Atlantic Coast Camellias

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CAMELLIAS AND FRIENDS

Dr. Reeves Wells **Panama City, FL**

In 1977, Margaret, my wife, and I were in California attending a meeting of the ACS. While there, a friend of mine, Mel Gum of San Gabriel, gave me a scion of a retic hybrid seedling of unknown parentage. He told me to see what I could do with it.

I grafted the scion and it grew. The next fall, I moved it into my greenhouse and planted it in the ground. It bloomed first in 1980, a small bloom that did not amount to much.

I went to California to see Mel in 1981 as he was not feeling well. Mel told me to do what I wanted with the plant as he had lost the original. Mel passed away a short time later. The plant grew and bloomed each year.

In January, 1983, I entered it in the Fort Walton show, and it was voted the Best Seedling. Tallahassee show, November 26, 1983, Best Seedling. Pensacola show January 14, 1984, Best Seedling.

I then entered it in the Fort Walton show January 28, 1984 in competition. It was voted the Best Flower in the Show. It needed a name, so because of my close friendship with Mel Gum, I named it 'Pleasant Memories'. Also in this same show, I had a plate of three that went to the head table. Again in the Fort Walton show January 25, 1986, 'Pleasant Memories' was voted the Best Flower in the show.

I think that it takes at least 4 to 5 years, maybe 6, for a hybrid to reach its potential.

It was time to register it. Meyer Piet of Arcadia, CA, was also a close friend of Mel's, so I asked him to register it under the name 'Pleasant Memories', giving Mel Gum credit for it.

Now this plant is about 10 feet tall and 5 to 6 feet across. It is an excellent grower and a very good looking plant. I trim it back each year. I can cut at least 100 scions off it. I will give anyone scions if they will let me know their wishes before I cut it back, which will be sometime in March, depending on how hot the weather gets here. 'Pleasant Memories' takes gib well.

ABOUT THE COVER DRAWING

This drawing depicts a portion of the Elizabethan Gardens in Manteo, North Carolina. The idea of developing a formal English garden was conceived in 1951 by the women of the Garden Club of North Carolina. It was subsequently built, and contains all the important features of the great gardens of England. South of the formal garden is a great lawn, surrounded by live oaks and other native shrubs. The path around the area is bordered by groups of camellias. The first camellias were planted in 1960, in the face of an oncoming hurricane, by "two ladies and a dedicated nurseryman." They planted 200 camellias and 150 companion plants between 4:00 PM one afternoon and 2:30 PM the next! They all survived. According to one of the ladies, there really were three ladies. Hurricane Donna was the third lady. She watered them the following day.

Many camellias have been added since 1960, and more are still being added. Camellias grown there are of "greenhouse quality", probably due to the humidity from the nearby water.

Atlantic Coast Camellias

The Atlantic Coast Camellia Society was organized September 13, 1980 at Myrtle Beach, South Carolina. The purpose was to extend the appreciation of camellias and to promote the science of camellia culture. Dues are $6.00/year for a single membership and $9.00 for a couple. Make payment to Atlantic Coast Camellia Society, 1325 E. Barden Rd., Charlotte, NC 28226.

In This Issue

Editor's Page

I have tried several times to write this editorial. I have begun and stopped, again and again. It is my last editorial. When I say the things I want to say, the editorial waxes maudlin. I surely don't want that. So here goes, one more time. There will be a new editor for the next issue. He (or she) has not been selected yet, but there are so many multi-talented camellia growers till I feel confident that a good editor will be found.

I am giving up the job for health reasons, not because I enjoy doing it any less now than I did when I edited my first issue, winter 1980. How well do I remember the joy and the awe I felt when I saw my first issue. I couldn't believe that I had produced such a beautiful magazine.

When Bill Robertson and Geary Serpas asked me to take the job, I said "No" resoundingly! I didn't know how to be an editor of a magazine! I didn't know the difference between a headline and a deadline.

I surely didn't know the difference between galley proofs and page proofs. But Bill and Geary persisted. Tita Heins put in her two cents. She said that she knew I could do it.

When I finally capitulated and said that I would do it, Tita invited me to her home, and for about an hour told me what she thought I ought to know. I realized that the job really wasn't all that difficult. That the most stress-producing part of the job was getting the material. This turned out to be not so difficult. Most of the people whom I contacted for articles, responded favorably. I never had to leave a page empty because I didn't have material for it. I determined from the beginning that I wouldn't use advertisements, because we couldn't charge enough to pay for the space they would occupy. I also refused to publish any recipes or any articles that had been published previously in other publications. This ban on reprints was not completely adhered to, but almost.

Now, how about the benefits I have derived from editing this magazine. They are multitudinous! To begin with, editing this magazine has opened for me many doors. It has made for me friends all over the camellia belt and beyond. Much beyond. I count as cherished friends the best known camellia lovers in the country. Also in Australia, New Zealand, Japan, England and Italy.

Editing this magazine has given me another interest in life. I have spent many happy hours in my basement office writing to my camellia friends and contributors, reading my correspondence from them, editing articles as they come in, traveling to places that I would not have visited except to gather material for the magazine, in short, immersed in Atlantic Coast Camellias. I will certainly miss these activities.

Retics and Non-Retic Hybrids

Bill LaRose New Orleans, LA

When Jim asked me to write a few lines about growing retics and non-retic hybrids outside, I thought that he was kidding, because I cannot claim any expertise in blooming these beautiful flowers. But here goes.

Everyone must understand that whatever success Joyce and I have enjoyed has been pretty much hit or miss.

We began some time ago after seeing a 'Francie L' bloom in the Oscar Elmer's yard. This was after some very cold, unpleasant weather. This plant, grown outside, in the ground, was full of beautiful blooms and it sent us on our way!

Upon investigating, we learned of the very large size and the spectacular formations that many japonicas did not seem to have. We also discovered the wonderful colors of the non-retics with their fuscia background, and we were hooked from then on!

Our fertilizer program for these plants does not vary much from the program for the other camellias. All are under a lath house, in containers, outside, and mixed as to location. However, I try not to fertilize as much when I recognize a particular plant which is not a japonica, as we have been told that retics do not like much fertilizer. I have also been told that we should not water too frequently, but our watering is through a small tube system that is in every container, so everything gets watered at the same time (approx. ¼ gal to a 10" pot) every other day until the rainy winter days when we turn it on and off when necessary. Up to now we have not noticed any difference between them when compared to other plants.

We do agree, however, that drainage is of utmost importance, particularly since our plants are in containers. If you do not have good drainage, you will surely have root rot.

The blooming habits have left something to be desired for us. We can bloom several non-retics reasonably early, but most of our retics bloom rather late for the shows. There are some exceptions such as 'Harold Paige' and 'Dr. Clifford Parks'. We have been disappointed in that many of our recent purchases of HOT varieties look so much like others.

Make sure that you see the blooms before you buy. But the ones that are good are very, very good. Some of the good ones are, 'Royalty', 'Harold Paige', 'Mona Jury', 'Elsie Jury', 'Valentine Day', 'Roy Stringfellow', 'Francie L', Miss Tulare', and 'Miss Houston'.

We continue to enjoy our retics and non-retic hybrids and hope you will.

The author, Bill LaRose and lovely wife, Joyce.

Message

from Our President

I hope that each of you had a happy holiday season and by now are ready for a prosperous new year.

The winter in Baltimore had been a mild one until late January and I guess we were a little spoiled. The snow began to fall and in a little over a week, we had more than twenty inches. The temperature fell with the snow and I recorded one night at zero. Hopefully, Spring is on the way.

At the time of this writing, my local Camellia Society is finalizing the plans for our Annual Show on February 28, 1987. I hope that each of you have made a special effort to support your local society and any others within a reasonable driving distance. Jeannette and I are planning to attend the Atlanta show on February 21st and 22nd, 1987. I have spoken to other members who will be attending the Wilson, NC show during the same weekend. We are looking forward to seeing our many friends at the show.

The annual spring meeting of the Officers and Directors of the Atlantic Coast Camellia Society will be held on May 2, 1987 at the State-Record Recreational area in Columbia, SC. The meeting will start at 5:00 pm with a Barbeque dinner to follow. We will also have a plant auction to benefit A.C.C.S. The meeting is open to all members of A.C.C.S. This has proven to be a good time in the past and all members that attend look forward to it. Mark your calendars now and be there.

I hope that each of you is trying to get new members for our Society. I know that Jeannette and I are carrying membership forms wherever we go and we have had some people sign up. The success of our Society is based on our membership. You can be sure that there is a direct relationship between the total number of members and the active ones. Everyone that has attended a meeting in Myrtle Beach will vouch for the fact that we gain a lot of knowledge there, but we also have a great time with our friends. Please go get that new member and bring him to the Spring and Fall meetings.

Richard L. Waltz, President

Things to Consider in Growing Head Table Blooms

Jim Newell

Pensacola, FL

1. The economists have a saying: "There is no specific productivity." That is to say that there is no one single, all important factor that spells out the difference between success and failure. This is true in the material sense, however at a higher level of understanding, there is one element that transcends this teaching and is known affectionately as T.L.C. (Tender Loving Care).

