

summer homes for Charlestonians who wanted to get away from the humid banks of the Ashley and Cooper Rivers. Begun in 1830, it grew into a Victorian village made popular by physicians of the time who recommended it for its "beneficial pine air." Our timing for our visit was perfect, because the entire town of very historic cottages and mansions seemed swathed in Southern Indicas of fuchsia and purple.

The evening banquet was a gala affair, finished off by one last talk, by **Barbara Stump**, describing a new garden's development project. All this fun and the slide show made the annual meeting a bit late. However, the entire crowd was more than happy to

give Bob and Bee Hobbs a standing ovation for their tireless support of the Society and their 10 years of work as editors of **THE AZALEAN**. They were really surprised to receive the commemorative case clock, presented by Jim Thornton. (See minutes in the Society News section later in this issue.)

All in all, the two days were a real whirlwind of azalea sights and history. Rather like an illustrated tour of Don Voss's talk: The area around Charleston was where some of the first azaleas came to America, and we got to see that those very gardens are still being well cared for today. And we can testify that today's growers are doing their best to continue that tradition.

Thanks again to all the folks who made this convention a wonderful event! Thanks to Mr. Drayton F. Hastie of Magnolia Plantation for his generosity and support; to Cypress Gardens and Kathy Woolsey for their support; to Jay Guy and Linda Erdman of Carolina Nursery for arranging the tour and wonderful lunch; and thanks to the speakers. A special thanks to the organizers from Louisiana and Alabama: Bill Bode, Buddy and Dixie Lee, June and Jerry Ladner, Billy Lucas, Maarten van der Giessen, James Campbell, and Vince Ciolino.

## How Azaleas Came to Our Gardens: A Snapshot

Donald H. Voss — Vienna, Virginia

Those who read **THE AZALEAN** can rest easy—this will not be one of my excursions into the rules of plant nomenclature. But because deciduous and evergreen azaleas came to our gardens by quite different paths, we must first distinguish between them. In addition, the terms "species," "hybrid," and "cultivar" require brief comment.

### Distinguishing Deciduous and Evergreen Azaleas

When the plants are in bloom, differences between deciduous and evergreen azaleas are apparent in flower form, color, and bud morphology. In the deciduous azaleas, the corolla tube is usually prominent and expands more or less abruptly into the limb. Corolla hues may be white, yellow, orange, yellowish pink, red, pink, purple, purplish pink—often in combination. Because of the presence of carotene pigmentation, these yellows and oranges tend to be high in chroma (i.e., saturation or "purity" of color). Examples are *R.* 'Windsor Buttercup' and *R.* 'Orangeade'. An important fea-

ture of the deciduous azaleas is that the terminal bud produces only flowers.

In the evergreen azaleas, the corolla usually flares from the receptacle into more or less widely spreading lobes—a form often called "funnel-shaped." The hue range is narrower than that in the deciduous azaleas, because carotenoid pigmentation is not present. The slight coloration from yellowish pigmentation present in many white azaleas is usually so low in chroma as to be visually indiscernible. Yellowish pinks (coral or salmon if you prefer), reds, pinks, purples, and purplish pinks are common in the evergreen azaleas. In the evergreen azaleas, a terminal bud produces both flowers and new vegetative growth.

With respect to foliage, both the evergreen and deciduous azaleas leaf out in the spring and drop leaves in the fall or early winter. In the evergreen azaleas, however, a second flush of growth produces the so-called summer leaves, as well as terminal buds that will produce flowers and vegetative growth in the following spring.

The summer leaves persist through the winter and usually drop when new growth develops in the spring.

As a result of their respective cycles of leaf growth and leaf drop, the deciduous azaleas are bare of foliage in winter, while evergreen azaleas have some leaves. Though leafless, the deciduous azaleas' branches and fat buds often add a grace note to the winter landscape—one especially attractive when highlighted with snow. The evergreen azaleas carry their relatively small green (or, in some cases, rich dark red or purplish red) summer leaves through the winter but do not appear as dense as in summer when clothed with the larger spring leaves.

