

Carolina Camellias



'ARCH OF TRIUMPH', a seedling of *C. Reticulata* 'WILD FORM' originated by David L. Feathers, Lafayette, California. This flower was awarded the coveted ACS Aubrey Harris Hybrid Award in 1974.

Courtesy of the American Camellia Society.

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Carolina Camellias

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SOUTH CAROLINA CAMELLIA SOCIETY

President's Message



P. A. DAHLEN

The 1975-1976 camellia flowering season is history for most of us. In spite of December and January temperatures being lower than for the past several years, the outdoor camellias produced a large number of beautiful blooms when the weather warmed up in our area. The Camellia Shows this season were very good. Greenhouse growers were able to supply excellent quality blooms throughout the season and outdoor growers enjoyed participating in the later shows.

I hope you enjoyed your association with other camellia enthusiasts as much as I did this past season. Keep up your contacts this summer with those who share this hobby with you, help others get started enjoying camellias, and continue to get new members for the South Carolina Camellia Society. We need enthusiastic and new members to promote the objectives of our Society.

Have a pleasant and enjoyable summer, do not neglect your camellias, and look forward to meeting all of your friends at the start of the Camellia Season next fall.

PAUL A. DAHLEN

NORTH CAROLINA CAMELLIA SOCIETY

President's Message



BILL HOWELL

DEAR MEMBERS:

Our 1976 camellia season started off with cold January thus most of the outdoor blooms were either killed or severely damaged. However, February has been mild and many of the blooms outside are looking exceptionally good. I am writing this article on February 20th and it appears that there will be a large number of outstanding blooms for the Wilmington Camellia Show on February 21 and 22. Several of the greenhouse growers state that they have never seen inside blooms open up so fast as they have during the past several days of warm weather. We should have a good show in Wilmington of both inside and outside blooms, as well, as the exotic hanging baskets and artistic arrangements.

The N. C. Camellia Society held its spring meeting in Fayetteville, N. C. on February 14, 1976 and voted to place 3 copies per year of the "Carolina Camellia" magazine in the libraries of the following educational institutions in N. C. (1) N. C. State University, (2) Cape Fear Technical Institute, (3) Central Piedmont Community College, (4) Fayetteville Technical Institute, (5) Southeastern Community College, (6) Forsyth Technical Institute, (7) Lenoir Community College, (8) Wilkes Community College (9) Sandhills Community College, (10) Randolph Technical Institute.

We believe the publication of *Carolina Camellias* will do much to promote camellia culture throughout North Carolina.

BILL HOWELL

VIRGINIA CAMELLIA SOCIETY

President's Message



ERNEST E. WOODEN, JR.

As I write this message we are looking forward to our spring show to be held again this year in the Auditorium of the Norfolk Botanical Gardens on March 20th and 21. It will, as last year, include Artistic Arrangements. The Show Chairman, Admiral L. O. Wood, and his committee are working to make this one of the best shows we have ever had.

There is one thing I would like to ask every member of the Virginia Camellia Society and that is to secure at least one new member. It is necessary that our society continue to grow if we are to be a successful society.

This is my last message of the 1975-76 year, I would like to thank the Board of Directors and the members for their splendid cooperation this past year. I have enjoyed serving as your president and my thanks and appreciation go to you all.

Give your camellia plants the care needed to get them through the coming hot months. Have a good summer.

ERNEST E. WOODEN, JR.

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Soil Mixtures for Seedlings

By JOHN L. CLARE, M.D.
Danville, Va.

Everyone who grows camellias will sooner or later plant several seeds. Most seedlings are of small value, usually giving small pink or red flowers of single or semi-double formation. Once in a blue moon, however, the grower hits the jack-pot. Naturally the more seeds one plants the better his chances of getting a worthwhile flower. Nuccios estimate that they introduce about one out of eight or nine thousand seedlings. On the other hand, John Urabec planted relatively few seeds—and got ‘TIR-FANY!’ But win or lose, it’s fun to grow seedlings. They can be used for grafting understock, if nothing else.

