersey join in extending their warmest welcome to ASA for its eighth annual convention, May 16-18, 1986. The convention facilities are truly superior: a magnificent meeting room without noisy neighbors, upwards of 1000 square feet for plant exhibition and sales, an ample room for small group meetings, food from The Headquarters Plaza Hotel's 3-star kitchen, and Sunday checkout at 3PM! The elegant private accommodations will be \$65 per room.

per night, single or double, or about half the regular rates for 1985.

Within a half an hour drive of Morristown, magnificent estates abound. For us, however, there is a hitch—*Odocoileus virginianus*, the white-tailed deer. Ten foot fences (some suggest fourteen) do not abound. Thus, the more competitive needled evergreens outnumber azaleas in these superb gardens by about five thousand to one. Still, there have been pioneers, and we will visit at least the following:

1) The 127 acre Frelinghuysen estate, since 1971 a Morris County arboretum, has an extensive collection of both evergreen and native azaleas, as well as hundreds of other things to interest the plantsperson. In town, it is generally free of deer. We will lunch here on Saturday, then tour the arboretum.

2) The Leonard J. Buck Garden is world famous among rock garden enthusiasts. A 1950 Gold Medal winner and, since 1976 the flagship arboretum of the Somerset County Park Commission, this work of art is sure to inspire you on Saturday morning.

3) Hamilton Farm is an excellent example of the grand estates in Morris-Somerset horse (and deer) country and the only one to use azaleas extensively. This is accomplished by confining the azaleas mainly to foundation plantings and erecting a few thousand feet of six foot fence each winter. Purchased several years ago by Beneficial Corporation, Hamilton Farm is famous as the home of the U.S. Equestrian Team. A short visit here on Saturday morning should instruct as well as delight.

4) On Sunday morning we will visit the pioneer garden of ASA past president, Jerry Goodman. No crews of gardeners here, just twenty plus years of hard work, good taste, and dedication to enriching the cold country suburbs with an enormous variety of azaleas. You will certainly love the results.

What we cannot show you in gardens we hope to exhibit at the convention center. Already we have assembled some two hundred varieties in landscape sizes, and we are not through yet. Hopefully we can have most in show condition come mid-May. Coupled with the plant exhibition will be an extensive sale and an ongoing slide program on the Gartrell hybrids.

The Saturday night banquet will feature Bob Carlson of Carlson Gardens. Few have more experience in Zone 6 azalea growing or better slides. We think you will agree that Bob's wide ranging expertise deserves a wider audience.

Arrangements for Friday evening and a large block of "available" time on Sunday are not complete. We are negotiating with the academic community for a "technical program", have approached several contemporary breeders to see if a roundtable can be assembled within our budget and, of course, we have several other outstanding gardens to offer. Thus, a few loose ends

remain, but all in all it's looking good for '86. Plan on joining us. We are confident it will be top shelf.

Malcolm Clark

Convention Chairman

P.S. In all things, we are concerned with keeping costs down in this expensive part of the country. We plan to do it for \$85 including Saturday meals through Sunday brunch or lunch but exclusive of lodging (\$65 per night at the Headquarters Plaza Hotel). In addition, we will provide as many peripheral cost-cutting services as we can. For example, airport transportation at cost (free driver) and, since you can eat both better and cheaper on your own, recommendations and/or arrangements for Friday dinner will be offered. In sum, be assured that we are working to provide door to door dollar value for each attendee. (The red carpet is free.)

NOMINEES FOR SOCIETY GOVERNORS

Five Governors are to be elected at the 1986 annual meeting of the Society to be held at the Headquarters Plaza Hotel in Morristown, New Jersey during the weekend of May 16-18, 1986. The nominating committee appointed by the Board of Governors presents the following names in nomination to serve a two year term from the 1986 annual meeting through the 1988 annual meeting of the society.

L. Malcolm Clark. Mal is currently Vice-President of the society and co-chairman of the 1986 ASA Convention. A long-time azalea enthusiast, he heads the society's awards committee. Later this year, he will be returning to his native North Carolina where he is planning to expand his endeavors in azalea horticulture and local azalea society activities.

