

# *Atlantic Coast Camellias*

JOURNAL OF THE ATLANTIC COAST CAMELLIA SOCIETY



## **Japanese Paper Kite Butterfly**

# ATLANTIC COAST CAMELLIA SOCIETY

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**COVER NOTE**  
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*The Japanese Paper Kite Butterfly will greet you at Callaway Gardens in the Cecil B. Day Butterfly Center. See the article on Callaway Gardens in this issue. For more information call Callaway Gardens at 404-663-5186 or 800-282,8181, Pine Mountain, GA 31822.*

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## PRESIDENT'S MESSAGE

Have you ever seen a more beautiful fall? Leaves had breathtaking colors, weather was crisp and nice, and we had adequate amounts of rainfall. All of these combined to make a perfect season.

Our camellias are looking much better than they did for a while. We have a good budset, however, for some reason the buds have been very slow to open. We have had fewer blooms for the fall shows than ever before. All the other exhibitors with whom we have talked seem to be experiencing the same problems. Maybe this is an indication we will have "bumper" spring shows.

There have been some lovely blooms at the fall shows which we have had the pleasure of attending. Outdoor blooms, particularly, have been excellent.

Those of you who were unable to attend our annual meeting in Myrtle Beach missed a great time. The weather cooperated with us as usual, lots of sunshine and mild temperatures. Something over a hundred were registered for the convention and this included a few new members.

Sergio's program on Saturday morning was very entertaining and informative. It was a pleasure having him with us all the way from California. We hope he will be back again soon.

The Boehm porcelain Betty Sheffield Camellia donated by Gist Duncan, the Camellia painting donated by Sadie Lyons and the needle work donated by Marie Dahlen along with proceeds from the auction brought approximately \$2,500.00 to our treasury this year. Our sincere appreciation to those who contributed items for the raffle and for the auction and also to those who purchased tickets and items from the auction. Without your continued support we would not enjoy the successes we have had each year. This, as you know, is our big annual fund raiser and the proceeds are needed to help defray the

costs of printing our magazine and for other expenses incurred in the day to day operation of the Atlantic Coast Camellia Society.

We express our appreciation also to Buck and Bill, our "resident" auctioneers who do such a super job each year in wringing our purses dry and getting the top dollar out of each item for bid.

The Atlantic Coast Camellia Society, as well as our local societies, needs to work on getting new members. Almost everywhere we go we hear that membership is declining. We are not attracting new and younger members. Let's all do our part to promote Camellias and share our knowledge with prospective members. Perhaps somewhere somehow the message will get across and we will get new members.

Our editor tells me that he needs articles for upcoming issues of Atlantic Coast Camellias. We have many talented people among our membership who could write a column or two. One doesn't need to be a professional to write. If you don't feel that you can write an article, I am sure Dave would welcome your suggestions as to what you might like to have included in a future issue. Jot down notes, your observations on growing Camellias, on Camellia shows, or anything else that might be of interest to readers. These can always be incorporated into informative and educational articles. Any input would be welcome.

We are eagerly anticipating the upcoming 1993 season. We hope all of your blooms will win blue ribbons and that many of them will find their way to the Head Table. We look forward to seeing you at the shows.

Mildred S. Robertson



## EDITOR'S NOTE

We welcome Mildred Robertson as president of the ACCS and thank Marion Edwards for his two years of strong leadership. There's talk of the year of the woman and our society is in step with Mildred as president with half of our officers and directors being camellia ladies. Annabelle, thank you for blazing the trail.

The fall season has lasted and become more beautiful without fading. The many hues of the leaves continue to improve and the leaves hang on as if sprayed with Clear Set and Clear Life. Annual and perennial flowers continue to bloom. Tomatoes still ripen just before Thanksgiving, as more vegetables mature dressed in vibrant colors. Those gold and orange sweet potatoes are sweetly flavored and free of strings. The greenhouse is covered and I wish the camellia plants could march into place.

As year's end arrives the joy of the Holidays is embellished by the arrival of seed and nursery catalogues. This leads to dreams that color the gray days of winter even though the dreams don't always reach reality. The flowers and vegetables frequently fall short of the brilliant pictures in the catalogues. It is a blessing that our camellias give us beauty and lead us into spring.

The last two camellia blooming seasons have been outstanding and both have in common a mild winter and adequate summer rainfall. We again are entering winter with the same combination and good buds which are somewhat slow to respond to early gibbing. The early camellia shows in October and November have been of good quality and, weather cooperating, we're off to another good camellia season. *C. japonica* seem to become gradually larger and Jack Teague has excelled at this. The largest bloom I've seen in 1992 was *C. reticulata* 'Philip Mandarich' exhibited in Tallahassee, FL, January 1992, by Huly Smith and originated by Jack Mandarich. Jack's *C. reticulata* 'Dobro' is a beautiful flower (see Huly's article in this issue).

We've reached a new high in my time as editor of the ACC Journal. We have articles by three ACCS members, John Penny, Huly Smith and a "Dear Buck" letter from the Grandma Moses of the Pen. The latter was one of Jim McCoys favorite authors. Now let us all take heart and contribute articles. Consideration will be given to rib tickling jokes, cartoons, letters,

tips, quotes, Helpful Hints, recipes, How I Do It and questions to answer. The editor will even accept and try to write an article from notes. Hope I'm not crushed by a full mail bag and please contribute.

Have any of you tried any reputable plant hormones on camellias, antitranspirant such as Wilt Pruf for cold protection or growth retardants on camellias? Results would make interesting articles. Jim Pinkerton's experience with Clear Set and Clear Life for preservation of camellia blooms is being quickly adopted with favorable comment. Let us hear of your adventures and experiences. Just to get you started off, see the helpful hint and recipe in this issue. And by the way, the subject of rooting camellias would make several good articles, particularly new retic hybrids.

My thought processes do not become any better on the subject of membership having tried many approaches for the last six years as membership chairman for ACS. Imperfection is a part of being human and best intentions usually don't last for long. For starters, where better can you find a member for a camellia society other than in our midst of non-member camellia growers? The camellia show season lends itself well to a sincere personal invitation to a prospective member or former member. And try it at club meetings; you're bound to succeed soon and you'll feel so good that it's easier to try again. Please forgive this editor if I've bored you but I hope to have motivated some of you.

Tis the day before Thanksgiving and those fall leaves have been nestled to the ground by copious warm rains. We're off to a good camellia season with as high as 870 blooms in our first five shows since October 16th and over 100 of us enjoyed the annual ACCS meeting at Myrtle Beach. My thanks go to John Penny, Huly Smith and Grandma Moses of the Pen as well as Donna and Bill Shepherd for their help with this issue. Many of you contributed greatly to our record drawings and auction at the Myrtle Beach Convention and we are thinking warmly of your generosity with time, talent and resources.

It is a pleasure to wish each of you a belated Happy Thanksgiving as well as a Merry Christmas and Happy New Year filled with excellent camellias.

Dave Scheibert

# Callaway Gardens

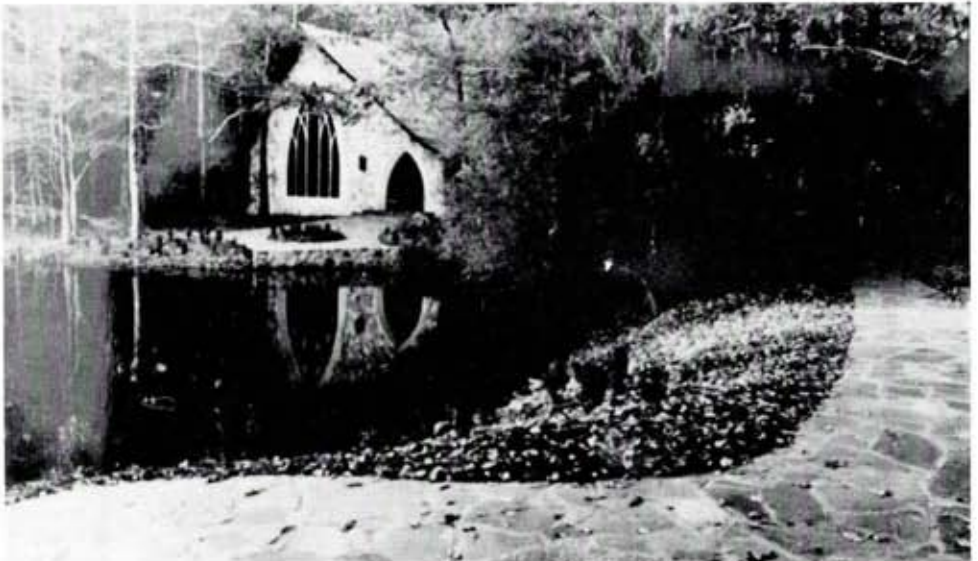
by Editor

What a nice day to visit lovely Callaway Gardens! The 2,500 acre horticultural center opened to the public 40 years ago and 750,000 visitors enjoy it each year. It is located at Pine Mountain in west Georgia, 75 miles southwest of Atlanta and 30 miles north of Columbus, GA. Seven restaurants, ten shops and stores, three lodging areas, three full and a half golf course, 17 lighted tennis courts, 13 lakes, a beach, fishing and hunting all join to fit most of your needs on a day visit, vacation or meeting. Visitors are welcome every day of the year with adult admission \$7.00 and children 6-11 years \$1.00.