Many growers now plant seedlings in containers of one sort or another. This has many advantages. More seedlings can be grown in a given space, thus saving room. It allows small plants to be protected from bad weather more easily. And container grown plants will definitely bloom earlier, allowing the grower to cull out the worthless ones at an earlier age.

Regardless of where they are grown the mortality of young seedlings is always high. Some are simply weak; some are killed by die-back, over-fertilization, or accidents. In my ex-

perience, however, most plants are killed by root rot. One has only to pull up a dead or dying seedling to see the roots brown and brittle, a sure sign of root rot. The one greatest cause of this condition is poor drainage. This may be due to stopped-up drainage holes in the container, over-watering, or a soggy water-retaining soil mix. The latter is probably the the greatest cause of trouble.

A soil mix for mature plants which has always worked well for me is one composed of equal parts of good top soil, peat moss, well-rotted manure, and sand. But seedlings transferred from a peat and sand mixture to this medium frequently died, almost always from root rot. Apparently the small root system and scant foliage is just not great enough to use the water this mixture will hold. Any time water-logged soil surrounds a root system there is trouble.

In an effort to find a more suitable mix for seedlings a simple test was run on those being moved out of sand and peat in which they had grown from germination. All plants were a year old and all appeared healthy, ranging in size from 2" to 12". They had been germinated in damp peat mess and then transferred to peat and

sand after the tap root had been cut to 1". All had been grown in the same box under continuous Gro-Lux light. The color of the foliage was good and all root systems were white and glistening.

Thirty-five were bare-rooted and planted in the following media:

A. Regular mix, described earlier.

B. $\frac{1}{2}$ regular mix, $\frac{1}{2}$ sand.

C. Rotted sawdust, about 20 years old.

D. $\frac{1}{2}$ sawdust, $\frac{1}{2}$ sand.

E. $\frac{1}{2}$ regular mix, $\frac{1}{2}$ sawdust.

Each plant was potted in a No. 10 can with four holes punched in the bottom with a beer-can opener. All received identical care, being grown in broken shade, watered at least once weekly, and fertilized every four months with a generous pinch of "Sta-Green" fertilizer (12-6-6) on top of the peanut hull mulch. All were sprayed with Cygon spray twice.

At the end of twelve months all plants were bare-rooted again and evaluated. The following results were found:

Fatalities: A-2; B-2; C-2; D-O; E-1.

Greatest growth (in order): E-D-A-C-B.

Poorest color (foliage): B. Rest about the same.

Greatest growth bud set: D.

Best root system: D, followed by E, then C. Rest about the same.

Root rot: Greatest with A, followed by B and C equally. Least in D and E.

With such a small series it would be foolish to draw hard and fast conclusions, but it does appear from the above data that greater friability of the growing medium with its accompanying greater drainage is definitely advantageous. Dr. Walter Homeyer of Macon, Georgia, showed me several years ago that plants grown in pure sawdust do well, and this confirms it. Fertilizers with slow release nitrogen, as uramite, make most growing media satisfactory from the fertilization standpoint, and again this is borne out.

Survival and root system growth point to the more friable mixes with the greatest drainage potential as being best. Again, it is repeated that this series is too small to draw sweeping conclusions, but I think it emphasizes two things: old sawdust is an excellent additive to any soil mix, and good drainage is a must.

In Memoriam

WENDELL LEVI

ETHEL HARLING

JAMES U. SMITH

DR. SAM NORWOOD

A Professional Gardener Speaks

By FREDERIC HEUTTE

As a professional gardener, I perhaps look on plants, as the means to an end, where as the hobbyist or amateur takes a more rational perspective . . . to me plants were placed on this earth for two main purposes, to sustain man and for his enjoyment . . . for instance in southern Japan where many of the forests are made up in most part of the *Sasanqua Camellia*, thriving there for countless centuries, the wood is used as fuel in the form of processed charcoal and their seed ground and refined as a lubricant for technical instruments.