### "Species," "Cultivars," and "Hybrids"

Botanists continue to argue about what constitutes a species. "Species" are usually, but not always, defined with respect to plants growing in the wild. The species is the basic unit in plant classification and is designated by a Latin epithet. We need only note

here (quoting Cronquist's definition) that "species are the smallest group that are consistently and persistently distinct, and distinguishable by ordinary means." We thus have sets of plants known as *Rhododendron calendulaceum*, *R. indicum*, *R. kaempferi*, etc.

Many if not most horticultural varieties are designated under a system of nomenclature different from that of the botanists. Minor differences (in color or form, for example) that lead growers to name new varieties—and spur collectors to acquire them—are often considered by the botanist as falling within the range of variation of a single botanical taxon. To deal with this situation, a system for naming cultivated varieties of plants was created. Now a distinguishable cultivated plant is called a "cultivar" and is given a name in a modern language. A cultivar may be a selection from wild material, a hybrid, or—in the brave new world of the millennium that begins January 1, 2001—the result of genetic engineering.

A hybrid may be created by applying pollen from a plant of one clone to the stigma of a plant of another clone. The resulting seed, seedlings, and plants will carry genetic material from both parents. This process is usually undertaken to select and combine desired characteristics found in the parents—cold tolerance; heat tolerance; flower form, color, color patterns, fragrance; foliage size, shape, color, denseness; and plant habit.

### Where Did Azaleas Originate?

We won't run through the provenance of the 111 species shown in the table. (That number includes the new North American deciduous species *R. eastmanii*, published in 1999 by Kron and Creel.) First, note that azaleas are Northern Hemisphere plants with temperature regimes mostly ranging from hot summer, mild winter (U.S. Gulf Coast, East China Coast, Taiwan) to hot summer, cold winter (southern New England, Japan, South Korea).

Most of the deciduous azaleas are native to North America. The range of *R. occidentale* in the wild is California and southwest Oregon. The other North American species are primarily eastern, some distributed widely, some narrowly. For example, *R. viscosum* (in which Kron now includes *R. oblongifolium* and *R. serrulatum*) is found in the coastal plain and piedmont from Massachusetts to central Florida, western North Carolina and the Great Smoky Mountains area, across the Gulf Coast, and up into Arkansas.

*R. calendulaceum* is found in the Appalachians from Pennsylvania to northern Georgia. An example of narrow distribution is *R. austrinum*, found along the Gulf Coast from southwestern Georgia and the Florida panhandle to southeastern Mississippi. Even narrower is the area for *R.*

*prunifolium*, limited to the southern half of the Georgia-Alabama border area.

*R. luteum* is found in the Pontic region (eastern Turkey along the Black Sea, the eastern Caucasus) and in a few locations in Ukraine and eastern Europe as far north as Poland.

While the deciduous azaleas are pre-



The main bridge at Magnolia Plantation is surely one of the most photogenic bridges in the world, connecting magnificent azalea collections among Spanish moss-laden live oaks.

dominantly North American, the evergreen azaleas are all from the Far East. The large number of species in China may in part reflect a propensity of Chinese botanists to be "splitters." *R. molle* subsp. *molle* is concentrated in China's central east-coast area, with widely scattered populations to the south and west. *R. molle* subsp. *japonicum* is native to Japan, widely distributed from Hokkaido through Honshu to Kyushu. *R. oldhamii*, a plant well known to one of our leading contemporary hybridizers, is native to Taiwan. *R. simsii*, found in China, mostly south of the Yangtze River and concentrated in the southeast, became an important parent in many of the early evergreen azalea hybrids developed in Europe.

*R. yedoense* var. *poukhanense* is from South Korea. In Japan, *R. kaempferi* is widely distributed from Hokkaido through Honshu and Shikoku to Kyushu. *R. indicum* is found mainly

### Geographic Origin of Azalea Species (Number of species, by subgenus)

Origin	<i>Pentanthera</i>	<i>Tsutsusi</i>
China, incl. Taiwan	1	53
Japan	5	27
Other Asia	1	7
Norht America	16	—
Europe / Near East	1	—

in central Honshu. *R. ripense*, a presumed parent of the putative hybrid cultivar 'Mucronatum', is native to southern Honshu, Shikoku, and northern Kyushu. In nature, some are limited to southern areas: *R. eriocarpum* (Kyushu, Ryukyu Islands) and *R. kiusianum* (Kyushu).