In the early 1930's Cason J. Callaway, Sr. and his wife, Virginia, began to vacation at Blue Springs near Pine Mountain and love for the land resulted in purchase of 14,000 acres. Their explorations resulted in discovery and preservation of the prune leaf native azalea or *Rhododendron prunifolium* which has become the

Garden's symbol or figurehead. As erosion and follow land were corrected, 13 lakes were created and ornamental gardens begun. In 1947 Cason Callaway decided to establish an outstanding garden of beauty which opened to the public in 1952. Cason Callaway died in 1961 shortly before the dedication of the Memorial Chapel to his mother, Ida Cason Callaway. Other mileposts of progress have been the John A. Sibley Horticultural Center, 1984, the Discovery Bicycle Trail 1987-89, the Cecil B. Way Butterfly Center, 1988. Future additions include a Nature Center and a Visitor Education Center.

Now it's time to rise and shine as we approach the Visitors Center. Here you'll receive a map and be sure to see the slide presentation of Callaway Gardens. With your paid ticket the gatehouse keeper will admit you to this horticultural fairyland 60 years in the making with 70 full time gardeners, 20 part-time and horticultural internes



**Ida Cason Callaway Memorial Chapel**



and volunteers on an annual budget of \$5,000,000.

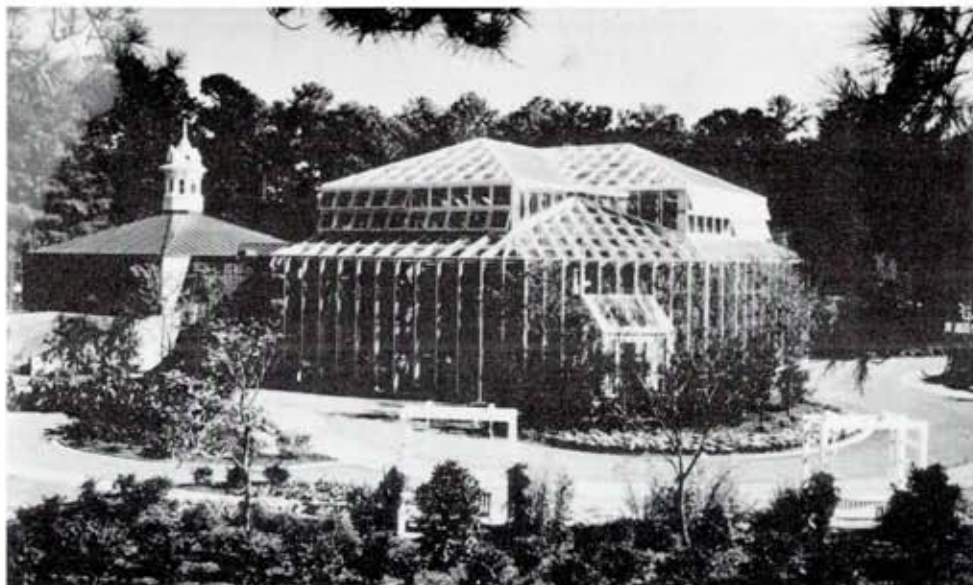
The road to the left just past the entry gate leads to the azalea trail. The 700 azalea varieties cover themselves in many beautiful hues usually during the Azalea Festival during the first half of April. Some rhododendrons and Mt. Laurel will also be found in season. It is difficult to leave the azalea bowl, but maybe there will be time later in the afternoon sun for a revisit.

On the way to the John A. Sibley Horticultural Center watch for waterfowl, native azaleas and attractive lakes. The Center is unimpressive till you're past the gift shop. Then you gasp repeatedly as you admire ever changing beautiful vistas of ornamental plants. Plantings are changed 18 times a year and it's difficult to choose between decors of poinsettias, mums, bulbs, cymbidium orchids, etc. The building contains 20,000 square feet and is an integral part of the outside 5 acres as well as being energy efficient for both heating and cooling. The building is 18 to 40

feet tall allowing several levels of viewing. Temperature moderation is assured by a 22 foot waterfall, misting, double roof with airspace, 700 thermal glass air filled bricks, limestone back wall backed by earth and 26 doors 24 feet tall facing south. The Sibley Horticultural Center is well planned and constructed for its purpose and recipient of many architectural awards.

The latest major addition in 1988 is the Day Butterfly Center featuring an 8,000 square foot octagonal glass tropical conservatory with 1,000 free flying butterflies. The remainder of the education center houses butterfly displays, a theater showing an award-winning movie on their life cycle, "On Wings of Wonder" and a gift shop. Hope for a sunny day and wear some red clothing and you may find butterflies lighting on you. The garden around the center features flowers that attract butterflies. A visit to the Butterfly Center will make you feel like a kid again.

The rhododendron walking trail is diagonally across from the center's



**Cecil B. Day Butterfly Center**

entrance door going alongside the parking lot. In April you can enjoy more than 60 varieties of rhododendron in various stages of bloom. If the weather is warm you may see some of the 70 species of native butterflies that live at Callaway Gardens.

The next attraction is the Pioneer Log Cabin which demonstrates life in the 1800's. On the same side as the cabin is the wildflower trail which is best in Spring and early Summer. Then beyond the cabin across the road is the holly trail which features most of the 450 varieties of holly found in the garden and a second Trail of Camellia '*sasanqua*' which were damaged partially in the freeze of January 1985.

By now you're realizing that it takes a full day, especially in April, to enjoy most of Callaway Garden. Mr. Cason's vegetable garden is 7½ acres of more than 400 varieties of vegetables, fruits and herbs as well as all America test gardens and wildflower test plots. The home demonstration garden of one-fifth of an acre along with a barn shed, patio and flower and vegetable beds serve as an outdoor television studio for the PBS series "The Victory Garden South". This home garden gives a look at successful gardening on a smaller scale. The remainder of the three acre upper terrace is devoted to fruits, berries, muscadines, unusual vegetables and test plots.

The middle terrace is the seasonal vegetable garden with extensive warm season varieties between the cool crops of Spring and Fall and you may partake of these in the restaurants in season. The lower terrace displays herbs among apple and peach trees along with native columbine along the back border. The herbs are both annual and perennial and many attract butterflies and hummingbirds and are good choices for the home garden.

The Ida Cason Callaway Memorial Chapel was built in the English Gothic style in 1961 to honor Cason Callaway's mother who instilled in

him the qualities that resulted in the creation of beautiful Callaway Gardens. Only the Vermont slate roof and limestone arches are not native to Georgia. The six stained glass windows show God in Nature. Falls Creek Lake reflects not only the Chapel but also the man who put his life, heart and soul into its design and completion.

Could there be more? Yes, the recreational facilities are north of the garden primarily around Robin Lake which boasts the largest inland, man-made white sand beach in the world and there are activities for every age. Robin Lake is the site of a Children's Center with a large playground, miniature golf, badminton and rides on the Robin E. Lee Riverboat. During June, July and August, Florida State University's "Flying High" Circus is presented daily under the new "Big Top" tent. The same performers supervise the Summer Recreation Program. There is a thrilling water ski performance and guests may ski and take lessons.

The Bike Barn at Robin Lake offers rental bikes, or bring your own, to cruise the 7 mile Discovery Bike Trail. This is the best way to see the gardens and stops at all major attractions. If you run out of "gas" just stop at the ferryboat at the 4 mile mark, ride across Mountain Creek Lake and back to the Bike Barn. The Spring Plant Sale in April sponsored by the volunteers in the tent at Robin Lake offers a good chance to purchase plants, trees and shrubs combined with the azalea season. Add to all this the golf, tennis, hunting and fishing facilities. You can be the "owner" for a day or weeks without worries. A visit or vacation at Callaway Gardens can give you some of the most beautiful, enjoyable and relaxing days of your life.

For more information please write to Callaway Gardens, P.O. Box 2000, Pine Mountain, GA 31822, or call 1-800-282-8181.



# It's That Time Again

by Hulyn Smith

As fishermen say, "It's time to fish or cut bait" . . . For camellia growers it's time to graft. You can get your scions several ways: buy, trade, beg or that other way we will not mention. Most people I have talked with this season seem to have sufficient understock.

The only question left is what are you going to graft. I can assure you that there are plenty of good new varieties. With hybridizers like Homeyer, Hall, Mandarich and Piet and Gaeta, there will be many new ones next year. Let's talk about a few new ones that some of our growers seem to like.

BIG DIPPER, HALL'S PRIDE, S&V, and JOHN HALL will continue to be in great demand this season. Also a brand new one KAY HALLSTONE. All of these are from Houghton Hall and he has three more registered for next season.

Jack Mandarich has quite a few new hybrids including PHILLIP MANDARICH and DOBRO which are really at the top of the list. Not far behind is H.C. RAMBATH, KATIE MANDARICH, MARY O'DONNELL, ROCCO and RAM'S CHOICE.

New this season from Walter Homeyer is EDNA BASS and GLADYS WALKER. EDNA BASS (STEVE BLOUNT x PIRATE'S GOLD) is a dark red japonica which really excites me.

LARRY PIET now joins EMMA GAETA, v. as an outstanding flower from Meyer Piet/Lee Gaeta team. They have two more which will make the scene in our area next season - LEE GAETA and KARRIE ARMIJO.

Marvin Jernigan has two new registrations: DR. DAN NATHAN SUPREME and RUTH JERNIGAN. Both are big reds with a lot of frosted sheen.

I also like BILL COLSEN, a good red japonica which does well outside from George Gerbing.

Dick Hardison of Tallahassee, Florida has registered three new japonicas. I am fortunate to have all three of these growing outside and they are all over four feet tall at only one year old. They have been named ROBERTA HARDISON, JUNELLA HARDISON and MELISSA HARDISON.

I have registered several seedlings originated by Frank Pursel. They are DR. DAVE, MANDY SMITH, TOMMY LAND, PEARL TERRY, J.D. DEAN and PEARL S. BUCK. I also registered a non-retic seedling of my own which is named CILE MITCHELL.