Another outlook of my profession, is that the pruning shear is the greatest tool ever invented for the gardener, and that the camellia can be its greatest benefactor, I use the term "CAN" most advisedly, because, so few among the so-called best amateur, seemingly are reluctant to use pruning shears to the best advantage.

Certainly few plants are so responsive to judicious pruning as are camellias, to the extent, that even when they have outgrown their allotted space, they can be radically cut back, to spring back in an amazing manner as a rejuvenated specimen. My intent in this article, however, is to advise

"annual pruning" as a means of keeping camellias, healthy and productive.

If you are unable to look through the super-structure of your plants so that other plants or objects on the other side of them are indiscernable, then it's about time you get your pruning shears to work, the only exception to this rule would be if you are using camellias as a hedge, but to harvest the best blooms, all of the twiggy growth within is superfluous and not conducive to quality flowers.

On the health side of the picture, you will always note that scale and other insects are the most productive when in the dark and self protected from overlapping foliage, so that these twigs and lesser of the crossing limbs should be removed as an annual chore. With this in mind, camellias will always prosper, requiring a lesser amount of fertilizer and spray . . . it stands to reason.

I like to use the analogy in reference to pruning "of feeding through the pruning shears," remember that plants are kept in balance as between roots and tops, each year adding to each, according to the dictates of man and nature, and that we are

capable of throwing the balance to one or the other.

To this I hasten to add, that I am not suggesting that pruning is substitute for feeding, rather an additive, weighing more on the health side of the ledger. Pruning to me however has another seldom used benefit, in the practice of moulding plants to our own concepts, I use as an illustration one of my favorite camellias, 'DAWN' of the species *vernalis*, it started out as it was intended, bush form, thinking that it was relatively a slow growing variety, it soon fooled me by cutting out a certain view in my garden, so it became a struggle between myself with the pruning shears and stubborn 'DAWN', after one of my most drastic prunings it decided to take off during the summer, by sending out several strong shoots . . . this was my clue . . . so I kept the strongest leader and let it reach for the sky, now ten years later we are both content, the leader has grown into a tree type, growing much faster than the bottom, I can see the garden beyond, besides the fact, that it is one of my most interesting conversation pieces other than the pair of 'MATHOTIANA' that flank my front door, for the past 18 years.

Yes, you can use your pruning shears to many advantages especially when dealing with camellias, next time there is one in your way because it has outgrown its emplacement . . . give it a second look, if not suitable to any of your artistic penchants . . . cut it back drastically and move it to another location, or maybe graft it through top-working with a variety like 'SHISHI-GASHIRA' one of the lovely hiemalis.

So remember that as the varieties and species go out of bloom, look to each for a new expression and concepts of what they can *do for you*.

—CAROLINA CAMELLIAS—

Marie Dahlen Wins Coveted Award

Mrs. Paul Dahlen S.C.C.S. Recording Secretary and a member of the Gardenmakers of Aiken won the Tri-Color Award at Aiken on January 24, 1976. Her arrangement in the Aiken Camellia Show, artistic division, was entitled "Pearls and Plaudits". 'VILLE DE NANTES' camellias were highlighted against philodendrum leaves and golden juniper in a base of gold and alabaster. Congratulations, Marie, we are most proud of you!

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Summer Care Means Winter Blooms

The summer care of your camellias is what determines the type of blooms you will have during the winter. In the Winter issue of *Carolina Camellias* summer care as it applies to fertilizing, watering, and syringing was discussed.

In this issue we will cover pruning, disbudding, weeding, mulching, and spraying.

Pruning

Probably the most neglected of all phases of camellia culture is pruning. Because most varieties are by nature slow growing most growers do not like to cut off any wood. This is a short sighted viewpoint. The best, heaviest blooming camellias anywhere are those nursery plants which have been ruthlessly sheared for cuttings each year.

There is a great variation among camellias in form and growth habits. Some are naturally well shaped and require little pruning. Others must be topped and branches shortened back to produce compact growth.