Fred C. Galle. "Mr. Azalea" to many, Fred was formerly Director of the Horticulture at Callaway Gardens during 1953-1973 and Curator until his retirement in 1983. He is a current Governor of the Azalea Society of America and has served in similar capacities in numerous horticultural societies and organizations including, the Advisory Council for the U.S. National Arboretum during the period of 1964-1972. Among his many honors are the Silver Medal from the National Council of State Garden Clubs and the American Horticultural Society's Citation for Outstanding Contributions to Professional Horticulture. Author of numerous publications, his current book *Azaleas* is the most authoritative reference on the subject.

David Lay. David became interested in azaleas in the Far East first as a Chinese linguist during the Korean War and later while working in Japan. Currently President of the Middle Atlantic Chapter of the American Rhododendron Society, he has for the past ten years

operated Northern Neck Nurseries, Inc. in Kilmarnock, Virginia, a wholesale and retail container operation specializing in rare and unusual azaleas in landscape size. David resides with his wife and two children, none of whom can tell a 'Shira Fuji' from a 'Silver Sword'!

Robert T. Stelloh. Bob and his wife Denise are 1979 Charter members of the Brookside Gardens Chapter. He has been an azalea enthusiast for more than 15 years and in recent years has been developing an extensive azalea and rhododendron collection in the woods around his home in Maryland. Bob is the staging chairman for the Brookside Gardens Chapter 1986 azalea flower show and has served on the society's satsuki project committee for the past several years.

Donald H. Voss. Don has been an international economist with the Federal government since 1961. Prior to that, he did economic research for a major New York bank and taught college economics for a decade. He has worked extensively with ornamentals, particularly azaleas, and pursues interests in the taxonomic aspects of botany. He has contributed definitive articles on the Robin Hill hybrids and on flower color perception to *THE AZALEAN*, is a member of the American Rhododendron Society's Publications Committee, and is compiling an annotated glossary of descriptive terminology for the genus *Rhododendron*.

1986 Nominating Committee
Donald W. Hyatt, Chairman
Barbara L. Laguardia
Dorothy Robinson
Glenn W. Taylor

AMENDMENTS TO ASA BY-LAWS

The Board of Governors proposes the following change to the By-Laws of the Azalea Society of America for consideration by the membership at the 1986 Annual Meeting of the society:

Change Article IV, Section 7, as follows:

1) Renumber the existing entry as "a".

2) Add a paragraph, to read: "b. Life membership dues are payable to the ASA. Beginning with May 1985, each life membership fee received shall be placed in the ASA Special Projects Fund, except that the ASA shall:

a) pay the appropriate chapter, if any, initially and each year thereafter for the life of that member, an amount equal to the chapter portion of the annual dues, and

b) place in the ASA Operating Fund, initially and each year thereafter for the life of that member, an amount equal to the ASA portion of the annual dues fee."

Rationale:

Until now, life membership dues have been apportioned between the national society and the chapter to which the life member is affiliated. The national society portion of such dues has been placed directly in the operating funds, and promptly used toward normal operating expenses. Presumably the same has been happening at the chapter level.

A sounder approach, financially, is to invest such dues, paying into operating funds each year only amounts which an annual member would pay. The remainder will earn interest toward future annual payment for the life member. The proposed change will accomplish this.

IN MEMORIAM

ROBERT D. GARTRELL

Robert D. Gartrell leaves to the horticultural world a heritage of remarkable azaleas—the sixty-nine he named as Robin Hill evergreen azaleas, as well as a large collection of numbered hybrids. Several of the latter, which Robert requested be designated Gartrell Hybrids, have been recognized for superior beauty and performance and have been named.

Robert's interest in hybridizing extended over six decades. While in Canada in the 1920s, he crossed delphiniums. Returning to the United States in 1930, he found that New Jersey was not well suited for this. Noting the paucity of azaleas that would grow and bloom reliably in the area (only 'Amoenum' and Kurume hybrids were widely grown) and remembering from his early years in Atlanta, Georgia, the beautiful Southern Indicas, Robert decided in the late 1930s to work with azaleas.

