Carolina Camellias

'Terrell Weaver'

(Courtesy of the American Camellia Society)

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Carolina Camellias

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In This Issue

About The Cover

'Terrell Weaver', is a hybrid of 'Crimson Robe' x 'Ville De Nantes' originated by Dr. Walter F. Homeyer, Jr., of Macon, Ga. and propagated by Nuccio's Nursery, Altadena, California. The flower is named for that "grand man" of Camellias, N. Terrell Weaver of Macon. Terrell is President Elect of the A.C.S. and has served as an official for many of the years of A.C.S. history. He is a Charter Member of A.C.S., formerly A.C.S. Vice President for the Atlantic Coast and past President of the Middle Georgia Camellia Society.

SOUTH CAROLINA CAMELLIA SOCIETY

President's Message

P. A. Dahlen

Dear Members:

Camellia enthusiasts are experiencing another very successful season. The flowers have been plentiful and beautiful, the camellia shows have been excellent, and the enthusiasm among growers and exhibitors has been high. Reflect back on the wonderful associations you have had with your camellia friends this past season and you will realize what an important part in your life the camellia plays. Membership in the South Carolina Camellia Society is an important means for maintaining our interest in camellias and for getting acquainted with the fine camellia people. Make sure you have renewed your membership for 1975 and encourage others to become members. It is a great bargain for $4.00 a year. This past year I have met a number of people from other parts of our country, and even from Australia, who commented very favorably on our fine publication, Carolina Camellias.

We are planning to have a spring meeting of the Society in Greenwood, South Carolina, in April. A notice about this meeting will be mailed to you when the details are firm.

Continue your enthusiasm with camellias, get new members for the S.C.C.S., plan to attend the spring meeting, and have a wonderful spring and summer.

Paul A. Dahlen, *President*

NORTH CAROLINA CAMELLIA SOCIETY

President's Message

E. O. Aycock

Dear Members:

We have just completed the fall meeting of our Society, at which time I was elected to be your president for the next year. To me this is the greatest honor I have ever received, to have the privilege of serving and working with the most wonderful group of people in this state. There are no finer people in the world than those with whom I have had the pleasure of knowing through our common interest—THE CAMELLIA.

I know you get tired of hearing about getting new members, but we can't stand still, we will either grow or dry up and I feel certain that none of you want our Society to dry up.

Let me ask you a question or two. When was the last time you gave a neighbor or friend a little advice or a helping hand concerning his camellias? When did you invite someone to attend a club meeting with you? When did you give someone a plant (a seedling will probably do the trick if he has no other plant) to get him interested in camellias? When did you get someone to attend a camellia show? Think back and remember who or what first interested you in camellias. Try this same thing on some one else, if it worked on you it will probably get them interested too. Eventually we'll have another new member in our Society.

A good member must love camellias so let's make this year a year in which we strive to make more people start loving camellias as we do.

Sincerely

Ernest O. Aycock, *President*

VIRGINIA CAMELLIA SOCIETY

President's Message

Robert O. Matthews

Dear Members:

If you were unable to attend the fall show, which was held at the Norfolk Botanical Garden, we had a terrific turnout of exhibitors with 83 blue ribbon winners.

After having the show at the Military Circle Mall for two years we moved it back to the gardens for economy reasons.

We were disappointed with the amount of visitors and therefore we should work very hard to create a larger interest in our spring camellia show. The spring will be held at the Norfolk Botanical Garden auditorium on March 22-23. The show committee is hard at work to make this one of the best ever. Artistic arrangements will once again be part of the show, in order to increase a wider public interest.

We are asking each and every member not only to participate in the show but to publicize it, thru your friends, that we may once again revive the interest in camellias in Virginia.

Hoping to see you all at the spring show and wishing you a happy camellia season.

Robert O. Matthews, *President*

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Studies on Benomyl (Benlate) for Camellia Dieback Control

By Luther W. Baxter, Jr., Wesley Witcher, and Susan G. Fagan

Introduction

Camellias are affected by the widely publicized disease, dieback and canker, caused by the fungus *Glomerella cingulata*. Many *Camellia japonica* and most *C. sasanqua*, *C. reticulata*, and camellia hybrids are susceptible to this disease. It is particularly abundant along the coast of the southeastern United States. Plants when affected have twig blight, cankers, and oftentimes dieback of twigs and branches distal to the canker. A few camellia cultivars are so susceptible to this disease that death of twigs and/or branches occurs before cankers are evident as symptoms. Plants which are grafted are particularly vulnerable to infection since the pathogen responsible for the disease invades camellia stem tissue through wounds. Pruning wounds, insect punctures, wind and mechanical damage, and natural leaf scars provide avenues through which the fungus can invade stem tissue. Normally leaves, flowers, seed pods, and roots are not affected by this pathogen. There is a need to control this disease, especially in the nurseries, since infected plants can be sold and then the customer is disappointed with the results of his efforts. Actually *C. japonica* and *C. sasanqua* plants thrive in all areas of South Carolina, much of North Carolina, and along the Coastal Plain region of Virginia. Since most nurseries which propagate camellias are located along the coast, the disease, which is favored by the highly humid and mild climate, develops to serious proportions on susceptible plants.

The Host

Camellias are grown on the west coast and in the southeastern United States from Texas to Virginia, Delaware, and Maryland and inland up to the mountains of North Carolina, South Carolina, Georgia, and Alabama. Their greatest popularity in the South, outside of greenhouse culture, is found in the southern parts of Louisiana, Mississippi, Alabama, and Georgia and along the eastern seaboard of South Carolina, North Carolina, and Virginia. The *C. sasanqua* cultivars are particularly susceptible to dieback. Many cultivars such as 'Rosea', 'Cleopatra', 'Narumi-Gata', 'Bettie Patricia', 'Hinode-Gumo',

and 'Texas Star' are so sensitive to dieback that many nurseries no longer attempt to grow them. Many cultural practices ultimately affect plant health. For example, the frequent use of overhead irrigation systems (Rainbirds, etc.) cause problems with this disease since the water droplets under centrifugal force help to disperse the pathogen. Improper spacing and excessive shade can provide humid conditions which aggravate this disease. Execessive nitrogen fertilization can make the plant more susceptible to this pathogen resulting in more disease.

Many *C. japonica* cultivars are extremely sensitive to the pathogen causing dieback. Examples are 'Ville de Nantes', 'Tiffany', 'Mathoniana', and 'Lady Vansittart', including all of their sports. Other *C. japonica* cultivars are resistant to dieback. Examples are 'Governor Mouton', 'Professor Charles S. Sargent', 'Rose Emery', 'Woodville Red', and all of their sports.

The majority of *C. japonica* cultivars, however, are intermediate in susceptibility to dieback. At times in their life history, they are more susceptible than others. For example, fast growing grafts and fast growing liners in highly fertilized and liberally watered soils are more prone to dieback and cankers than slowly growing older plants. When infection occurs in any of these older plants, cankers form, but usually they will heal over as in 'Betty Sheffield', 'Rev. John G. Drayton', 'Gloire de Nantes', 'Queen Bessie', 'Rose Hill Red', and most *C. japonica* seedlings. Cankers sometimes form on 'Professor Sargent' and 'Governor Mouton', but invaribly they will heal. Twig blight and dieback rarely occur in these cultivars.

In most *C. japonica* and *C. reticulata* cultivars, grafts are particularly vulnerable to death of scion and/or stock. When the understock is a *C. sasanqua* seedling, the complete understock may be killed by the pathogen responsible for dieback, if it is introduced at the time of grafting. Therefore, in summary of this section, it is safe to state that grafts, most *C. sasanqua* cultivars, and some *C. japonica* cultivars need some protection from the pathogen responsible for camellia dieback.

The Pathogen and the Disease

The cause of camellia twig blight, canker, and dieback is a fungus, *Glomerella cingulata*. It has two stages in its life history, the asexual stage whereby conidia or spores (seed) are produced on camellia stem cankers or affected camellia leaves. These spores are produced in a water-soluble matrix. They are normally dispersed in splashing raindrops to nearby areas. The asexual stage is the typical form which is seen fruiting on camellia cankers. Most often the spores are produced in April, May, and June coinciding with the time of leaf fall of camellias. The pathogen enters the plant stem tissue only through wounds or leaf scars. It can enter very young camellia leaves directly provided the environmental conditions are favorable for infection, which include warm, extremely humid

and partially to fully shaded conditions. Symptoms of twig blight may occur 4 days to several weeks later depending on temperature, the age of the tissue, and the cultivar involved. Cankers usually form 2 to 3 months after initial infection. Dieback may occur within 2 to 3 months, or it may be delayed for years depending on the size of the affected

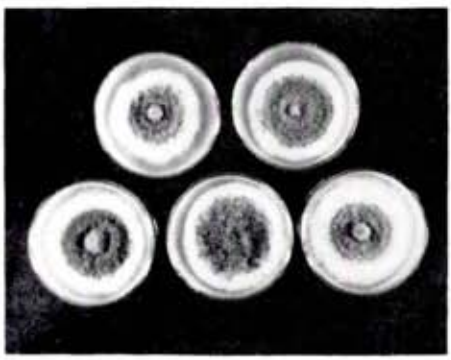

FIGURE 1. Five separate isolates of the fungus *Cloremella cingulata*, the cause of camellia dieback and canker. All isolates were grown on carrot juice agar. Top, left to right—isolates from Cleo and Texas Star; bottom, left to right— isolates from Daydream, an unknown *C. sasanqua*, and an unknown *C. japonica* from Magnolia Gardens.

stem, the variety, and a number of other factors. Healing in some cultivars may occur within 6 months to 2 or 3 years.