2. Perfection is no trifle, but trifles make perfection.

3. A winner's philosophy: If we would become a master, it is wise to follow in the footsteps of the masters. Old Ben Franklin said, "Never put off until tomorrow what you can do today", "An ounce of prevention is worth a pound of cure", and "Keep thy shop and thy shop will keep thee". Translated into camellia lingo, Love they plants and thy plants will love thee and bless thee with magnificent blooms. The blooms our plants produce tell us with mathematical precision just how much we love our plants - a report card, if you will.

4. Luck? Sorry, no such thing!

5. Quantity of plants: Only as many plants are kept as can be cared for in accordance with the above.

6. Selection of Plants: I believe it was Walter Winchell who said, "Always bet on the champion". The champions in the camellia world are the consistent head table winners as tabulated in the ACS year books entitled "The Judges Have Spoken". Other considerations when selecting new varieties or using existing varieties for understock are as follows:

a. Does bloom shatter, bull-nose or age fast ?

b. Are blooms distorted, undersized or dull colored?

c. Does plant produce mostly weak stems?

d. Are blooms from new varieties finding their way to the Head Table?

e. Other undesirable characteristics are flat blooms, lack of petal substance and bad strain.

7. Soil preparation:

Remove all grass, weeds, etc. and loose the soil to a depth of 6". Dig in 4" of leaf mold then dig in 4" of manure at least three months old. Have soil analyzed and request recommendations as to supplements needed. Add recommended suppliments to bring pH to 6.0 - 6.5, Phosphorus, Potash, Magnesium and Calcium to H. or VH. Also add trace elements which contain Sulpher, Iron, Boron, Copper, Manganese and Zinc as recommended by the manufacturer.

8. Fertilization and Mulching:

No specific program. A general program is as follows: 2 to 3 oz. cottonseed meal to a 6 foot plant once or twice in the spring. If plants aren't growing vigorously by May, a fast release nitrogen fertilizer is used selectively as follows: 20-20-20 at 1 Tbs/gal of water or Amonium Nitrate at 1 Tbs/2 gals of water or Urea at 1 Tbs/3 gals of water. Use a gallon or two gallons for a 2 to 3 foot plant. No fertilizing needed after June.

Apply 3" of mulch (leaves or leaf and pine straw mixed) and 1" of horse manure. Mulch should be kept away from the trunk approximately 6", to aid in root aeration. Also, keep mulch from matting, caused by water and biological break down. Matting prevents air and water penetration.

9. Water and Humidity:

Watering is done by low pressure DRAMM (Grey) perfect nozzles at approximately 5 to 7 psi, 5 feet o.c., located ap-

proximately 8" above bed. Beds are watered on 7 to 10 day schedule with 1 to 2 inches of water, year 'round.

Our mist system is EDDY-MIST NOZZLES, placed 8 feet o.c., 7½ feet high, over beds, using 40 to 60 psi water pressure. System is activated by 24 hour timers set for the hot day hours, in series, with a humistat set at 50% and an intermittant timer set at 2½ seconds every 5 minutes. The system is used to enhance plant growth and bloom bud development. It is turned off during the blooming season.

10. Shade, ventilation and temperature control:

Shade is provided by a 60% polypropalene tarpaulin over the roof. The south and west sides are sprayed with a light coat of white latex paint except for the bottom two feet. Ventilation and temperature control is provided by a 30" fan in the east end of the greenhouse (30 ft. x 36 ft.) and a wet pad system in the west end, 3½ ft. x 22 ft. The system is activated by a thermostat set at 90 to 100 degrees in summer and 60 to 75 degrees in winter. This system can add up to 5% increase in humidity. No attempt is being made to use this system to lower the temperature below ambient temperature.

11. Pruning:

Roughly speaking, large plants are pruned back about one third every year. This drastic pruning is done for the following reasons:

a. To produce strong vigorous stems that will in turn have the substance necessary to support, grow and sustain a large healthy bloom.

b. To remove all weak stems.

c. To provide adequate space between limbs so that disease and insects can be controlled by spraying and surgery, and flowers can bloom and be harvested without contacting other limbs which may damage them.

d. To keep plants from growing higher than one can reach to gib and harvest blooms, and from growing into neighboring plants.

12. Disease control:

The number one problem is Die Back. The writer has found no substitute for surgery. One must be continually vigilant in plant examination, searching for cankers or twig die back. All infected of off colored wood must be removed and painted with a protective coating. Tree Kote is excellent. The addition of 5% Benlate and enough water to make a thick paste so it can be brushed on will insure complete would seal and will prevent re-infection. This coating also enhances healing. These are the surgical tools I use for this work:

1. Razor sharp knife.

2. 1/8" and ¼" chuck rotary tools approximately 20,000 rpm, fitted respectively with a 1/8" and ¼" very sharp H.S. steel bit.

For small cankers, a sharp knife and bonsai shears may do the job.

For larger cankers, the 1/8" or the ¼" drill may be needed. Drills are used for drilling and routing, and the sides of the drills are used for planning and smoothing up the wound. The fine tooth saw is used for cutting limbs which are too large for the pruning shears. The electric chain saw is used for routing out large trunks 2" or more in size. The critical time for spread of die back is in the spring during leaf drop. Now that all known dieback has been removed surgically, it is time to turn to prevention.

If dieback has been severe, the plants should be sprayed every two weeks beginning with the first sign of leaf drop in the spring. It should be continued until leaf drop is completed.

To each gallon of water, add two Tbs of Benlate (W.P.) and one Tbs Captan (W.P.). If algae is a problem, add one Tbs

Manzate 200 and ½ Tbs of a sticker-spreader. Nu-Film-P works well as sticker-spreader. Place powders together in a small container. Add small amounts of water until a heavy paste if formed. Work out all lumps. Continue adding small amounts of water until a thin smooth paste is obtained. Add this paste to the gallon of water and then add the sticker-spreader.

The number two problem is root rot. The cause, very simply stated is too much water and not enough air around the roots. Here are some don'ts:

a. Don't try to grow camellias in wet heavy soil.

b. Don't over water.

c. Don't water new grafts at all and especially in containers until there is enough foliage to begin using the water around the roots.

d. Don't let the mulch mat up or cover the roots to within 6" of the trunk.

Here are some do's:

a. Loosen up heavy soil by adding 50% or more of organic materials, coarse sand, perlite or equivalent.

b. In wet weather, keep potted plants under cover.

c. If root rot is suspected use Subdue as a soil drench. Mix Subdue ¼ Tsp/2 gallons of water. Apply one quart of this mix to a 2 gallon container, proportionate amounts for other sizes. Treat at 6 month intervals as required.

13. Insect control:

Once insects are under control, routine sprayings are reduced to 2 or 3 times a year, twice in the spring, 10 to 14 days apart, beginning shortly after leaf drop begins, and once in the fall. Spraying is done with a power sprayer and great care is taken to insure that the trunks, branches and all leaves, bottoms as well as tops, are completely covered. Spring spraying is done with a spray composed of 2 Tsp of Cygon E2 per gallon of water, ½ Tsp spreader-sticker and fungicides and algicides listed above.

Soluable fertilizers are also added sometimes. Fall spraying is done in September, October or November as required to control red spider or black aphids. Use Kelthane for spider mites and Malathion for aphids mixed at the rate of 1 Tbs/gallon of water. While spraying, all recommended precautions are taken except the wearing of a mask. In lieu of a mask, exhaust fan is turned on and windows are opened in the proper location to create adequate ventilation for removing all fumes and over spray.

Slugs and snails are controlled with Bug-eta as directed by manufacturer, Fire ants with AMDRO, Nectar ants, pill bugs and Sow bugs with Diazinon. There is only one sure way to control moles, mole traps used as directed by manufacturer.

14. Disbudding:

Remove all but terminal buds. Remove all buds from weak stems. Always try to leave buds that face down. This will help to protect the bloom from the elements. After disbudding is finished, another 50% of the remaining buds are removed. Disbudding is begun in June and continues through January. It appears that once a bud breaks dormancy, Gib has very little effect, hence the late disbudding. An effort is made to preserve about ⅓ small buds in hopes that they will mature later and extend the blooming season.

