

Atlantic Coast Camellias

JOURNAL OF THE ATLANTIC COAST CAMELLIA SOCIETY



DONCKELARII

Photo by Jim Darden

ATLANTIC COAST CAMELLIA SOCIETY

OFFICERS 1990 - 1992

PRESIDENT	Marion Edwards 5603 Darlow Avenue Jacksonville, FLA 32211 (904) 744-2690
1st VICE PRESIDENT	Mildred S. Robertson 319 Deep Run Road Aiken, S. C. 29801 (803) 649-9434
2nd VICE PRESIDENT	Ed Powers 234 Braxlo Lane Wilmington, N. C. 28409 (919) 799-4410
SECRETARY & TREASURER	Fred and Clara Hahn 4437 McKee Road Charlotte, N. C. 28270 (704) 846-2245
ASST. SECRETARY AND TREASURER	Latimer and Gloria McClintock 1325 East Barden Road Charlotte, N. C. 28226 (704) 366-0207
HISTORIANS	Bill and Donna Shepherd 4724 Park Place East North Charleston, S. C. 29406 (803) 744-4841
EDITOR	Jim Darden P. O. Box 1087 Clinton, North Carolina, 28328 (919) 592-3725

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COVER GRAPHIC

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DONCKELARII is our cover photo for this issue. This old standby is red with varying degrees of white marbling. The bloom is large and semi-double. The growth of the plant is slow, but bushy. Donckelarii was imported from China to Belgium in 1834, and has been known by many names since that time. Ville de Nantes sported from Donckelarii in France in the early part of this century.

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PRESIDENT'S MESSAGE

Dear Members:

Our 11th Convention was held at Myrtle Beach, SC on October 4 and 5 and a great time was had by all. The weather for the pool party on Friday night could not have been better, mild temperatures and no rain. We did have some rain around noon on Saturday and the hot-dog party being given by the Holiday Inn had to be moved under cover. This was not a big problem and everyone got plenty to eat.

We had 120 members present including several who were there for the first time and had traveled a great distance. These included Tommy and Margaret Lee of Carmichael, California, Jim and Delores Oates of Daphne, Alabama and Greg and Rosamay Davis of Houston, Texas. Greg is President of the American Camellia Society. We are glad they could come this year and hope that they as well as the others who came for the first time will come back again next year.

Dr. Jerry Hogsette of Gainesville, Florida was the guest speaker at the Saturday morning business meeting. His subject was the control of insect pests of camellias. His remarks accompanied with some excellent slides was well presented and very informative. Some members stated this program was the best on camellias they had ever witnessed.

Jim Darden of Clinton, NC has been the Editor of the Journal of the Atlantic Coast Camellia Society for the past 5 years and this will be the last Journal with Jim as Editor. He has asked to be replaced as Editor as he does not have the time required to do the job. His workload at Sampson Community College has tripled recently. His plant Nursery was severely damaged by the hard freezes in December, 1989 and Jim now has to do most of the work in the nursery. Jim has done an outstanding job during his 5 years as Editor and I felt honored to be able to present Jim with a plaque expressing the Society's gratitude. Jim was probably expecting

the plaque but was really surprised when Annabelle Fetterman presented Jim with a beautiful camellia painting done by Sadie Aycock Lyon. Jim told me the Camellia painting will hang in his living room along with the portraits that Sadie did of his two sons.

Dr. Dave Scheibert of Marshallville, Georgia will replace Jim as Editor of the Journal. With Dave's knowledge of camellias and camellia growers, he will be able to maintain the high standards set by Jim Darden and the late Jim McCoy. Dave will need help from all our membership in providing articles of interest for the Journal. If he asks you to write an article, please don't say that you are too busy or don't have the knowledge but go ahead and do your best.

Saturday night is fun night at the annual convention. Raffle tickets had been sold on a large camellia painting done by Sadie Aycock Lyon and a smaller camellia painting done by Latimer McClintock, Jr. and something called a half-pot organized by Lawanda Brodgen. The winners of the raffles were announced and was followed by the highlight of the evening, the auction of plants, hand crafts and food items. Buck Mizzell and Bill Robertson were at their best, the auction went quickly and some high prices were obtained. I believe these two could sell refrigerators to Eskimos. Over \$1600 was raised for the society from the raffles and auction.

The 1991-92 Show season is off to a great start. The Middle Georgia Camellia Society's show was held on October 11-12 at the Georgia State Fair, Perry, Georgia and the Mid-Carolina Camellia Society's show was held on October 26-27 at the South Carolina State Fair, Columbia, SC. I was not able to attend either show but have heard that both had plenty of outstanding blooms.

I am keeping my fingers crossed and dreaming of another show season as great or even better than last year.

MID-CAROLINA CAMELLIA SOCIETY FALL SHOW - COLUMBIA, SC

Best Bloom L/VL Open	<i>Carter's Sunburst Pink Var.</i>	Lib Scott
Runner-up L/VL Open	<i>Tomorrow's Dawn</i>	Rupert Drews
Best Bloom Medium Open	<i>Daikagura</i>	Donna and Bill Shepherd
Runner-Up Medium Open	<i>H. C. Scott</i>	Lib Scott
Best Bloom Small Open	<i>Pink Pearl</i>	Lib Scott
Runner-up Small Open	<i>Kiku-Toji</i>	Elizabeth Brown
Best White Bloom Open	<i>Gus Menard</i>	Lib Scott
Sweepstake Gold Open		Parker Connor, Jr.
Sweepstakes Silver Open		Elizabeth Brown
Best Bloom L/VL Protected	<i>Nuccio's Pink Lace</i>	Jim Pinkerton
Runner-up L/VL Protected	<i>Math. Rubra</i>	Anne and Mack McKinnon
Best Bloom Medium Protected	<i>Betty Shef. Sup.</i>	Anne and Mack McKinnon
Runner-up Medium Protected	<i>Mary Alice Cox</i>	Oliver and Tyler Mizzell
Best Bloom Small Protected	<i>Little Babe Var.</i>	Billy and Sally Hardwick
Runner-up Small Protected		
Best White Bloom Protected	<i>Ruffian</i>	Elliott Brogden
Sweepstake Gold Protected		Annabelle Fetterman
Sweepstake Silver Protected		Jack Teague
Best Bloom Reticulate Parentage	<i>Hall's Pride Var.</i>	Gist Duncan
Runner-up Reticulate Parentage	<i>Curtain Call</i>	Gist Duncan
Best Bloom Non-Retic Parentage	<i>Mona Jury Var.</i>	Oliver Mizzell
Best Bloom Miniature	<i>Runt</i>	Marvin and Ruth Jernigan
Best Bloom Seedling	<i>Seedling</i>	Albert Ewan
Best Bloom Novice	<i>Miss Char. Var.</i>	Eulee Wheeler
Best Bloom Species	<i>Dazzler</i>	C. Bays
Court of Honor	<i>Louis Hariston</i>	Jack Teague
Court of Honor	<i>Carter's Sunburst Pink</i>	Jack Teague
Court of Honor	<i>Snowman</i>	Jack Teague
Court of Honor	<i>Betty Shef. Silver</i>	Anne and Mack McKinnon
Court of Honor	<i>Leonard Messel</i>	Jim Pinkerton
Court of Honor	<i>Debutante</i>	Ray and Beulah Smith
Court of Honor	<i>Ave Maria</i>	Parker Connor, Jr.
Court of Honor	<i>Feathery Touch</i>	Parker Connor, Jr.
Court of Honor	<i>Louis Hairston, Var.</i>	Parker Connor, Jr.
Court of Honor	<i>Elsie Jury Var.</i>	Oliver and Tyler Mizzell
Court of Honor	<i>Lady Kay</i>	Lib Scott
Court of Honor	<i>Ville De Nance</i>	Paul and Marie Dahlen

Joe Austin's Camellias — A Beautiful Name for a Beautiful Flower

By DORIS CANNON
Staff Writer
The Smithfield Herald

Camellia is a beautiful name for a beautiful flower.