The fungus also has a sexual stage which is rarely seen. This stage occurs on fallen leaves, fallen branches, etc. and provides variability in the fungus so that different strains can occur. Just as the seed of the camellia gives rise to variation so too can the sexual spore (called an ascospore) of this fungus give rise to variation. All camellia enthusiasts recognize that each *C. japonica* seedling differs in one or more ways from any other seedling. Also, these individuals who have had experience with camellia dieback recognize that camellia cultivars, such as 'TIFFANY' and 'VILLE DE NANTES', certainly react differently to dieback caused by *Glomerella* than do the cultivars 'GOVERNOR MOUTON' and 'PROFESSOR SARGENT'. These two examples reveal that within camellias there is abundant variation. Variability also occurs in fungi as in any other biological subject. Seven isolates of *Glomerella* from widely different sources (representing different locations and cultivars) were all found to be sensitive to benomyn at concentrations of 1 part per million active ingredient (ppmai) or lower. One isolate, 'TEXAS STAR' (from the *C. sasanqua* cultivar 'TEXAS STAR' on the Clemson University campus), was able to adapt to concentrations of benomyl of 5 ppmai but not to 10 ppmai.

The fungus persists from year to year in camellia cankers and on any fallen branches which may have been affected.

THE CHEMICAL AND EXPERIMENTAL

Benomyl, sold under the trade name of Benlate, is a biologically active fungicide, which is systemic in many herbaceous plants, such as corn, beans, balsam, cowpeas, cucumbers, zinnias, and many other plants. This means that if benomyl is added to soil in which zinnias are growing, the plants will take up benomyl and translocate it to the leaves where it

will protect the leaves against certain fungi which cause specific diseases. The control of powdery mildew on zinnia leaves by absorption of benomyl by roots is an example. A few woody plants can take up and translocate benomyl to the leaves (needles). Examples are hemlock, white pine, Arizona cypress, redcedar, bald cypress, and podocarpus. Camellias, however, do not take up biologically detectable quantities of benomyl even when grown in soil to which excessively high concentrations have been added.

Benomyl is safe to man, animals, and plants. It is active against certain fungi but not against others. For example, it is extremely active against *Glomerella cingulata*, the cause of camellia dieback and canker, but it is not active against *Phytophthora cinnamomi*, the fungus causing root rot of camellias, rhododendron, shortleaf pine, and many other plants.

Camellia japonica and *C. sasanqua* seedlings grown in soil to which benomyl was added at concentrations of 1000, 2000, or 4000 ppmai did not absorb and translocate biologically detectable quantities. This means that either the camellia root system cannot absorb benomyl or that the material is broken down to a biologically inactive form by the camellia plant.

Laboratory studies have indicated that when benomyl is mixed in water at 10, 100, or 1000 ppmai, it retains its biological activity for at least one month. When sprayed onto cedar trees during summer, it retained its activity for at least 3 weeks. When incorporated into soil out-of-doors, it remained active for at least 3 months and in soil under greenhouse conditions, it retained its activity for 6 months or more. In summation, benomyl is relatively stable when it is either sprayed onto plants or incorporated into soil.

When Glomerella spores were exposed to a benomyl solution at a concentration of 1000 ppmai, some spores survived exposure periods of 1, 10, 100, 1000, and 10,000 minutes. However, after 10,000 minutes there were fewer spores surviving than at the lower benomyl concentrations. Benomyl exposure periods of 1, 10, and 100 minutes had no effect on the number of surviving spores when compared with spores held in water. When benomyl was added to laboratory media (carrot juice agar), there was complete suppression of vegetative growth of *Glomerella* at concentrations as low as 0.4 ppmai.

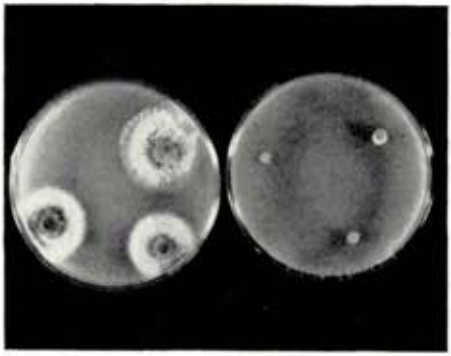

FIGURE 2. Left: the response of 3 Glomerella isolates to benomyl-amended carrot juice agar (CJA) (1 ppmai). Isolates are Daydream, Texas Star, and Magnolia Gardens. Right: the same isolates on regular CJA.

[One-half (0.5) ppmai is equivalent to adding one drop of material to 26 gallons of water. A relative comparison is that a spray application using Captan at 1 tablespoonful per gallon is equivalent to 600 ppmai.] Although benomyl is extremely active against *Glomerella*, it does not effectively kill the fungus. Benomyl is therefore largely fungistatis (causing

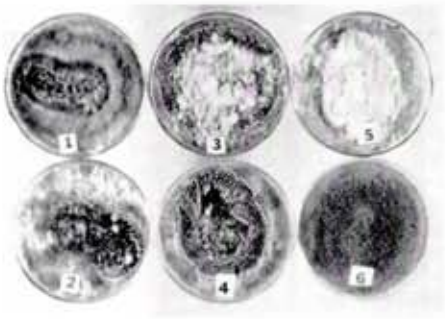

FIGURE 3. Spores induced by scraping various Glomerella isolates. Plates 5 and 6 were colonies not scraped. Note the tremendous number of spores in 1, 2, 3, and 4. These spores were used to test their survival in benomyl when exposed for different time periods.

cessation of growth) rather than being fungicidal (cide—to kill).

Benomyl does not cause injury to camellias when sprayed onto plants as directed (one pound per 100 gallons of water—1 tablespoon per gallon). Scions or cuttings which were soaked for one hour in water with benomyl (600 to 1200 ppmai—1 to 2 tablespoonsful per gallon) were not injured and there was no decrease in either rooting of cuttings or union of grafts. In special tests camellias sprayed with benomyl at concentrations of 2500, 5000, and 10,000 ppmai did not sustain foliar injury.

Camellias normally shed their leaves predominantly during May and June, although some leaves are shed at all times of the year. Since the newly formed leaf scars are vulnerable to infection by spores of *Glomerella* for 24 to 62 hours, depending on weather conditions (humidity and temperature), they require some protection from infection if the fungus (pathogen) is present. This is particularly true if the prevailing weather conditions are mild and moist since the fungus is most active at temperatures between 20 to 25 C (68 to 77 F). Also, moist conditions favor the sporulation of the fungus and splashing raindrops favor their dispersal. Since any leaves about to fall can be dislodged by rain and since the fungus is dispersed by raindrops, this creates a favorable situation for disease development. The fungus can invade wounded tissue within 12 to 16 hours to a degree whereby sprays applied after invasion are ineffective.

The recommended rate of benomyl for the control of most fungus diseases of ornamentals is one pound per 100 gallons of water (one tablespoonful per gallon). Sprays using rates higher than this concentration to ornamental plants are forbidden by federal (EPA) regulations. The directions on the package should always be followed rigidly.

Studies on the application of benomyl to camellia cankers indicated that benomyl protected only against infection of new areas by spores but did not aid in healing of cankers.

Wounds created during pruning remain susceptible to infection for about 3 weeks during weather conditions prevailing in the spring. It should be remembered that the conditions required for any disease development are: (1) a pathogen must be present, (2) there must be a susceptible host, (3) a favorable environment is required, and (4) a vector is necessary. If any one of these factors is absent, no disease develops.

Based on the studies as herein described, the following recommendations regarding the use of benomyl for control of camellia dieback and canker can be made:

1. Scions and cuttings of camellias should be soaked in benomyl at the recommended rate for at least one hour before grafting or placing in the rooting bench; grafting stock and tools should be thoroughly soaked with benomyl as each graft is made.

2. Since camellias do not take up and translocate biologically detectable quantities of benomyl, it is recommended that benomyl not be added to the soil in which they are growing.

3. Benomyl is extremely effective against Glomerella spores, and it retains its activity when sprayed onto plants out-of-doors for at least 2 to 3 weeks. Therefore, spraying plants with benomyl at 14-day intervals during periods of heavy leaf fall, which coincides with favorable weather conditions for fungus fruiting is recommended. The time of leaf fall and thus the time of spraying will vary, depending on the location in the state. About 6 sprays, covering a span of 12 weeks, should provide acceptable control of dieback of *C. japonica* and *C. sasanqua* cultivars under field conditions.

4. Since the fungus is nonactive out-of-doors during the late fall, winter, and early spring, no spraying during this period is necessary.