Dr. Habel from Norfolk, Virginia has registered the following: LES MARBURY, MISS FAYETTEVILLE, HEATHER GREEN, JEAN FOSTER and CHARLIE MASON.

There are a few new ones from the west making their way south. Some of these are CLOISONNE, FIRST BLUSH, HARVEY SHORTS FINALE, SHAYLA'S BABY, SPRING DAZE, UNFORGETTABLE, MILTON BROWN, GRACE CHOW, and JENNY MILLS. I believe you will see some of these in our shows this season.

In July of 1992 Trevor Lennard from TePuke, New Zealand registered five new camellias: NICK CARTER, WYN CARTER and ALISHA CARTER. These are all seedlings of C. FUYAJO

and are all dark red. PHILLIPA LENNARD is a FLOWER GIRL x NUCCIO'S RUBY seedling that blooms early and should bloom in our area as early as October. Trevor's last registration was TREVOR LENNARD (FLOWER GIRL x CARL TOURJE) is another early bloomer which is a large peony form with 24 deep pink and very crinkled petals. It must be a really great one since he named it for himself.

Also new from New Zealand is SEA WITHCH registered by Vonnie Cave. This is a miniature and no one could locate the originator.

There are a few sleepers out there that are not brand new but you will be hearing from them. BORON'S GEM is a fine outside japonica. Anyone should

be able to grow this one. CHRISSIE'S RETIC from Neville Haydon in New Zealand is almost white and very good. One I love is the sweetpea named FANCY PANTS from Walter Homeyer. ANN BLAIR BROWN, V. is a very good, very variegated flower. You'll be seeing a lot of this one. MISS BAKERSFIELD is a good red camellia japonica and most of you know how I feel about the red ones!

For those of you who took the time to read this article, I hope in some way I may have inspired you to prepare for the grafting season. Grafting is the answer for keeping up with the fast moving change in our hobby. In no other hobby can you stay as near the top as economically.

\* \* \* \* \*



**Mary Adams and Alda Boll, Valdosta, GA.** (by D. Scheibert)



# Winter Care of Camellias

Dave Scheibert

The camellia blooming season is upon us and we are enjoying the flowers of our last three seasons of care. This is the season for sharing our blooms with others and thus increase interest in our hobby.

Those who are well prepared have their plants mulched or comfortable in a newly covered, clean greenhouse. Extra mulch that can be mounded up around the camellia trunks can allow survival in case of a severe freeze. The late summer fertilization with potassium and phosphorous can help protect plants exposed to cold. If you used a late summer oil spray, the camellia leaves should be at their shiny best.

Water is needed less in winter if rainfall is normal and evaporation is less in a greenhouse so that half of the usual watering may be required. Swelling buds and profuse blooms will increase the water requirement so that individual watering may be needed. While four parts per million of flouride is permissible in our water, some plants may be injured by only 1 or 2 p.p.m.

Once a month during Winter a liquid<sub>2</sub> fertilizer mixture as described in the August 1989 *The Camellia Journal* can help produce better blooms without stimulating vegetative growth. Trace elements are felt to be important in aiding better coloration of flowers. In early March the first of two or three fertilizer applications can be applied to be ready for spring vegetative growth.

The use of gibberellic acid to promote better show blooms may be carried out to late January by those who anticipate using show blooms in March. One part of regular liquid gib may be diluted with ten parts of

distilled water to promote blooms during show season on late blooming miniatures.

Ventilation in a greenhouse is desirable. This will also keep the plants cool which assists in producing better blooms. This can be accomplished by opening the greenhouse whenever the outside temperature is above freezing. Cool temperatures can prolong the blooming season and produce better large blooms. Those whose camellias are outside know that bloom buds stimulated by gib are more subject to freezing as well as tip dieback of vegetative growth since the water content is increased. Young plants and grafts are also more subject to cold damage.

Spot spraying or a no pest strip may become necessary if late winter aphid or scale infestation occurs. A sharp eye and magnifying glass may be necessary if red spider mites become a problem and insecticidal soap may be the safest remedy. Slugs and snails can ruin beautiful blooms quickly and can be killed with slug bait or saucers of beer. All spent flowers and petals should be burned to control or prevent petal blight.

Pruning is best done in late February or early March before new growth begins. Needless to say, dieback should be removed when it occurs and burned. A camellia will tolerate heavy pruning in late winter, but may die if the same is done at another time, or at least will be more subject to cold damage. A Benlate® - Captan® dip of pruning instruments between cuts is desirable as is sealing the exposed wood with a water based asphalt mixture containing Benlate® and/or Captan®. The



latter is no longer available but Kelthane® is now back on the shelf for red spider mites if simpler measures do not work.

Proper planning when disbudding and pruning will help flowers have adequate room as they bloom. Further light pruning or leaf removal may prevent bloom damage or pinning branches or leaves with clothespins may be needed. Leaving a down pointing terminal flower bud will aid in having a down facing flower which gives more protection from rain or water drip.

There are many ways of holding and packing blooms for a show and chemicals to aid in preservation of blooms. Those who use the latter seem convinced of their value. My only experience with spraying hormones on blooms did not convince me of its value. Blooms picked in early morning are placed in a sweater box on a bed of polyester fiber under which there is a moist paper towel. This seems to work as well as putting the flower stem in an orchid tube containing 2% sugar (1 rounded tsp.) and ½ tsp. of bleach per pint of distilled water. The box is then kept cold at 38-42°F. If going to a show later, the sweater box can be placed without opening it into a plastic foam box with blue ice. *C. reticulata* 'Valentine Day' so handled has been able to win "Best in Show" 10 days after picking. In that case an orchid tube was also used. When attending a camellia show observe and ask other exhibitors how they do it and then experiment.

Propagation by grafting or rooting cuttings can be done during the winter season. Cleft grafting is the usual grafting method and is done before vegetative buds begin to grow. Ask a camellia big brother, refer to Yearbooks or Camellia Journals, for assistance or take the grafting

workshop at Masee Lane in 1990. In preliminary observations Dr. Luther Baxter<sub>4</sub> has observed 46 to 90% death of *C. sasanqua* stock cut off in early December but not grafted on while 0 to 10% of *C. japonica* died when so treated. Early grafters in November and December should take note. When pruning in late Winter, root cuttings with rooting hormone and a heating cable and promptly get a year's growth on your cutting that you may not realize if you sprig cuttings in July or August.

Hybridizing during the blooming season can be carried out when temperature is above 60°F and preferably 70°F. Pollen can also be stored in a dry, cold state for at least six months to be used on flowers blooming at different times. You will enjoy your own seedling crosses blooming even more than watching a successful graft. A reference to speeding seedling growth can be found at the end of the guest editor's note in the August 1989 *The Camellia Journal* using extra light, warmth and fertilizer.

For a brief discussion of planting, transplanting or potting camellias, refer to the May 1989 *The Camellia Journal*<sub>5</sub>. Remember to share your camellias during the Holidays and late Winter. This will give you a warm feeling and lighten any burdens.

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# Letter and Recipe

106 Park Place, East  
North Charleston, S.C. 29406  
August 5, 1980

Dear Jim,

Camellia people are just about the nicest people there are. Ask one! They not only are willing to share scions from their newest, loveliest prize winning camellia, but will also share their prized recipes such as their fabulous pineapple pound cake and super chocolate cake.

When the cake was finished it looked so pretty and smelled so good that I cut it while it was still warm. Bill ate two slices right then. Our daughter Melody cut one-third of the cake and took it with her to share with friends. Each time I look around Bill is cutting another slice of that cake. It is just scrumptous! No wonder everyone brags on your cooking. That cake is so great that I can hardly wait for someone to drop by so I can share it — if it lasts that long.

Try it, you'll like it - Editor.

Sincerely, Donna

## Jim McCoy's Pineapple Pound Cake

½ cup vegetable shortening  
½ # margarine  
2¾ cups sugar  
6 large eggs  
3 cups sifted all purpose flour  
1 teaspoon baking powder  
¼ cup milk  
1 teaspoon vanilla  
1 cup undrained crushed pineapple  
(packed in own juice)

**Topping**  
½ stick margarine  
1½ cups powdered sugar  
1½ cups pineapple (crushed), drained.

Cream shortening, margarine and sugar. Add eggs one at a time. Beat well after each addition. Add flour sifted with baking powder alternately with milk. Add vanilla, pineapple and blend well. Pour into tube pan which has been lined with waxed paper on the bottom.

Place in cold oven. Set oven at 325° and bake 1½ hours or until top springs back when touched lightly. Let stand about 5 minutes, remove from tube pan.

Mix butter, powdered sugar and pineapple and pour over top of cake while still hot. (Don't use pineapple packed in syrup)

\* \* \* \* \*

*Good supervision is the art of getting average people to do superior work.*

Consider how hard it is to change yourself and you'll understand what little chance you have of trying to change others.

JACOB M. BRAUDE

*You can buy a man's time; you can buy his physical presence at a given place; you can even buy a measured number of his skilled muscular motions per hour. But you can not buy enthusiasm . . . you can not buy loyalty . . . you can not buy the devotion of hearts, minds, or souls. You must earn these.*

CLARENCE FRANCIS

# Temperature Dynamics In Black Poly Containers

by Chris A. Martin  
and Dr. Dewayne L. Ingram

Container medium temperature flux is influenced by solar radiation, container color, type of medium, water content, proximity to the container sidewall and time of year. Extended root exposure to higher than optimal root-zone temperatures decreases plant growth and quality, which also can increase the length of the production cycle.

We recorded temperature dynamics in black poly containers in Gainesville, FL, during one year.