It is a flower that has brightened the life of Joe Austin of Four Oaks for 40 years, and has brought him countless trophies at camellia shows throughout the Southeastern United States.

Mr. Austin will be among camellia growers from several states who will participate in a Spring Camellia Show at the Carolina Pottery Outlet Center at Smithfield from 2 to 9 p. m. Saturday, February 17 and 1 to 5 p. m. Sunday, February 18. It is an official show of the American Camellia Society. Mr. Austin is serving as show chairman.

Twenty-three awards will be presented to the best of the winter wonder blossoms. Around 1,200 are expected to be on display.

Mr. Austin began growing camellias in 1950 and is widely known as "the master" in the field.

It all began when he burned an old barn on his property and went to Wilson to buy some privet hedge to screen off the building's remains.

While looking through plants at a nursery, his eyes fell on a camellia, and he was totally captivated by its grandeur. Along with the plant, he took home a book on camellias written by Gus Gerbing. And he was hooked.

Shortly thereafter, he took a large truck to Gerbing's Nursery in Florida and came home with a load of plants that would expand into thousands. At

one time, he had 19 greenhouses on his property, but is now operating only three. He operated a commercial nursery at Four Oaks until 1966, when he sold it to Karl Lee.

In 1955, Mr. Austin began taking his exquisite blooms to competitions, and he rapidly raised the standard for excellence and became known as "the man to beat."

By 1963, he had won so many trophies and had so dominated the field that he decided to give it a rest and allow others a chance. From 1963 to 1980 he dropped out of competition and displayed his delicate treasures only as an exhibitor. Since 1981, he has received 500 awards.

During the time of Mr. Austin's sabbatical, his good friend, the late Ernest Aycock of Smithfield, gained a sterling reputation and a vast number of awards at shows near and far, much to Mr. Austin's delight.

Mr. Austin is often asked how he manages to produce pink, red, and white "blossoms from heaven" that often measure as large as eight inches across and five inches deep. And he is not the least bit stingy with his advice.

In an article written by Jim Darden in Atlantic Coast Camellias, the Journal of the Atlantic Coast Camellia Society, Mr. Austin gave the following hints: "First, pick winning varieties. If your plants don't have the genetics to win, you just cannot compete."



Joe Austin of Four Oaks, known far and wide as "the master" grower of camellias, checks his greenhouse blooms as he prepares for a spring camellia show.

(Herald photo by Doris Cannon)

He said the "Jean Pursel" variety produces the best bloom that he's seen, and it comes in eight or nine formations. In pink shades, he's also fond of "Tomorrow's Dawn Bessie," "Tomorrow's Dawn," and "Elegans Splendor." His favorite reds are "Dr. Clifford Parks" and "Harold Paige," and his favorite whites are "Silver Cloud," "Ruffian," and "Elegans Champagne."

Mr. Darden noted that the Austin camellias thrive on raised beds inside the greenhouses, in order to avoid diseases. They are planted two to three feet apart, and are pruned in what a landscaper might think is a nightmarish shape. Rather than shearing the tops of the plants to produce short, bushy, attractive plants, Mr.

Austin prunes internally, removing weaker shoots and allowing the viewer to look right through the leggy plants.

He is not concerned with how the plant looks, only what glories it will produce.

When he prunes his plants, he always paints the wounds with "Tree Kote," and he mixes Benlate into the sticky black material as extra insurance against disease. He tests the soil annually, and adds a handful of lime to each plant around April 1. Each plant is soaked with Ridomil at the same time. "That does more good than anything," he said.

Mr. Austin cautions that "too much fertilizer means dead plants." He recommends any good azalea/camellia fertilizer.



Joe Austin is shown with former ACS President Annabelle Fetterman at a camellia show in Charlotte.

(Photo by Shepherd)

When grafting a plant, which should be done January through March, he uses red clay and a Benlate solution, mixed one tablespoon to a gallon formulation, until the clay becomes workable. He uses a lump of the clay to seal the graft union. After the union meshes, the clay hardens, cracks, and falls away.

The graft is covered with a clean plastic bottomless milk or soft-drink container with a screw-off cap. This is then covered with a brown paper bag which has a window the size of a quarter torn out of the north-facing corner. When there is evidence of growth from the bud on the grafted scion, he removes the bag and the cap on the bottle; and when the shoot begins to emerge, the protective bottle comes off.

One of Mr. Austin's unusual camellia treats is a sprinkling of tea grounds over the roots. This supplies tannic acid, he explained, which helps blooms retain a proper shape.

Mr. Austin is wholeheartedly assisted in his camellia project by his wife Mabel. "I couldn't do it without her," he said. They cut around 100 blooms for each show and travel to around 10 shows each season. They recently participated in a show in Jacksonville, Fla. and have been as far away as New Orleans, La.

For travel, blooms are packed in cotton and ice — a process that requires much time and precise handling. A bloom with even a hint of damage will not be considered by judges. Neither will a bloom that has received a slight frown from Mother Nature. Perfection is the price that must be paid.

Mr. and Mrs. Austin are the parents of two daughters, and they have three grandchildren and two great-grandchildren. Their daughter Phyllis Austin is an investigative reporter for

the *Maine Times* in Topsham, Maine. Her "boss" is Dodge Morgan, a name many people recognize as the man who sailed around the world alone. Their daughter Sandra Penny is a resident of Four Oaks. Her husband, John, is becoming one of the new breed of camellia enthusiasts, and Mr. Austin enjoys teaching him the tricks of the trade.

Mr. Austin said he doesn't expect to fare as well as usual in the upcoming camellia show, because the winter has been unseasonably warm, and that means that his greenhouse blooms will not attain the size they normally would. "It hasn't hurt outside growers too much," he said, "but it's about killed me."

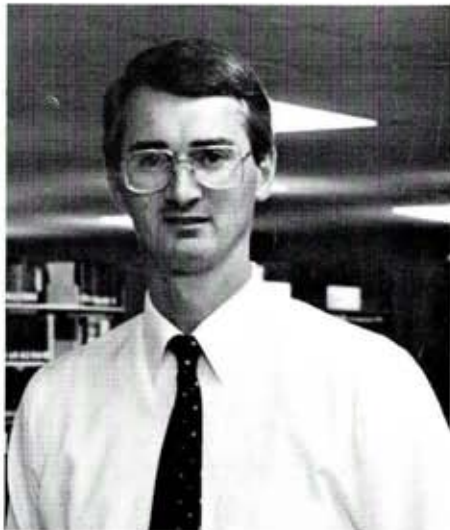
But that doesn't mean his enthusiasm for the upcoming show is diminished one iota. He looks toward February 17 with great anticipation as he checks the progress of the colorful array offered by his hundreds of plants.