15. Gibbing:

Potassium Gibberellic Acid is used at the following strengths: September and October, last year's left over gib 2.2% and new gib 1.3% (13,000 ppm). November, 1.5%; December, 1.8%; January, 2.2%. Buds are regibbed only once. Analysis of detailed gibbing records has not provided substantial evidence that multi-gibbing is superior in any way to single gibbing. Miniatures are gibbed with

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SHOW RESULTS

WEST CAROLINA CAMELLIA SOCIETY

Greenwood, SC — October 18-19, 1986

Best bloom in show: 'Tiffany', Mrs. Lib Scott
Best japonica protected: 'Miss Charleston var', Mr. & Mrs. Jack Teague
Best japonica grown in open: 'Helen Bower', Parker Connor, Jr.
Best reticulata: 'Dr. Clifford Parks', Col. Elliott Brogden
Best Non-retic hybrid: 'Anticipation', Mr. & Mrs. Jack Teague
Best Sasanqua: 'Lander's Choice', Paul & Ann Crawley
Best Miniature: 'Little Slam', Parker Connor, Jr.
Best Collection of three, same variety: Mr. William Gardner
Best Collection of five, different: Mrs. Lib Scott
Best novice bloom: 'Don Mac', Harold Foxworth
    Runner-up: 'Lady Clare', Mrs. Allie Croft
Sweepstakes, grown in open: Mr. Parker Connor, Jr.
    Runner-up: Mrs. Lib Scott
Sweepstakes, protected: Mr. & Mrs. Jack Teague
    Runner-up: Ann & Mack McKinnon
Best Seedling: Mr. Rupert Drews
Court of Honor, Grown in open:
    'Ville de Nantes', Mrs. Lib Scott
    'Gus Menard', Mrs. Lib Scott
    'Mathotiana Supreme, var', Mrs. Lib Scott
    'Kick Off', Mr. William Gardner
Court of Honor, Protected:
    'Carter's Sunburst, var', Col. Elliot Brogden
    'Ruffian', Col. Elliott Brogden
    'Aspasia McArthur', Mr. W.C. Robertson
    'Tomorrow, var', Ann & Mack McKinnon

Blooms Shown: 322 — Show Chairman: Linda Foxworth

MID CAROLINA CAMELLIA SOCIETY

Columbia, SC — October 24, 1986

Grown in open:
Best bloom large-very large: 'Betty Sheffield Blush Supreme', Mrs. Elizabeth Scott
    Runner-up: 'Tomorrow Crown Jewel', Mr. & Mrs. G. Dubus
Best bloom small-med: 'Campari', Mr. & Mrs. G. Dubus
    Runner-up: 'Debutante', Mr. & Mrs. Parker E. Connor, Jr.
Best White: 'Allie Habel', Mr. & Mrs. G. Dubus
Sweepstakes: Parker E. Connor, Jr.
    Runner-up: Elizabeth Scott

Grown protected:
Best bloom large-very large: 'Miss Charleston, var', Mr. & Mrs. G.M. Serpas
Runner-up: 'Mathotiana Supreme', W. Gist Duncan
Best bloom small-med: 'Margaret Davis', Mr. & Mrs. Fred Hahn, Jr.
Runner-up: 'Harriet Bisbee', Mr. & Mrs. G.M. Serpas
Best White: 'Gus Menard', Mrs. J.C. Bickley
Sweepstakes: Mr. & Mrs. Jack Teague
Runner-up: Mr. & Mrs. Oliver Mizzell
Best retic or retic hybrid: 'Mouchang', Sgt. C.T. Freeman
Runner-up: 'Dr. Clifford Parks', Mr. & Mrs. Jack Teague
Best non-retic hybrid: 'ELsie Jury', Mr. & Mrs. Jack Teague
Runner-up: 'Elsie Jury', Mr. & Mrs. Oliver Mizzell
Best Miniature: 'Baby Pearl', Mr. & Mrs. L.M. Fetterman
Runner-up: 'Bonbon', Col. & Mrs. Elliott Brogden
Best Seedling: Mr. & Mrs. W.T. Shepherd
Novice award: 'September Morn', Mr. G.E. Smith
Court of Honor:
'Mini Pink', Parker E. Connor, Jr.
'Tiffany', Mrs. Elizabeth Scott
'Golden Gate', Mr. & Mrs. W.T. Shepherd
'Anticipation', Mr. & Mrs. Jack Teague
'Moonlight Sonata', Mr. & Mrs. Oliver Mizzell
'Campari', Mr. & Mrs. L.M. Fetterman
'Charlie Bettes', Mr. & Mrs. Oliver Mizzell
'Carter's Sunburst', Mr. & Mrs. G.R. Serpas
'Helen Bower', Mr. & Mrs. L.M. Fetterman
'Miss Tulare', Mr. & Mrs. William Robertson
'Dawn's Early Light', Mr. Parker E. Connor, Jr.
'Alta Gavin', Mr. Parker E. Connor, Jr.
'Magnoliaeflora', Mr. & Mrs. W.T. Shepherd
Blooms shown: 620 Show Chairman: Col. Elliott Brogden

COASTAL CAROLINA CAMELLIA SOCIETY

Magnolia Plantation & Gardens November 2, 1986
Best Japonica grown in open: 'Helen Bower', Parker E. Connor, Jr.
Runner-up: 'Marie Bracey', Donna & Bill Shepherd
Best Japonica (protected): 'Tomorrow Park Hill, Pink', G.M. Serpas
Runner-up: 'Tomorrow Park Hill', G.M. Serpas
Best Reticulata: 'Massee Lane', Marla Holland
Best Hybrid: 'Mona Jury', Mr. & Mrs. Oliver Mizzell
Sweepstakes (open): Parker E. Connor, Jr.
Runner-up: Mrs. Lib Scott
Sweepstakes (protected): G.M. Serpas
Runner-up: Mr. & Mrs. L.M. Fetterman
Best Seedling: Mrs. Lib Scott
Best White (open): 'Mary Alice Cox', Donna & Bill Shepherd
Best White (protected): 'Gus Menard', Mr. & Mrs. Oliver Mizzell

Best 'Miss Charleston' (open): Mr. & Mrs. J.K. Blanchard
Best 'Miss Charleston' (protected): Mrs. J.C. Bickley
Novice winner: 'Don Mac', Melissa Foxworth
Best outdoor bloom originated by Magnolia Gardens:
'Mathotiana', Donna & Bill Shepherd
Court of Honor (open):
'Betty Sheffield Supreme', Mrs. Lib Scott
'Mathotiana Supreme, var', Rupert E. Drews
'Mary Agnes Patin', Rupert E. Drews
'Mathotiana Supreme', Rupert E. Drews
'Lassie', Donna & Bill Shepherd
'Rosea Superba', Robert B. Deadmond
Runner-up:
'Sawada's Dream', Rupert E. Drews
'Tomorrow Park Hill', Rupert E. Drews
'Carter's Sunburst', Rupert E. Drews
'Blushing Beauty', Parker E. Connor, Jr.
'Tomorrow, var', Parker E. Connor, Jr.
'Oscar B. Elmer', M.S. Edwards
Court of Honor (protected):
'Carter's White', Ann & Mack McKinnon
'Mrs. D. W. Davis Descanso', Ann & Mack McKinnon
'Charlie Bettes', G.M. Serpas
'Valley Knudsen', G.M. Serpas
'Mary Agnes Patin', Mr. & Mrs. L.M. Fetterman
'Dream Girl', Mr. & Mrs. L.M. Fetterman
Runner-up:
'Dr. Clifford Parks', Mrs. J.C. Bickley
'Moonlight Sonata', Mrs. J.C. Bickley
'Carolina Sunrise', Mr. & Mrs. L.M. Fetterman
'Alyne Brothers', Ann & Mack McKinnon
'Donckelarii', Mr. & Mrs. J.K. Blanchard
'Harriet Bisbee', G.M. Serpas
Blooms shown: 622 (outside: 452, protected: 170) Show Chairman: G.M. Serpas

MEN'S CAMELLIA CLUB

Pensacola, FL November 6-8, 1986
Best japonica in show: 'Mathotiana Supreme', Jim Newell
Best large-very large japonica: 'Tomorrow Park Hill', Jim Newell
Best medium japonica: 'Betty Sheffield, Funny Face', Edwin Horton
Best small japonica: 'Kiku-Toji', Bob Gramlin
Best miniature japonica: 'Man Size', Jim Newell
Best White camellia: 'Campari', C.C. Crutcher
Best medium-large non-retic hybrid: 'Mona Jury', Jim Newell
Bst miniature-small non-retic hybrid: 'Spring Festival'
Best large reticulata: 'Harold Paige', C.C. Crutcher
Best plate of 3 japonicas: 'Mathotiana Supreme', C.C. Bush

Best plate of 5 camellias: Jim Newell
Sweepstakes: Jim Newell
Runner-up: Bob Gramlin
Best seedling: J.K. Edwards
Best mutation: 'Elegans Supreme', Robert A. Hall
Novice awards:
Best large to very large: Jack Wetherell
Best medium: Carl Schuman
Best plate of three: Jack Wetherell
Best plate of five: Jack Wetherell
Court of Honor:
'Hopkin's Pink', T.L. Lundy
'Mouchang', Jim Newell
'Tammia', George Griffin
'Fircone', Dave Scheibert
'Jean Pursel', Jim Newell
'Nuccio's Jewel', Bill LaRose
'Mary Alice Cox', Mr. & Mrs. L.M. Fetterman
'Julia', C.C. Crutcher
'Lucy Stewart', J. Edwards
'Debbie', R.A. Hill
'Marion', J.R. Comber
'Tomorrow's Dawn', Jim Newell
'Donckelarii', Jim Newell
'Charlie Bettes', Jim Newell
'Little Ginger', C.C. Bush
'Massee Lane, V', Jim Newell
'Pirate's Gold', R.W. Leonard
'Betty Ridley', Gordon Westen
'Pink Perfection', Alfus Johnson
'Kick Off', Mr. & Mrs. L.M. Fetterman