#### Evergreen Azaleas—Journeying to the West

For an audience in Charleston, South Carolina, it is appropriate to deviate from chronology and begin our discussion of the travels of azaleas about 1848. At that time, the Reverend John Drayton, who was the master of Magnolia Plantation, introduced *Rhododendron indicum* and *Camellia japonica* into his rapidly expanding garden. In his book, *Carolina Gardens* [1939], Shaffer states:

His choice was happy—an inspiration that was to light here on earth a look of heaven. Travelers declare that these two exotic plants flourish today at Magnolia in even greater luxuriance than in their native regions of the Far East. Reverend Drayton, when an old man, was visiting the wonderful Kew gardens whose azaleas are the pride of London. There he saw a notice that azaleas in their greatest perfection were to be found at the Magnolia garden in South Carolina.

Having paid due homage to the Reverend Drayton's good judgment in selection of exotic plant material, we turn to some general observations on the "travels" of deciduous and evergreen azaleas.

With respect to the evergreen azaleas, we are indebted to Japan (at first indirectly) for most of the varieties represented in our gardens today. In his introduction to *A Brocade Pillow* (the translation of a 1692 Japanese book on azaleas), John Creech observed:

One can only be awed by the sophisticated level of azalea culture that existed in the Edo period (1615-1867). It is doubtful that there are any objectives pursued by modern azalea breeders that were not taken into consideration by these pioneer azalea developers, who produced selections that have not been duplicated since. *Curiously, it was only the simpler forms of these azaleas that reached Europe during the centuries following the appearance of A Brocade Pillow* [emphasis added]. Some azaleas did make their way to Europe during the eighteenth and nineteenth centuries to become the basis of the Belgian forcing azaleas, which were later introduced to America, where they became known as the "Southern Indica" azaleas. It was not until the twentieth century that Kurume azaleas were introduced to the West, and satsuki azaleas did not reach the United States until Benjamin Y. Morrison of the USDA acquired a collection in 1938 and 1939 . . .

Almost nothing is known about the movement of azaleas between China and Japan before Western plant collectors went to eastern Asia. It is probable that Buddhist priests traveling between these areas occasionally took with them seeds and plants of favorite ornamentals. Revelation to the West of the Orient's rich store of ornamental plants was a byproduct of European traders' search for economical access to the spices and—of course, for the English—tea from the Orient.

The key that opened the entire Far East to economic exploitation was Vasco da Gama's voyage from Portugal, around the Cape of Good Hope, to India in 1497-98. Portugal dominated the Indian Ocean and waters around Malaysia for a time, but soon was challenged by Spain and, later, by England and Holland.

Around 1600, both the English East India Company and the Dutch East

India Company were formed. In the following two-and-one-half centuries, the dispatch of seeds and plants from China and Japan to the West was accomplished to a great extent by doctors and commercial officials assigned to the trading posts and consulates, as well as by missionaries.

At first, plants from China (which included some Japanese plants found in Chinese gardens) reached the West via English collectors; plants from Japan, via Dutch collectors. Until the 1860s, the Chinese and Japanese azaleas that reached the West were plants from gardens and nurseries, shipped mainly from Canton, Shanghai, and—for plants from Japan—Batavia on Java.

The export of plants from Japan was difficult. A Portuguese explorer found Japan in 1542, and in 1549 St. Francis Xavier introduced Christianity there. As the newly introduced religion acquired converts, it became increasingly alarming to the politico-military rulers and the Buddhist priests. In 1624, Christianity was proscribed, and Japan was closed to foreigners, except for Chinese and Dutch traders.

Around 1640, the Dutch traders were confined to a small islet, Deshima, in Nagasaki harbor. Access was restricted for two centuries, until Commodore Perry's 1853-54 expedition led to an opening of commerce.

After establishing dominance in the East Indies, the Dutch chose Batavia (Jakarta), Java, as their administrative center there. A botanical garden at Batavia became an early center for the study and classification of plant material from Japan, as well as a primary way station for shipment of Japanese plant material to Holland. The botanical and horticultural worlds benefited immeasurably from the activities of three doctors attached to the Dutch East India Company. (They not only provided descriptions and illustrations of the Japanese flora but also managed—in the best tradition of illicit acquisition of plant material—to

evade Japanese restrictions and to send plant material to Batavia and to Holland.)