And he hopes a large crowd will turn out to see the flower that has been foremost in his life for so long.

Some unsuspecting camellia viewer at the Carolina Pottery show may be just as smitten as Mr. Austin was 40 years ago. And a bud may begin to form on a brand new camellia-growing champion.

EDITOR'S NOTE: Mrs. Cannon wrote this article in 1990, and the camellia show she refers to in Smithfield was held that year. The Smithfield show will not be held this year, 1992.





EDITOR'S COLUMN

BY

JIM DARDEN
CLINTON, N. C.

It is with this issue that I must inform you of my leaving as editor of ATLANTIC COAST CAMELLIAS. My ever increasing family, school, and business responsibilities have made it increasingly difficult to find the 40-50 hours required to write and collect articles, show results, photos, and the like, to have the magazine printed, and to mail the publication before the deadline. While I wouldn't take anything for the experiences I have had as your editor, I must now turn the reigns over to someone new. We are extremely lucky that the someone new who has agreed to become your new editor is Dr. David Scheibert of Fort Valley, Georgia.

I would like to thank everyone who has been so kind and helpful during the past five years. Particularly Bill and Donna Shepherd, who have consistently helped with wonderful photos of members of the society. And also to Annabelle Fetterman, who has always been there when I needed guidance or help. And so many of you have also been helpful, please accept my sincere thanks.

It seems only fitting that some of you should be recognized. You have surprised me with a fine plaque and beautiful "Sadie A. Lyon" painting at Myrtle Beach, and I can't tell you how much both of those gifts were appreciated. At the risk of leaving out many of my friends who are equally deserving, and based upon my five years as magazine editor, here is my ACCS Hall of Fame.

Best Outside Grower	Parker Connor
Best Greenhouse Grower	Joe Austin (This was tough, because Jim Pinkerton and Fred Hahn are nipping at Joe's heels.)
Best Artist	Sadie A. Lyon (Thanks again for the beautiful "Howard Asper.")
Best Singer	Gordon Howell (Don't hold me to this one.)
Best Interview	Ann and Mack McKinnon
Most Photogenic	Harry Watson (How is it that he shows up in almost every photo in the journal?)
Best Smile	Elliot Brogden
Best Golfer	Bruce Williams (He is one of the few people I can occasionally beat.)

Most Gracious Lady	Amy Connor
Nicest Gentleman	Paul Dahlen
Best Picnic Thrower	Buck and Tyler Mizzell
Best Chief Judge	A toss-up between Geary Serpas and Fred Hahn
Best Photographer (Blooms)	Marion Edwards
Best Photographer (People)	Bill and Donna Shepherd
Best Shopper	Lu Powers (and thanks a lot to you too, Ed.)
Best Fund Raiser	Martha Duell (grip your wallet tightly when near Martha)
Most Likely to Succeed	Jack Kohler (look out, ACS President)
Best All Around	Annabelle Fetterman (thanks to a terrific lady, it is my privilege to know.)

I have run out of categories, but there are many more of you who deserve to be in the Hall of Fame. My thanks go out to all of you. Please give Dr. Dave your support and send him all of your Camellia clippings, show results, etc. Your input will guarantee a great magazine.

I hope to see all of you at the shows this year. Best wishes for the best Camellia season ever.

Jim Darden

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Elizabeth and Dave Scheibert of Marshallville, Georgia. Dave will be the new editor to Atlantic Coast Camellias.

(Photo by Shepherd)



No. 10 at Augusta — The Camellia Hole

By Jim Darden
Clinton, N. C.

(Jim Darden is Chairman of the Horticulture Technology Department at Sampson Community College in Clinton, N.C., and Editor of the Atlantic Coast Camellia Society journal. This article was written for that journal, hence the emphasis upon Camellias.)

This article is about a wonderful plant and its association with a wonderful place. The plant is the Camellia, my favorite, of course. The place is the Augusta National Golf Club, my choice for the most beautiful golf course in the world. There is, however, much more to the story of Augusta National than Camellias.

My association with Augusta began when a good friend helped me get tickets to the Masters Tournament. The Masters is arguably the top golf tournament in the world. When Mary Nell and I were fortunate enough to enjoy our first Masters, we realized that Augusta National is a very special place, and not just because of the world class golf played there each April.

The golf course and grounds include a magnificent clubhouse, built in 1854, along with several other buildings reminiscent of the Old South architecture that one might expect to find at the great plantations. Then there are the 200 acres of perfect turfgrass, brilliant green in April with ryegrass-over-Bermuda fairways and bentgrass greens. On these hallowed grounds a weed of the wrong species is a strange and rare intruder.

But there is much more to this awe-inspiring place than buildings and fairways. On these acres are thousands of ornamental plants growing on rich soil with a distinctly rolling character which seems to be the perfect site for the world's premier golf

course. Golf immortal Bobby Jones described the site as "Perfect . . . lying here all these years waiting for someone to come along and lay a golf course on it." One could travel the world over and rarely see such a combination of topography, ornamental beauty, architecture, atmosphere, history, mystique, and great people. And, yes, our friend the Camellia plays a special part in all of this.

Augusta National is a very exclusive club, not one where horticulturists may visit without invitation. Being quite fascinated by the beauty and history, both horticultural and athletic, which abound here, I requested a meeting with the head horticulturist, and last July was extended an invitation to visit him.

What a great opportunity this would be, to learn about turfgrasses and ornamentals on a course that is used as the standard for beauty and excellence by courses the world over. The college where I teach, realizing the value of having its turfgrass instructor exposed to such an outstanding learning opportunity, extended an educational leave day for me to make the trip. I was accompanied by Dr. Bruce Williams, formerly head of the Horticulture Department at Fayetteville Technical Community College, and now a turf specialist with our state extension service working with golf courses in the Wilmington, N. C., area. Bruce was equally excited about the chance to visit Augusta National.

A look at the history of Augusta National will give us insight into the early ornamental plantings in the South, including the Camellia. When the Spanish explorer Hernando DeSoto, fresh from conquering the

Incas in Central America and Mexico, traveled from Cuba through Florida and Georgia searching for gold and riches in 1540, he approached the Savannah River. There DeSoto and his army of 700 used an old indian trail that connected the coast with the Great Smoky Mountains. In the vicinity of what is now Augusta, the old trail followed the Savannah River, less than a mile from its southern shore. A spring, which offered a cool drink to Indians and travelers on the old trail, still flows on one of the holes of the Augusta National course.

The rich lands on the ridge between Raes Creek and the Savannah River came under cultivation in the early 1800's as an indigo plantation. Pigments for dye were taken from the berries of the indigo plants, some of which have been found in the woods along several of the fairways since the course was built.

In 1853 the plantation was purchased by a Mr. Redmond, who planted an orchard on the 315 acres of the bluff over the river. Shortly thereafter he built a "gravel wall" concrete country house, which is now the main clubhouse at Augusta National. The orchard became known as "Fruitland near Augusta."