COASTAL CAROLINA CAMELLIA SOCIETY

Charleston, SC November 15-16, 1986

Best japonica, grown in open: 'Tomorrow's Dawn', Mr. & Mrs. W.C. Robertson
Runner-up: 'Ville de Nantes', Liz Scott
Best japonica grown protected: 'Easter Morn', Mr. & Mrs. Fred G. Hahn
Runner-up: 'Mrs. D.W. Davis Descanso', Ann & Mack McKinnon
Sweepstakes, grown in open: Parker E. Connor, Jr.
Runner-up: Mr. & Mrs. W.C. Robertson
Best Seedling: Donna & Bill Shepherd
Best Hybrid, grown in open: 'Anticipation', Parker E. Connor, Jr.
Best Hybrid, grown protected: 'Elsie Jury', Mr. & Mrs. Oliver Mizzell
Best reticulata, grown in open: 'Forty-Niner', Marla Holland
Best reticulata, grown protected: 'Jean Pursel', Joe Austin
Best 'Miss Charleston', grown in open: Donna & Bill Shepherd
Best 'Miss Charleston', grown protected: C.T. Freeman
Best miniature: 'Kiku-Toji', Joe Austin

Court of Honor, grown in open:
'Golden Girl', Donna & Bill Shepherd
'Tiffany', Parker E. Connor, Jr.
'Nellie McGrath', Parker E. Connor, Jr.
'Rosea Superba, var', Parker E. Connor, Jr.
'Helen Bower, var', Parker E. Connor, Jr.
'Pink Perfection', Harold W. Zorn
Court of Honor, grown protected:
'Massee Lane', Mr. & Mrs. Oliver Mizzell
'Tomorrow Park Hill', Mr. & Mrs. Oliver Mizzell
'Jonathan', Mr. & Mrs. Oliver Mizzell
'Tomorrow Park Hill Pink', G.M. Serpas
'Ruffian', Mr. & Mrs. Fred G. Hahn, Jr.
'Show Time', Joe Austin
Blooms shown: 668 (outside: 464, protected: 204)

IN AND AROUND THE GREENHOUSE

James H. McCoy Fayetteville, NC

I have been chided for writing that New Zealand is far ahead of us in the development of excellent non-retic hybrid camellias, two letters, two phone calls and several good-natured verbal complaints. So, perhaps I should take it back and just say that "In my opinion", this is true. How did I come to such a non-patriotic conclusion? Well, by an examination of the reports of camellia shows held in North Carolina and South Carolina for 1985 and 1986 (those published by this magazine). We find that at the 13 spring shows held, the best non-retic award went to a New Zealand introduction in **every case!** It is also interesting to note that all four of the non-retics so honored were developed by the same New Zealand hybridizer, Mr. Les Jury. The four winning cultivars were 'Mona Jury', eight times; 'Elsie Jury', three times; and 'Debbie' and 'Mirage', one time each.

At the ACS convention held in Pensacola, Dr. Luther Baxter reported on a new camellia root rot which he calls **Cylindrocladium** black root rot and stem blight of camellias. It is not controlled with Rid-O-Mil (Subdue) as is the much feared Phytophthora Cinnamomi. But it **is** effectively controlled by adding Benlate to the potting soil. How much should you add? This depends on the **weight** of your potting soil. The amount to use is 1 to 1000 by weight, 1 gram of Benlate to 1000 grams of potting soil. Since very few of us know the weight of our potting soil, I tried to get another method of determining the amount of Benlate to use. After consulting one of the most knowledgeable plant pathologists in the country, I am going to suggest that you use one level tablespoon of Benlate for the soil in a one gallon container. If your potting soil is unusually light, then a little less Benlate may be used.

How do you recognize cylindrocladium root rot? You can recognize it easily by scraping away the bark on the lower part of the trunk of the plant. You will see dark streaks in the wood. This disease affects not only the roots, but the lower part of the main stem of the plant as well. It will kill a camellia plant quickly

as opposed to the slow death that phytophthora cinnamomi causes.

Two new ACS awards were announced at the convention in Pensacola. One was the Evelyn A. Abendroth award which can be made annually at the show held in conjunction with the fall meeting of ACS, starting in 1987 in Fayetteville. This award will be made for the best bloom of the camellia japonica 'Rachel Tarpy'. The other was the Charlotte C. Knox award which can be made annually to an outstanding seedling of reticulata or hybrid with reticulata parentage. The committee to select the award will be named in the summer of 1987. Each of these awards will consist of a permanent cup which will remain with the American Camellia Society at its headquarters. The cup will be engraved with the name of the flower, and other pertinent information each year the award is made. The winner of the best 'Rachel Tarpy' or the originator of the winning seedling of reticulata will be awarded a bronze plaque, suitably engraved.

I believe that most of us use plastic containers for our container grown plants. Some of us use metal cans: Lerio cans, egg cans, gallon fruit and vegetable cans, five gallon paint cans, cracker tins and other miscellaneous metal cans. I have always thought that they were satisfactory, except for their unsightly appearance. Now, I'm not so sure that I would want to use anything for potting up camellias except plastic containers. Dr. Walter C. Hava wrote in the Camellian for March 1963 of his experiences with iron rust and the probability that it is toxic to plants, or at least to camellias. He suspected that it was, and he made a test. Some weeks previously, he had set out some five gallon cans to catch rain water. He noticed that in each can was several inches of brownish-red rain water. He selected 12 of his seedlings that had already bloomed and were useless except for grafting stock. They were all quite healthy. He poured about a quarter of this iron-rust water on each of the seedlings. In a week, the leaves began to droop, and in two weeks they began to wither, and finally, after about a month, he realized that all of them were dead. I will admit that this is not much of a test. But it is convincing enough for me to get rid of all my Lerio cans with their rusty bottoms and all other metal containers. My camellias are too precious for me to deliberately expose them to any possible peril!

Can anything new be said on the subject of grafting? I believe so. At the January meeting of the Fayetteville Camellia Club, Joe Austin presented a program on grafting. He brought up several new ideas that he says work for him. He says that he almost always puts two scions in every cleft graft, but never leaves more than one. He also leaves a breather branch at the bottom of the stock if this is possible. But the idea that interested me most was his use of clay on the juncture of scion and stock after the scion is inserted. Take a gallon of water, add one teaspoon of Benlate, and mix well. Take some clay, just ordinary clay, and make a thick putty using the needed amount of Benlate water. Carefully pack a wad of this clay around the juncture of scion and stock. Don't worry about it falling off. It won't unless you jiggle the graft, and anyone who would jiggle a graft can't play on my team! Anyway, the clay will get harder and harder. When the graft has begun to grow, about the last of May, you may remove the clay by lightly tapping it. It will fall away, and expose the prettiest callus you have ever seen! Paint this callus with Tree-Cote and you've got a new camellia.

One final item on getting greenhouse camellias to behave. Most, if not all, of us

have run into a camellia which just will not open right! The buds will swell, sometimes to the size of a duck egg. They will not go on and open up. They will just sit there until they finally fall off the plant. This is what is known as bull-nosing. Some cultivars seem to be more susceptible than others. Some plants seem to be more susceptible than others of the same variety. Some years they will bull-nose and other years they will open well. Sounds like a riddle without an answer, doesn't it. Well, one of our best camellia growers told me what he does to eliminate bull-nosing in his greenhouse. He says that it absolutely will work. Use tannic acid as a soil drench! Tannic acid is found in tea leaves. You could make some good strong tea and you'd have your tannic acid. But this man gets tannic acid by boiling bark from oak trees. I can't tell you how much bark to use or how strong a potion to make, but I would imagine the stronger, the better. To make use of this remedy, a grower would have to know which plants are susceptible to bull-nosing, and treat them only. Nor can I tell you when to treat the plants or how often. You'll have to experiment. But I would give my susceptible plants a good drenching mid-summer, soon after the buds have formed, and if I have time and think about it, again in mid-fall. I have been told that you can boil acorns and get tannic acid.

Can We Improve Our Judging?

Dr. D. Lyle Robertson Gulfport, MS

If you have attended a rodeo you have seen a rider leap from his horse onto the neck of a steer. He grabs the steer by the horns and nose and twists. The steer falls on his side to keep his neck from being broken. If there is a slip up, the rider may find a horn in his ribs or a hoof in his face.

I will take the bull by the horns and discuss Camellia Shows. I may step on some toes and end up with my foot in my mouth and my own neck wrung.