We filled four #3 black poly nursery containers with a uniform blend of 3 parts pine bark, 1 part sand and 1 part peat. We spaced containers five feet on center of 225 square feet of black polypropylene. We irrigated containers to capacity at 5:30 p.m. the day before temperatures were to be recorded.

We used a micrologger to sense temperature every five minutes during a 14-hour period every four weeks on days when clear weather was anticipated. We recorded temperature patterns in container media exposed to direct solar radiation from June 15, 1987, to June 15, 1988.

Maximum average temperatures were consistently recorded at locations closest to the container sidewall. The maximum average temperature recorded was 137°, which occurred on Aug. 6, 1987 at 6:30 p.m. in the west coordinate. The same day, temperatures higher than 122° were recorded for two hours in the east coordinate and four hours in the west coordinate.

Although maximum temperatures recorded during the winter months were generally lower than in the summer months, the daytime temperature flux can be greater.

In general, container medium temperature dynamics differ with the time of year.

□ *Chris A. Martin is graduate research assistant and Dr. Dewayne L. Ingram is professor of woody ornamentals in the department of ornamental horticulture, University of Florida, Gainesville.*

*\*American Nurseryman pp. 78-79, May 15, 1992.*

\* \* \* \* \*

## A WORD FROM THE COACH

I'm just a plowhand from Arkansas, but I have learned how to hold a team together. How to lift some men up, how to calm down others, until finally they've got one heart-beat together, a team. There's just three things I'd ever say:

If anything goes bad, I did it.

If anything goes semi-good, then we did it.

If anything goes real good, then you did it.

That's all it takes to get people to win football games for you.

BEAR BRYANT



# Camellias - Cars - Cabbages

by Grandma Moses of the Pen

Dear Buck,

You notice the flush on your Dads face — the sparkle in his eye — the squaring of his shoulders? He is like an old soldier off to war. Yep - its that time again. Time to trade cars. Car salesmen in our area are not sleeping well.

For many years we bought cars to accommodate our family. Usually we ended up with a station wagon as that style had more room to separate you and your brother, cutting down on the possibility of fights. It didn't work but did help.

Today our needs are different. We try our cars ON - they have to fit. When the salesman sees your Dad drive up with eight styrofoam fish they draw straws to see who gets them.

There is a minimum of tire kicking and hood gazing before we get to important negotiations like how many fish boxes will fit in the trunk and on the back seat. The shock absorbers are another consideration. We can't have blooms bouncing around. A good test for smooth riding is the traffic bumps in the parking lot. I refuse to crawl into the trunk to check it out.

We toyed with the idea of a station wagon again but found in the past we had to stay away from I-95, known far and wide as "crack alley". Two elderly people riding down the interstate with our boxes covered with blankets seems to excite the police. It brings to their mind bales of marijuana.

We settled for a sedan that holds six boxes in the trunk and three on the back seat. The air condition system is great. It can keep the inside a constant 38°. I can't tell you how the heater works as I am not allowed to use it for fear of heating the blooms. All us camellia wives know how it is to arrive at a show so cold we have to have help getting out of the car.

All this leads to the rumors camellia wives are all a pale shade of blue. I believe the expression "cool it" started with camellia people.

I can't tell you what size motor it has - only that it has a lot of shiny things and a great big fan up front and some black things that go up and down. It fills the whole area under the hood and leaves no room for more boxes.

We are all set for the camellia trail - new car - camellias - you are wondering about the cabbage? Take a look at our check book.

Love,  
Mom

# My First Greenhouse

by John Penny

My first greenhouse was one of the hardest jobs Sandra and I have ever tackled. Sadie Aycock Lyon asked Joe if he thought I would like to have a greenhouse. You already know my answer. Sadie wanted it moved out of her back yard. Sandra and I started moving the small green house. That was one job! Ernest had buried each post at least waist deep into the ground, all twenty of them. Some he had poured cement around. We had to dig each one up and pull them out of the ground, being careful not to tear up the arch Ernest had fashioned out of treated 1"x4"s reinforced with ½" EMT electrical conduit bent to form an arch. We would load a couple of these post/arch combinations on a small trailer, haul them home and lay them out in our own backyard. This went on every afternoon after work that week and into the weekend. That was just the beginning. There was soil to prepare, holes to dig for posts, arches to erect, fiberglass sheeting to install and beds to build up for planting. You know who came out on top of the greenhouse move; Sadie, well maybe not. We have had many hours of enjoyment and some winning blooms from that little greenhouse and we're still using it today.

For those who don't know. Sandra is Joe and Mable Austin's oldest daughter. We started to school together and were good friends throughout school. We married just out of high school, going our separate ways, raising our families but still keeping in touch with each other. After

our children were grown and we each had outgrown our spouses we started dating again. We decided to get married in April of 1982. I still believe Sandra might have backed out had we not flown to the island of Kauai, Hawaii to get married.

My interest in camellias was soon to follow. Sandra and I attended several area shows with Mable and Joe. Joe started letting me help with the blooms he had brought with him to the shows. We would put them out onto the tables to be judged and more times than not, Joe's blooms were winners. I was hooked. That first year after having moved the greenhouse Joe helped me stock it with rooted cuttings and one year grafts. He showed me how to graft and hybridize; my enthusiasm was at a peak. That first season I drowned, over fertilized and under watered enough plants to stock a large greenhouse. Joe never gave up on me nor did I give up on myself. Somehow enough plants survived that first year that we had some winners that following season. Best white "Ruffian" in the Columbia spring show, a runner-up with "Nuccio's Jewel", and several on the court of honor at the Wilmington show. That's all it took. I started rooting cuttings and grafted those that Joe said were winners. Joe gave me a lot of plants. I was even lucky enough to get a fine "Super Star". Joe said that Jim Pinkerton had said that Super Star was a real winner. Soon we outgrew Ernest Aycock's small greenhouse.

That spring I looked at greenhouses,

bought books on greenhouses, went to look at manufactured greenhouses of all styles. Everything was so very high! I drew up several different plans using 4x4 treated posts every 4 feet at each end and the center of each rafter, Ernest had used 5" round treated posts. I made out a material list and went to Lowe's for prices; still too high, back to the drawing board. Having done some building years earlier, I thought about roof trusses in the home construction industry. Why not for a greenhouse? That helped bring the price down somewhat. That summer Joe wanted to expand one of his greenhouses so I helped him with the task. We started by burying big 2x4's 18" to 24" into the ground. These were put on 4 foot centers, finally tying everything together with 1x4's and connecting all to Joe's existing greenhouse, 2x4's instead of 4x4 posts. This reduced the price of constructing the new greenhouse even more. Then Joe told me about buying fiberglass roof panels from "The Panel Outlet" in Junction City, Tenn. Well maybe I would get the new greenhouse built after all. Sandra and I hauled treated lumber home from Lowe's in the afternoon after work. That Saturday, I laid out the first truss, then built a jig enabling me to construct each roof truss to span 20 feet out of 2"x4"s. Using the first as a pattern I sawed each of the pieces to length and correct angle. Next the easy part of truss building at home.

With metal cleated truss plates in one hand, hammer in the other, on hands and knees we started joining the pieces of lumber together. First one side, then we turned each truss on putting cleats and nails in that side, back over again to nail the first. This went on every afternoon the next week. Finally up went the 2x4 post with plates on top, then up with the roof truss. I don't know how she did it, but with Sandra's help we put each truss up and braced them with 1x4's. I then hauled in fine ground pine bark and tilled it into the soil. I used 1x8's to make raised beds throughout the new construction, finally the fiberglass sheets came in. Sandra handed up each sheet to me as I nailed them onto the 1x4's I had installed. That fall I started moving plants into the new greenhouse and soon it was almost full. With each show those beautiful blooms, the friendship and an occasional winner makes it worth all the hard work. Guess what? I've just started a 60 foot addition to this greenhouse making it 20'x140'. All my camellias are planted in the ground. I had a little protest from Sandra, but after the protest, much help.

Sandra and I just finished pruning and disbudding with Mable and Joe's help, and Joe's careful guidance and advice. We're looking forward to the coming camellia show season, the friendship, and yes, maybe a win or two.



## Progress in Fertilizers - Top Dress, Long Acting

One of the fastest advances in horticulture has been in the field of fertilizers, particularly in the long acting forms which are great labor savers since applied by surface broadcast. Vigoro Industries latest addition to this growing group is Woodace® 20-5-10 with a release time of 10-12 months. This line now contains three top dress specials consisting of 60 day 12-5-9, 90-120 day 18-5-10 and the new addition above. The previous four formulas for incorporation in mix or ground are available as well as briquettes 14-3-3 active for 12-18 months. However, the magic words are top dressing which means no fertilizer mixing with media or pot mix but only allowing the fertilizer to slowly dissolve with watering in order to reach the root zone. They are also sturdy enough to be broadcast mechanically.

Vigoro Industries uses two methods to incorporate the nitrogen, phosphorus, potassium and macro and microelements in the balanced top dress fertilizer. The first is a soft elastic polymer called Escote which allows the nutrients to pass through tiny holes freely at an even rate that doesn't peak but plateaus at an even rate of release for the time specified. The release of nutrients from Escote is controlled by both bacterial action and temperature. Thus, the release is primarily during the active growing season.

The second ingredient is IBDU or isobutyl diurea which is almost insoluble and contains the greatest percent of insoluble nitrogen that is available. It releases its nitrogen by hydrolysis or contact with water. Overhead watering or a cloud burst causes release of about 1% of its nitrogen which is repeated by the next water contact. The length of nitrogen release is controlled by the size of the granules of IBDU. Temperature is also important in that nitrogen release slows as temperature drops and almost stops at 40°F. It should be noted that a resin is also used to coat some of the ingredients in the Eskote portion.