In 1857 the arrival of Dr. L. E. M. Berckmans signaled the beginning of an era that would see this special place become known the world over. Dr. Berckmans purchased a half interest in Fruitlands, along with 50 adjoining acres. A year later Dr. Berckmans' son, Prosper Julius Alphonse Berckmans, purchased the entire site and Fruitlands Nursery was begun.

The Berckmans family has a long and colorful history in which ornamental plants play a great role. P. J. Berckmans was born in Arschot,



Dr. Bruce Williams and Supt. Tommy Crenshaw marvel at this spectacular live oak in front of the old clubhouse at Augusta National.

(Photo by Jim Darden)



One of the buildings at Augusta National impeccably landscaped with traditional plants and framed by massive cedars.

(Photo by Jim Darden)

Belgium, in 1830. The family was one of nobility, prominent both politically and horticulturally in Europe.

Dr. Berckmans, P. J.'s father, had played a prominent role in the liberation of Belgium from Holland in the revolution of 1830. He also was a noted pomologist, and he passed his great love for plants down to his son. P. J. Berckmans was educated in Botany during his early years at several of Europe's finest schools, and at the age of 17 was already supervising the plantings at his father's estates. By the age of 21 he was an accomplished horticulturist, having written about the fruit crops of Belgium and France, and having contributed to an extensive set of books on that topic.

Upheaval and revolution in Europe in the late 1840's caused the Berckmans family to search for freedom and opportunity in America.

The Berckmans brought a large collection of plants with them, first settling in New Jersey. There P. J. planted a nursery, married, became an American citizen, and continued to write about fruit trees. He soon became disenchanted with the climate, however, and in 1857 he moved to Georgia. The lure of Fruitlands was like a magnet, drawing the Berckmans to Augusta.

Within four years the Berckmans had planted extensively at Fruitlands. By 1861 P. J. published a catalog which listed hundreds of varieties of pears, apples, grapes, and other fruit crops. Still only thirty years old, P. J. was rapidly becoming the most outstanding horticulturist in the South. Of greater importance to those of us in ornamental horticulture, however, was the fact that the 1861 catalog also listed a collection of over 100 varieties

of azaleas and 100 varieties of Camellias.

The story of P. J. Berckmans continued for the next 50 years, during which time he became revered throughout the South and the entire country for his horticultural expertise. He remained at his beloved Fruitlands, where his apples, peaches, and pears were winning awards and his collection of ornamentals continued to grow. During the 1880's he was mailing over 25,000 catalogs annually to customers all over the country and the world. Fruitlands became the largest nursery in the South, consuming over 500 acres. There were over 100 acres of ornamentals, plus 50 acres of roses, 20 acres in grapes, and an amazing 60,000 square feet under glass. Berckmans was truly a horticultural genius.

The accomplishments of P. J. Berckmans in plant science were many, including breeding programs that introduced large numbers of new plants to the trade. Worthy of note is Berckmans Golden Arbor Vitae, which is still thought by many to be the most popular dwarf conifer in the world. He also imported Japanese wisteria, and the plant now growing by the Augusta National clubhouse with its thirty inch diameter trunk is considered to be the first wisteria established in this country. Berckmans imported privet plants from France in 1860, the offspring of which were planted by the millions throughout the South in privet hedges.

A lasting testament to P. J. Berckmans is Magnolia Lane, which now leads from Washington Avenue to the stately clubhouse. Berckmans planted these trees in 1861 from seedlings brought from Atlens, Georgia. Today, some 130 years later, they grace the entrance to Augusta National with elegant splendor. P. A. Berckmans died in 1910, at which time he was eulogized around the world as a great horticulturist.

All of this history brings us to Camellia and their association with Augusta National. P. J. Berckmans collected hundreds of species of plants, but must have had a fondness for the Camellia. He imported Camellias from France, England, Germany, and his native Belgium. In his catalog of 1861 he named and described 24 Camellia varieties, and noted that he had "many other varieties." His collection of Camellias grew and soon became the cutting stock that would provide new plants for the gardens of coming generations all over the South.

During the years after Berckmans' death, his sons left Fruitlands due to family disputes. But when the property was purchased in 1930 and construction was begun on the golf course in 1931, sons P. J. A. Berckmans, Jr., and Alphonse Berckmans returned to provide horticultural assistance for the new project. In 1932 Alphonse Berckmans submitted a report to Bobby Jones in which he suggested that, in order to further beautify the already splendid grounds, one type of ornamental plant might be concentrated near each individual hole. The hope was that each hole on the golf course might be unique, remembered for its beauty by the collection of one special plant chosen to adorn it.

The idea was approved, and today each hole is named for a plant collection growing near it. Amazingly, thirteen of the eighteen holes are now beautified with the very plant that Alphonse Berckmans suggested. With a profusion of fine ornamental plants already growing on the old Fruitlands Nursery property, an extensive program was initiated to dig and move plants of all types, placing them more strategically around the golf course and grounds. Four hundred azaleas were moved to Hole No. 13 in 1932.

At about this same time a small nursery was established at Augusta

National, and cuttings were taken from existing azaleas and Camellias in large numbers. Because of this inhouse production, just two years later, in 1934, some 5000 plants were added to the golf course. An estimated 75,000 ornamental plants of 350 varieties now call Augusta National home. Below is

a list of the eighteen special plant types which now have a hole named for them. Notice that Hole No. 10, just down the hill in front of the main clubhouse, was planted extensively with a collection of our favorite plant, and is today known as the Camellia hole.

KEY TO FLOWERING PLANTS ON COURSE

Hole No. 1	Tea Olive
Hole No. 2	Pink Dogwood
Hole No. 3	Flowering Peach
Hole No. 4	Flowering Crab Apple
Hole No. 5	Magnolia
Hole No. 6	Juniper
Hole No. 7	Pampas Grass
Hole No. 8	Yellow Jasmine
Hole No. 9	Carolina Cherry
Hole No. 10	Camellia
Hole No. 11	White Dogwood
Hole No. 12	Golden Bell
Hole No. 13	Azalea
Hole No. 14	Chinese Fir
Hole No. 15	Firethorn
Hole No. 16	Redbud
Hole No. 17	Nandina
Hole No. 18	Holly

When Bruce and I arrived at the National that warm July morning we were admitted by the gateman and proceeded down the hallowed Magnolia Lane to the office of the Chief Horticulturist, Mr. Tommy Crenshaw. We had been told by my friends Bill Bambrick and Bert Botts, owners of Augusta's best garden center, that Tommy was a fine fellow and an excellent horticulturist. Tommy has been at Augusta National for twelve years. Even though he is still in his thirties, he seems to possess an extraordinary gift with plants. We would learn firsthand that all of what we had heard about Tommy was true, and more.

As you enter Tommy Crenshaw's office you know instantly that his blood runs Clemson orange. The intense

nature of his busy schedule was evident when we noticed a large chalkboard filled with the names of dozens of horticulturists and laborers on his staff. By each name daily assignments had been chalked in, a sign of the superb organization that must be practiced to groom a great golf course.