Robert approached the new challenge scientifically, applying methodology ingrained from the work in chemistry and industrial product development in which he was engaged until retirement in 1960. He began by studying azalea hybridization and the parentage of cultivars with promising characteristics and by acquiring plants to grow, observe, and evaluate for crossing. In these activities, Robert earned the respect and friendship of plantsmen—many of the great and tyros alike.

After selecting and growing to maturity nearly 2,000 hybrids during the 1950s, Robert faced disappointment in 1962. While many of these were superior in habit and foliage, he judged that they were not sufficiently distinctive from the Glenn Dales and others to warrant introduction. By then, however, thousands more had been grown, and genes from the newly introduced Satsukis were adding to hardy stock the characteristics sought: superior foliage and plant form; low-growing habit; large,

full flowers of good substance; and, in many cases, late blooming time.

As the new hybrids matured, demonstrating their quality and hardiness, Robert began selection for naming and distribution. Characteristically, even when the Robin Hill azaleas had fulfilled his early hopes, Robert set new goals and continued to make new crosses until failing health forced him to close his nursery in Wyckoff, New Jersey.

Those who came to know Robert's creativity and gentility through contacts in connection with azaleas and those who know only of his hybrids may find a deeper appreciation of the man and his horticultural work in awareness of his other accomplishments and interests. Intellectual curiosity and creativity were hallmarks of his approach to product development with the U.S. Rubber Company and to his avocational activities. In addition to horticulture, his hobbies included history, music appreciation, art history, mathematics, and electronics.

Robert D. Gartrell died on October 30, 1985, at the age of 90, but he left to us an everlasting legacy of springtime beauty.

* * * *

Robert's family has indicated that a fitting tribute to his memory would be contribution to the American Rhododendron Society Research Fund or a similar activity benefitting the art and science of horticulture that was so much a part of his life.

Donald H. Voss

GLENN DALE PRESERVATION PROJECT

At this writing, it is too soon to assess the impact of the 1985-1986 winter on our ongoing project at the Plant Introduction Station at Glenn Dale, Maryland (or for that matter on our horticultural interest closer to home). A gross inspection of the Germplasm Resource Planting Area shows that our cohort of unnamed Back Acres hybrids is suffering to a disproportionate extent in comparison with the Glenn Dale hybrids... a finding consistent with expectations.

In view of our experience in 1985, with the sudden freeze in early April and its subsequent negative effect on flower production, it will be interesting to note in the coming year whether we have more color, less color, or about the same color as usual. One could be tempted to believe that there is a lot of unexpended potential or energy that was not utilized in flower and seed production, which is awaiting an opportunity for expression as (1) additional foliage during the current year or (2) increased bud production for the next year. If such potential is cumulative from year to year, and the weather gives us an even break, then 1986 could be a remarkable year for color. Whether or not it works that way remains to be seen.

The Committee is please to report that the Workdays

at the Glenn Dale Station went quite well in 1985. In fact, in response to growing interest, the Committee has decided to organize one spring Workday to complement the existing program of three fall Workdays. Workdays for 1986 are planned for April 16, September 20, October 18, and November 15, from 9:00 a.m. to 1:00 p.m. Bring your gloves, loppers, shears, pitchforks, shovels, saws, axes, and enthusiasm and enjoy the good company. Come one... come all and share in the spring beauty of Glenn Dale while contributing a little of yourself to a good cause.

For the first time we are experimenting with using Typar, a lightweight fabric mulch produced by Du Pont. We anticipate that this will result in a reduction in the amount of labor necessary for maintaining the society's Germplasm Resource Planting Area, thus permitting more attention to be shifted to the restoration activities.

The Committee is very pleased to acknowledge the donation of twenty Hager hybrid azaleas to the Germplasm Resource Planting Area by Don Hager of Spotsylvania, Virginia. This is the first major plant acquisition in over two years, and we are informed by Don that he will have more for us next year. The criteria for donating plants to the Glenn Dale project were previously published in *THE AZALEAN* 5:54(1983). For more information or to donate plants contact Roger Brown at (301) 577-7509 or Andy Dietz at (301) 384-2092.