Initially, the interest was mainly scientific—the description, classification, and illustration of the Japanese flora. Engelbert Kaempfer, a German doctor, was employed at the Dutch trading post on Deshima during 1690-92. In 1712 he published his *Amoenitates Exoticae*, an illustrated account of his travels in Japan. Included were descriptions of more than 200 species of plants. According to E.H. Wilson, Kaempfer described 21 Japanese azaleas.

According to Stearn, the Japanese considered Kaempfer's interest in plants "natural for a physician, many medicaments being of vegetable origin, and they brought him specimens of many plants cultivated or growing wild around Nagasaki." As a doctor, Kaempfer was accorded more respect than his colleagues, who as merchants were near the bottom of the Japanese social order. The Dutch on Deshima were required to travel annually to Edo (Tokyo) along with the local lords to pay homage to the Shogun. Stearn states: "At the Shogun's court he [Kaempfer] was treated as a clown, having to dance and sing, but physicians sought his advice."

Carl Peter Thunberg, a Swedish doctor and protégé of Linnaeus, went to Japan in 1775 and published his *Flora Japonica* in 1784. While in Japan, he was able to obtain seeds and living plants to send to Holland. Later, in 1823-29, Philipp von Siebold, a German doctor, was stationed at Deshima. He managed to acquire and send to the Netherlands a collection of almost 500 different plants, which he grew in a nursery—first at Ghent then at Leiden. Von Siebold published a *Flora Japonica* and was responsible for introduction of many Japanese plants in the West.

Meanwhile, in the late 1600s the English East India Company established facilities at Amoy and Canton. Many

plants from Chinese gardens were sent through these ports to India during the 1700s and to England in the early 1800s. One of the most horticulturally significant of these plants was *R. simsii* Planchon, which arrived in England from China on an English East India Company ship around 1810 (or 1806, depending on whom you choose to believe).

Later, French missionaries became active in plant exploration in China. David, Delavay, and Farges are among those whose names appear as specific epithets on various ornamentals. Many of their collections were sent to France to be classified and named by Planchon at Montpellier and, later, by Franchet at the Natural History Museum in Paris.

Several of the evergreen azaleas that reached the West in the first half of the nineteenth century are of special significance in ornamental horticulture:

- *R. simsii* Planchon (Upper Burma, China [widespread], Taiwan, Laos, Thailand, Ryukyu Islands): grown near London in 1812 and in Paris in 1822; the plant was cultivated in Dorchester, Massachusetts, in 1837. E. H. Wilson states that *R. simsii* remained rare in the West for several decades, but adds that "The so-called 'Indian Azaleas' of western gardens have been originated almost entirely from *R. Simsii* since about 1850, chiefly in Belgium, but some in France and others in Germany."
- *R. 'Mucronatum'* (Japan, only known in cultivation, possibly a hybrid of *R. ripense* and *R. stenopetalum*; specimens in China and Java): this Japanese plant, also widely known from Chinese gardens, reached Holland from Deshima via Batavia. Kaempfer described it in 1712, Blume used the specific epithet *mucronatum* at Batavia in 1823, and Lindley in 1824 described and named (as *Azalea indica alba*) a plant sent to England from China in 1819. *R.*

'*Mucronatum*' was imported into what is now Belgium in 1825, and the cultivar was growing in a garden at Watertown, Massachusetts, in 1838.

- *R. indicum* (L.) Sweet (Japan; specimens in China and Java): appears to have reached Holland from Deshima via Batavia on Dutch East India Company ships in the 1680s. This is the species that Linnaeus included in *Species Plantarum* (1753) as *Azalea indica*. It was introduced in England in 1833, with some color forms brought from China on English East India Company ships. Two varieties were introduced from England into Boston, Massachusetts, in 1838. According to E. H. Wilson, the true *R. indicum* largely dropped from cultivation (because it could not be forced to bloom out of season in greenhouse culture) and the name was loosely applied to *R. simsii* for some time after 1850.

After the mid-1800s, the flow of plants from China was increasingly in the hands of collectors working on behalf of nurserymen. Many garden forms were soon in English gardens. At first, azaleas from the Orient were considered to be tender and suitable only for greenhouse culture. *R. 'Phoeniceum'* was widely used as rootstock onto which so-called "Indian Azaleas" were grafted.