What a gentleman Tommy Crenshaw was. He took time from his schedule to talk with us at length, answering any question we might pose. Then Tommy took us on a golf cart tour of the grounds and course. We saw virtually every hole and planting, an unforgettable tour which lasted over three hours. We began by studying the plantings at the old clubhouse and cottages, and then off we went around the golf course. While

efficiently directing his crews with an occasional chat on the walkie talkie, Tommy graciously gave of his time and expertise, a grand lesson on a great golf course that we will never forget.

We talked about the turfgrasses and the ornamentals. I was interested in the azaleas and Camellias, particularly the masses of azaleas that fill the pine-covered hillsides at Amen Corner and serve as a backdrop for several of the splendid greens. Many of these azaleas have been a part of the landscape since Alphonse Berckmans suggested their use in 1932. However, Tommy pointed out that two things happened in the 1950's that were really responsible for the beauty of the course as we now know it.

First, there was Arnold Palmer. Arnie caused golf to become the major sport that it is today. Perhaps with a little help from President Dwight Eisenhower, Palmer brought golf into the living rooms of America and greatly

increased the popularity of the sport. Secondly, there was color television. In the 1950's television was first broadcast in living color, and Augusta National was the perfect place to show during the first week of April. There was a natural attraction between millions of viewers with Augusta and Arnold Palmer. The love affair was on, and massive amounts of azalea color exploded on television screens across America.

Azalea plantings began in earnest at the National. Thousands of large Southern Indicas, such as Formosa, Pride of Mobile, George Taber, G. G. Gerbing, President Clay, Pride of Summerville, Southern Charm, and others were planted, sometimes very close together for an immediate massing effect. They were put at strategic locations on the course to provide a panorama of color for the television cameras.

It is said that sometimes blooming



In contrast to the great mass plantings of mixed azaleas varieties that form the background for several of the national's famous holes, Bruce and I found many of Tommy Crenshaw's azalea clusters on the course, each consisting of only one Southern Indica Variety.

(Photo by Jim Darden)

azaleas were planted on the course the night before the tournament, but only after the cameras had been placed in position and their field of view was known. Azaleas were not grouped or massed by variety, as is the current trend. Instead, they were planted randomly, sometimes as close as eighteen inches apart. The idea was to have a spectacular array of many colors for the viewers to see from a distance. The strategy worked, and since the tournament dates correspond with the normal blooming time for Southern Indicas in Augusta, they helped the great tournament become a spectacle unlike any other event in the world.

Tommy Crenshaw's ongoing job includes reshaping, thinning, enlarging, and maintaining the great azalea plantings at Augusta National. Thousands of other plants, including the Camellias, grow under his gentle and learned hands. Both on the course and around the buildings, the landscape is dynamic and ever-changing. Many of the cottages use the simple old plants of a bygone era, such as ligustrum, Japanese hollies, native yaupon, and green liriope to gracefully illustrate the principle of simplicity. In the forested areas between fairways Tommy has many modern massed plantings of azaleas, forsythias, wisteria, flowering trees, Camellias, and many other species.

It seems only natural at this writing to make a comparison between Tommy Crenshaw and P.J.A. Berckmans. If while still in his 30's Berckmans possessed the same gentlemanly demeanor and vast botanical background that we saw in Tommy Crenshaw, we can easily understand why Fruitlands basked in beauty and success then just as Augusta National does today. Bruce and I felt truly privileged to meet and learn from such a fine young man. In a job where perfection is the minimum requirement, Tommy Crenshaw's results seem to suggest that he is pushing the great old course to new levels of excellence.

As the three of us rode our chariot back toward the old clubhouse we came alongside Hole No. 10, and there stood the Camellias. Some were quite large and old, while others were relatively young, indicating that Tommy has recently added to the collection. One could only wonder if these fine old plants, when freshly imported from Europe or the Orient, were spaded into the Georgia soil by P. J. A. Berckmans.

The large collection of Camellias stand guard over No. 10, which is the first hole used for championship playoffs. These stately plants are but a few feet from the green where Nick Faldo took the title from Scott Hoch two years ago. And, it was just over the knoll on the next hole where the Englishman Faldo took another Green Jacket from Ray Floyd last year. It seems appropriate that Camellias, thought by many of us as the finest plant in the world, should provide the backdrop for this wonderful world championship of golf.

As afternoon approached, Bruce and I bid farewell to Tommy Crenshaw and Augusta National, aglow in the history and grandeur of this horticultural marvel. We were truly in awe of the job done here by Tommy Crenshaw. During the five hour drive back up to I-20 to North Carolina there was much talk of turfgrasses, chemicals, and other things that horticulturists discuss. But what we had seen at the National was never far from our minds. Bruce and I began to realize that, once you have been a part of the beauty of Augusta National, a vicarious revisiting of the spectacular beauty there will always be as close as your thoughts.

Hernando DeSoto and his men trod this way over 450 years ago, killing and plundering the natives in pursuit of gold and riches. Little did he know that centuries later, in the tradition of men like P. J. Berckmans, Bobby Jones, Arnold Palmer, and Tommy Crenshaw, the riches would find their way here to Augusta National.

Historical Sources:

Historical Sketch of Fruitlands
Augusta National Golf Club

P. J. Berckmans, Georgia Horticulturist
by Willard Range

* * * * *



Our fearless (and lovely)
leaders — ACS Executive
Secretary Ann Brown and
former ACS President
Annabelle Fetterman.

(Photo by Shepherd)

Two of Aiken's finest — Bill
and Mildred Robertson.

(Photo by Shepherd)



ATLANTA CAMELLIA SHOW

Atlanta Botanical Garden, Atlanta, Georgia

February 16-17, 1991

C. japonica: Protected

Very Large	<i>Tomorrow Park Hill</i>	M/M Oliver Mizzell Ellore, SC
Runner-up	<i>Elegans Supreme Var.</i>	Jim Pinkerton Lugoff, SC
Large	<i>Ville de Nantes</i>	John Newsome Atlanta, GA
Runner-up	<i>Betty Shef. Pink Var.</i>	Ann & Mack McKinnon Lugoff, SC
Medium	<i>Margaret Davis</i>	Clara & Fred Hahn Charlotte, NC
Small	<i>Little Babe</i>	M/M R. F. Jeffares Meridian, Miss.
Runner-up	<i>Maroon & Gold</i>	M/M Geo. Griffin Nashville, TN
Miniature	<i>Mini Pink</i>	M/M Geo. Griffin Nashville, TN
Runner-up	<i>Bon Bon</i>	Clara & Fred Hahn Charlotte, NC

C. japonica: In open - Atlanta Area

Best	<i>Donckelarii</i>	Bettie & Bonneau Dickson Atlanta, GA
Runner-up	<i>Mark Allen Supreme</i>	Bettie & Bonneau Dickson Atlanta, GA
Best	<i>Donckelarii</i> <i>Carter's Sunburst Pink Var.</i>	Leroy & Frankie Stevens Stuart Watson Albany, GA
Runner-up	<i>Magnoliaeflora</i>	Elliott P. Brogden Columbia, SC

C. reticulata:

Protected	<i>Jean Toland</i>	Jim Pinkerton Lugoff, SC
Runner-up	<i>Mandy Smith</i>	Jim Pinkerton Lugoff, SC

C. hybrid:

Protected	<i>Mona Jury Var.</i>	Jim Pinkerton
Runner-up	<i>Julie Felix</i>	Jim Pinkerton

Tray of 3 Japonicas	<i>Ville de Nantes</i>	M/M R. F. Jeffares Meridian, Miss.
Tray of 3 Retics	<i>Francie L</i>	John Newsome Atlanta, GA
Best White Bloom	<i>Ruffian</i>	Clara & Fred Hahn
Best Bloom by Novice	<i>Aunt Jetty</i>	Gary Spikula

GOLD CERTIFICATES:

In open, won by Bettie & Bonneau Dickson - Atlanta
Protected, won by George & Jane Griffin - Nashville, TN

SILVER CERTIFICATES

In open, won by Mr. & Mrs. W. Lee Poe, Jr. - Aiken, SC
Protected, won by Clara & Fred Hahn - Charlotte, NC

* * * * *

Happiness Is —
An Elliott Brogden smile.
Elliott is shown here
placing blooms in a show
last season.