The Woodace® 20-5-10 was released for sale in 1992. Please note that the top dress fertilizers are not to be incorporated in the mix and if soil is a component of the mix, a light rate of application is to be used. The top dress fertilizer should be kept near the edge of the container way from the trunk of the plant. Please refer to suggested rate selection guidelines and spoon sizes in grams of weight in Fig. 1.

As additional information becomes available from other manufacturers and sources it will be presented.

I wish to thank Vigoro Industries for providing information and some experimental work which served as the basis for this article.



ACCS Convention, Jim and Delores Oates, Elaine and Jim Smelley  
(by D. Scheibert)

Fig. 1 - Summary of 20-5-10 Top Dress Special

# 20-5-10 TOP DRESS SPECIAL

10-12 Month Formula with  
Xtra Coarse IBDU\* and Escote®  
Slow-Release Nitrogen

## PRODUCT DESCRIPTION

Woodace 20-5-10 is a specially formulated multinutrient fertilizer for ornamental container plant production. It contains the unique IBDU\* and Escote® forms of nitrogen along with a carefully selected ration of the other primary nutrients. It also contains planned amounts of essential micronutrients. The product is designed for use as a top dressing on newly planted and established container grown ornamentals.

### MEDIA INCORPORATION OF 20-5-10 IS NOT RECOMMENDED

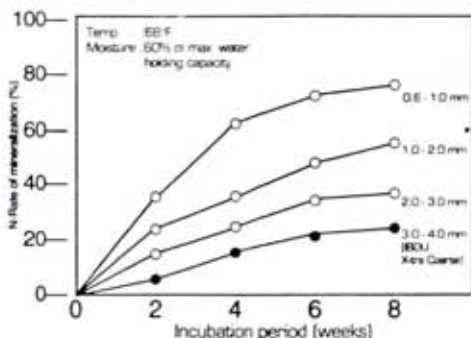
## 20-5-10 GUARANTEED ANALYSIS

Total Nitrogen (N) .....	20.00%
2.3% Nitrate Nitrogen	
0.55% Ammoniacal Nitrogen	
8.75% Water Soluble Organic Nitrogen*	
8.40% Water Insoluble Nitrogen	
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )* .....	5.00%
Soluble Potash (K <sub>2</sub> O)* .....	10.00%
Total Magnesium (Mg) .....	1.30%
1.0% Water Soluble Magnesium (Mg)	
Sulfur, free (S) .....	1.00%
Sulfur, combined (S) .....	2.00%
Copper (Cu) .....	0.05%
Iron (Fe) .....	2.00%
Total Manganese (Mn) .....	0.20%
0.05% Water Soluble Manganese (Mn)	
Zinc (Zn) .....	0.20%

Derived from: Isobutyridene diurea, polymer coated urea, sulfur coated monoammonium phosphate, resin coated potassium nitrate, sulfate of potash-magnesia, triple superphosphate, magnesium oxide, magnesium sulfate, copper oxide, copper sulfate, iron oxide, iron sulfate, iron EDTA-HEEDTA, manganese oxide, manganese sulfate, zinc oxide, and zinc sulfate.

\*This product contains 7.6% slow release nitrogen from polymer coated urea, 2.3% nitrogen from polymer coated potassium nitrate, 2.6% slow release phosphoric acid from sulfur coated monoammonium phosphate and 8% slow release potash from polymer coated potassium nitrate.

Influence of particle size on the mineralization of IBDU\*.



## RATES OF APPLICATION

### RATE SELECTION GUIDELINES

#### Use Low Rates -

- \*On salt-sensitive varieties.
- \*When growing media contains native soil or top soil & drip irrigation is used.
- \*On plants recently transplanted to containers from the field.

#### Use Medium Rates -

- \*When using artificial growing media (no soil) and irrigating with drip.
- \*When using media with soil and overhead irrigation.

#### Use High Rates -

- \*On salt-tolerant, fast-growing plants.
- \*When using artificial growing media and overhead or hand watering.

## WOODACE SPOON APPLICATION AND RATE GUIDE

# 20-5-10

Container Diameter (Inches)	Trade Size	Low Rate grams	Medium Rate grams	High Rate grams
6	Sat. 6"	10	15	20
6.5	1 gal	15	20	25
8	2 gal	25	32	38
10	3 gal	42	57	70
12	5 gal	61	80	95
14	7 gal	85	115	132
16	10 gal	120	155	180
17.5	15 gal	150	190	220
21	20 gal	220	290	325
Boxes (Inches)	Surface Area			
20	400	255	335	375
24	576	367	485	540
30	900	575	755	845
36	1296	825	1085	1215
48	2304	1470	1930	2160

## WOODACE SPOONS - 20-5-10 (g = grams)

#1 10g	#3 20g	#5 35g	#7 65g
#2 15g	#4 25g	#6 50g	#8 80g

# Helpful Hints

by Editor

Many seemingly insignificant procedures we use that improve camellia care and culture are not common knowledge particularly to new members of our hobby. Such hints could be of interest and help to most of us. It is hoped you will be moved to come forward with further suggestions for a regular article on Helpful Hints.

Dr. Harry Moore, my camellia father explained that his pile of sawdust was not for plant mix but was used to bury the poor root system of a camellia plant that was failing to thrive. After several months this would produce a number of healthy white roots and the previously bare rooted plant could be repotted or planted. Jim McCoy mentioned this in Carolina Camellias and it is well worth repeating. This is also helpful for the occasional bare rooted plant from Nuccio's Nursery that appears to have been raised in a small tuna fish can that would fit in a five pound large bass's mouth.

The above is related to and can be of help in treatment of an over-watering syndrome noted in container plants by Dr. Dan Nathan of Fort Valley, GA, and by Wally Freshwater in England. In Dan's case 180 container plants were involved after being placed in his greenhouse a month before. The leaves were noted to lose luster and dark green leaf color. This progressed to some curling and browning of leaf tips. Watering was stepped up to twice weekly and defoliation began to occur. Leaves, plant and root samples were analyzed

by the Georgia Extension Service and no evidence of root rot or die back organisms found at University of Georgia. Watering was cut back greatly. Some of the defoliated plants still have green cambium in the bark and are beginning to grow. This would be a situation where the sawdust treatment may be of help before repotting and Subdue® dip or drench use if root cultures are not done. In a humid greenhouse plants can go up to three weeks without watering so check with finger or pot weight for time to water. As in medicine prevention is the best cure. Water is also toxic to humans in excess amounts due to dilution of salts and minerals in the 70% of water of which we are composed. While not familiar with all writings, I cannot recall a clear description of the effects of over-watering camellias. Thanks go to Dr. Nathan for documenting the over-watering problem leading to this very Helpful Hint. The nature of things is a balance and too much and too little interferes with us as well as the plant world. And remember that when a camellia appears sick the problem is already serious.

If you don't have ready access to Clear Set and Clear Life plant spray try your own hair spray to see if it dries quickly and clearly without petal damage. Elizabeth's hair spray, Vita/E, works well and is only \$4 to \$5 for a large can.

Please contribute your own Helpful Hints for the next journal.



# Club and Society News

by Editor

The annual convention at Myrtle Beach, SC, October 2-3, 1992 was enjoyable and productive. The Bloody Mary party at the Elks Club was hosted by Delores and Marion Edwards. President Edwards announced that the next convention would be at the Independent Holiday Inn October 8-9, 1993 with a confirmed room rate of \$33.00 including days before and after the convention. The following new members were introduced: Carmen and Robert Kolodney, Dot and Lee Poe, Lou Bryant and Bill Warren. Seven members expired during 1992.

The ACCS has 244 memberships as compared to 247 last year with a total of 407 individuals, 101 of whom attended. The treasury is stable at about \$10,000. Changes in officers for the coming year were Mildred Robertson

as president and Bill Hardwick as 2nd vice president while Ed Powers moved up to 1st vice president. The following state directors were elected: 1991-1992 Zenobia Kendig; 1992-94, VA-Richard Waltz and Dot Urquhart, SC-Parker Connor and Lee Poe, NC-Sadie Lyon and John Penny, GA-Cheryl Thompson and Elizabeth Scheibert.

Our guest speaker Sergio Bracci of CA was introduced by Hulyn Smith. Sergio informed us of camellia culture in CA, the Nuccios and their nursery and presented slides of new camellia varieties. Elsie Bracci smiled and it's obvious that both she and Sergio work together well with their camellias.

The banquet Saturday evening was a fun-filled event with fellowship, more visiting with friends and new members



Hilton Head Show set up 11-6-92. (by D. Scheibert)

and excellent food. It is difficult to make a choice between the seafood and prime rib.

President Edwards thanked everyone for their help during his two year term and surprised the editor with a color print of 'Dr. Dave' registered by Hulyn Smith. What a wonderful thank you just for volunteering to be editor of Atlantic Coast Camellias.

Drawings were held with Delores Edwards winning the needlepoint by Marie Dahlen, Herb Racoff, the recipient of Sadie A. Lyon's camellia painting and Ivan Mitchell taking home the Boehm camellia donated by Gist Duncan.

The auction conducted by the pros Buck Mizzell and Bill Robertson disseminated more plants, crafts, jellies, breads and porcelain objects of art than usual. Our thanks go to those who contributed to the success of these two events which helped the

treasury by \$2,499.00.

Marion turned the gavel over to our new president, Mildred Robertson, who then presented Marion a plaque in appreciation for his two years of outstanding service to ACCS. Mildred called on Ann Brown for an interesting overview of activities at Masee Lane Gardens, home of the American Camellia Society.

The enjoyable Friday evening poolside party must be recognized. It was an excellent introduction to our annual convention complete with a wonderful buffet. The weather also aided us with sunny mild weather that lasted till after the banquet when a north-easter blew in. Thus ended a wonderful camellia gathering that we hope all members can attend October 8-9, 1993.