5. Since infection can occur within 12 to 16 hours after wounding, sprays should be administered to wounds the *same day* they are made.

6. Special application of benomyl to cankers for the purpose of aiding in the healing process in ineffective and therefore not recommended although sprays administered to the entire plant at 14-day intervals protects new infection sites and prevents Glomerella spores from germinating.

7. Scions and/or cuttings for propagation purposes should be made from current year's wood from disease-free plants when possible. At any rate, when grafting is made onto understock, all stem cankers should be cut out. In other words, the graft should be made below the lowermost canker onto wood free of any brownish discoloration.

8. Irrigation of camellias in greenhouses should be done carefully to avoid unnecessary splashing. Irrigation when necessary for plants grown out-of-doors should be done during mid-day to avoid prolonged moist conditions which would supplement the time of continuous free moisture created by heavy dews.

9. Benlate should always be used as directed on the package.

An Invitation to Join

SOUTH CAROLINA CAMELLIA SOCIETY

Membership which runs with the Calendar year, January 1 through December 31, entitles you to three issues of "CAROLINA CAMELLIAS", issued usually in January, March, and October, which has more regular features, authentic feature articles in Grafting, Planting, Feeding, Gardens, Sasanquas, Judging, Pruning, Arrangement, Disbudding, Diseases, Spraying, and Mulching, to mention a few. Also, there are photographs and other types of illustrations.

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Aiken Has Another Successful Mini-Show

By Mildred S. Robertson

What started out as a small show sponsored by the Aiken Camellia Club to interest Aiken County's novice growers three years ago, apparently has now become a tradition. The third Mini-Show was held Saturday, October 12, 1974, in the lobby of the Farmers & Merchants Bank on Laurens Street in Aiken. Chairman of this year's show was William C. Robertson with Vaughn Geddes as co-chairman. Blooms were received from 8:00 A. M. until 10:30 A. M. As always club members were on hand to assist exhibitors with their entries. Our distinguished judges, Mr. and Mrs. Carl Wagner of Augusta, Georgia and Mrs. Pearle Cooper of Springfield began judging at 10:30 and took an hour to select lucky winners. The show was opened at 11:30 A. M. and remained open until 4:00 P. M. A steady stream of visitors came to view the show. A very special guest was Carroll Moon. Carroll's unique charm and wit contributes to any show and we were especially glad to have him with us.

Judging for the Mini-Show was on basis of color rather than by varietal name. A classification for Sasanquas was also included. When the judging was completed, lucky winners were as follows:

Best in Show — 'Mathotiana Supreme'—W. A. Russell, New Ellenton, S. C.

Best White — 'Snowman'—W. A. Russell—New Ellenton, S. C.

Best Variegated — 'Elegans Var.' P. E. Beasley, Aiken, S. C.

Best Red — 'Rosea Superba'—Cogburn Gaillard, Ridge Spring, S. C.

Best Pink — 'Debutant'—Mrs. L. Goshorn, Aiken, South Carolina.

Best Sasanqua — 'Shishi Gashirae' Jane Robertson, Aiken, South Carolina.

Only two blooms on the court of honor this year were repeat winners from last year's show. These were Mathotiana Supreme and Shishi Gashirae. I think it was interesting to note that this early in the season we had a total of 201 blooms in competition. A display of Camellias for exhibit only was furnished by Club members but these were not included in the above number. We had a total of 33 exhibitors who came from four locations; New Ellenton, North Augusta, Ridge Spring and Aiken. Five exhibitors brought 12 or more blooms with the greatest number by a single exhibitor being 24. These were entered by Vivian Dewitt of Boardman Road, Aiken, S. C. The exhibitor with the largest number of blue ribbons

was Bernie Beier of North Augusta, who had four. The youngest exhibitor was seven year old Jane Robertson who had the winning Sasanqua.

Blue ribbon winners were Bernie Beier, George Caskey, Frank Corley, Mrs. Vivian Dewitt, Miss Maggie Edwards, Farmers & Merchants Bank, Mrs. Edith Faucett, Mrs. Mary Fincke, Mrs. F. L. Foreman, Harold J. Franz, Mrs. Monroe George, Helen Hamblen, Mrs. Clide Ouzts, Miss Jane Robertson, Dr. and Mrs. A. Schifferli, Mrs. George W. Stewart, Mrs. Ella Weeks, Mr. P. E. Beasley, Mrs. L. Goshorn, Mr. Cogburn Gaillard, and Mr. W. A. Russell.

Some of the excited winners came back at the close of the show to pick up ribbons and awards. One award winner was heard to say all his plants were grown outdoors but he was already planning to start accumulating material for a greenhouse and planned to start on this "Camellia Show Circuit." The bug has bitten. This is, of course, what we had hoped to accomplish with our Mini-Show. If the size of this year's show is any indication, we can expect bigger and better things next year and what fun we had this year kicking off the Camellia Season.

In Memoriam

"When earth's last picture is painted
and the tubes are twisted and dried,
When the oldest colors have faded
and the youngest critic has died,
We shall rest and faith, we shall need
it—lie down for an aeon or two.
Till the Master of all Good Workman
shall set us to work anew!"

—KIPLING

Mr. Jim Pinkerton III, son of Mr. & Mrs. Jim Pinkerton of Columbia, S. C.

Mrs. Mary Boyd Smith, wife of Horace N. Smith of 3030 Walnut Grove Rd., Memphis, Tenn.

Mr. Earl M. Delk of 1728 McLeod Ave., Charleston, S. C.

Grafting Under Artificial Lights

By James H. McCoy
Fayetteville, North Carolina

What can one say about grafting? We all do it, with varying degrees of success. Most of us graft during January, February and March. Some graft earlier and some even have success grafting in June. Some graft in the greenhouse, some outside. Though most of us graft using cloches of one sort or another, some do not, but graft under mist instead. In short, we all know how to do it and the purpose of this article is not to tell how to graft. It will describe an innovation which has worked successfully for me and perhaps for some others. It entails the use of artificial light and heat.

After reading an article in the yearbook for 1970 by Mr. D. H. Batt, describing seedling culture under controlled light and heat, it occurred to me that grafting under similar conditions might give good results. I took no action though until I heard of a camellia nurseryman who grafts under fluorescent lights. This inspired me to try it.

But first, is artificial light for grafting better than daylight? Probably not. Is the percentage of takes higher? No, I cannot make such a claim, but neither have I found that the percentage of takes to be lower. Then why change? In my opinion, there are several advantages.

First, I have found that regardless of the date one grafts, whether it be November, December, January or February, rarely can a graft be uncovered before May 1. This means then that the scion must be under the cloche several months where humidity is high and conditions ideal for development of fungus. Also, I believe that the shorter the period that a root stock is without life giving leaves, the healthier the new growth will be. It would seem that fewer root stocks would die if they could start producing leaves within two months than if they could not begin for 4 to 6 months. Also if you can get your graft "out from under" in February or March rather than in May, it will put on more growth during the first growing season.

Grafts made under artificial light and in a heated space begin callusing almost immediately. Often it can be detected within a week, and most of them show callus within two weeks. I have taken one out from under the cloche 30 days after grafting. The lights I use are 48 inch fluorescent

fixtures with two Gro-Lux tubes per fixture. I make cleft grafts in the usual manner and use gallon glass jars for cover. I place them on a table under the light without covering the glass with a paper bag or anything else. I bring the light down as near as possible to the top of the jars—say 2 to 4 inches. If you are using stock in gallon cans, you can place about 40 grafts under one light fixture. The lights should be on a timer which will give your grafts 16 hours of light per day. The temperature of the basement, in which I do my grafting, is consistently 70-72 degrees. If you cannot provide heat close to 70 degrees, then don't try it, because heat is an important element in grafting. Another caution: let your stock go dormant. Bring it in just prior to grafting.

One friend expresed fear that, with the light so close and the heat so high, the buds would swell and start growing before the graft callused. This has not been my experience. True, the buds swell and start growing quickly but then so does callus start quickly.

Leave the graft under the cloche until it is well callused and top growth has started. Both conditions must be met before you can consider that you have a "take". It is hard not to start rejoicing when you see the bud swell and start growth, or when you see callus practically cover the juncture of scion and stock, but be patient. When you have both callus and top growth, then you can take the cloche off and leave it off. You don't have to gradually remove it or remove it and replace it as we often do when we're grafting under natural conditions.

There is one problem I should mention, and if anyone has the solution, I wish he would pas it to me. How do you keep your wife from filling your table with petunias and philodendrons and ferns and coleus and the other little green things that she tries to carry through the Winter. Maybe HIS and HER tables would be the answer. What do you think?

IMPORTANT ANNOUNCEMENT

THERE WILL BE ONLY ONE ISSUE WHERE **SHOW DATES** WILL BE PRINTED. This will be the FALL ISSUE OF CAROLINA CAMELLIAS. **YOU MUST** have this information to me by August 15th. This should not be a hardship because your clubs have made their plans and invited your judges before this date. Please type your articles double spaced and get them to me by this deadline.