The Glenn Dale Preservation Project Committee

William C. Miller III

August A. Dietz IV

Roger C. Brown

AZALEA GARDENS TO VISIT: RHODODENRON SPECIES FOUNDATION

The Rhododendron Species Foundation Garden in Federal Way, Washington, is home to more than 600 species of rhododendrons, comprising the most comprehensive collection in the world. Nearly all hardy species in cultivation along with many tender and tropical species are represented.

Located adjacent to the Weyerhaeuser Corporate Headquarters, approximately 24 miles south of Seattle, the two and a half acre study garden features a half mile main path with additional branching garden walkways. The garden contains species that bloom as early as January and as late as August. The seasonal opening of the garden in 1986 is from March 9 through May 28. Bloom time for early species is March 9-30. Primary blooming season is April 2-30, and late blooming season is May 7-28. A Fall Foliage Festival will also be held October 17-19, 1986.

The Rhododendron Species Foundation is a non-profit organization. Additional information about the garden and the foundation may be obtained by writing the Rhododendron Species Foundation, P.O. Box 3798, Federal Way, Washington 98063-3798, or by telephoning (206) 838-4646 or (206) 927-6960.

U.S PATENT OFFICE IS RETHINKING PLANT NAMING CHANGE

The U.S. Patent and Trademark Office in Washington, DC, is "rethinking" a proposed rule amendment that has encountered opposition from plant breeders and developers.

The amendment basically involves a change in how the names of new plants are chosen and who determines whether names are acceptable.

Generally, the Patent Office now accepts the plant varietal name submitted by the patentee. The proposed rule change, however, would define specific requirements for choosing plant names and would broaden the government's authority to accept or reject names.

The Patent Office says the amendment is necessary in order to comply with the Convention of the International Union for the Protection of New Plant Varieties, to which the U.S. adheres. The purpose of the amendment is to further the effort toward standardizing plant names worldwide.

When submitting names of varieties to be patented under the proposed rule, applicants would be required to follow criteria set down in the *International Code of Nomenclature for Cultivated Plants*.

In a statement explaining the change, the Patent Office stated that a suitable variety name "is the generic name by which the variety is popularly or commonly known." The office referred to "cultivar names" and "variety names" as being synonymous.

Many of the several hundred varieties submitted for patents each year do carry common cultivar names. However, many do not. Often, a patentee submits a variety under a "code" name. Some names, for example, have been acronyms or have included numbers.

The use of code names is often based on business considerations. Varietal names of plants cannot receive federal trademarks. Non-varietal names can.

By giving his variety a code name, an owner can then trademark the more commonly used name. A federal trademark can protect his rights to the name indefinitely. The protection of a patent extends only 17 years. A plant owner, who may spend thousands of dollars over several years marketing a plant under a particular name, obviously would prefer the longer protection.

It is unclear exactly what the Patent Office would consider a suitable name under the new rule, and that is one of the reasons the change has been opposed by plant breeders and developers.

The Patent Office recently requested comments on the rule change and received 14 replies, most if not all of them negative, according to Stan Schlosser of the Patent Office. The responses have caused the office to consider revising the proposal.

"We've just begun the process now of rethinking the whole thing," Schlosser said.

Most of the responses, which included those from the American Association of Nurseryman and the Ameri-

can Seed Trade Association, complained that the change added an administrative burden on patentees and that it was stricter than called for by the international convention.

The ASTA was strongly opposed to the change, which it claimed was "unneeded, unnecessary and costly."

The association believes the *International Code of Nomenclature for Cultivated Plants* is often arbitrary in its criteria and too restricting. For example, the code allows the use of "Mrs." in a name but not "Mr." The code also does not permit acronyms or numbers.

The ASTA said it does not oppose the standardization of plant names "per se," but it added that it was skeptical such an effort could be successful on an international scale.

The biggest objection of the association, however, is that it transfers authority now held mainly by the patentee to the government. "That is the key," an ASTA official said.