The summer saw three enjoyable picnics at Edisto on Oak Island by Coastal Carolina Camellia Club



Oysters and Beaufort Stew, Marshallville, GA. Dan Nathan, Lawanda Brogden, Muriel Nathan.

(by Shepherd)

members, the Columbia, SC picnic and the Beaufort Stew Picnic on Lake Marion. Many of our wonderful members make the summers as enjoyable as the cool weather camellia season.

The Middle Georgia Camellia Society pulled off an oyster roast and Beaufort Stew gathering at Mary and William Rumph's beautiful home in Marshallville, GA the night before the MGCS show at Perry, GA, October 15-16, 1992. We've taken lessons from Tyler and Buck Mizzell and many other Carolina camellia lovers.

All camellia shows are special but one new one must be mentioned. The second Hilton Head Island Show was

again held at Shelter Cove Mall, November 7, 1992, sponsored by the Coastal Carolina Camellia Society and the Hilton Head Merchants Association. Local club member Betty Brown and daughter, Dede, have the thanks of all of us for this great show in a beautiful location. The Coastal Carolina Camellia Society brings all the supplies for the show and help greatly in making it possible. There were 800 blooms last November and we are all indebted to those who make this possible and very successful.

Please send your club news to the editor for publication and include pictures if available.



**Marie Dahlen, Donna Shepherd at Beaufort Stew, SC.** (by D. Scheibert)



**Parker Connor and Fred Hahn at Beaufort Stew, SC.** (by D. Scheibert)



# Critical Physical Properties of Container Media

by Dr. Bert T. Swanson

Nurserymen grow plants in greenhouse benches, seedbeds, transplant beds, fields and containers. And there are significant differences among these production methods. Of particular note is the artificial environment created in containers.

Compared to other stock, container-grown plants are exposed to greater environmental extremes, including wind and temperature and moisture fluctuations. Other factors impact plant growth patterns in container nurseries, including the container's size, color, composition and shape; the species; and the physical restriction of plant roots.

The intense management required for a successful container operation, such as fertilization, watering and weed control, is also critical.

But before any of those factors matter, the growing medium must meet certain specifications. If your medium is wrong, the best environment and management practices cannot make the situation optimum.

Container media are and must be different than field soils because the plants growing in them are coping with different stresses. Container-grown plants must survive in greatly reduced soil volumes. This, in turn, reduces the amount of nutrients and water available to them.

A container medium must provide a plant physical stability. It has to retain water and minerals. And it must have enough oxygen and remove sufficient carbon dioxide for the plant to thrive.

Although I cannot specify the exact mix to use, I can describe the physical factors

you must consider when building a medium. Remember, many ingredients grow plants well — if they are properly mixed in the right proportions.

**A**eration is very important since it determines the amount of water and minerals available to a plant's roots. Although it may appear that a container medium has better aeration and drainage than field soil does, this may not be true.

The bottom of a container creates a barrier to downward drainage. Only when the medium's pores at the container's bottom become saturated with water does the water move out of the container's drainage holes. The cohesive and adhesive (capillary action) forces created by the water and the medium's pore size determine how tightly the water is held in the pot before it drains out.

This does not happen in a field (unless there is a hardpan) because the saturated flow can continue downward.

But, in a container, the bottom creates a "perched water table," where water saturates the medium's pores. The height of this water depends on the size of the pores and the depth of the medium.

**P**ore size is a critical factor in aeration. The smaller the pores, the tighter the medium holds water before it flows freely from the drainage holes. Therefore, placing a layer of coarse sand or gravel in the

container bottom actually makes the situation worse. The medium's small pores hold water tighter than do the gravel's large pores.

Therefore, water accumulates above the juncture of the two until the medium is saturated to a height that creates sufficient downward pressure to force the water into the larger pores below. This, in essence, raises the height of the perched water table.

If, on the other hand, a layer of fine pores lies below a layer of large pores, it will pull the water down, where it will accumulate until the layer is saturated. Most likely, this would keep the lower layer too wet for optimal root growth.

Thus it is essential to have an evenly mixed medium throughout the container.

**T**he second factor in aeration is the medium's depth. It determines how much water drains from top to bottom. The taller the container, the better the drainage.

In deep containers, more water drains downward, leaving the upper part of the medium well-drained or at "media capacity." At media capacity, the medium contains water held in small pores by cohesion and adhesion. It contains no free water in the large pores, as it does when saturated.

If, however, the container is shallow, there is not enough force to create much downward drainage. A major portion of the medium remains saturated.

This problem can be solved by increasing the depth of your containers.

medium is another way to improve its aeration. They increase the medium's pore size, which decreases the strength of its hold on the water. This, in turn, increases the amount of oxygen available to the roots.

You can use sand, peat, perlite, bark or wood chips, crushed corn cobs, peanut shells, vermiculite, plastic foam balls or any of a host of other materials as an amendment. Each has certain advantages and disadvantages. Perhaps the most critical factor in choosing one is availability. Pick a component you can get consistently over time so you can build a constant, reproducible medium for several years.

**T** here are several factors to consider when adding amendments. First, be aware that adding a coarse material to a fine one may, in fact, make a mix tighter — if the small particles fit into the large pores.

Another concern is the medium's drainage, or hydraulic conductivity, the rate at which water moves through the mix. You should have a minimum flow of approximately 2 inches per hour. This means the medium should absorb 2 inches of water an hour without any runoff. As another test, 1 quart of water should penetrate the mix in a 1-gallon container within 1 minute.

Moisture retention is another critical factor. A cubic foot of mix should retain 3 gallons of water.

Porosity, the amount of air space in a medium when it's at media capacity, is another important physical characteristic. A medium's porosity must be greater than 15 percent for proper root aeration. The acceptable range is 20 to 30 percent air space.

You can determine porosity by saturating a given volume of medium and then weighing it. Next drain off the excess water, bringing the medium to media capacity. Weigh it again. The percent difference between the two weights is the medium's porosity.

The percentage can also be determined by measuring the volume of water you add to the medium and the volume of water that drains from it.

You can determine another of the medium's properties during this procedure — the percentage of water it holds. It should hold between 20 and 30 percent water by volume.

Bulk density, another physical characteristic, is the mix's weight. This is a factor in a container's handling ease, shipping costs and stability in wind.

Media that weigh less than 30 pounds a cubic foot are often too light. They should weigh between 40 and 75 pounds a cubic foot. In contrast, a cubic foot of soil weighs 80 to 100 pounds, while sand weighs 100 to 120 pounds per cubic foot.

**T** he medium's texture and structure are also important. "Texture" refers to the particles' actual size and cannot be changed. But you can change the amount you use of each different-textured component (sand, silt or clay).

"Structure" refers to the way particles stick together and how strongly. You can change a medium's structure. You can improve it by adding organic matter or amendments. You can also destroy the structure by working with a mix when it is too wet or by pulverizing it.

The impact of texture and structure on a medium's characteristics are intertwined.

Small particles increase surface area, which improves nutrient exchange. However, to make a good medium, these particles should clump in such a way that they form larger particles that do not fit closely together. Otherwise, there will be poor aeration.

**P** eat and sand are common components in container media. Both vary considerably in quality, so know what you are purchasing.

Often peat is very fine. This only plugs your medium's pores. Make sure you use coarse peat that does, in fact, improve the medium's structure.

Sand varies even more than peat does, but there is a terminology that describes sand according to particle size. Whenever you buy sand for a growing medium, make sure at least 60 percent of its particles are between 0.25 and 1.0 millimeter. No more than 3 percent of the sand particles (by weight) should be smaller than 0.1 millimeter. Likewise, no more than 3 percent should be bigger than 2 millimeters.

This property is measured by a "fineness modulus." Sand with a rating be-

tween 1.7 and 2.5 is optimum for use in a container medium.

A sand's "uniformity coefficient" indicates how much falls in a narrow band of size. A uniform sand has a uniformity coefficient of less than 4.

Nurserymen have found plaster's sand useful in their media.

As a final consideration, check the sand's pH. It is often high and will increase the pH of your final mix. This, in turn, affects the medium's nutrient availability and plant growth. A sand's pH should be between 6 and 7.

Your sand supplier should be able to provide all this information. Obtaining the right size sand at the right pH may eliminate cultural problems later.

**Y**our final mix should make planting easy and ensure good survival, optimum growth, and minimum transplanting shock and intertace problems. The cost of components must not be prohibitive.

Although all of these factors are important, I believe your priority should be as follows:

- Availability.
- Consistency.
- Physical properties.
- The pH level.
- Salts.
- Stability.
- Planting and transplanting.
- Cost.

Availability affects all other aspects, particularly consistency and eventually cost. Without a consistent supply of components, your mix has to continuously change, preventing you from establishing good production practices.

You encounter many costs in container production; most are higher than that of one medium component. And that one component may, in fact, ensure an adequate return on costs, including those of the total mix, container, plant, culture, labor and marketing. For this reason, I do not recommend making costs your first priority when selecting medium components — unless they are significantly out of line and, in fact, prohibitive.