One of the great collectors was British plantsman Robert Fortune, whose collecting trips in China occurred between 1843 and 1861. Notable among Fortune's azalea introductions are:

- R. kiusianum* Makino 'Amoenum'
- R. 'Vittatum'* (white with lilac-purple stripes)
- R. 'Bealii'* (white with red stripes)
- R. 'Narcissiflorum'* (a double form of *R. 'Mucronatum'*)

The well-known cultivar 'Amoenum' was sent to England from China by Fortune around 1850 and was introduced into the Boston, Massachusetts, area in 1855. *R. kiusianum* (including var. *sataense*), from Japan's is-

land of Kyushu, is a major component in the genetic makeup of the "Kurume Azaleas."

According to E. H. Wilson—whose collecting trips in China and Japan between 1899 and 1918 gave Western horticulture hundreds of new ornamentals—'Vittatum' and 'Bealii' gave rise to new forms and "may be said to have initiated an industry which has resulted in the so-called race of "Indian Azaleas." (E.H. Wilson considered 'Vittatum' and 'Bealii' to be infraspecific taxa in *R. simsii*, but taxonomists today list them as cultivars of indeterminate origin.) 'Vittatum' was the seed parent of 71 of the Glenn Dale azaleas.

Although commerce with Japan had opened to the West after 1854, introduction of azaleas from Japan proceeded slowly. *R. kaempferi* Planchon (Japan), one of the most widely distributed azalea species in Japan, was described by Kaempfer in 1712 but did not receive a proper Latin binomial until Planchon named it in 1854. The Russian botanist Maximovich studied the wild flora in Japan during the early 1860s and sent seed of several azalea species to the botanical garden at St. Petersburg. But not until 1892 was *R. kaempferi* introduced to western horticulture by Prof. C. S. Sargent, who sent seeds from Japan to Arnold Arboretum.

After 1900, the pace of introductions accelerated rapidly. A Japanese nurseryman, Akashi, won a gold medal for an exhibit of a dozen varieties of Kurume azaleas at the 1915 Panama-Pacific Exposition in San Francisco. A California nursery, Domoto Brothers, purchased some of Akashi's plants and subsequently, between 1917 and 1920, imported large numbers of Kurume azaleas. Many of these were sold to East Coast nurseries. Unfortunately these nurseries substituted English names for the Japanese names of the plants, and the documentation of the changes was lost.

Another major introduction was "Wilson's Fifty," a group of Kurume azaleas selected by E. H. Wilson from the Akashi nursery. These reached the Arnold Arboretum in early 1919. In listing the names, Wilson (1921) stated:

The names are those of the originator, Akashi, and therefore authentic. The plants will be propagated and distributed under these names and, owing to the reprehensible habit of changing names by Japanese nurserymen, will probably remain the only set with standard names in existence.

Thus we see that the long and inglorious tradition of name changing (often for monetary gain) is not unique to the western world.

A group of evergreen azaleas, selected by R. K. Beattie of the U.S. Department of Agriculture (U.S.D.A.), was introduced in 1929. Later, in 1938-39, the U.S.D.A. imported 53 varieties of Satsuki azaleas selected by B. Y. Morrison from the catalog of the Chugai Nursery of Kobe, Japan. In the late 1970s,



One of the Southern Indicas, seen in profusion on the Azalea Hillside at Middleton Place and at Cypress Gardens.

U.S.D.A. imported a large number of Kurume azaleas selected during trips to Japan led by John Creech.

As to hybrid groups in the evergreen azaleas, it would probably take all night to list them: the number of named cultivars is well over 7,000. This number reflects a great diversity (some good, some bad) of plant characteristics that have resulted from species selections and extensive hybridization. Some hybridizers have been content to attain a narrowly defined objective and name just a few plants. Others have pursued a broader spectrum of objectives and named many more. The leader in this regard must be B. Y. Morrison, who named the 454 Glenn Dale azaleas and over 50 Back Acres.