(Photo by Shepherd)



The History of Camellias

by Ann Richardson
Huntington Botanical Gardens, California

Plants of the genus *Camellia* grow naturally over a large area of southeast Asia, China, Japan, Indochina, Burma and Assam. The history of two very important species, *Camellia japonica* and *Camellia sinensis*, are briefly explained here beginning with their discovery in Asia and their introduction to Europe. This brief overview will end at the close of the 19th century.

China and Tea

Camellias in the West are prized as ornamental plants, but in other areas of the world they are cultivated for other purposes as well.

C. sinensis, the tea plant, originated in China where tea drinking goes back to approximately the third century.

Tea drinking was first introduced into Europe in the early 17th century and the tea trade was carried on a large scale through the 18th century. The importation of tea from China was costly and attempts were made to import plants and seeds to cultivate tea closer to home. However, few survived the long voyages. In 1819, John Livingstone of the East India Company complained that only one plant in the thousand was expected to survive the four to six month voyages from China. Those that did live often died in colder areas of Europe.

The camellias that made it through the voyages turned out to be *C. sinensis*. Whether Chinese officials were being purposeful or not, they must have realized that once exported, the tea plants would be propagated and grown for profit elsewhere.

In 1748, the East India Company sent plant collector Robert Fortune to China to collect plants and seeds and to recruit some expert tea makers, for the purpose of establishing a tea

industry in India under British control. Today, tea is one of the largest and most successful industries in Sri Lanka and India.

The tea industry never met with much success in the New World, due largely to high labor costs which resulted from hand picking and processing of the leaves. Presently, the only tea producer in the United States is the Charleston Tea Plantation in South Carolina, which was established in 1987.

Japan

Camellia japonica, the species most widely cultivated over the longest period of time, has nearly 30,000 known cultivars. It originates in Japan as its name indicates, but it is also found in the southwestern provinces of China where numbers of garden forms or cultivars originated. The first garden forms of *C. japonica* to arrive in Europe came from China, but these same forms were also commonly cultivated in Japan, and so probably originated there.

The influence of the camellia in Japan can be seen clearly in legend and in lasting traditions. Symbolizing longevity, friendship, elegance and harmony, the simple single camellia blooms are an essential part of the tea ceremony during late winter months and early spring when other flowering plants are dormant. Historically, in many famous temples of Kyoto, camellias were traditionally planted by Imperial family members and have survived over 500 year — to this day. In season, flowers are often scattered before the sanctuary of Buddhist temples. Camellias appear both in modern and ancient books, on kimonos and other fabrics, fans,

scrolls lacquered trays, ceramics, and other art objects.

The beauty of Japanese plants has fascinated western gardeners for centuries, but Japan's ports were closed to foreigners for many years. Between 1624-1853/54, only the Dutch were able to maintain limited trade. In 1694, Englebert Kaempfer, a German doctor and naturalist with the East India Company, managed to bring back from Japan a collection of azaleas, camellias, and tree peonies that stunned botanists in Europe.

Shoguns carefully watched the movements of early European traders and explorers. Plant collectors, therefore, were at extreme risk to remove any plant material. A slow stream of plants did, however, manage to trickle from Japan to Europe and eventually to the U. S. It wasn't until 1853 that the presence of Commodore Perry's American warships in Tokyo Bay forced Japan to open trade with the West.

Japanese cultivars of *C. japonica* introduced to Europe were the oldest in the world. They had been selected and reselected over more than a thousand years, some confined to particular areas, creating quite distinctive forms not found elsewhere. Many that were introduced in Europe and the United States had their original Japanese names changed to western names.

Europe-England

The first recorded camellia material to arrive in Europe came at the end of the 17th century when James Cunningham, a physician stationed at an East India Company factory on the island of Amoy off the coast of China, sent dried herbarium specimens to James Petiver, an apothecary and botanist in London. In 1702, Petiver illustrated Cunningham's camellia in a pamphlet.

In 1730, a semi-double red camellia was reported growing in the glass-houses of Lord Petre at Thorndon Hall, Essex. A drawing in 1745 of a camellia at Thorndon was called the "Chinese Rose," probably referring to its Chinese origin.

Around 1780, there are scattered reports of camellias appearing in Europe, and interest was sparked particularly when collections of drawings of camellias in double and formal forms were imported from China by the East India Company.

The date most frequently cited for the appearance of two cultivars whose names and existence are familiar to this day is 1792. 'Alba Plena' and 'Variegata' arrived in England from China as living plants for the brothers John and Gilbert Slater. 'Alba Plena', a white formal double flower, is still available today at nurseries. 'Variegata', an extremely rare cultivar, is a common flower described as semi-double, deep pink blotched white. Both cultivars are grown on grounds of the Huntington Botanical Garden.

Most importations went to England and quickly spread throughout the continent, appearing on nursery catalogue lists in France, Belgium, Italy and Portugal. Importations slowed due to the increase of European seedling cultivars. Unfortunately, camellias in England rarely produced seed. Most new cultivars came from Italy and other European countries.

Portugal

The history of camellias introduced into England is well documented, but for other European countries it is quite sketchy.

The pioneering efforts of Portuguese sea captains and merchants making contact with China date to 1516. Although sea captains and explorers must have been aware of camellias, there is no record of their returning plants to Europe.

There are, however, very old camellia plants in both Portugal and Spain. A garden in Oporto, Portugal, has three very large specimens with single red flowers and a combined canopy spread of 150 square yards. The age of these plants has been in question for many years, the most probably estimate of their age is about 200 years.

Camellias found their way into many private gardens and areas that had favorable growing conditions. Nursery catalogs of the mid to late 1800s show entries of hundreds of cultivars, attesting to their popularity.

Spain

In Spain, camellias are not looked upon as exotic plants, having long been established in farms, along roads, in the countryside and in cities. Many are 25 feet tall, a sure sign of age and stature.

Germany

Winters in Germany are too severe for camellias to survive unprotected. A *C. japonica* 200 years old survives and blooms in a Dresden park in Pillnitz Castle, but it is protected by a heated glasshouse in the cold season. It measures 27 feet tall, 33 feet wide, bears no cultivar name but produces small red single flowers typically of seedlings.