Charleston Fall Meeting of the S. C. C. S. November 23, 1974

Seventy-two persons attended the meeting of the South Carolina Camellia Society in conjunction with the Show held in the First Federal Savings and Loan in Charleston. Luncheon was held in the Harbor House Restaurant, and this location was used for the meeting.

Outgoing President Neal Cox called for order after the Show Judges were introduced and dismissed. Minutes of the Summer Board Meeting were read and approved as read in a condensed form.

Secretary-Treasurer, Paul Rush, reported that 630 members are currently registered with S.C.C.S., with but 366 of those residing in our state. Receipts are: $2518.45; expenditures—$2255.66; balance in bank—$638.01, and $311.00 is on hand. Anticipated expense is $400.00, with the savings account intact and drawing interest.

Editor Pearle Cooper requested that more articles be written by our directors, and officers, and pleaded that delinquent members be wooed back. She also stated that "local happenings" and recipes are welcome "items", as well. She announced that former National President, Clyde X. Copeland, was in the Baptist Hospital in Jackson, Mississippi.

Mort Miller suggested that the secretary (to the board) send items to state newspapers covering our meetings. This was put into a motion seconded by Pearle and carried.

Mr. Cox called upon the nominating committeman, T. C. Evans, to present the new slate of officers in the absence of chairman Buddy Pregnall who was Judge Chairman for the Show and was absent. In-coming officers presented:

President—Paul A. Dahlen of Aiken
1st Vice President—M. F. Miller of Ridgeland
2nd Vice President—Jack Teague of Columbia
3rd Vice President—J. A. Timmerman of Greenwood

It was moved by Carroll Moon that nominations be closed and the slate be accepted as presented . . . carried by acclamation.

Next on the agenda was the election of District Directors. Those receiving this honor were:

Jim Seelig of Mt. Pleasant for District I
Heywood Curlee of Orangeburg for District II
Dave Elliott of Clinton for District IV, and
Neal Cox of Georgetown for District VI

As there was no new business, retiring President Cox expressed his thanks to fellow officers and members for their support, and turned over the

authority to incoming President, Paul Dahlen. Mr. Dahlen's first action was to call upon Tom Evans who presented Neal with a "President's Plaque"—a nice momento of his service to the Society.

President Dahlen's acceptance speech dwelt with our urgent need to gain more members and commented that the Shows in Beaufort and Greenwood are good promotional efforts toward stimulating renewed interest in those areas. He also urged continued submitting of news items for Pearle. After a request for a short meeting of the board afterwards — the Fall Meeting of the S.C.C.S. was adjourned. Mrs. Racoff made the announcement that our new president was honored at Macon recently when he was appointed a new Director to the A.C.S.

Director's Meeting—following the Charleston Fall Meeting—November 23

With eleven present—a request for a host for the Winter Meeting was made by the president . . . with the duties entailed oulined . . . stressing the importance of a good program designed to be of interest to new members. Please notify the president if your community wishes this honor, and preferably a date *not in conflict* with a Show.

Any effort for new member promotion will be welcomed! It was suggested that dues notices be mailed out *sooner* than mid-December.

Pearle offered the idea that a gift certificate accompany the new president's message in the next publication.

J. A. Timmerman will check with Park Seed Company about a possible event in April . . . with Greenwood as a *tentative* host for the Spring Meeting.

Bill Robertson asked that delinquent member lists be obtained at an early date—by March 15th if possible.

Adjournment and on the Show . . .

Respectfully submitted,
MARIE W. DAHLEN,
Secretary to the Board of S.C.C.S.

The West Carolina Camellia Society's First Camellia Show:

Everyone attending the West Carolina Camellia Show agreed it was an outstanding success. The show was sponsored by Bankers Trust of Greenwood, S. C. The hospitality at the Northside Junior High School was great. Exhibitors arrived early from three states.

Although cool weather early in the week held the total number of blooms below the estimate, the 465 blooms exhibited were of excellent quality. The judges agreed they had never judged a better organized Camellia show. The ladies of the garden clubs serving as clerks were real pros. Also selecting the Best Blooms was a most difficult assignment.

Special guest as judges were Mr. and Mrs. Milton Brown of Fort Valley, Georgia. "Brownie" as he prefers to be called is our new Executive Secretary of The American Camellia Society.

Dr. and Mrs. Herbert Racoff of Columbia, S. C. won the top award—Best japonica in show—with 'Elegans Supreme'.

Mr. and Mrs. Jack Teague of Columbia, S. C. won the runner-up award for the best japonica, 'Kate Smith', also the best medium japonica, 'Betty Sheffield Supreme'. Runner-up, best medium, 'Pink Diddy' award won by Mr. and Mrs. C. H. Hendrix of Greer, S. C. Best Small to Medium, 'Hopkins Pink' award to Mr. and Mrs. D. G. Elliott of Clinton, S. C.

Best Reticulata or Retic Hybrid, 'Lila Naff' award to R. J. Sprott, Greenwood, S. C. Best non-retic hybrid, 'Elsie Jury' award to Mr. S. G. Holtzclaw of Greer, S. C. Best White in show award to Mr. and Mrs. C. H. Hendrix of Greer, S. C. for 'Sea Foam'. Best Seedling, 'Wilson's Knockout', won by Mr. Graem Yates of Charlotte, N. C. Best Sasanqua, 'Benni-Kantzu-Bari', by Mrs. George Byrd of Greenwood, S. C. Best tray of three and best tray of five won by Mr. and Mrs. Jack Teague of Columbia, S. C.

The Frances Timmerman Memorial award for the best bloom entered from Greenwood County won by Mr. R. J. Sprott, 'Elegans Splendoe'.

A.C.S. Gold Certificate won by Mr. and Mrs. Jack Teague, A.C.S. Silver Certificate, Mr. J. A. Timmerman of Greenwood, S. C.

COURT OF HONOR WINNERS: 'Tomorrow Park Hill'—Mr. and

Mrs. C. H. Hendrix; 'GUILLIO NUCCIO VAR.'—Mr. and Mrs. Jack Teague; 'PIRATES GOLD', Mr. and Mrs. Jack Teague; 'TOMORROW VAR.', Mr. and Mrs. D. G. Elliott, also 'PRELUDE VAR.'

Honor Court under 5 inches: 'LEUCANTHA' by Mr. and Mrs. W. C. Robertson of Aiken, S. C. 'WOODVILLE RED BLUSH' by Mr. and Mrs. D. G. Elliott; 'CABEZA DE VACA', by W. Lee Poe Jr., of Aiken, S. C. 'TOM KNUDSEN' by Mr. M. S. McKinnon; 'FLOWERWOOD' by Mrs. R. W. Hart.

The encouraging support of local and visiting exhibitors confirmed the intent of The West Carolina Camellia Society to make this first cooperative show the predecessor of many annual Camellia shows at Greenwood, S. C.

—CAROLINA CAMELLIAS—

Camellia Society Annual Fall Meeting

Historic Charleston played host to the annual Fall Meeting of the South Carolina Camellia Society in conjunction with its Show on Saturday, November 23. Luncheon was held in the Harbor House Restaurant, followed by the election of new officers and directors.

Incoming officers for the Society are:

Paul A. Dahlen, President—Aiken, S. C.

M. F. Miller, 1st Vice President—Ridgeland, S. C.

Jack Teague, 2nd Vice President—Columbia, S. C.

J. A. Timmerman, 3rd Vice President—Greenwood, S. C.

Newly elected Directors for the Society are:

J. J. Seelig, Mt. Pleasant—for District 1

T. H. Curlee, Orangeburg—for District 2

D. G. Elliott, Clinton—for District 4

T. Neal Cox, Georgetown—for District 6

The First Federal Savings and Loan, Sponsor and host for the Show, announces these top winners of awards in the Show:

W. C. Robertson — Aiken, won BEST PROTECTED bloom with his 'EASTER MORN'.

Oliver Mizzell — Elloree, won the BEST RETICULATA bloom with his 'JOHN TAYLOR', Variegated.

Mr. A. R. Parlor — Elloree, won the BEST SEEDLING CERTIFICATE.

Mr. and Mrs. G. R. Dubus — Savannah, Georgia, won the BEST BLOOM GROWN OUTDOORS, with their 'LADY KAY'.

A Note on Mixing Gib

By W. F. Wilson

In recent years the widespread use of Gibberellic acid in some form and of various concentrations has become a standard cultural practice in the South and Southeast—as well as its limited use in other areas. In testing various formulations, a number of minor problems have occurred in the mixing and keeping of the materials.

In this particular problem, which occurred more than once in the preparation of calcium gibberellate, the solution was cloudy or murky and slightly off-color. This solution was compared with the same material and concentration of the very clear, normal preparation. For this purpose large plants growing outdoors were used, with the buds used selected from the middle section of the plants, avoiding any buds from the lower or upper portions of the plants. These plants were debudded in order to get good flowers.

Data for this comparison is shown in the tables below.