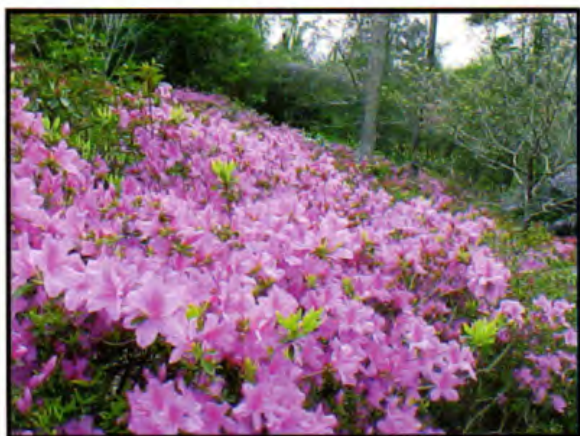
#### Deciduous Azaleas — East Meets West

Hybridization of deciduous azaleas brought together the native azaleas of North America, Eastern Europe, China, and Japan to produce plants with showier flowers than those of the species. For some observers, the simple beauty of the native azaleas has strong appeal. But most find irresistible the smorgasbord of rich colors and inflorescence forms of the Ghent, Mollis, Knap Hill, Exbury and later hybrid groups.



These flowers are from *R. 'Vittatum'* at the Glenn Dale, Maryland, Plant Introduction Station of the U.S. Department of Agriculture. 'Vittatum' was the seed parent for 71 of B.Y. Morrison's Glenn Dale azaleas. [Photo by William C. Miller III.]

By the early 1800s, the North American *R. calendulaceum*, *canescens*, *flammeum*, *periclymenoides*, *prino-phyllum*, and *viscosum* had reached Europe. The beginning of the hybrid saga is attributed to one Mortier, a baker in Ghent. In 1825, he began crossing North American species with the native azalea of the Pontic region and eastern Europe, *R. luteum*. These crosses, at first called "Mortieri" azaleas, are now known as Ghent hybrids. In 1831, an Edinburgh journal reported that interspecific azalea hybrids had been raised at the Highclere garden of the Earl of Carnarvon, but it was the Belgian plants that achieved wide distribution in the nursery trade.



This photo gives just a glimmer of what it was like to walk through the Azalea Hillside garden at Middleton Place. Planted in the 1920s and the 1930s the 35,000 azaleas have been maintained and rejuvenated to continue to make a wonderful color display.

In the latter half of the nineteenth century, English nurserymen, the Waterers, crossed *R. molle* subsp. *molle* with *R. calendulaceum*. Only one cultivar, *R. 'Nancy Waterer'*, was named. Much later, in the 1920s, Lionel de Rothschild acquired some of the Waterer plants, and these entered into the hybridization program that gave us the Exbury azaleas. After the death of the younger Waterer in 1924, many of the Knap Hill seedlings were acquired and developed further by several English nurseries.

Around 1900, the Japanese *R. molle* subsp. *japonicum* (synonym:

*R. japonicum* (A.Gray) J.V. Suringar) was crossed with *R. luteum*, the Pontic azalea, by Koster; it also appeared in the Mollis hybrids, crosses between selections of the Chinese and Japanese subspecies of *R. molle* [*R. molle* subsp. *japonicum* and *R. (molle* subsp. *japonicum* × *molle* subsp. *molle*)]. The western North American azalea, *R. occidentale*, entered the deciduous hybrid picture in the late 1800s. The Koster hybrids of *R. occidentale* × *R. (molle* subsp. *japonicum* × *molle* subsp. *molle*) became known as Occidentale hybrids.

While many of the original cultivars in the deciduous azalea hybrid groups are no longer available, new ones keep appearing. Some of the new plants can be grouped under the older categories; for example, Knap Hill azaleas in the broad sense may include plants hybridized at Knap Hill, Exbury, Slocock Nursery, Windsor Park, and Ilam in New Zealand.

In the United States, development of deciduous azaleas has proceeded in many geographic regions. Thus (in an illustrative, not exhaustive listing),



Cypress Gardens Horticulturist Kathy Woolsey shows Helene Goodman lovely azaleas perfect for taking cuttings. Behind them, *R. 'Duchess of Cypress'* shows how big mature Southern Indicas can become.