Schlosser said it was unknown when the Patent Office would make a decision on how to revise the rule. If it is altered, another comment period and possibly a public hearing would follow, Schlosser said.

From *Amer. Nurseryman* 163:9 (1986).

ROYAL HORTICULTURAL SOCIETY REISSUES ITS COLOUR CHART

A new edition of the Horticultural Colour Chart has been issued by the Royal Horticultural Society, London, in association with the Flower Council of Holland, Leiden.

The first colour chart to be issued by the Royal Horticultural Society, the Horticultural Colour Chart, was prepared by Robert Wilson and published in 1942. Some twenty years ago, the colour chart needed to be reprinted, and it was decided to publish a new chart by a different method of printing and with a wider range of colours. The format of the new chart made it easier to handle. This chart, issued in 1966, was prepared by a committee appointed by the Royal Horticultural Society.

The design of this new edition is basically unchanged—but some refinements have been introduced to make it even easier to use. To coordinate matters relating to the new edition, another committee was formed including experts from Holland as well as Britain, and the colour chart was produced by the Flower Council of Holland.

The colour chart comprises four fans in sturdy packaging. Each fan has about 50 sheets each containing four different colour shades. The sheets, measuring 190 x 60 mm, are joined with screws. The total range includes 202 sheets with four colours on each. Each colour patch measures 32 x 60 mm and has a hole in the center to make it easier to match colour.

Fan numbers 1, 2, and 3 include colours ranging from yellow, via orange, red, purple, violet, blue, green, and back to yellow. Fan number 4 includes greys and white-and-black colours. The fans are supplied with instruction for use.

The fans are intended for use by professionals in the ornamental plant industry, but they are also very useful for anyone involved in any capacity with colours, who will find the wide range of colours indispensable in colour matching.

The colour codes will be included in the computer product code lists handled by the flower auctions in Holland.

Each copy of the new COLOUR CHART is 25 pounds British sterling postpaid. Send your cheque or postal order in pounds sterling to: Royal Horticultural Society Enterprises Ltd., RHS Garden, Wisley, Woking, Surrey, GU23 6QB, England.

MASSACHUSETTS HORTICULTURAL SOCIETY HONORARY SPECIAL MEDAL AWARDS

The Trustees of the Massachusetts Horticultural Society would like to recognize those persons who have made outstanding contributions to horticulture by awarding them appropriate Honorary Special Medals. The five Honorary Special Medal Awards are the following. **The George Robert White Medal of Honor:** Awarded to the individual, commercial firm, or institution in the United States or other country that in the opinion of the Trustees has done the most to advance interest in horticulture in its broadest sense. **The Jackson Dawson Medal:** Awarded for skill in science and practice of hybridization and propagation of hardy woody plants. **The Thomas Roland Medal:** Awarded for exceptional skill in horticulture. **The Gold Medal:** Awarded to persons, institutions, and commercial firms for eminent horticultural accomplishments or for outstanding service to the Society. **The Silver Medal:** Awarded to men, women, or firms for noteworthy service in horticulture. Nomination forms and procedures are available from the Committee on Medals, Massachusetts Horticultural Society, 300 Massachusetts Avenue, Boston, Massachusetts 02115.

THE AZALEA CALENDAR

April 13, 1986

Richmond Virginia Chapter Azalea Tour
Contact Mrs. Page Calisch (804) 272-5195

April 26, 1986

Glenn Dale Preservation Project Workday
Contact Roger Brown (301) 577-7509 or
Andy Dietz (301) 384-2092

May 2-4, 1986

7th Brookside Gardens Chapter Azalea Flower Show held in conjunction with the Landon Azalea Festival at the Landon School, Bethesda, Maryland.

Contact Denise Stelloh (301) 840-1714

May 3, 1986

McCrillis Garden Open House, Corner of Greentree and Burdette Roads, Bethesda, Maryland. 10:00 a.m.-3:00 p.m. Opening remarks 10:00 a.m., Carl Hahn, Head of Horticulture and Forestry, MNCPPC.