Before making any cut, visualize the effect it will have on the general outline of the plant. Weak or diseased branches should be removed entirely. Lanky, crossing growth should be cut out. All plants have weak little

branches inside that never have a chance to grow or produce good blooms. (They also increase the chances for disease since they make it difficult to spray the inside area of the plant). Cut out this weak inner growth to admit light and air and to throw all the strength of the plant to productive wood.

Sharp Tools

All general rules of pruning apply to camellia pruning. Sharp tools are essential. Make all cuts to the trunk, a strong branch, or a growth bud to eliminate stubs and promote quick healing. Where larger branches are removed the cut area should be painted with a pruning compound to prevent decay.

The old saying of, "Spare the rod and spoil the child" could be changed to "Spare the Shears and spoil the plant". Intelligent pruning will pay big dividends in well shaped, strong and healthy plants and bigger and better blooms.

Disbudding

The principal reason for disbudding is to obtain large specimen blooms. Some varieties such as 'PINK PERFECTION' have small blooms and should not be disbudded because

their beauty lies in their profusion of blooms. On the other hand those varieties having large blooms will benefit by disbudding.

The time to disbud is just as soon as you are able to definitely distinguish the fat round bloom bud from the slender growth bud and for the best results only one bloom bud should be left at any one terminal. If possible, select buds at various stages of growth so they will not all bloom at the same time.

Buds may be removed by carefully twisting them off being careful not to damage the growth bud.

Weeding

Summer is the time to weed your camellias. Even though your camellias are mulched some weeds, grass, etc., will come up around and through the mulch. Pull these weeds by hand. *Never* cultivate around camellias as they are shallow rooted plants and will be damaged by digging.

Mulching

In its natural environment in the forest, growing as an undershrub among trees, the camellia is naturally mulched by falling leaves, twigs, and flowers. We try to duplicate this natural environment by mulching.

Spring is the time to replace mulch about your plants. Whether to remove the old mulch and replace it or just add to it depends upon the condition of the old mulch and its depth. Sometimes, over a period of years, the adding of mulch builds up and becomes too high and thick about the trunk of the plant. When this happens it is the equivalent of planting

too deeply and the old thick mulch should be removed and replaced with fresh mulch.

There are a number of type materials that can be used for mulching, however pine needles are as good as any and better than most. In addition pine needles are both attractive and easy to obtain in most areas. Do not use peat moss since it has a tendency to cake when dry and it will then shed water and make it difficult to water the plant.

Spraying

Camellias may be severely damaged by insects unless they are protected by prompt application of insecticides. No one insecticide will control all pests of camellias. To select an effective insecticide you must first identify the insect or its characteristic plant injuries. Recommended insecticides are available at garden-supply stores. Follow label directions for dilution and care in handling. **WARNING:** Never use DDT on camellias; it injures certain varieties.

Scales: The leaves or bark of camellias frequently become encrusted with hard-shelled insects known as scales. The insects feed on plant juices and cause injury or death to the plant.

The most common species of scales found on camellias are tea scale, Peony scale and Florida wax scale.

Description:

The young insects of all species are tiny, flat, and yellow; they can be seen crawling on leaves in summer.

Some characteristics of the adult scales are as follows:

Tea scale—*Brownish* shell, about 1/16 inch long. Causes yellow blotches on upperleaf surfaces; infested leaves drop off prematurely.

Peony Scale—Grayish brown; grows to about 1/10 inch long. Burrows beneath bark of twigs and stems and feeds on plant juices; infested areas swell, later sink; smaller stems die quickly. Produces one generation of young a season; other species, several generations.

Florida Wax Scale—Reddish-brown body with thick, white or slightly pink waxy coating. Grows to about 1/10 inch long. Causes stunting or dying of plants.

Control:

Spray infested plants with summer-oil emulsion in early spring, before plant growth starts. Use 5 tablespoons of summer-oil emulsion in a gallon of water for peony and Florida wax scales.