Date Applied 9/19

	15,000 PPM Calcium Gibberellate					
	Clear			*Murky or Cloudy*		
	No.	*Days to Bloom*		*No.*	*Days to Bloom*	
Variety	*Buds*	*Range*	*Average*	*Buds*	*Range*	*Average*
'Debutante'	20	20-35	25.80	20	16-37	25.75
'R. L. Wheeler'	10	37-54	41.30	8	32-51	43.14
'Ethel Davis'	10	38-53	41.30	8	37-47	39.88
AVERAGE	40		36.13	36		38.26

Date Applied 9/19

	15,000 PPM Calcium Gibberellate					
	Clear			*Murky or Cloudy*		
	No.	*Diameter in Inches*		*No.*	*Diameter in Inches*	
Variety	*Buds*	*Range*	*Average*	*Buds*	*Range*	*Average*
'Debutante'	20	3.88-4.88	4.35	20	3.75-4.88	4.32
'R. L. Wheeler'	10	5.38-6.75	5.96	8	5.38-6.75	5.84
'Ethel Davis'	10	4.38-5.38	5.00	8	3.50-5.63	5.11
AVERAGE	40		5.10	36		5.09

Results, as expected, varied with the variety, with the range in size of blooms being quite large even for a given variety. However, when averages of all buds were considered, the cloudy material was just as efficient for early blooms and size of blooms as the clear or normal material.

Presentation of Certificate of Recognition and Appreciation to Cora A. Harris

Charlotte, N. C.—The Men's Camellia Club of Charlotte at their annual Ladies Night program, presented Cora A. Harris a framed certificate which stated as follows:

> "May it be known that Cora A. Harris is presented this Certificate of Recognition and Appreciation for promoting and publicizing the many phases of Horticulture."

Miss Harris was active in the formation of the Men's Camellia Club of Charlotte in 1954 and has relayed much pertinent information concerning the propagation and growth of Camellias to the community through her column in The Charlotte News. One of her more popular columns related to the use of Gibberellic Acid for the forcing of early Camellia blooms before severe cold weather reached the Charlotte area, resulting in many early and larger blooms through the simple act of "Gibbing."

Mrs. Frank (Lib) Dowd

Mrs. Pearle Cooper, *President* Tom Hatley, Mrs. Neal (Bea) Rogers.

A small display of Camellia blooms in the window of the American Trust Company by Mr. Frank Dowd in 1953 created such interest on South Tryon Street in Charlotte, that Miss Harris sensed a news story that was the

President HATLEY, MISS CORA HARRIS.

beginning of an organized group of Camellia growers, now numbering about one-hundred members, who grow and show Camellias throughout the south on a regular basis, as a very exciting hobby. Many members own one or more greenhouses which are open to visitors by appointment during the blooming season.

The Charlotte Camellia Show will be presented at Southpark on Saturday and Sunday, February 22-23, 1975. Some two-thousand blooms are expected to be displayed at no charge to the public. There is no doubt that Miss Harris is proud to have been a part of the formative years of the Charlotte club based on her acceptance statement, "Many of you ladies don't realize that I am the only lady Honorary member of the Men's Camellia Club of Charlotte."

To those readers of her column, it's no surprise that Cora A. Harris is again right!!

Fall Meeting of N.C.C.S

The North Carolina Camellia Society held its annual fall meeting on November 2, 1974 at the Ramada Inn, Greenville. There were approximately 70 members present. We had a pleasant meeting and a delicious meal.

There were many door prizes awarded to lucky number holders. Dr. Ed Ryan gave 12 air layered plants from his very fine collection of miniatures. He prepared these last spring with the thought in mind of giving them as prizes at the fall meeting. Our President, Marshall Rhyne, brought many very useful items for a camellia grower including s n i p s, fertilizer, insecticides, sprayers, etc. I do not know who donated these prizes, but thanks any way.

George Ross, chairman of the nominating committee was called upon to present the slate of officers and directors for the coming year. He presented the following: William S. Howell, President-Elect; Graem Yates, Vice President; Harris Mewber, Sec.-Treas.; Mrs. C. M. Allen, Historian. The three new directors, Mrs. Mary S. McLaurin, Col. Jean Hollstien and Lester M. Allen. These were duly elected.

Our guest speaker, Mr. Milton Brown, Exec.-Sec. A.C.S. made a very interesting and informative talk. He explained some of the ways they have increased the membership by 250 new members. He made it very clear that it was necessary for the state societies and local clubs to function as we are the feeder roots which make A.C.S. prosper. He showed many slides of interesting things at Massee Lane, plus quite a few of the new introductions of camellias. You will be seeing some of them at the shows this year.

President Marshall Rhyne, after completing all outstanding business, turned the gavel over to the incoming president, Ernest Aycock. He made a short talk asking the members present to try to increase N. C. Camellia Society. Our membership has dropped down below 200 paid up members. He announced that the spring meeting and show will be held in Wilson, N. C. on March 15th. The meeting and luncheon will be at the Heart of Wilson Motel and the show at the Branch Banking & Trust Co. These are the same facilities that were used for the fall meeting in 1971.

The camellia show was held at the Mendenhall Student Center on East Carolina University Campus. There were about 600 blooms entered in competition, some m i g h t y fine blooms, especially an Owen Henry exhibited by Mr. and Mrs. Clay Foreman. Mr. Les Marbury brought a fine collection of blooms for display only. These two displays of excellent blooms added very much to the beauty of the show.

Dr. and Mrs. Ed Ryan took on the responsibility of arranging the luncheon, staging the show and having open house at their home on Friday

night. They are to be thanked and congratulated for a job very well done, especially so since they were novices, never having been connected with putting on a show before. Bob Eagles and Ernest Aycock assisted Dr. Ryan on Friday afternoon in setting up the show.

Laurel Lake Nursery donated very nice plants to give each person who joined either the A.C.S. or N.C.C.S., these were very instrumental in getting 4 new members for A.C.S. and 13 new members for N.C.C.S. Mr. Howard deserves a vote of thanks, not only for this donation but for the many things he has done in the past to promote our Camellia Societies.

Let's make the spring meeting in Wilson a whopping success by all attending. It's a little late in the season, but bring your blooms.

SADIE M. AYCOCK,
Reading Secretary.

Spring Meeting of N.C.C.S.

North Carolina Camellia Society's Spring Meeting will be held in Wilson, N. C. on March 15 and 16, 1975. The luncheon will be hosted by the Wilson Womens' Club, W. Broad Street, Wilson, N. C. Please make your reservations to the Club Manager at the above address at least four days prior to the meeting. You will receive forms for filing applications for reservations for motels and luncheon in advance of this meeting.

PRESIDENT AYCOCK.

Men's Camellia Club of Charlotte Ladies Night

January 4th the members of the men's Camellia Club honored their wives with their ladies night banquet. President Tom Hatley introduced the guest at the head table. Lovely table decorations of camellias by Mrs. Marshall (Ethel) Rhyne drew many oohs and ahhhs. Guest speakers were Mrs. Pearle Cooper from Springfield, S. C., Editor of CAROLINA CAMELLIAS and Mrs. Neal (BEA) Rogers of the Belle Fontaine Camellia Nursery of Theodore, Alabama. Mrs. Rogers told what Camellias had meant to her life. She gave some of her secrets producing lovely plants and prize winning blooms. Mrs. Rogers is the only lady on the Board of the American Camellia Society. She is the state Director from Alabama. She is not only a knowledgeable but charming speaker.

S. H. ("Son") Hackney was the Master of Ceremonies and at his finest that night. Door prizes were awarded to every lady present.

Mrs. Elizabeth Dowd, one of the greatest ladies of Camellias, told what Miss Cora A. Harris has been doing for many years to beautify Charlotte and help promote camellias and garden clubs.

President Hatley then presented Miss Harris a framed certificate of Recognition and Appreciation for promoting and publicizing the many phases of Horticulture.

Camellia Dieback

By R. S. Mullin, *Plant Pathologist,*
Cooperative Extension Service, University of Florida, Gainesville, Florida

DIEBACK

Symptoms: The most damaging disease of camellia, certainly in Florida, is dieback, or twig blight. Symptoms of the disease include wilting of leaves on a new shoot and subsequent often rather sudden death of these leaves and also of the shoot itself. There is little discoloration accompanying the first symptoms but after a few days the leaves become a dull green to a brownish green and on to a complete brown when dry. This of course is the most conspicuous and easily identifiable stage of the disease. At the same time the leaves are turning from green to brown and drying out, the new shoot is doing the same thing. Leaves on these dead shoots do not fall but hang on for some time. Usually there is a fairly sharp line of demarcation between diseased and healthy tissue farther down the stem. Usually the dead tissue in the stem is sunken and of a different color than the healthy tissue. Often where a small branch dies all the way back to a larger branch there is a canker formed around the point of attachment of the smaller branch. This may remain fairly small or enlarge rather rapidly to the point that it will encircle and kill the larger branch.

As a rule, dieback is more prevalent on plants which are weakened or unthrifty for one reason or another.

Control: The best control of dieback is sanitation—the removal and destruction of all dead or infected branches. These should be carefully pruned out of the plant, cutting back well into healthy tissue. This cut into healthy tissue should probably be some six inches below the lowest visible symptoms of the disease. Pruned off parts should be destroyed preferably by burning. Where small twigs affected with the disease are found attached to larger stems, it may be necessary to make the cut below the point of attachment of the small twig to the larger stem. Pruning cuts should be painted with a pruning paint if they are 1/4 inch or more in size.