When Camellia Clubs were organized on the Gulf Coast their shows were held in January and February. The introduction of Camellia blight and Gibberellic acid caused drastic changes. Shows are now held in November and December before the height of the blight and freezes. In order to obtain flowers at this early date all plants must be treated with Gibberellic acid. All large and very large blooms are definitely judged with reference to their response to this treatment. When miniatures, small and even medium blooms are judged there is often some quibbling about "typical blooms". The Camellia nomenclature recommends standards for untreated or basic blooms. However, treated blooms are not basic and have a different set of standards. If one chooses to judge in a 100% gib show, he must leave his non-gib standards at home and judge all varieties with reference to their response to Gibberellic acid. There are a number of other points to consider in judging besides size but the latter should be a positive not a negative evaluation.

Another factor in presenting a good show is to pick people who are interested and enthusiastic about blooms they have been asked to judge. The growers of Reticulata are often assigned to evaluate miniatures while the exhibitors of tiny japonica are sent to the tables covered with hybrids. Each has a disinterest, if not contempt, for the others pride and joy.

Too often the judges of miniatures pick a Man Size, Fircine and Grace Albritton to be sent to the head table and rush away to follow the fate of a Bill Goertz. They leave behind 20 to 30 blooms stranded with a few blue ribbons. Some are exquisite blooms of a series of varieties. At the other end of the hall the hybrids are faring no better. There may be 10 to 20 medium blooms present but only one is sent to the head table. Three trophies were purchased. This leaves two carry over trophies. Too often a member takes them home and either forgets about having them or cannot locate them when needed. It always creates a controversial situation when the judges do not recommend blooms to cover all the trophies. If the club wishes to award the trophies, there is a precedent to follow without jeopardizing standards. When there is inclement weather prior to a show, the judges are requested to be considerate and lenient. If this policy is adopted for an entire show, it is logical that it can be applied to a single category. The judging team can be instructed to send up the best blooms available. Most exhibitors like to win the big trophy but are not adverse to grabbing an easy pick up. If a category is inferior, it is an open invitation to exploit it next time, with a result that a weak area is strengthened because of additional blooms.

Many of these problems can be eliminated by an active and alert chairman of judges. Some chairmen feel that their task has been finished when the assignments of judges and clerks have been completed. The chairman, like a good host, circulates among his judging teams answering questions here, making a suggestion there, and on the whole produces a smooth, efficient show. He continues his guidance throughout the voting, keeping his people well informed.

After the judges have assembled for the selection of trophy winners, they have reached what several call the final lap of the marathon. Many of the judges have been on their feet since early morning. They feel as if they have already covered twenty miles but the delays appear to be endless. The voting can be accelereated by providing an adequate number of counters. The slogan should be "Keep the judges moving and the counting straight." Many of the clerks enjoy assisting with this phase. To produce a smooth operation the various workers should meet a few days prior to the show for instructions and a dry run. In some shows a black pen is used on the reverse side of the entry card to write the number for voting and a red pen is used to denote its standing. If further identification is desired, a blue tab can be applied to the reverse side for the winner, red for runner-up and yellow for court of honor. Anyone can then carry the bloom to its proper location. If an error is made on placement, it will be quickly noted and corrected. If the entry cards are properly marked, the tedious tabulations can be completed at a later hour if it is delaying the judging.

In conclusion, it is a pleasure to attend a well organized show, win, lose or draw.

We have found at Magnolia Gardens that established camellias will stand much drought, but are badly damaged by too much rainfall.

C. Norwood Hastie, Jr.
from "Camellian", 1961

Luther Baxter

Susan Fagin

LEAF SPOT OR BLIGHT OF CAMELLIA SASANQUA CAUSED BY GLOMERELLA CINGULATA, THE CAMELLIA DIEBACK FUNGUS

Luther W. Baxter, Jr. and Susan G. Fagan

Camellia dieback, a disease caused by the fungus, **Glomerella cingulata**, infects susceptible cultivars in many ways. The fungus infects camellia stems causing cankers (2), young grafts causing graft failure, young emerging shoots in the spring causing twig blight, and older camellia stems causing dieback (death of entire stems distal to the point of infection). This report identifies another, but little-known phase of camellia infection by **G. cingulata**, leaf spot or blight (Figure 1).

Many **Camellia sasanqua** plants are being grown in the garden of the senior author. A hard freeze in January 1985 severely injured camellias in the Clemson, South Carolina area. Many of these plants recovered by sprouting from the base. These plants are approximately 15 years old, some highly susceptible to dieback (1) as revealed by the presence of large numbers of stem cankers (Figure 2).

During 1986, several young leaves on new growth at the base of plants were affected by a leaf spot or blight. Microscopic observations revealed conidia and setae, characteristic of **G. cingulata**. Isolations, using standard laboratory procedures, yielded pure cultures of **G. cingulata** which appeared identical to known cultures of the dieback fungus. After routine purification procedures, **G. cingulata** was grown on carrot juice agar (CJA) at 22°C (about 72°F) for 4 to 5 days under continuous fluorescent light, and then scraped to induce asexual (conidial) sporulation. The fungus was routinely seeded onto CJA on a Monday, scraped on the following Friday and by the following Monday, abundant conidia were available.

Conidial-bearing cultures were used to inoculate artifically wounded stems of five greenhouse-grown **C. sasanqua** plants. Controls consisted of five **C. sasanqua** plants whose stems were wounded but not inoculated. Results were evaluated after 60 days.

Inoculated stems were infected by the leaf isolate of **G. cingulata**. By using standard laboratory techniques, the fungus was received from infected stems. Control plants remained healthy and wounds healed.

This procedure demonstrates that this leaf spot (or leaf blight) disease found on current year's leaves of **C. sasanqua** is another phase (expression) of **G. cingulata**, the camellia-dieback fungus.

Very young leaves may develop large necrotic (dead) areas, often resulting in either leaf fall or death of most of the leaf area. Spots caused by limited fungal

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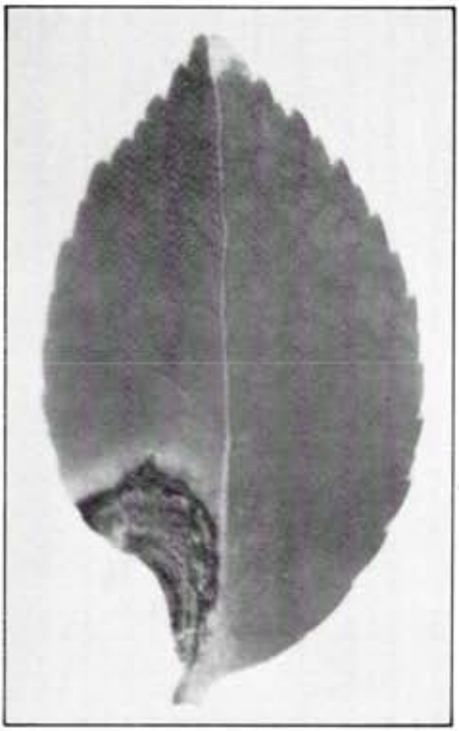

Fig. 1. Leaf spot or leaf blight of **Camellia sasanqua** caused by **Glomerella cingulata**.

Fig. 2. Stem cankers of Camellia sasanqua caused by **Glomerella cingulata**.

growth may result from infection of semi-mature leaves. Apparently, older leaves possess adequate energy to restrict somewhat the development of the fungus, resulting in spots, as opposed to blights (unrestricted development of the fungus on infected leaves).

Small, young stems of **C. sasanqua**, particularly fast-growing stems, are often killed before cankers develop. Larger, older stems, particularly of **C. japonica**, typically form cankers. In many cases, as has been noted on certain cultivars, such as Debutante, cankers form, the fungus sporulates (produces conidia) and then later (a year or so) cankers heal. When either young or small stems of susceptible plants are infected, they die often before cankers develop. This is the dieback phase from which the disease gets its name. Figure 3 illustrates such stem death. Note the lesion with healthy tissue above and below the lesion (dark, dead tissue). This is interpreted to mean that the fungus invades and kills stem tissue within a restricted area before plants (**C. sasanqua**) can respond and further restrict development of the fungus (**G. cingulata**). Some **C. sasanqua** cultivars, such as Rosea and Cleopatra, are so highly susceptible to **G. cingulata** that even finger-size branches die before cankers form. These larger branches die revealing only slightly depressed areas encircling stems. The stem depressions are lesions (dead stem tissue) killed by the fungus. Lesions are bordered by live tissue that continues to grow. Natural infection has been observed also on susceptible cultivars of **C. japonica**. There is no reason to suspect that leaf spot (or blight) does not occur on other species and hybrids of **Camellia**.

In summary, leaf spot (or blight) of **C.**

sasanqua is caused by **G. cingulata**, the fungus responsible for contagious dieback, canker, graft failure, and twig blight of various camellias.

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Lush, glossy foliage and exotic, symmetrical blossoms characterize the elegant camellia. Even if they never bloomed, their lovely, evergreen foliage would make them gardenworthy.

from Ortho book, "All about Azaleas, Camellias & Rhododendrons

Fig. 3. Camellia dieback of **Camellia sasanqua** caused by **Glomerella cingulata**. Death occurred to stem distal to a canker. The dead tissue of the canker cut off water supply. Canker arose from stem infection through a newly-formed leaf scar. Note apparently healthy (pathogen-free) stem tissue above and below the dead stem tissue (canker and surrounding tissue scraped to remove bark). Also note the dried dead leaves at top (curled and twisted) and healthy leaves at bottom.