To kill young crawlers of all species, spray leaves and twigs with malathion or dimethoate. Spray when crawlers are first observed—in May, June, or July. Apply spray three or more times at 10 to 15-day intervals.

Whiteflies: Adult whiteflies are very tiny; they have pale-yellow bodies and white-powdered wings. They feed on underleaf surfaces and cause black, sooty deposits on the leaves.

To destroy overwintering young, spray foliage with a summer-oil emulsion in early spring before plant growth starts. Use 5 tablespoons of summer-oil emulsion in 1 gallon of water.

For summer infestation spray with malathion, dimethoate, or lindane. Make two or three applications at weekly intervals. Use either 2 teaspoons of 57-percent malathion emulsifiable concentrate, or 23.4 percent dimethoate emulsifiable concentrate, or 1 teaspoon of 25-percent lindane emulsifiable concentrate per gallon of water.

Mealybugs: Adult mealybugs are oval or elongated about 1/5 inch long, with a white waxy or mealy covering. Black sooty molds on leaves followed by wilting and dying of the leaves are signs of infestation by mealybugs.

Mealybugs are usually found in clusters along the veins and undersides of leaves or in crotches of twigs. They secrete a sticky honeydew that attracts ants; the ants feed on the honeydew and spread the mealybugs to other plants.

The first step in controlling mealybugs is to eliminate ants in the garden. Soak the soil with a mixture of 2 level teaspoons of 40-percent chlordane wettable powder per 3 gallons of water for 30 square feet.

The second step is to kill the mealybugs. Spray with malathion or dimethoate as for whiteflies when they are first observed. Spray two or three times more at 10-day intervals.

Rhabdopterus Beetles: Several kinds of shiny black or bronze beetles, about 1/4 inch long, eat long narrow holes in the foliage of camellias. These in-

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sects feed by night and hide by day. Spray plant with lindane when leaf injury is first observed. Use the same lindane spray as for whiteflies.

Mites: Speckled leaves that later turn rusty brown are a sign of the southern red mite. This dark-red pest is common on camellias throughout the South. It attacks both upperleaf and lowerleaf surfaces. It lays shiny eggs that resemble red pepper.

Feeding injury starts in April and continues until fall. Injured leaves do

not recover, but control measures will prevent injury to new growth.

One of the latest methods of killing the various insects on camellias is with the use of a systemic such as dysiston applied to the soil. This can be purchased in fertilizer, but when it is used please follow closely the directions on the label. Cygon is also very effective as a spray for most sucking insects. Follow directions precisely as too strong a mixture may defoliate or kill the plant.

—CAROLINA CAMELLIAS—

Let's Standardize Entry Cards

Separation of the various classes in a show is more easily facilitated through the use of entry cards of different colors. Not all exhibitors, however, are recipients of an advance show schedule indicating the color entry card to be used for the various classes. The result is that blooms are often entered on the wrong color card and occasionally judged in the wrong class. This is particularly true of shows having separate classes for gibbed and nongibbed blooms.

When a gibbed bloom wins a nongibbed award because of confusion of the color of the entry card, the result is embarrassment for the winning exhibitor and an injustice to the grower of the best nongibbed bloom. We believe and urged all local societies to adopt, that since gibberellic acid is widely available and well known and used by the great majority of exhibitors, the nongibbed class

should be eliminated from all shows. A continuing feature of local society meetings could be the instruction of newcomers in the availability and use of gibberellic acid. This done, we would suggest consideration of the following standardization of entry card color.

Blooms grown without protection—

White Cards

Blooms grown protected—Green Cards

Reticulatas and Reticulata Hybrids—Yellow Cards

Other hybrids and species—Blue Cards

Seedlings—Pink Cards

Minatures—Buff Cards

Gibberellic acid is here to stay. It enables us to have beautiful fall shows, it enhances the beauty of most varieties grown on healthy plants and there is no evidence that any plant has been damaged by its use.