Control of dieback by applications of fungicides has not been satisfactory even though the fungus causing the disease is susceptible to fungicide activity. Since the fungal infection is inside the stem, it is impossible for our current fungicides to enter the plant and kill the infection. Normally infection takes place through leaf scars and if a fungicide is to be applied it should coincide with leaf fall. However, it is doubt-

ful if enough control would be obtained by such methods to make it worthwhile. If an application is made, probably Benlate (benomyl) at one tablespoon per gallon would be the best material to use.

LEAF GALL

Symptoms: Leaf gall will occur sporadically in Florida and usually is not of any particular consequence. Symptoms of the disease are thickened and enlarged leaves, and often enlarged buds, of the new growth in the spring. There may be one to several leaves on a single shoot which are affected in this manner. The color may be a light green, white or very light pink. Only one or two shoots may be infected, or many shoots on a given plant may be infected. On rare occasions, a flower may be infected, and in this case, the petals are thickened and enlarged as are the leaves.

Control: In the home garden, control can usually be accomplished by simply picking off these leaves and destroying them. The problem will occur only in cool weather in the spring and with the advent of warmer weather the disease will die out and not need additional control measures.

LEAF SPOTS

Symptoms: Often leaf spots occur on camellias. These may be very small or cover half or more of the leaf and be irregular in shape or essentially round Color of these leaf spots may be from white to gray to brown or even black. Often small pin point dark colored fruiting bodies of a fungus are in the spots. Several different fungi cause spotting on camellia leaves but as far as can be determined all are weak parasites and not believed to be able to attack the leaves unless the leaves have been damaged by some other agency, such as sunburn, chemical burn or some type of mechanical injury.

Control: Generally, control measures are not necessary and the best control is to avoid the predisposing factors which allow the fungi to enter the leaves. If however, it is deemed advisable to treat the plants with a fungicide, basic copper sulfate at 1½-2 tablespoons per gallon of water at 7-10 day intervals is suggested.

ALGAL SPOT

Symptoms: In Florida, a leaf spot caused by an alga can occasionally attack camellias rather severely. This is particularly true where the plants are growing in a rather humid location. The spots may vary from small to ¼ inch or more in diameter and usually have feathery edges. The spots may be slightly raised above the leaf surface. They vary in color from a dull brown to a brownish green, or if the alga is fruiting they may be an orange brown color. Sometimes these spots will also appear on the twigs and stems of camellia plants.

Control: Algal leaf spot can be controlled very satisfactorily by spraying with basic copper sulfate at 1½-2 tablespoons per gallon of water at 7-10 day intervals as needed.

SCAB

Symptoms: While on leaf spots, a condition called scab should probably be considered. Symptoms of scab are rather varied. Usually it appears as tiny, more or less water-soaked, and possibly slightly raised areas on the underside of the leaf. These enlarge and may take any one of several different forms. Probably the most common development of these is to become enlarged, somewhat corky, brown in color, and of irregular size and shape. They may be very small or increase considerably in size till they are as much as a half inch across. Usually they are somewhat raised above the normal tissue. Another form these spots can take is essentially round and often with concentrate ridges or cracks. In some cases, the condition may also appear on the upper side of the leaf as small dark brown to black spots of an irregular shape.

Control: Since scab is considered to be a physiological condition, the improvement of growing conditions is the best control. Apparently scab is associated with excess moisture or with fluctuations of moisture from too high to too low. For this reason, the improvement of drainage conditions is one of the most important methods of control. In some cases, a fungus has been associated with the spotting but this is by no means true in all cases, and attempts to control the condition with a fungicide have been very erratic. So it is now believed that the improvement of drainage and growing conditions are the best possible controls.

MUSHROOM ROOT ROT

Symptoms: Probably the worst soil borne disease in Florida is the disease we call mushroom root rot. Plants infected with this disease may decline fairly slowly, or wilt rather suddenly and decline either on one side or over the entire plant. These symptoms are followed in a few weeks by death of the plant where the entire plant is affected, or somewhat later if first symptoms show only on one side. Where this disease is suspected, the best diagnostic characteristics is a thin layer of white fungal growth found in between the bark and the wood in the cambium area. This is most evident in the lower stem and upper root area, or, in other words, about the ground line. The fungal sheet may be completely around the stem or root or possibly encircling only a part of it. After death, or sometimes just before death, in wet weather in the fall, a cluster of honey colored mushrooms may appear at the base of infected plants. It is unlikley that the spores from these mushrooms are an important source of disease spread and it is believed that the main infection comes from the fungus being in the soil or from roots of an uninfected plant coming in contact with the roots of an infected plant with subsequent infection occurring. The fungus causing this disease attacks a great many other woody shrubs and trees here in Florida.

Control: Once a plant is infected, nothing can be done to control the disease. The best control is simply to remove and destroy infected plants with as much of the root system as

possible, and treat the soil with such materials as SMDC (Vapam, VPM) or Vorlex. Preferably a woody plant should not be placed in the same spot where a plant has died from this disease.

PHYTOPHTHORA ROOT ROT

Symptoms: The fungus Phytophthora sometimes causes damage in Florida on camellias. Where this disease is present, the plants become unthrifty, the new growth is rather short and usually of a lighter green than normal, and the leaves may be somewhat smaller. The old leaves will fall prematurely and the plant thus appear "thin." Damage by the disease is reduction of the root system and this of course causes the above ground symptoms.

Control: As with mushroom root rot, once a plant is infected with Phytophthora root rot we have no effective control. However, it can be prevented by planting healthy plants in non infested soil. If the soil in which a camellia is being planted is infested, the soil can be treated with one of the chemicals listed for mushroom root rot.

CROWN GALL

Symptoms: Crown gall is a bacterial disease found occassionally in Florida but is not generally wide spread. Symptoms of the disease include small so large tumor-like enlargements on the stems or roots below the ground line. These galls are normally rounded but may be of irregular shape. Usually the surface is fairly rough particularly on larger galls. Plants infected with this disease usually exhibit only a slow growth but otherwise are fairly normal.

Control: Again planting uninfected plants in noninfested soil is the best control. Avoidance of wounds when working around the plants is also a help in avoiding the disease. Where plants are found infected, they should be removed and destroyed and the cavity treated as for mushroom root rot.

NEMATODES

Symptoms: Occasionally camellias are attacked by the root knot nematode. Nematodes are small microscopic worms which live in the soil and are capable of entering plant roots. In fact, several nematode species may damage camellia roots, but the main one, in Florida at least, is the root knot nematode. Symptoms are enlarged areas in the small roots which gradually enlarge and form galls. These galls are tapered and usually the entire root area at the point of infestation will enlarge. In severe cases most of the small feeder roots will be thus affected and even larger roots will have the typical galls. If the infestation is severe enough it can cause a very unthrifty plant and may cause a dying of twigs and a general lack of new growth as well as a poor color foliage. Plants show the symptoms during dry weather, and severely infected plants may wilt and die under such conditions. Plants are also very susceptible to sunburn when infested by nematodes. Mature galls formed as a result of nematode in-

festation are much smaller than those of crown gall—usually not over ¾ inch in diameter.

Control: Avoid planting camellias in soil known to be infested with root knot nematode, unless the soil is treated with a nematicide. The material SMDC (Vapam, VPM) is effective but should be applied two to four weeks before planting. DBCP (Nemagon, Fumazone) is also effective and can be applied even after the plants are planted. Read labels and follow all directions carefully.

FLOWER BLIGHT

Symptoms: To date the only known area in which flower blight has become established in Florida is in the extreme western part of Florida in the Pensacola area. Flower blight is a disease affecting the flowers only. It does not affect leaves, stems, or roots. On the flowers, the disease appears as brownish specks or spots on the petals starting small but later enlarging and coalescing to form rather large brownish areas. Often the veins in the petals are darker brown than the surrounding tissue. Frequently the browning will staart deep in the flower at the base of petals. Infection spreads often rather rapidly through the petals until all of them are diseased and the flower a brownish color. Later these infected flowers fall to the ground where if they are left the fungus produces a structure called sclerotium. A sclerotium is composed of very closely compressed fungal threads, is black in color and may be one half inch or more in length. Shape and size are very irregular. If permitted to stay on the ground until the following flowering season, the sclerotium will germinate and produce a structure in which spores are developed. These spores are released into the air and will infect camellia blooms of that season. Often the only method of definitely determining whether or not a flower is infected with flower blight is by holding it until the sclerotia develop.

Control: Probably one of the best methods of control is strict sanitation. Sanitation simply means picking up all flowers that have fallen off the plants and picking off all that hang to the plants and destroying them. If everyone in a fairly good sized community would do this, flower blight would be held to a minimum. Of course, if the disease is not present in an area, it is desirable to prevent its introduction. This can be done by bringing in only bare root plants not showing any color in the buds. Use of fall blooming varieties or treatment with gibberellic acid to induce early bloom will avoid the disease, but this, of course, may not be the period in which the grower desires blooming. Chemical control has not been too satisfactory. The use of PCNB (Terraclor) at two pounds to 1000 sq. ft. as a spray on the soil in December will assist considerably in preventing the sclerotia from germinating and thus control the disease. This treatment should be repeated once or twice at three to four week intervals. Some experiments indicate less infection where blooms and leaves are sprayed several times with Ben-

late (benomyl) one tablespoon per gallon of water at seven to ten day intervals. More experimentation remains to be done here before definite conclusions can be made. Of course addition of a thick mulch after all blooms have fallen and before the following blooming season will cover the fallen flowers and the sclerotia they contain, and help prevent escape of spores and subsequent infection of flowers.