Rooting Azaleas and Camellias

Jim Darden — Clinton, NC

Editor's Note: Jim Darden is Chairman of the Horticulture Department at Sampson Technical College in Clinton. In addition, he is owner of Darden's Nursery, specializing in azaleas and camellias. He has been active in plant propagation for over a decade, and currently produces over 100,000 rooted azaleas and camellia cuttings annually. The following is a brief excerpt from the materials that Jim uses in teaching his Plant Propagation course at the College and in taking cuttings in his nursery.

Everyone loves azaleas and camellias and seems to try his hand at rooting them at one time or another. Just as there are several thousand varieties of evergreen azaleas and camellias, so too are there many different ways to propagate them. Every gardener has his own methods. A few pointers might be of help to those just starting out with cuttings.

WHAT AND WHEN TO CUT

Azaleas and camellias can be propagated almost any time of the year. I have taken cuttings during all four seasons of the year. However, the optimum time to take cuttings is during the late summer, July and August. Most nurserymen take their cuttings during this time of the year for several reasons. First, during the hot part of the summer there is a slowdown in business and a little time to do things other than potting and selling

plants. Second, and more important, the new growth on the plants has grown out and formed its first mature wood. Stems used for rooting need to be from the current year's growth, so that the bark is relatively thin and will allow the new roots to pop out easily. At the same time, the stems must be mature enough to have formed some woody tissue and have the accompanying microscopic root cells called latent root initials, in the cambium layer under the bark. These cells would probably never become roots unless a catastrophe strikes the plant and the stems find themselves severed from the mother plant and in contact with moist soil. A good test to see if your new wood is mature enough to root is to press a twig between your fingers, breaking it like a match. If the stem snaps, then the wood is ready for rooting. If it bends, then there is not enough wood, and the herbaceous stem should be allowed to mature a bit longer. Use healthy new tissue on the outer perimeter of the plant. Be sure that there are no diseases or insects on the cutting wood. Remember to prune the mother plant in such a way that she benefits from the cuttings being taken. Never take more cutting wood than the mother plant will comfortably yield while remaining shapely. If cuttings are taken during mid-summer, there will still be plenty of time for the mother plant to grow out and respond with an improved shape by the coming fall season. Taking cuttings too late in the summer, or in the fall, will result in the removal of some of next spring's bloom buds which have already formed on the stem tips. Be careful not to cut too radically, or the number of blooms on the plant next spring will be greatly reduced.

HORMONES

Should you use a rooting hormone on your cuttings? Many amateur and professional propagators do, but some do not. The cuttings will root with or without a hormone. You will probably have a better percentage of the cuttings to root, they will root a few days sooner, and they will have more roots if a hormone is used. Many hormones are on the market, and they come in several forms. Rooting hormones simulate the natural chemicals that are produced in the stem tips and leaves of plants, and are responsible for various types of growth. Powders have been popular for many years. Rootone and Hormodin are popular brand names which can be found at more garden centers. Some rooting powders contain fungicides to help combat the fungal diseases that sometimes invade the rooting beds due to the high moisture levels that must be used. Many nurseries are currently using a liquid "quick dip" hormone. These are easy to use and more powerful than most powders. Some are said to "root baseball bats." Chloromone is a green liquid which is probably the squeezings of a plant that naturally produces lots of hormone, and roots easily, such as weeping willow. The formula for the ingredients in Chloromone is secret, but the product works well on azaleas, camellias and many other ornamentals. Cuttings are simply dipped into the liquid, allowed to dry briefly, and then inserted into the rooting medium. Only the bottom 1" to 2" of stem is dipped. When I have accidentally dropped the entire cutting into the liquid, I got a profusion of healthy roots almost all the way up the stem to the tip. These "adventitious" roots, or stem-borne roots, should be encouraged only below ground level.

Another strong rooting hormone which is very popular with professionals is IBA (Indole Butyric Acid) quick dip. IBA is a compound which is very similar to, and functionally almost identical to, the IAA (Indole Acetic Acid) that is produced naturally in the apical tips of the shoots. One very good feature of IBA quick dip is that the filler is alcohol. This sterilizes the

cuttings when they are dipped into the liquid, thus reducing the incidence of fungal diseases. If this is used, be sure to allow the cuttings to dry after dipping and before insertion into the medium. In just a few minutes, the alcohol has vaporized, leaving the hormone on a virtually sterile stem. You can dip a handful of cuttings at one time, being sure only to apply the hormone to the bottom 1" or so of stems. One of the few regional sources of IBA quick dip is Coor Farm Supply in Smithfield, NC.

TAKING THE CUTTINGS

If possible, take your cuttings in the morning. The outer stem tips of the plants are more likely to be turgid then, so they are less likely to loose moisture quickly when severed from their root system. Remove the cuttings from the mother plant with a sharp pair of clippers. A good cutting is 4" to 5" in length, and has a firm woody stem that is about ¼ to ½ the diameter of a pencil. It will snap if bent more than 90 degrees. Strip the leaves from the bottom 1" to 2" of azalea cuttings. You will need to insert that amount of stem into the medium without having any leaves in contact with the soil. Also, it is a good idea to snip the apical tip out of azalea cuttings so that no energy will go into stalky growth, and the first growth that occurs after the cuttings root will go into new branches. For camellia cuttings, remove all except the two top leaves. You may cut these two leaves in half if you need the space. The health and vigor of your cuttings at the early stage are directly proportional to the quality of the new plants that you are about to produce. Use good wood.

ROOTING MEDIA

Lots of folks root plants in plain water on a window sill. A glass in the window works well for many herbaceous plants. However, woody plants like azaleas and camellias root best when inserted into a rich, well-drained, soil-like medium. Commercially prepared soil-less mixes are available at many garden shops, and can be used if you would like to avoid mixing your own soil. Be sure to use a mix with plenty of peat moss or pine bark mulch as the source of organic material, and an aggregate like sand or perlite for drainage. Almost every propagator has his own mix. Some of the blueberry farmers in Sampson County use 8 inch deep wooden beds filled with nothing but well-rotted sawdust. You can get into trouble if you use sawdust that is not very old and completely rotted, since high cellulose contents will lead to microbial action (rotting). This activity can generate heat, and will result in a nitrogen depletion of the soil. But, the blueberry farmers root thousands of fine plants and have better than 90% viability in their sawdust beds.

Many nurserymen prefer peat moss and perlite in a 50:50 mix. This seems to work as well as any rooting medium now in use. The millions of plants that root in it each year will attest to that. I personally like a little more in my rooting mix. I use peat moss (about 50%), perlite (about 25%), vermiculite (about 20%), and coarse washed sand (about 5%). While the percentages might fluctuate somewhat from mix to mix, I always like to have enough peat moss to make the mix look dark and rich like good topsoil, and enough sand to be barely visible in the mix and to give it a detectable weight. This mix seems to have enough organic matter to give the mix an acid pH and good water holding qualities, while providing the drainage and porosity (air space) that are so essential to good rooting. Many other ingredients can be used in your rooting mix. Pure sand or pure perlite can be moistened and used for rooting. Field soil, although often contaminated with pathogens, can be used. Quite a few nurserymen are using a mixture of pine bark mulch and sand or

perlite. Even styrofoam balls are used by some propagators in their rooting mixes. You will need to try several different mixes and decide which roots best for you.

HIGH HUMIDITY

We have already mentioned the importance of turgidity in the cuttings. You will have much greater success in rooting plants if you can maintain good water pressure in the stems and leaves after they have been cut away from the supporting root system of the mother plant. This will avoid wilting during the rooting process. If you can accomplish this, the plant can continue to photosynthesize and make sugars (and therefore roots) without going into the shock of dehydration. There are several ways to keep the turgidity high in your cuttings while they are rooting.

One of the simplest methods is to place the cuttings in the rooting medium and then cover the entire container with clear plastic. Water will condense on the inside of the cover, indicating that the humidity within is very high. When the humidity outside the leaf is high enough that water will not move from a higher concentration inside the leaf to a lower one outside, you have slowed or stopped transpiration and are well on your way to rooting the cutting.

On a somewhat larger scale, a coldframe can be sealed with clear plastic and retain very high humidity on the cuttings within. Probably the most common system used by nurserymen for keeping the humidity high on cuttings is an intermittent mist system which is controlled by timers and solenoid valves. The North Carolina Extension Service has a good pamphlet which shows exactly how this can be done. For $100.00 to $200.00 you can put together a system which will root thousands of cuttings.