Spring and Summer Greenhouse Camellia Care

By R. D. Hicks

Spring and summer are by no means a "rest season" for the greenhouse camellia grower. In fact, this should be the busiest season as there are many things that should be done in preparation for good blooms next year.

Preferably, container grown plants should be moved outdoors during the summer months if semi-shade and a water supply is available. This movement should take place immediately after the danger of frost and freeze has passed. Under desirable conditions, plants grown outside during the summer months provide for more growing room, greater air circulation, lower daytime temperatures, and some rainfall which is usually better than commercial water. Evacuation of plants in the spring facilitates necessary greenhouse cleaning and minimizes the problems of disease and pest control. There are a variety of ways in which a greenhouse may be used for avocational purposes during the summer months. One school of thought recommends returning plants to the greenhouse after the first hard freeze. This establishes dormancy. The other school of thought

believes that dormancy can be established by normal reduction of temperatures to the minimum level maintained in the greenhouse. In any event, plants with tender growth should be moved in before the first frost or freeze. If plants are not moved out during the summer months, the greenhouse should be well ventilated and should receive some shade. If artificial shade is necessary, commercial or improvised shading material may be used. A pint of latex-based interior paint mixed with 2½ gallons of water may be applied with a conventional sprayer. The solution dries rapidly and a second coat may be added if the first application does not produce sufficient opacity. Local weather conditions will determine if another application is needed later on to provide desired shading until late fall.

Regular inspection of all plants during and just after the period of new growth is very important. Poor performers during the past blooming season should be watched carefully. Any plant that does not "take off" into new growth at the proper time should be un-potted and inspected

for root-rot, drainage, planting depth, and other adverse conditions. Corrective action with re-potting and some pruning should produce subsequent, even though late, new growth. Detecting and correcting the difficulty before the plant tries to go into new growth, belatedly, may be the difference between subsequent healthy growth and immediate or eventual death. Regular inspection during and after new growth should include a check on die-back. Die-back seems most apt to develop where new shoots are thrown from plant trunks or large branches. Infection at the base of such growth is very dangerous in that the branch or trunk can be completely girdled in a few days. A sudden and unexplained wilting of new growth is an ominous sign and usually denotes the presence of die-back. Cutting out the infected wood or pruning back to uninfected wood is immediately in order. Last issue's article by Dr. Luther Baxter offers Benlate as an effective control.

There are as many recommended fertilizing programs as Carter had pills or oats. Regardless of which one you use, establish a schedule in advance and follow it. If you are getting old and forgetful, chart your schedule on paper and check off each completed unit by date. Most successful (and hopefully honest) growers report better results from smaller applications made at more frequent intervals than larger applications two or three times a year. In any event, stay on the light side and always fertilize when the soil is damp. Direct damage to the feeder roots may re-

sult if the plant is not watered thoroughly before and after fertilization. Plants to be grafted on next year should receive little if any fertilizer during the summer months. If water used has any appreciable mineral content, periodic flushing of the containers may be beneficial. Any watering operation that does not result in some liquid drainage through the container contributes toward building up a saline content in the soil. An occasional double watering will eliminate this hazard. Fertilization and any necessary Ph adjustment should take place shortly thereafter as the flushing process eliminates fertilizer and Ph conditioner along with the excess salts. Poor drainage can sometimes be corrected by driving an iron rod into side holes in the container and shaking up the crockery or gravel. Watering should be scheduled according to individual plant need. Plants should not be permitted to dry out completely nor should they be watered too often. Excessive watering leaches out fertility and many cause root-rot due to prolonged soil sogginess.

If indicated, follow a standard spraying program for sucking and chewing insects. Most aphids can be washed off new growth by syringing while watering. A nicotine spray should be used for aphids in cases of serious infestation. Greenhouse floor treatment with Chlorodane discourages ants which provide aphid transportation from plant to plant. Several of the new systemic poisons are reported to be very effective against scale. The

old reliable oil emulsion base spray should be used cautiously during periods of new growth and temperature extremes. If oil emulsion spray is not used to kill the adult scale, periodic applications of Malathion, Parathion, or similar sprays will kill off successive broods of crawlers before they reach maturity. Special care should be taken in use of Parathion as it is very dangerous. Heated greenhouses permit the use of oil emulsion sprays at any time during the winter months.