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*\*American Nurseryman, pp. 59-63, June 1, 1989*

*Dr. Bert T. Swanson is a professor with the department of horticultural science, University of Minnesota, St. Paul.*



## Show Dates

1. Tampa, FL; Tampa Garden Center; Tampa Bay Area  
Camellia Society ..... January 9, 1993
2. Gainesville, FL; Gainesville Camellia Club ..... January 9, 1993
3. Aiken, SC; University of SC-Aiken; Aiken Camellia Club ... January 9-10, 1993
4. Winter Park, FL; Winter Park Mall; Camellia Society of  
Central Florida ..... January 16-17, 1993
5. Tallahassee, FL; Tallahassee Mall; Camellia & Garden  
Club of Tallahassee ..... January 16-17, 1993
6. Charleston, SC; Citadel Mall; Coastal Carolina Camellia  
Society and Shelter Cove Merchants Assn. .... January 23, 1993
7. Ocala, FL; Appleton Culture Center; Ocala Camellia  
Society and Ocala Pioneer Garden Club ..... January 23-24, 1993
8. Lakeland, FL; First Federal Florida; First Federal  
Florida ..... January 30-31, 1993
9. Daytona Beach, FL; Volusia County Camellia Society .... February 6-7, 1993
10. Pineville, NC; Carolina Place Mall; Charlotte Camellia  
Society ..... February 6-7, 1993
11. Columbia, SC; Columbia Mall, Mid-Carolina  
Committee ..... February 13-14, 1993
12. Atlanta, GA; Atlanta Botanical Garden, North Georgia  
Camellia Society ..... February 20-21, 1993
13. Thomasville, GA Garden Center ..... February 20, 1993
14. Nashville, TN; TN Botanical Garden at Cheekwood;  
Middle Tennessee Camellia Society ..... February 27-28, 1993
15. Wilmington, NC ..... February 27-28, 1993
16. Warner Robins, GA; Houston Mall; Middle Georgia  
Camellia Society ..... March 6, 1993
17. Fayetteville, NC; Cross Creek Mall ..... March 6-7, 1993
18. Walnut Creek, CA; Northern California Camellia Society  
(In conjunction with ACS Annual Meeting) ..... March 13, 1993

Wilmington and Fayetteville, NC are not confirmed.

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**Head Table ACCS Convention, Bill Robertson, Elsie and Sergio Bracci, Delores and Marion Edwards.** (by Shepherd)

# Show Reports

## Middle Georgia Camellia Society

Georgia National Fair, Perry GA, October 16, 1992

C. japonica  
Very Large  
Woodville Red . . . . . Parker Connor  
Runner-up  
Dawn's Early Light . . . . . Parker Connor  
Medium  
Feathery Touch . . . . . Parker Connor  
Runner-up  
Ville De Nantes . . . . . Bob Gramling  
Small  
Kiku-Toji . . . . . Elizabeth Brown  
Runner-up  
Pink Perfection . . . . . Bob Gramling  
Miniature  
Mansize . . . . . Bob Gramling  
Runner-up  
Fircone Var. . . . . E.P. Brogden  
C. japonica (Protected)  
Very Large  
Tomorrow's Dawn Peony . . . . . Jim Pinkerton  
Runner-up  
Louise Whiting . . . . . Bill Hardwick  
Medium  
Amazing Grace . . . . . Dan Nathan  
Runner-up  
Dixie Knight Supreme . . . . . Jim Pinkerton  
Small  
Kiku-Toji . . . . . Bob Gramling  
Runner-up  
Buttons and Bows . . . . . Parker Connor  
C. reticulata (Includes hybrids with  
reticulata parentage)  
In Open  
Massee Lane . . . . . Bob Gramling  
Runner-up  
Betty Ridley . . . . . Bob Gramling

Protected  
Dr. Clifford Parks Var. . . . . Dan Nathan  
Runner-up  
Miss Tulare Var. . . . . Bill Hardwick  
C. hybrid (With other than reticulata  
parentage)  
In Open  
Mona Jury . . . . . Dan Nathan  
Runner-up  
Mona Jury . . . . . Bob Gramling  
Protected  
Julie Var. . . . . Bob Gramling  
Runner-up  
Miss Tiny Tot Princess . . . . . Parker Connor  
Best White Bloom  
Elegans Champagne . . . . . Dan Nathan  
Gold Certificates  
In open, won by Parker Connor  
Silver Certificates:  
In open, won by Dan Nathan  
Court of Honor  
Dr. Dan Nathan . . . . . Dr. James M. Howell  
Parker E. Connor, Jr. . . . . Dawn's Early Light  
Frank Jamison . . . . . Mary Alice Cox  
William Hardwick . . . . . Louise Whiting  
William Hardwick Woodville Red Blush  
Dr. Dan Nathan . . . . . Curtain Call  
Parker E. Connor, Jr. . . . . Buttons 'n Bows  
Bob Gramling . . . . . Mona Jury Variegated  
Jim Pinkerton . . . . . Dixie Knight Supreme  
Bob Gramling . . . . . Ville De Nantes  
Jack Teague . . . . . Anticipation  
Jim Pinkerton . . . . . Leonard Messer  
Elliott Brogden . . . . . Fircone  
Bob Gramling . . . . . Kiku-Toji  
William Hardwick . . . . . Brooks

\* \* \* \* \*

## Mid-Carolina Camellia Society & S.C. Fair Assn.

Columbia, SC, October 24, 1992

C. japonica (In Open)  
Very Large  
Miss Charleston . . . . . Parker Connor  
Runner-up  
Helen Bower, Var. . . . . Parker Connor  
Medium  
Anita . . . . . Parker Connor  
Runner-up  
Elizabeth Weaver Var. . . . . Marvin & Ruth  
Jernigan

Small  
Kiku-Toji . . . . . Elizabeth Brown  
Runner-up  
Pink Perfection . . . . . Marvin & Ruth  
Jernigan  
Miniature  
Fircone Var. . . . . Bill & Donna Shepherd  
C. japonica (Protected)  
Very Large  
Miss Charleston Var. . . . . Bill & Sally  
Hardwick

- Runner-up  
Sea Foam . . . . . Gist Duncan
- Medium  
Lady Kay . . . . . Jim Pinkerton
- Runner-up  
Campari . . . . . Annabelle Fetterman
- Small  
Jessie Connor . . . . . Jim Pinkerton
- Runner-up  
Ave Maria . . Elizabeth & Dave Scheibert
- C. Reticulata (Includes hybrids with  
reticulata parentage)
- Protected  
Emma Gaeta Var. . . . . Jim Pinkerton
- Runner-up  
Dr. Clifford Parks . . Oliver & Tyler Mizzell
- C. hybrid (With other than reticulata  
parentage)
- Protected  
Joe Nuccio . . . . . Bill & Sally Hardwick
- C. sasanqua (And related species)
- Best Bloom  
Double Rainbow . . . . . Carter Bays
- Gold Sweepstakes . . . . . Parker Connor
- Silver Sweepstakes . . . Elizabeth Brown
- Seedling . . . . . Elizabeth Brown
- Best White Bloom  
Lucy Stewart . . . Annabelle Fetterman
- Best Bloom by Novice  
Debutante . . . . . Dr. & Mrs. Ben Stands
- Gold Certificates:  
In open, won by Parker Connor
- Silver Certificates:  
In open, won by Elizabeth Brown
- C. japonica certificate  
Originated by Elizabeth Brown
- C. sasanqua certificate  
Won by Carter Bays for Double Rainbow



### Coastal Carolina Camellia Society At Hilton Head, SC, November 7, 8, 1992

- C. japonica - Open  
Large/Very Large  
Tiffany . . . . . Lib Scott
- Runner-up  
Miss Charleston . . Donna & Bill Shepherd
- Small/Medium  
Ville de Nantes . . . . . Lib Scott
- Runner-up  
Betty Sheffield Silver . . . Donna & Bill Shepherd
- C. japonica - Protected  
Large/Very Large  
Show Time . . . . . Jim Pinkerton
- Runner-up  
Mathotiana Supreme Var. . Dot & Jack Teague
- Small/Medium  
Betty Sheffield Supreme . . Jim Pinkerton
- Runner-up  
Betty Sheffield Blush Supreme . . Clara and Fred Hahn
- C. reticulata - Open  
Dr. Clifford Parks . . Donna & Bill Shepherd
- C. reticulata - Protected  
Hall's Pride . . . . . W. Gist Duncan
- C. hybrid - Open  
Anticipation . . . Donna & Bill Shepherd
- C. hybrid - Protected  
Mona Jury Var. . Mr./Mrs. Oliver Mizzell
- C. sasanqua  
Yule Tide . . . . . Elliott P. Brogden
- Runner-up  
Mine-no-yuki . . . . . Elliott P. Brogden
- Best Miniature  
Man Size . . . . . Parker E. Connor
- Runner-up  
Shuchuka . . . . . Parker E. Connor
- Best Seedling  
W. Homeyer's # 568 . . . . . Fred Hahn
- Runner-up  
Seedling . . . . . Donna & Bill Shepherd
- Best Novice Bloom  
Rena Swick . . . . . Denise Heyman
- Runner-up  
Mathotiana Supreme . . Denise Heyman
- Best Untreated Bloom  
Kiku-Toji . . . . . Elizabeth Brown



Runner-up  
 Arajishi Var. . . . . Elizabeth Brown

Court of Honor  
 Mary Alice Cox . . . . . Parker E. Connor  
 Helen Bower Var. . . . . Parker E. Connor  
 Woodville Red . . . . . Parker E. Connor  
 Magic City . . . . . Parker E. Connor  
 Sam Barranco . . . . . Elizabeth Brown  
 Kiku Tuji . . . . . Elizabeth Brown  
 Rosea Superba . . . . . Robert Deadmond  
 Show Time . . . . . Lib Scott

Tomorrow Var. . . . . Rupert Drews  
 Clark Hubbs . . . . . Mr./Mrs. Oliver Mizzell  
 Helen Bower Var. . . . . Mr./Mrs. Oliver Mizzell  
 Big Dipper Var. . . . . Jim Pinkerton  
 Lady Kay . . . . . Jim Pinkerton