How does a mist system work? Nurserymen will tell you that they always try to avoid an excess of water in the rooting beds, since such a condition invites disease problems. Ideally, if you could place a very thin layer of tiny water droplets on the leaves of your cuttings (never drenching the bed), and then allow the leaves to become almost, but not quite, completely dry before applying more water, you can maintain high turgidity without encouraging disease. An intermittent mist system has timers which automatically mist the leaves at pre-set intervals. I use five seconds of mist every ten minutes. A 24-hour timer limits the mist system so that it only operates during the hot part of the day. You can adjust the number of seconds of mist, the frequency of the mist cycle, or the hours of the day during which misting occurs. It doesn't matter whether your system for increasing the humidity around the leaves is simple or fancy. Just remember that if the humidity is high outside the leaves, then there will be less transpiration (movement of water molecules out of the leaf), and the result will be high water pressure inside the leaf. This increases turgidity and will help your cuttings remain upright and healthy during the 3-6 weeks that are required for rooting. The trick is keeping the water inside the leaf without drenching the cuttings.

DURING THE ROOTING PROCESS

Several factors will determine the length of time that is required for you to get roots on your cuttings. July and August are the best months to take cuttings because the temperatures are high, humidity is naturally high and muggy, sunlight is strong and predictable, and you have an abundance of fresh woody cuttings on your plants. If you take your cuttings any other time of the year, these conditions will not be as good. It is important to remember that, regardless of the time of year when your cuttings are taken

and rooted, there is one set of growing guidelines to be used during the actual rooting process, and another set of procedures to be followed after rooting occurs.

During the rooting process, you need to optimize the humidity around the cuttings by using the cold frames or mist systems already discussed. The warm temperatures of July and August allow us to root azaleas in as little as 14-17 days, with a heavy set of roots on each cutting in 3-4 weeks. Camellias take a little longer. This is desirable to the nurseryman because he wants each plant to be mature enough to be taken from the rooting bed, planted into individual "liner" containers, and show lots of new growth by the fall. Such growth would insure that he has a healthy, well-balanced plant that can be taken out of the greenhouse in April of the following year and planted into a pot in the nursery. During the 3-4 weeks required for rooting, you might wish to use fungicide, such as Captan or Benlate, to protect the vulnerable cuttings from rotting. It is most important to remember that during the rooting process, your cuttings have no roots, and must be exposed to unusual amounts of moisture in order to avoid wilting and death.

LIFE AFTER ROOTING

Once the cuttings have produced their new set of roots, you must begin to wean them from the high moisture conditions that accompanied the rooting process and begin to treat the cuttings like independent plants. Indeed, they are new individuals at that point, able to draw water through their new root systems, and they should only be watered when they dry out and need a drenching. To expose well-rooted cuttings to an excess of water will be inviting fungal diseases to cause rotting. The new plants will need to be protected during the first winter, either outside in a shaded, protected area, or inside a greenhouse or coldframe. Very little loss of cuttings occurs when they are maintained at temperatures above freezing during the first winter. In addition, the cuttings will grow somewhat during the winter and early spring, giving you superior plants by springtime.

If you keep your cuttings in a coldframe or greenhouse, you will notice that many of the azaleas will bloom during January, February and March. This occurs because the bloom buds were already on the cuttings when they were taken during the previous summer. They mistook the warm greenhouse temperatures for springtime. It is quite a spectacular sight to see a greenhouse filled with thousands of beautiful azalea blooms in February with snow on the ground outside. However, it is much better for the cuttings to pinch these flower buds off when you first take the cuttings during the summer or first see them arise. This will allow all of the photosynthesis in the new plants to build a stronger and more well-branched plant. Remember, once the cutting becomes rooted, it should be treated just like any other plant when it comes to watering, pruning, fertilization, growing medium, etc.

I hope that these pointers will help you with your azaleas and camellia cuttings this year. I think that seeing all of those helpless little stems develop roots and begin to push out lush new growth is one of the most fun-filled and exciting phases of the horticultural experience.

In the galaxy of ornamental plants, the genus Camellia stands out as one of the most desirable shrubs in the western world. With its dark green leaves and its many flower forms it has become a favorite of gardeners and landscape developers everywhere.

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Miniature Hybrids from Victoria, Australia

Dr. R.M. Withers Australia

Since the Camellia first became a popular garden plant, C. japonica with its enormous range of cultivars, has been the type of camellia most commonly grown. However, following World War 2, with the importation of the Kunming reticulatas to the Western world, and subsequent hybridization resulting in a wide variety of large and spectacular reticulata hybrid blooms, there was a surge of popularity in this group, especially among specialist growers of camellias. At the same time, especially in Australia and New Zealand, the Williamsii hybrids derived from C. saluenensis, with their vigour and rapid growth were becoming very popular as both garden plants and plants for the specialist grower.

Popularity polls have been held from time to time and the 4 Camellias that have usually topped the list, have been C. japonica 'Guilio Nuccio' as number one, followed by the Williamsii hybrids 'Debbie' and 'Water Lily' and the reticulata hybrid 'Dr. Clifford Parks'.

However, times are changing and during the past 10 years there has been an upsurge in popularity of the miniature hybrids both in Australia and New Zealand. A number of these are described by James H. McCoy in his very interesting article "Sugar Babies from Down Under" which appeared in the Spring-Summer issue of "Atlantic Coast Camellias" 1986. Two hybrids from Victoria that are mentioned are 'Snow Drop' and 'La Petite'.

It was in July 1977 when visiting Edgar and Beryl Sebire to see some of their new seedlings, that I came upon a hybrid between C. pitardii var. pitardii and C. fraterna. The upright, open plant with dark green leaves only had a few flowers at that stage, single miniature white flowers with pink edging to the petals and with golden stamens. I thought the seedling had a lot of potential and I am pleased that Edgar proceeded with it, registering and naming it 'Snow Drop' in 1979. 'Snow Drop' has since shown itself to be a long flowering, very floriferous vigorous plant, has become very popular and widely grown.

Meanwhile Erica McMinn at Camellia Lodge Nursery had been developing miniature reticulata hybrids. The reticulata hybrid 'Janet Clark' was pollinated with pollen from C. fraterna and a resultant seedling was open pollinated to produce a number of F2 seedlings. The best seedling was a plant with upright spreading habit and grey-green leaves, with medium-pink shaded cyclamen semi-double to incomplete double flowers 40mm in diameter. This is the only really miniature hybrid that I know which con-

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Over-zealous people interested in promoting the culture of sasanqua camellias somehow managed to convince many people that sasanquas were hardier than the japonicas. Our observation at the National Arboretum indicate that they are neither as bush nor flower bud hardy.

Dr. Francis de Vos
Asst. Dir. Nat. Arboretum
from Pied-Cam Review, April 1961

tains C. reticulata in its parentage, and it was registered in 1981, and at my suggestion Erica named it 'La Petite'.

In 1981 Edgar Sebire named and registered a C. rosaeflora seedling C. 'Rosabelle'. The plant has a spreading open growth with medium green leaves, and semi-double rose pink flowers 60mm in diameter. C. 'Rosabelle' is a big improvement on its parent and an excellent garden plant.

In 1984 Edgar Sebire named and registered another C. rosaeflora hybrid seedling C. 'Mandy', a plant with weeping habit, medium green leaves, and semi-double pale pink perfumed flowers.

In 1985 Ian Harmen named and registered a seedling C. 'Phyl Shepherd' which should become popular when it is more widely known. Raised from C. cuspidata crossed with C. 'Cinnamon Cindy', the plant has a spreading habit with dull dark green leaves and semi-double to anemone form flowers, pale pink shading to white in colour.

In 1985 Edgar Sebire named and registered two new miniature hybrids. The first was named C. 'Popsy', raised from open pollinated seed from C. pitardii var. pitardii. The flowers are single and white, but the virtue of C. 'Popsy' is that it is a dwarf growing hybrid. The small leaves are dark green. The second seedling is perhaps my favourite camellia, and in my opinion should prove to be one of the best and most popular hybrids that has been raised for many years. The upright open plant has light green leaves, and miniature single to semi-double flowers with two shades of pink colouring, darker pink towards the edge of the petals, and paler pink towards the centre of the flower, and with golden stamens. A chance seedling from C. 'Snow Drop', it was named C. 'Alpen Glo', a name suggested by Mrs. Violet Lort-Phillips, Past President of The International Camellia Society, reminding her, as it did, of the colour of the snow at sunset in the Swiss Alps. I am sure that 'Alpen Glo' will become very widely grown, and supersede C. 'Snow Drop' in popularity.

In 1986 Edgar Sebire named and registered 3 further seedlings each distinctive and worthy additions to our range of miniature hybrids. The first was C. 'Our Melissa' a C. pitardii var. pitardii chance seedling. It is a rapid growing plant with weeping habit, and olive green leaves. The flowers are 50mm in diameter, pink in colour and 'Elegans' or anemone form. The second was C. 'Blondy' a chance seedling from C. 'Snow Drop'. The plant has an upright open growth with olive green leaves and the flowers 50mm in diameter, are of 'Elegans' or anemone form. This is the first pure white hybrid to be registered that has C. pitardii var. pitardii in its parentage. The third was C. 'Spink', also a chance seedling from C. 'Snow Drop'. The upright open plant has olive green leaves, and the flowers 50mm in diameter are single and rose pink in colour.