And each night we were a rapt audience listening to our peers regale us about lore, propagation, and gardens.

from the Northwest come selections and hybrids by the Bovees, Slonecker, Arneson, and others; from Minnesota (of all places), the Northern Lights series; from Ohio, Girard and Leach; from Vermont (again "of all places"), Abbot hybrids; from Massachusetts, Weston hybrids; from southeastern New York, Carlson hybrids; from Virginia, Don Hyatt's 'Yellow Cloud'; from Georgia, Galle and the Beasleys; and from southern Alabama, the "Confederate Series" that Society members saw on their 1999 visit to the Dodd & Dodd nursery.

When you walk among the azaleas in your gardens, reflect on their origins—they are a microcosm not only representative of one form of plant life from the temperate regions of the Northern Hemisphere but also a reminder of intrepid collectors in hostile environments and the nurserymen and hybridizers whose interest and devotion have made possible today's rich array of offerings in subgenera *Pentanthera* and *Tsutsusi* of genus *Rhododendron*—the AZALEAS!

continued on page 62

**Donald H. Voss** is an economist by training, and an active gardener with a scholarly interest in azaleas and rhododendrons. He is an expert on the azaleas of Robert Gartrell (Robin Hill hybrids) and is a former chairman of the Society's Board of Directors and former keeper of the Society's database. Don currently volunteers at the herbarium of the U.S. National Arboretum.

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# Research Notes

## Azaleas Resistant to Lace Bugs

[Contributed by Oconee Chapter Newsletter, Ed.]

The azalea lace bug, *Stephanitis pyrioides*, is an important pest of azaleas. Scientists Y. Wang, C. Robacker, and S.K. Braman at the Department of Horticulture, University of Georgia, Georgia Station, Griffin, Georgia reported on their research in the 1998 *Journal of the American Society of Horticultural Science* (123: 592-596). Seventeen deciduous azaleas, or their cultivars, were evaluated for their susceptibility to lace bug damage. Factors evaluated were oviposition rate, percentage of emergence from the egg, feeding damage, and nymphal growth rate. In order of resistance, *Rhododendron canescens* and *R. periclymenoides* led, followed by *R. prunifolium*. *R. viscosum* (including *R. oblongifolium* and *R. serrulatum* strains) and *R. alabamense*, *R. 'My Mary'*, and *R. 'Buttercup'* were most susceptible.

A subsequent study published in the 1999 *Journal of the American Society of Horticultural Science* (124: 239-244) by these scientists suggested that resistance may be due to a lesser amount of, or absence of, attractants and stimulants for feeding and oviposition on the plant's surface.

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Further Word on *R. 'Millie Mac'*  
Donald H. Voss—Vienna, Virginia

After reading " 'Millie Mac' Misbehaves" in **THE AZALEAN** for June 2000, American Rhododendron Society Plant Names Registrar Jay Murray checked the registration application for *R. 'Millie Mac'*. It states that the cultivar originated as a mutant branch discovered in 1966 on a plant of *R. austrinum* collected in the wild in Escambia County, Alabama, in 1950. The name was registered in 1977 by F.T. McConnell.

In a note to me, Jay enclosed a copy (print from a digital scan) of a photograph that accompanied the registration application. This print shows the inflorescence of *R. 'Millie Mac'* and, held below it, an inflorescence from the plant on which the 'Millie Mac' mutation was discovered in 1966. In the print, the corolla lobes of the original plant appear to be a strong yellow or strong orange yellow with orange yellow spotting or blotch; the buds are a moderate reddish orange. The 1999 "misbehavior" of my *R. 'Millie Mac'* resulted, however, in white corollas with a yellow blotch in the upper lobe (see Photo 2 in the June 2000 article). The failure of the 1999 mutation to produce the typical yellow corollas of the original plant tends to confirm that the original plant is *R. austrinum* x *R. canescens* rather than pure *R. austrinum*.

Judd, W.S. & K.A. Kron. 1995. A Revision of *Rhododendron*: VI Subgenus *Pentanthera* (sections *Sciadorhodion*, *Rhodora* and *Viscidula*). *Edinb. J. Bot.* 52(1): 1-54.

LeDuc, Alice. 1998. "Leaves, Elliptic or Lanceolate—Oblong, Obtuse or Acute. If I Only Knew What This Means!" **THE AZALEAN**. 20(1): 4-6.