BOTRYTIS FLOWER BLIGHT

Symptoms: Botrytis flower blight, or gray mold as it is often called, usually affects flowers that have been injured by frost or some other damaging condition. Infection by the fungus causes brown discolored areas on the flower petals and as it develops the entire flower may become brown. Usually a gray powdery fungal growth develops on the flowers. This gray growth is an abundance of spores produced by the fungus and these spores can of course infect other flowers which are also damaged. Usually this disease is not a particularly serious problem.

Control: Here again, picking off the diseased flowers and destroying them can help in control of the disease. Avoiding injury where possible and giving good air circulation will assist in control.

BUD DROP

Symptoms: As indicated by the name, this is a condition of camellias where buds drop prior to opening or prior to full opening of the flower. Initially the tips of the young buds and edges of the petals turn brown and then the buds drop. Sometimes buds will swell and show color but before they open will drop from the bush. This has often been called "bull-heading." Where this occurs, the base of the petals usually shows a blackening and will readily pull away from the center of the flower. Several factors cause bud drop. Among these are sudden changes in climatic conditions or in growing conditions. Excessive fertilization, over watering, poor drainage, nematode or other root infections, can cause bud drop. In Florida, it is considered that one of the main causes is insufficient water during the fall prior to blooming, with resultant damage to the new buds forming at this time. Where dry conditions continue to prevail during the winter months and sufficient irrigation is not given to the plants, bud drop can be quite severe. Some varieties are much more susceptible to bud drop than others, and seem to drop at least a part of the bud regardless of anything that can be done to the plants to improve their growing conditions.

In addition, cold damage can cause bud drop and this a particularly the case where the "bullhead" symptoms are present. On late blooming varieties, developing rapidly in warm spring weather following cold weather, this condition is particularly prevalent.

Control: Where possible select varieties which are known to be well adapted to your area. Try to select

good planting sites, follow good cultural practices and see that plants have sufficient moisture during the fall and winter months.

LICHENS

Symptoms: Probably some mention should be made of lichens, occurring on camellia stems and branches. A lichen is a combination of an alga and a fungus growing together, each one helping the other. These combination plants can often attach themselves to stems of the higher plants and particularly in moist locations exist there and appear to be parasitizing the plant. However, they are not parasitic and essentially cause no damage on the plant on which they are growing. Lichens can be of many forms and colors. However, they are usually gray or greenish gray, they may be feathery or may be attached fairly closely to the stems or twigs, or in some cases have a ruffled type of growth. In some cases they will appear on leaves of plants. On the leaves, the growth is usually flat and closely attached to the upper surface of the leaf. Usually lichens are most prevalent on plants which are unthrifty for one reason or another.

Control: Thus, the best method for controlling lichens is to keep the plants in a good growing condition. If they do occur, however, even on healthy plants, one or two applications of basic copper sulfate at 1½-2 tablespoons per gallon of water should give adequate control. It will take some

time for the lichens to weather away even though they have been killed by the spray.

In summary, it might be said of camellia diseases that for best control, careful selection of planting sites and planting soil in order to insure a minimum of soil borne disease problems and nematode problems is a must. Good drainage is essential, and constant sanitation must be practiced in order to have healthy plants. Actually, camellias can do well with a minimum of chemical treatment if sufficient care is taken in planting sites, fertilization, irrigation, sanitation, and general care to insure best growth.

—CAROLINA CAMELLIAS—

The 29th Annual Beaufort Camellia Show

Presented by THE COUNCIL OF BEAUFORT GARDEN CLUBS.

Sponsored by BANKERS TRUST.

The Beaufort Academy on Lady's Island was the setting for one of the best Camellia Shows in 1975. Mrs. Anna King, show chairman, did an excellent job, assisted by Mrs. Ben (Lydia) Carter with the Horticulture Division. The Artistic Division arrangements were most outstanding. Mrs. Edward Dooley, Mrs. Norman L. Gay, Council President, Consultants, Mrs. J. M. Hicks and Mrs. A. R. McAfee. These ladies deserve a BIG Hand for their hard work.

Most unusual was the fact there were no duplicate winners at the Head Table of Camellias. Best flower in the show was won by Mr. and Mrs. W. C. Robertson of Aiken, S. C. it was 'CARTER'S SUNBURST'. Dr. and Mrs. Herbert Racoff of Columbia, S. C. had the Best Japonica, 'SEA FOAM'. Runner-Up Japonica bloom 'LEANNE'S TOMORROW'—Mrs. William Laughlin of Aiken, S. C. Best Hybrid with Reticulata parentage, 'VALENTINES DAY'—Mrs. Jack Teague of Columbia, S. C. Best Hybrid, 'CHARLEAN', Mr. C. T. Freeman of New Ellenton S. C. These were grown with protection, treated or untreated.

Mr. M. L. Miller won the best Seedling award and American Camellia Seedling Certificate—a Beauty which he plans to name 'MARGARET MILLER' after his wife.

Japonica Blooms grown in the open were outstanding. Winners in this classification were: Mrs. M. V. Tyson of Savannah, Ga., Dr. Stanley Morse, Jr. of Beaufort, S. C., Mr. Jasper Woods of Beaufort, S. C., and Mr. Gus Dubus of Savannah, Ga.

Camellia Chit-Chat

WARNING: CAMELLIA FEVER—VERY CONTAGIOUS

Symptoms: Continual complaints to all duties other than camellia chores, blurry vision from disbudding and reading of catalogs, low back pain due to re-potting, sleepless nights dreaming up new varieties and ways to win at shows, extreme anxiety waiting for the final results of hybridizing or a seedling bloom. Swell head upon receiving first ribbon.

NO KNOWN CURE

Treatment: Medication is useless, disease is not fatal, victim should attend as many Camellia Shows and activities as possible.

Compliments of a SMART, Sweet and Sympathetic friend of your *Editor*—Mrs. John Augis (Helen) from San Jose, California.

South Carolina Camellia Society's members will be in for a TREAT at their annual Spring meeting this year. President Paul Dahlen advises me that the meeting will be in Greenwood, S. C. before The Masters Golf Tournament and the Camellia Show at the National Arboretum in Washington, D. C. of the Camellia Society of The Potomac Valley on April 19th and 20th.

Thanks to Mr. Lonnie Timmerman, those attending will be guests of The Park Seed Company for a tour of their greenhouses and gardens, in the forenoon, dutch luncheon and meeting in a motel restaurant. Program on controlled camellia pollination with film and an expert on this subject as speaker. EVERYONE plan to attend and invite a friend to come along. Reservations should be made to J. A. Timmerman, Rt. 1, Box 170, Greenwood, S. C.

Mid-Carolina Fall Camellia Show was a HUGE success. Quanity and quality of lovely blooms were viewed by thousands attending the South Carolina State Fair. The arrangements by Columbia's finest garden club's ladies were the BEST and the tree of Hanging baskets of begonias was a focal point for the Camellia Show. The display of other hanging baskets also brought forth "oohs and aahs" from the crowds viewing, some of them, their first camellia blooms.

The Fall Camellia meeting of the American Camellia Society held in Macon, Ga., was one of the BEST ever. The weather was perfect, the hospitality the Greatest, the Camellia Show on Saturday at our headquarters.

Massee Lane was really the highlight of it all. Camellia lovers from all over America enjoyed with much

pride our headquarters, especially the Boehm Birds Building. Meeting Mrs. Mildred Taylor Stevens was a highlight for me. She is so lovely and charming. It is impossible to comprehend the extent of her gift to we Camellia lovers and A.C.S. members until you actually see this building and the beauty of the Boehm porcelians. If you can be fortunate enough to get Ann Brown as your guide then you will really enjoy this important part of your visit to your headquarters at Massee Lane.

A great big THANK YOU to Dr. Nathan and Muriel Brown and the Wally Freshwaters for the wonderful hospitality while we were there.

The lovely young girls dressed in Colonial costumes walking through the gardens of Camellias was another sight to see. There is not enough space to tell you all—just don't miss any American Camellia Society's annual meetings. Go to see our National headquarters very soon if you have never been there.

Mid-Carolina Club meeting on November 12th was one of the best. The Hungry Bull Restaurant is the regular meeting place and the room was crowded on this night. The reason was our distinguished speaker—Mr. Camellia, W. F. Wilson, known and loved as "Hody", from Louisiana State University, Hammond, La. He was a guest of Mr. and Mrs. Foster ("Buster") Bush. He toured all the famous greenhouse growers in Columbia with his hostess, Helen Bush.

"Hody" was honored at our meeting in Macon when the American Society made him a member of the Hall of Fame, A FELLOW.