Finally, mention should be made of a seedling voted best seedling at the show held by the Victorian Branch of the Australian Camellia Research Society in conjunction with Waverley Garden Club on 23rd August 1986. It was an unnamed seedling shown by Ray Garnett and raised from a cross between C. 'Tiffany' and C. 'The Czar' pollinated with pollen from C. lutchuensis. The miniature flowers were perfumed, informal double of Peony form, and pale pinkish-white in colour. The plant had a weeping habit. This seedling will be named and registered in 1987, and with its colour, form and perfume, has been very much admired by all who have seen it.

James McCoy in his article "Sugar Babies from Down Under" reaches some conclusions by examining the parentage of miniature hybrids he discusses, and suggests guidelines for would-be

hybridizers in the future.

I cannot agree more that C. fraterna is a red hot "daddy" or "mommy".

C. tsaii is a species that has not been used as a parent in Australia.

C. yuhsienensis is a species that has only recently been imported into Australia. It has not been used as a parent to date, but will be introduced into local breeding programs, especially as it has the added virtue of being perfumed.

C. lutchuensis must not be forgotten as an excellent parent with the added virtue of transmitting perfume to its offspring.

C. yunnanensis has recently been imported into Australia and could be a useful parent in the future.

Finally we must not forget C. chrysantha but it remains to be seen whether or not this species will contribute to the breeding of miniature hybrids of the future. Although we have large plants growing well, we have yet to flower this species in Victoria.

Preparing and Packing Blooms for a Show

Annabelle Fetterman

Clinton, NC

Each person interested in the camellia hobby wants to have his loveliest blooms to carry to shows or to share with a friend. You know that those blooms are often so badly damaged before they get to their destination that they could not possibly win a prize. What a pity! If you are like me, you've dropped one occasionally and it fell flat on its face. Oh how bad I felt! If crying would have helped, I'd have cried. There are lots of other ways to damage blooms, and we want to help you get your flowers to a show in the best possible condition or anywhere else you may be sharing them.

This is how we do it. You go out to the greenhouse or the garden early in the morning or late in the evening. Both times are excellent. I think I prefer early morning because in the early morning, light blooms have a special sheen not seen at other times. Preparing blooms for a show is one of the most interesting phases of our camellia hobby.

Now, cut the bloom at the right moment, not too soon, not too late. I like to cut the bloom just before the flower reaches its peak. This is sometimes difficult to decide. I like to cut them just before the pollen sac has burst. How can you tell that the pollen sac has burst? If in doubt, touch it lightly with a Q-tip. If pollen sticks to the Q-tip, it has burst. I sometimes waiver, shall I cut it now or cut it tonight. A really good flower with lots of substance, good form and good color will hold up better than a more fragile looking bloom with slender delicate petals. The latter may not last till show time no matter when you cut it. Usually, you get your best blooms on a healthy looking, vigorously growing plant and many times best blooms open on Monday or Tuesday after a show.

Early in the week before a show, I carry two or three containers with me to the greenhouse. We use sweater boxes which are clear plastic and measure about 12"x 15"x 6½". Two of these slide neatly on one shelf of our camellia refrigerator. Altogether, it will hold six. The flowers rest on about 2 inches of easter grass or poly fiber placed in the bottom of the box. I place 2 or 3 blooms in a box, depending on the size of the blooms, so I place 2 or 3 jelly cups in each box before going to the greenhouse. These little cups are filled with a wad of cotton saturated

with a floralife solution. As I very carefully cut the bloom, I place it in the cup in the box immediately.

Those with a rosebud center, like 'Helen Bower' or 'Rosea Superba' are placed in a box above the little cup, but the stem does not touch the water or cotton in the cup. This seems to prevent the rosebud from opening further. When we get to the show, we trim the bottom of the stem a tiny bit before placing it in the cup so it can take up water. The bloom may look a little less than crisp, but the water will freshen it. We have also used rather warm water in the display cup to freshen a bloom that looks a little tired.

I know that to touch a petal, bump the bloom or drop it is really the kiss of death for that bloom. I have a little kit that I use and then take it along to the show. It contains Q-tips, finger nail scissors, clippers, cotton wads, pencil, extra entry cards. These are the things I use to groom a bloom. Q-tips will remove a speck of pollen or a drop of water, clippers to trim the stems. I handle each bloom as little as possible and as carefully as I can. I make sure they do not touch the container or each other in any way. Sometimes I put little pieces of cotton or poly fiber among the petals of an extra large bloom. This helps keep the petals upright in the refrigerator and during the long ride to a show. Some folks use a cardboard collar under the blooms to support the petals of a very large bloom, and to keep them from drooping and looking tired.

To keep the flowers fresh, we have tried NAA, potato whitener, a grape on each stem, 7-up and some other solutions, but find floralife works well for us and is easy. I feel sure you can use a different product with good results since floralife may not be available in your area. I mix a quart at a time and keep it in the refrigerator filling the little jelly cups as I need them. Lew has the local restaurant save these little cups for him. He's really great at finding things I decide I need for our flowers.

Two of our really good blooms will go in one of these boxes. Occasionally a box will hold only one very large bloom. Sometimes a box holds three blooms. Perfect, no flaws, each one beautiful, but not large enough to win a show. No matter, a flawless bloom is what really matters. You can use any box or plastic container to carry your blooms, just be sure it is deep enough so that the lid does not touch or rest on the petals or the flower will not bounce to the top when you drive over a bump on the way to the show.

When the blooms have been placed in the box in the greenhouse, they are not removed from the box until we get to the show. The boxes are carried to the work room where we have excellent lighting and they are inspected for imperfections, pollen, dust specks. Then an entry card is completed for each bloom and put inside the box. The lid is taped all the way around with 1½ or 2 inch masking tape so the refrigerator will not draw the moisture from the blooms. These are not opened until we get to the show. These

In the whole range of splendid exotics which have been introduced into this country, there are few, if any, that combine so much elegance and beauty, either as regards the dark, shining evergreen of their foliage, or the dazzling brilliance of their flowers, as those constituting the natural order Camelliae.

Marshall P. Wilder, Esq.
from "Camellias" by Gerbing

boxes fit nicely in the refrigerator to wait for loading in the car. Six boxes fit in our refrigerator reserved for camellias, three more boxes will go in a smaller refrigerator we have in the work room. We add a box or two a day, depending on how fast blooms are opening.

A really good flower with good substance, size, formation, color, will hold up well for 3 or 4 days. Sometimes a week, but that's iffy. Sometimes yes, most times not. Our winners are usually cut the morning of the show or the day before.

The morning of the show, Lew and I get up at 6 o'clock or 5 or 4 or even 3! It depends on how far we will travel to the show. For a few, like ACS Headquarters at Massee Lane (9 hours) and Jacksonville (7 hours) we leave on Friday afternoon to drive to the destination, stay overnight, get up refreshed, ready for the show.

The author carefully inspects her blooms before entering them in the show.

Lew puts a 2" foam rubber mat in the trunk of the car and covers it with blankets. He takes the boxes carefully from the refrigerator and places them neatly in the car. In and around the boxes, he adds containers of ice to help keep the temperature constant. Then blankets are placed on top and wrapped around to keep the boxes from shifting and to prevent a sudden change in temperature. We've removed the ice when we stop overnight if the temperature seems cool enough. We've had blooms to freeze in the car at night when there is a sudden temperature change.

Then we're off to the show to see old friends and make new ones. Entering blooms in shows is a joint effort. Lew is the best "toter" you ever saw. When we get to the show, he carries all the boxes of blooms into the staging area and my job is to get them entered in the show without a blemish. When placing one on a tray, I carefully pick a bloom up by a leaf sticking out from under the flower petals. Be sure leaf or leaves are clean and upright. Stem should be cut to about 1 or 1½ inches long so it will set up in the cup nicely and look at the judges. Set it in a cup and groom it if it needs it. As the blooms are put out, Lew removes the empty boxes and loads them back in the car. When all the blooms have been entered, we visit with friends until the show opens or help judge if they need us.

Oh what a sight to see all the blooms on display at a show! I never fail to be amazed at all that loveliness. We are so pleased that our blooms add to that breathtaking sight and another show is born.

THINGS TO CONSIDER

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0.5% potassium or magnesium gib. One or two buds per plant are gibbed every week or two depending on the size of the plant. Detailed gibbing records indicate a great difference in blooming time after gibbing. For example: 'Aztec' - 58 days, 'Tomorrow' - 45 days, 'Mouchang' - 40 days, 'Carter's Sunburst' - 36 days, 'Little Babe' - 30 days, etc. Buds are gibbed for shows in accordance with these predetermined harvest days.

"They don't make dinner plates as big as my retic seedling."

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*At a meeting of Officers and Directors, October, 1986, the decision was made to increase the dues. This was necessary because of rising cost of publication.

Court of Honor

Our first president and his princess Hulyn Smith and Janet.

Our second president and her prince Annabelle Fetterman and Lew.

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