G. F. Seidel, a German botanist and nurseryman, imported a camellia from Japan in 1893 and changed its name from 'Usu-otome' to 'Frau Minna Siedel'. When it was introduced later in Sacramento, California, its name was again changed to 'Pink Perfection'. This is the oldest camellia on the Huntington property. It is over 100 years old. The cultivar is still popular and available in the nursery trade today.

Belgium

The camellia was the favorite flower of King Leopold who came to the

Belgium throne in 1865 and started an ambitious building compound of glasshouses at the Royal Palace at Leuken. Reputed to have one of the most beautiful collections of rare plants in Europe, King Leopold housed the camellia collection in a separate "specialist" glasshouse. This fine royal collection survived two world wars and the glasshouses still exist.

France

In France, the first camellia was presented to Josephine Beauharnais, wife of Napoleon, in 1700 and planted in her famous garden at La Maison. The popularity of camellias spread fast, and they became the symbol of luxury and fashion. They were worn as boutonnières by gentlemen or in corsages by the ladies in the mid 19th century.

Alexander Dumas Fils' famous story, *La Dame aux Camellias*, portrayed a lovely but doomed lady of pleasure who wore white camellias on the days of her availability. The novel created a scandal; it was turned into a popular play, and then became Verdi's opera, *La Traviata*, which premiered in Venice in 1853.

Italy

The camellias entered Italy via the Court of Naples where it was introduced by Lady Hamilton. She was friend to Lord Nelson, who in turn was the friend of Lord Petre, the Englishman who in 1745 received some of the earliest recorded plants.

During the middle of the 19th century camellias were very popular with collectors and horticulturists. In 1856, many new releases were introduced from Italian Sources. The Roman villa Doria Pamphilj listed 57 different camellia cultivars growing on the grounds, a total of 500 plants. In 1969, there were only five.

By the end of the 19th century, the craze for camellias waned in Europe. Their decline may be attributed to

the deterioration of international relationships and poor economic conditions. It was the end of the age of formal elegance and the cost of maintaining conservatories, where many camellias were grown, became difficult. Few new cultivars appeared and nurseries kept numbers to a minimum.

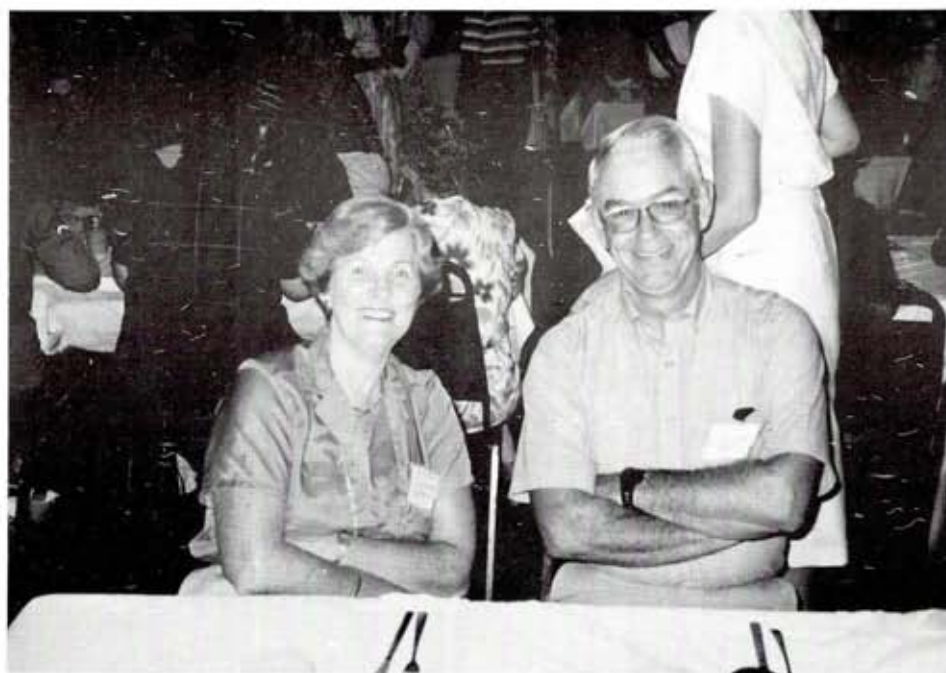
Other Camellia Products

Besides harvesting the leaves of *C. sinensis* for tea, another quality product from camellia plants is a fine grade oil extracted from the seeds of

C. sasanqua, *C. japonica* and *C. oleifera*, used in China and Japan for cosmetics and cooking.

In its homelands, the camellia's red flowers have been used in dyeing. The dense camellia wood is burned for heat and light and when processed, produces a high grade charcoal used for fuel. The accessibility and toughness of the wood widened its use for many tools, agricultural implements, and formerly, for weapons.

* * * * *



Ed and Lou Powers — great Camellia friends from Wilmington. (Who is that fellow looking in from the top left?)

(Photo by Shepherd)

Camellia Variegation

by Ann Richardson
Huntington Gardens, California

Non-infectious (Mutational) Flower Variegation

Fuzzless peaches, corkscrew willows, and variegated camellia flowers are examples of the ageless phenomenon of mutation — but a special sort. In these examples the genetic mutation affects a portion of the cells in the plant's growth tip. In this growing point, a mutation change produces tissues composed of normal cells and affected cells. Such a mixture of genetically different cells is called a **chimera**. Sometimes leaves, flowers or fruit which develop from that growth tip will visibly reflect that change.

In camellias that are chimeras, the affected cells of flowers may produce a different color from normal, resulting in a flower that is variegated. Two distinct patterns of chimeras are commonly noticed. One pattern (**sectorial**) occurs when an entire wedge of cells in the growing tip has distinct genetics. Flowers produced by a plant with a sectorial chimera show bars, streaks or stripes of a different color in the petals.

The other common chimera (**periclinal**) occurs when one or more layers of cells in the growing tip are genetically different from the layer(s) above or below. These parallel layers, becoming thinner towards the edges of the petals, will often produce borders or fringes. Less frequently, flowers speckled with numerous white and varying shades of pink or red spots may result from multiple mutations.

Because of the way in which a plant's flowers and leaves are produced, the periclinal chimeras yield a more stable, more predictable type of variegated flower than sectorial chimeras.

Non-infectious (Mutational) Leaf Variegation

Non-infectious leaf variegation is extremely rare because the genes for chlorophyll (the color green) are apparently very stable in camellias, in contrast to the easily mutated genes for anthocyanins (the red pigments) found in flowers.

Camellias with non-infectious variegated foliage have not been observed with non-infectious variegated flowers. In fact, the camellias selected with variegated foliage tend to have single red flowers and spare bloom.

Infectious (Virus) Flower Variegation

Virus-induced variegation differs strikingly from genetic-induced variegation both in the patterns formed in the flowers and in the mode of transmission from plant to plant.

The exact origin of the class of virus found in camellias is unknown. But it is generally assumed to be Asian, where the original vector, possibly an insect such as a leafhopper, transmitted the virus. Today, however, the only known means of virus transmission has been through grafting, a common practice for propagating camellias and for introducing variegation into new cultivars of camellias.