Everyone present thoroughly enjoyed his talk on grafting and the lovely slides of some of the newest camellias.

Mr. Alan Shoemaker of the Riverbanks Park was also a guest of the club. He was interested in where the Park could get a large planting of Camellias. After his speech over 50 plants were donated by the club members present. What a more wonderful opportunity to expose lovers of nature and beauty than to have lovely blooms of Camellias in the new famous Zoological Park in the Fall and Spring. Another MUST when in Columbia, S. C. do visit this attraction.

Thanks Jim McCoy of Fayetteville, N. C. for the gift membership to Mr. Yoshiaki Andoh of Yamatachoo, Japan. I am sure he will appreciate your thoughtfulness.

A reprint from the *Times & Democrat* newspaper of Orangeburg, S. C.

Mr. and Mrs. Bert Hubert Cooper, Jr. of Washington, D. C. announce the marriage of his Mother, Mrs. Pearle Deery Cooper, of Springfield, S. C. to Mr. Carroll T. Moon of Columbia, S. C. on January 7th at the Springfield United Methodist Parsonage.

Mr. and Mrs. Moon will be home after Jan. 15th at their home on the Columbia Highway, Springfield, S. C.

NOW you know why the Winter edition is so late reaching you.

OUR WISH FOR YOU IN 1975

May you have
Enough happiness to keep you sweet
Enough trials to keep you strong
Enough sorrow to keep you human
Enough hope to keep you happy
Enough failure to keep you humble
Enough success to keep you eager
Enough friends to give you comfort
Enough wealth to meet your needs
Enough enthusiasm to look forward
Enough faith to banish depression
Enough determination to make each day a better day than yesterday.

Best of Get Well Wishes to our past president of the American Camellia Society, Clyde Copeland. You and Dorothy were missed in Pensacola.

Mrs. Harold Cawood of Americus, Ga., "Minta", we were so disappointed you and Harold had to cancel out at Pensacola because of your hospital visit. This little poem, author unknown, is dedicated to everyone who has had to miss all the fun and excitement of the meetings and shows in '74 and '75.

"I'M FINE"

There is nothing whatever the matter with me,
I am just as healthy as I can be
I have Arthritis in both of my knees
and When I talk, I talk with a wheeze.
My pulse is weak, and my blood is thin,
But I'm awfully well for the shape I'm in.

My teeth will eventually have to come out
and my diet—I hate to think about
I am overweight and I can't get thin
But I'm awfully well for the shape I'm in.

I think my liver is out of whack
and a terrible pain is in my back
My hearing is poor, and my sight is dim
Most everything seems to be out of trim
But I'm awufully well for the shape I'm in.

I have arch supports for both of my feet
or I wouldn't be able to go on the street
Sleeplessness I have night after night
and in the morning I'm just a sight
My memory's failing, my head's in a spin
I'm practically living on aspirin.
But I'm awfully well for the shape I'm in.

The moral is, as this tale we unfold
that for you and me who are growing old
It's better to say, "I'm fine" with a grin
Than to let them know the shape we're in.

The City of Five Flags, Pensacola, Florida, was the host city for The American Camellia Society's 30th annual meeting on January 9-12. Pensacola's Men's Camellia Club were the Host and what a job they did! The beautiful Galatea Inn on Pensacola Beach was convention headquarters. Mr. George Anderson was Convention Chairman, Dr. Wm. Bennett, Program Chairman, Mr. John K. Edwards in charge of Registration and Bob Sansing Chairman of Hospitality. Everyone present agreed these gentlemen deserve a Great Big THANK YOU for a job Well Done.

Gulf Coast Camellia Society Members and the Ladies of Pensacola also deserve appreciation for helping the Men's Camellia Club of Pensacola do such an outstanding job—hosting this Spring meeting.

Thursday afternoon took care of the business of the ACS Committee meetings and the ACS Board of Directors Meeting.

Thursday night we were guest of the Pensacola Men's Club Members for dinner in their homes or Country Clubs.

Friday morning the educational part of the convention was given by Dr. R. S. Mullin, Extension Pathologist, University of Florida. He chose as his topic, "New Aspects of Camellia Pest Control." This was a most popular topic for who has camellias with pests?

Dr. William L. Ackerman, Research Horticulturist, U.S. Dept. of Agriculture, Washington, D. C. presented an interesting and informative lecture, complete with slides, on "Breeding and Hybridizing New Camellias."

The Hospitality Suite was a popular gathering place in the afternoon before the Seafood Dinner hosted by the Pensacola Men's Club.

Saturday was a beautiful Florida sunshine day and everyone enjoyed the Seville Square tour in the City of Pensacola, with it's 400 years of history. The Saturday "Flea Market" was unique and a pleasure to stroll through on our way to the Municipal Auditorium where the Camellia Show opened to registered guests at 2:30 P. M.

The Judges and convention guests had their lunch in Seville Quarter, a restored warehouse with all the charm of New Orleans French Quarter. What a charming place—especially the Quarter's Palace Courtyard with it's tropical plants, statuary and fountains. The luncheon was delicious Southern food served in Old Southern Style and setting.

The folks from Australia and New Zealand liked our style convention and thoroughly enjoyed themselves. We had a better time than usual because they were there.

—CAROLINA CAMELLIAS—

Aiken Camellia Club's Annual Camellia Show

Aiken Camellia Club has done it AGAIN! In spite of the dreary, rainy foggy week end and competition from the Charleston, S. C. club's camellia show, the best growers from several states made the journey to enter their beautiful blooms. Aiken's show is known throughout the Camellia World as one of the finest. The blooms were spectacular! The judges worked hard to select the prize winners and did an excellent job.

The hospitality of this club is outstanding. The most dedicated folks, the Judges, traveled miles in rain and arrived in Aiken on Friday afternoon. They were delightfully entertained on Friday evening at the Tom Evans' lovely home on Laurel Drive. Tom and Dottie are the host and hostess with the mostest! Cocktails and a buffet dinner was served in a setting of spectacular camellia arrangements.

Saturday noon the Judges were guests of the Aiken Club for lunch at The Ramada Inn. After the show, out of town exhibitors and Judges were the guests of the club at the home of the President, George Caskey. Mrs. Caskey and the ladies of the Aiken Camellia Club had prepared all kinds of goodies and punch. The Dave Elliotts were congratulated for sweeping the beautiful awards from the head table with their outstanding beautiful camellia blooms.

Sunday morning the Judges and out of town guests were invited to a breakfast with the Paul Dahlens. What a beautiful morning after all the rain. The Dahlen home and solarium was a perfect setting for a delicious breakfast and saying farewells as two by two friends had to start for home.

From Maryland, Mr. D. D. Hall (Doug); Tennessee, Mr. James Rast (Jim); North Carolinians, President and Mrs. W. P. Kemp, Mr. S. L. Marbury (Les), Mrs. C. M. Allen (Catherine), Mr. J. P. Mason, (J. P.), from Georgia, Boynton and Caroline Cole, Mrs. G. R. Dubus (Grace), and Mr. G. R. Dubus (Gus), Mrs. F. L. Edmondson, (Liz), Mr. J. C Rigdon (Jim), Mr. and Mrs. J. R. Jones (Jack and Lila), Mr. Joe Pyron, Mrs. Marguerite Smith, Mrs. Percy Bland, Exec. Secretary Milton Brown (Brownie), Mrs. M. H. Brown (Ann); from Florida, Mrs. J. W. Freeman (Doris), and Mrs. C. M. Gay (Ailene); from South Carolina, Mr. and Mrs. H. D. Pregnall (Buddy and Betty), Head Judge Haywood Curlee and wife, Mary Edna, Mr. and Mrs. D. G. Elliott (Dave and Rosemary) and Mr. Carroll Moon.

Aiken Camellia Club although one of the smallest camellia clubs is the only club in the American Camellia Society having three members serving on the National Board, observed President W. P. Kemp. They are, Mrs. Pearle Cooper Moon, Vice-President for Atlantic Coast; Mr. Thomas C. Evans, Chairman of the Board of The American Camellia Society and South Carolina State Director, Mr. Paul Dahlen. Mr. Dahlen is also the President of the South Carolina Camellia Society.

The Aiken Camellia Show is presented by The Aiken Camellia Club in cooperation with The Aiken Garden Club Council.

Sponsored by The Farmers and Merchants Bank, Aiken, S. C. Mr. W. Lee Poe Jr., *Show Chairman;* Mr. W. C. Robertson, *Vice Chairman;* Mrs. H. C. Scott and Mrs. H. C. Morris, *Arrangements Co-chairmen.*

You may not think of what you've accumulated in property and assets as being an "estate."

But when it's all added up, you'll find you're worth a lot more than you thought.

The point is this. You can do something now to make your estate provide a great deal more financial security for your family.

You need a will. And you should explore, with your lawyer and one of our very capable trust officers, the various trust arrangements that South Carolina National offers to preserve your estate and reduce estate taxes.

If you don't plan for the future, your favorite charity could turn out to be the federal government. They could use the money, but your loved ones need it more.

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Do something today for your favorite charity.

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