Guided tours:

10:30, Ryon Page & George Harding
Noon, Brian Barr, Curator at McCrillis Garden
2:00, Phill Normandy, Curator at Brookside Gardens, Wheaton, MD.

Refreshments: Noon-3:00 p.m.

Contact Brian Barr (301) 593-6242

May 8, 1986

Richmond Virginia Chapter Plant Sale
Contact Page Calisch (804) 272-5195

May 10, 1986

8th Brookside Gardens Chapter Azalea Mart, Charles Woodward High School parking lot, Bethesda, Maryland.

Contact Warren Groomes (301) 662-0459

May 16-18, 1986

8th Azalea Society of America Convention
Morristown, New Jersey
Contact Mal Clark (201) 228-4406

June 23, 1986

Annual Brookside Gardens Chapter Azalea Auction
Contact Buck Clagett (301) 869-1059

July 17, 1986

Richmond Virginia Chapter Propagation Meeting and Distribution of Plants
Contact Page Calisch (804) 272-5195

October 19, 1986

Richmond Virginia Chapter Banquet
Contact Page Calisch (804) 272-5195

Future Azalea Society of America Convention sites

May 1987 Northwest Chapter, Eugene, Oregon.

May 1988 10th Anniversary Convention
Brookside Gardens Chapter
Washington, D.C.

THE AZALEA CALENDAR lists upcoming Society and chapter activities. Items to be included should be forwarded to the Editor together with name, address, and/or telephone number of contact person(s) at least three months prior to the month of publication of *THE AZALEAN* in which the notice is to appear.

LETTERS TO THE EDITOR

1985 Guide to Azalea Hardiness

Of my 500 azaleas (70 cultivars), only one cultivar was totally unaffected by the 1985 late frost bud blast—the mid season 'Rosebud.' All the others suffered bud, flower, and foliage damage from total to partial no matter whether they were extra early ('LaRoche' was total) or very late (Satsukis, macranthas, and Gumpos).

Ruth Schmidt
Richmond, Virginia

Further Notes on Die-Back

The oldest fallacy of reason is "*Post hoc ergo propter hoc*"—after it therefore because of it. In my experience, dieback on azaleas, rhododendrons, and pieris can occur on branches that have never been tagged or in contact with any wire. Therefore, the appearance of die back on branches that are tagged is coincidental rather than causative. *Post hoc*.

Twenty years ago, I cut out the top of 'Everest' because of die back. Since then it has thrived and is about six feet tall. This year, I again cut out a branch

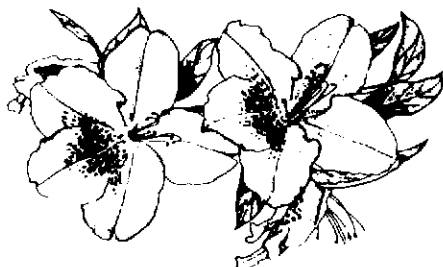
because of die back as well as a long branch on 'Stardust,' and neither one had a tag. If the label had been changed twenty years ago, then the disappearance die-back for twenty years could have been attributed to the change of the label.

George Harding tells me that the University of Maryland has been unable to identify any causative factor on branches that have been submitted. One wonders if it could be due to a virus. Perhaps good nursery practices (adequate water, etc.) to increase the vigor of the plant might be helpful.

The only treatment is to cut out the affected branch down to healthy wood. The diseased or dead brown wood may extend several feet below the wilted end, and shears should be sterilized (by flame) between cuts. Several years ago, I saw a Virginia Polytechnic Institute publication in which they referred to die back as *phomopsis*. This suggests a fungus, as the dictionary lists *phomas* as plant disease caused by a fungus: *phoma*. The treatment prescribed was to cut out affected branches.

Neil P. Campbell
Washington, D.C.

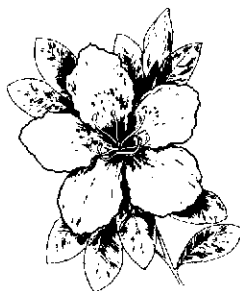
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