The type of virus that infects camellias most noticeably affects the flowers. The virus prevents the development of color in certain groups of cells during flower bud development. There is evidence that weather conditions during bud formation can influence this process. Low temperatures may inhibit the multiplication of the virus.

It has further been observed that the first blooms on some variegated

camellias often have the greatest amount of white-late blooms (on the same tree) having very little variegation. Commercially, it is difficult to reproduce a virused plant having flowers uniformly virused. No two flowers look alike.

Variation in virused flowers is erratic, some flowers having white blotches here and there or little at all, and others an unusual uniform distribution throughout. The latter often take a prize over non-virused camellias in a camellia show. Virusing is not accepted everywhere in the world — some countries do not allow importation.

According to the handbook *Guideposts for Camellia Judges*, "For the purpose of show competition . . . to be a contender a variegated bloom should have enough white and the white should be so placed as to make the white a distinctive part of the flower."

To introduce variegation into a non-virused camellia, rootstocks from an easily virused cultivar such as

'Adolphe Audusson Variegated' are used. The virus is translocated upwards to the clean or non-virused scion (cutting) when the graft union occurs. Virus travels rather slowly through the plant. A branch or twig may be free of virus for a long time while the rest of the plant is infected.

Some camellia cultivars are more susceptible to virusing than others. 'Dr. Clifford Parks', however, is very difficult to virus, and 'Pink Perfection' has no known instance of having been successfully virused.

When a plant is susceptible to virus, parts other than flowers may be affected. Plants can become stunted and some slowly die, depending on the cultivar. A few trees display some mottling (yellowing) on the leaves — easily detectable as virus and not mutation, because the leaf yellowing is neither evenly distributed throughout the plant nor do the leaves have a characteristic pattern or border that identified the camellia as non-infectious.

* * * * *



Camellia masters — Fred Hahn and Elliott Brogden.

(Photo by Shepherd)

AN INVITATION TO JOIN

We hope that you will join the Atlantic Coast Camellia Society. Let's enjoy Camellias together.

The Atlantic Coast Camellia Society was organized September 13, 1980 at Myrtle Beach, South Carolina. The purpose of our organization is to extend the appreciation of Camellias and to promote the science of Camellia culture. Through our Camellia shows and programs, and by exchanging knowledge and ideas with the Camellia specialists within our membership, we feel that everyone in the ACCS benefits from being a member of this organization. Whether you are a beginning Camellia fancier or a veteran Camellia competitor, the ACCS is dedicated to providing information, shows, and social events that you will find helpful, entertaining, and enjoyable.

Annual dues for membership in the ACCS are \$12.50 for singles or couples. The membership year runs from September to September. A membership entitles you to three issues of Atlantic Coast Camellias, the journal of the Atlantic Coast Camellia Society. These are issued January 1 (spring), May 1 (summer), and September 1 (fall). In addition, your membership provides an invitation to our annual meeting in October in Myrtle Beach, S. C. This event has been especially successful in recent years, with over 100 participants in 1986, and with such keynote speakers as Julius Nuccio and Sergio Bracchi.

A variety of Camellia topics are addressed in articles published in Atlantic Coast Camellias. In addition to regular features concerning Camellia culture in the landscape and in the greenhouse, articles cover such topics as Camellia planting, grafting, rooting, judging, pruning, gibbing, disease control, insect control, new and old varieties, show preparations and results, liming, fertilization, spraying, mulching, disbudding, and nursery production. Numerous photographs and illustrations are provided.

We invite you to join, and welcome you as a member. Please make your check payable to the Atlantic Coast Camellia Society. Fill out the convenient application blank below, and mail it to:

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Variegation in Camellias

by Luther W. Baxter, Jr.
Clemson University

It is common knowledge that camellias have either solid-colored or variegated leaves. Variegated leaves are normally green with yellow mottling or splotching. More spectacular than variegation of the leaves is variegation of red and pink flowers. Many cultivars are sold as either solid colored flowers or as variegated such as Adolphe Audusson and variegated, Burgundy Queen and variegated, Carter's Sunburst Pink and variegated, Diamond Head and variegated or Don-Mac and variegated. There are two types of variegated flowers. They are infectious (virus-induced) and non-infectious (genetic). In the virus-induced, infectious type, the variegation is irregular and may be slight to severe. Virus destroys color so there is no flower variegation. In white-flowered cultivars, it is impossible to destroy color because white represents the absence of color and thus there is no flower color to destroy. Most virus diseases of plants are harmful but the severity varies from virus to virus as well as the effect of a given virus from host to host.

The virus that causes camellia variegation affects *Camellia japonica*, *C. sasanqua*, *C. oleifera*, *C. reticulata*, *C. hiemalis*, *C. sinensis* and camellia hybrids. There are probably many more *Camellia* species susceptible to infection by the virus. Virus of camellias in this country is spread by man during vegetative propagation. There seems to be one exception to the above which is as follows: a solid colored camellia growing alongside a variegated one will sometimes make a

root graft and under these conditions the solid one becomes variegated. The virus responsible for this type of variegation (irregular mottling and chlorotic splotching) moves throughout the root system of the affected plant and enters the root system of the non-affected plant through the root graft and from there goes throughout the roots, stems, leaves and flowers and becomes systemic (meaning throughout the system).

Another means of spread is to use a variegated scion on a solid understock. If a union occurs and then the scion dies, the new growth of the understock (for example, a *C. sasanqua* cultivar) will be systemically infected. Therefore, any cuttings and/or scions taken from this infected plant will then be passed on to the cuttings or graft.

The virus is not transmitted through the true seed so that *C. sasanqua* seedlings make good understock since they are virus-free and resistant to root rot (caused by *Phytophthora cinnamomi*). The presence of virus in the scion or cutting does not affect either its grafting or rooting capabilities. Once a plant is systemically affected by a virus it usually remains infected for the remainder of its life although the virus is not equally distributed throughout the plant and symptom expression is variable.

There are several strains of the virus. Some may variegated the leaves but show very little symptom expression on the flowers, while others may show symptoms beautifully on the flower but very little if any symptoms on the leaves. Four virus strains have been reported and there may be

others. The symptoms may be so severe that the leaves sunburn and then drop off. If such is the case, some of the defoliated branches may show dieback, but this type of dieback should not be confused with dieback caused by the fungus *Glomerella cingulata*, which kills, not by defoliation, but by destruction of conductive tissue.

As mentioned earlier, variegation of camellia flowers can be caused by genetic variability. Some cultivars, such as 'Herme' and 'Lady van Sittart,' have variegated flowers but the difference is in the pattern. The flower

color is regular and appears more as regular stripes throughout the flower rather than irregular white blotches mixed with irregular colored parts of the flower. In this case, one flower of a specific cultivar such as 'Herme' (of a specific type) looks very much like all of the other flowers on that particular cultivar.

Virus variegation may be considered harmful if it causes the loss of the original solid colored scion. However, infection of a cultivar such as 'Adolphe Audusson' by the virus, may greatly enhance the beauty of the flower.

* * * * *



Is Harry Watson modeling his newest purse? No, just showing a camellia tote bag about to be auctioned in Myrtle Beach.

(Photo by Shepherd)



CAMELLIA
JAPONICA



CAMELLIA
SASANQUA

ATLANTIC COAST CAMELLIA SOCIETY

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