Gold Sweepstakes  
 Open . . . . . Parker E. Connor  
 Protected . . . . . Mr./Mrs. Jack Teague

Silver Sweepstakes  
 Open . . . . . Betty Brown  
 Protected . . . . . Jim Pinkerton

\* \* \* \* \*

## Camellia Society of the Potomac Valley Annual Fall Show

### National Arboretum, Washington, DC, November 8, 1992

C. japonica (In Open)  
 Large  
 La Peppermint . . . . . Mr. & Mrs. W.L. Miller

Runner-up  
 High Hat . . . . . Mr. & Mrs. Harry Kendig

Runner-up  
 (No distinction made between size of bloom nor whether protected or un-protected)

C. reticulata (Includes hybrids with reticulata parentage)  
 Protected  
 None Qualified

Runner-up  
 Jean Pursel . . . . . Mr. John Pumphrey

C. hybrid (With other than reticulata parentage)  
 In Open  
 Frost Princess . . . . . Mr. & Mrs. W.L. Miller

Runner-up  
 Winter's Fancy . . . . . Dr. & Mrs. W.L. Ackerman

C. sasanqua (And related species)  
 Best Bloom  
 Bonanza . . . . . Mr. & Mrs. W.L. Miller

Runner-up  
 Sparkling Burgundy . . . . . Mr. & Mrs. W.L. Miller

Best White Bloom  
 Snow Flurry . . . . . Mr. William Allen

C. hybrid (With other than reticulata parentage)  
 Certificate  
 won by Dr. & Mrs. W.L. Ackerman for # 80-229 Winter's Fire  
 Originated by Dr. W.L. Ackerman

C. hybrid (With other than reticulata parentage)  
 Certificate  
 won by Dr. & Mrs. W.L. Ackerman for # ABC-1 Winter's Darling  
 Originated by Dr. W.L. Ackerman

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## Fort Walton Camellia Society

### Fort Walton Beach, FL, November 14, 1992

Most Outstanding Bloom In Show  
 Show Time . . . . . Jim Newell

Runner-up  
 Harola L. Paige . . . . . R.F. Jeffares

C. japonica  
 Very Large . . . . . Show Time

Runner-up  
 Nuccio's Pink Lace . . . . . Jim Newell

Medium  
 Magic City . . . . . Jim Newell

Runner-up  
 Margaret Davis . . . . . Walter M. Creighton

Small  
 Something Beautiful . . . . . Jim Newell

Runner-up  
 Little Babe Var. . . . . Jim Newell

Miniature	
Little Slam	Gordon Wesley
Runner-up	
Little Man	W. C. Stout
C. reticulata (Includes hybrids with reticulata parentage)	
No Distinction	
Pleasant Memories	Jim Newell
Runner-up	
Harold L. Paige	R. F. Jeffares
C. hybrid (With other than reticulata parentage)	
No Distinction	
Debbie	Jim Newell
Runner-up	
Mona Jury	Jim Newell
C. sasanqua (And related species)	
Best Bloom	
Star above Stars	Jim Newell
Plate of 3	
Jp. Min. to Small	
Mansize	Jim Newell
Jap. Med. to VL	
Betty Sheffield Supreme	Walter Creighton
Hybrid	
Wynne Rayner	Walter M. Creighton
Ret.	
Massee Lane	Walter Creighton
Plate of 5	
Fort Walton Beach	Jim Newell
Best White Bloom	
Lucy Stewart	Jim Newell
Runner-up	
Little Man	W. C. Stout
L to VL	
Lady Clare	Peggy Kammer
Med	
Imperator	Gerald Petty
Small	
Pink Perfection	Peggy Kramer
Gold Certificates	
In open, won by Jim Newell	
Silver Certificates	
In open, won by Ed Atkins	
Best Seedling	
Unnamed	W. C. Stout
Court of Honor	
Jap. White	
Alba Plena	John K. Edwards
L to VL	
Moonlight Bay	Don Applegate
Med	
Rosea Plena	Ed Atkins
Small	
Hishi-Karato	Jim Newell
Hybrid	
Delores Edwards	Ed Atkins
Ret.	
Harold L. Paige	Newel
Min.	
Mansize	Jim Newell
Novice	
Tina	Gerald Petty
Seeding selected as	
"Miss Fort Walton Beach"	Ed Atkins

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## Middle GA Camellia Society

Massee Lane, November 14-15, 1992

Most Outstanding Bloom In Show	
Protected	
Pleasant Memories	Frank Johnson
Outdoor	
Miss Charleston V.	Parker Connor
C. japonica (In Open)	
Large	
Helen Bower V.	Parker Connor
Runner-up	
Elegans Splendor	Parker Connor
Medium	
Magic City	Parker Connor
Runner-up	
Beauty Of Holland	Donna & Bill Shepherd
Small	
Kiku-Togi	Denise Heyman
Runner-up	
Something Beautiful	Donna & Bill Shepherd
Miniature	
Dolly Dyer	Parker Connor
Runner-up	
Mansize	Annabelle Fetterman
C. japonica (Protected)	
Large	
Edna Bass	Jim Pinkerton
Runner-up	
Royal Velvet	Dr. Dan Nathan
Medium	
Nuccio's Jewel	Jim Pinkerton
Runner-up	
Ville De Nantes	Anne & Bob Gramling

Small  
 Brooke . . . . . Bill & Sally Hardwick  
 Runner-up  
 Baby Pearl . . . . . Curt Smith

C. reticulata (Includes hybrids with  
 reticulata parentage)  
 In Open V-L  
 William Sellers . . . Anne & Bob Gramling  
 Runner-up V-L  
 Terrell Weaver . . . Anne & Bob Gramling  
 Protected V-L  
 Dr. Clifford Parks . . . . . Frank Jamison  
 Runner-up V-L  
 Jean Pursel . . . . . Jim Pinkerton

C. hybrid (With other than reticulata  
 parentage)  
 In Open V-L  
 Jubilation . . . . . Parker Connor  
 Runner-up V-L  
 Julie Var. . . . . Anne & Bob Gramling  
 Protected V-L  
 Julie Var. . . . . Jim Pinkerton  
 Runner-up  
 Delores Edwards Var. . . . . Jim Pinkerton

C. sasanqua (And related species)  
 Best Bloom  
 Mine-No-Yuki . . . . . Dr. Dave Scheibert

Protected Large Retic  
 Valentine Day . . . . . Dr. Dan Nathan  
 Valley Knudsen . Annie & Bob Gramling

Outdoor Large Retic  
 Arcadia . . . . . Anne & Bob Gramling  
 Betty Ridley . . . . . Elliot Brogden

Best White Bloom  
 Charlie Bettes . . . Anne & Bob Gramling

Best Bloom by Novice  
 Debutante . . . . . Evelyn McBride

Gold Certificate  
 Parker Connor

Silver Certificate  
 Elizabeth Brown

Outdoor C. hybrid (other than retic)  
 Large  
 Debbie (Var.) . . . . . Marvin Jernigan  
 Runner-up Large  
 Mona Jury (Var.) . Anne & Bob Gramling

Protected C. hybrid (other than retic)  
 Large  
 Ruth Smith . . . . . Dr. Dan Nathan  
 Runner-up Large  
 Julie Felia . . . . . Elliot Brogden

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**Valdosta Camellia Society - First State Bank & Trust Co.**  
**Valdosta, Georgia, November 21, 22, 1992**

Most Outstanding Bloom In Show  
 Unprotected  
 Mary Alice Cox . . C.M. & Lillian Gordy  
 Ocala, Fla.

Protected  
 Helen Bower Var. . . . . Billy & Sally  
 Hardwick, Reynolds, GA

C. japonica (In Open)  
 Large  
 Miss Charleston Var. . . . . L.R. Smith  
 Tallahassee, Fla.

Medium  
 Betty Sheffield Sup. Blush . . . Dr. Daniel  
 Nathan, Ft. Valley, GA

Small  
 Kiku Toji . . . . . Parker E. Connor, Jr.  
 Edisto Island, SC

Miniature  
 Frances Council . . . . . Ivan J. Mitchell  
 Melrose, FL

C. japonica (Protected)  
 Large  
 Tiffany Var. . . . . John T. Newsome  
 Atlanta, GA

Medium  
 Clown . . . . . Curt Smith, Atlanta, GA

Small  
 Kiku Toji . . . . . Jim Pinkerton, Lugoff, SC

Miniature  
 Fircone . . Elliott P. Brogden, Columbia, SC

C. reticulata (Includes hybrids with  
 reticulata parentage)  
 In Open  
 Harold L. Paige . . C.M. & Lillian Gordy  
 Ocala, FL

Protected  
 Valentine Day . . . . . Frank L. Jamison  
 Ft. Valley, GA

C. hybrid (With other than reticulata  
 parentage)  
 In Open  
 Anticipation . . . . . Parker E. Connor  
 Edisto Island, SC

Protected  
 Elegant Beauty . . . . . Jim Pinkerton  
 Lugoff, SC



Best White  
Unprotected  
Dorothy Copeland . . . G. Stuart Watson  
Albany, GA

Best White Bloom  
Protected  
Ruffian . . . . . Elliott Brogden  
Columbia, SC

Gold Certificates  
In open, won by Parker E. Connor,  
Edisto Island, SC

Silver Certificates  
In open, won by Ann & Bob Gramling,  
Tallahassee, FL

. . . . .



Fayetteville, NC - Judging School (by Shepherd)



After the Judging - Fred Hahn, Paul Dahlen, Bill Robertson, Jim Pinkerton, Bill Shepherd (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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4437 McKee Road  
Charlotte, N. C. 28270

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PHONE (     ) \_\_\_\_\_

*Check if you want a membership card.*





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