Pruning is in order at any time of the year but is most appropriate just after the flowering season is over and before new growth begins. This minimizes growth points, eliminates unproductive wood, and contributes to the overall health of the plant. Plants are also pruned to develop desired shape and conserve greenhouse space. Remove all dead wood regardless of location and all spindly inner growth. Flowers are seldom produced on inner growth and are invariably of inferior quality. Poor growth should be cut back to a healthy growth bud. Vigorous growth will not extend next year from this year's poor growth. Where a choice is involved, leave a terminal bud that will produce desired directional growth. A lateral bud on the upper side of the branch will result in upward growth. Conversely, a bud on the lower side will produce downward and outward growth. When good sized branches are pruned, the cut surface should be covered with an asphalt base wound dressing.

Most greenhouse plants are grown for specimen blooms. It is therefore important to disbud heavily for largest blooms and best results. Disbudding should begin as soon as the round bloom buds can be distinguished from the more pointed growth buds. The rule of thumb is to leave no more than one bloom bud per terminal. In the case of large plants, this minimum should be lowered so as to limit the total number of buds on the plant. The longer the delay in disbudding, the greater the loss of energy that would have otherwise been channeled into the buds that remain.

The "Eager Beaver" with spare time on his hands may do a lot of summer work and avoid the inevitable fall "rush" where potting and repotting is planned. If considerable fall potting and repotting is contemplated, summer preparation of a "soil bank" would be in order. Quart oil cans can be gathered up, punched, and drained for fall potting of seedlings and rooted cuttings. Larger cans may also be secured, painted, punched, and stored for repotting. Square wooden containers are easy to make, look good, and handle well in a greenhouse. Treated 1" x 12" pine shelving cut into 18" lengths and overlapped rotatively makes a minimal step-up size container for egg can plants. The bottom is nailed on 2" x 2" runners. A 14' and a 2' 2 x 4 ripped will make two attractive and long-lasting containers.

Verily, spring and summer should be busy seasons for the greenhouse camellia grower!!

Notes for Camellia Show Entry Committee

By JUDGE ANONYMOUS

Camellia show entry or property committee should provide exhibitors with three (3) sizes of display cups:

1. Very small cups with 1" to 1½" mouth for miniatures.

2. Medium size cups with 2" to 2¼" mouth for the average size, 4" to 5" blooms. This is the size commonly used for *all* size blooms.

3. Extra large cups with a 3½" to 4" mouth for the 6" to 8" blooms now being shown.

Why have at least three (3) sizes of display cups? Take a look at a miniature bloom displayed in an average show cup. The miniature bloom is smaller than the mouth of the cup and the bloom is in the cup instead of on the cup. A small cup

is just as important to a miniature as an extra large cup is for an 8" bloom. A perfect 1½" miniature looks pitiful sinking in the mouth of a 2" cup.

The medium size display cups now being used do a fine job for the medium size bloom which constitute the majority of entries exhibited.

When growers "blow their bloom up" to the 6" to 8" size, the larger cups are needed. When any Camellia exhibitor, by their knowledge of Camellia culture plus a good "shot of gib" and a lot of devoted attention produces an exceptionally fine extra large bloom, and the bloom and the exhibitor deserves the support provided by the proper size display container.

—CAROLINA CAMELLIAS—

Airlayering Grows Plants in a Hurry

As the new growing season approaches, we should not forget airlayering as an effective method of reproducing varieties we like, particularly when we want to acquire another plant of the variety in a short time. An advantage of airlayering is that both large and small branches can be rooted without hindering normal growth of the plant during the rooting process. As a result, good sized plants can be established in one year, and during this same period,

the mother plant will have attained the same growth that would have occurred after the normal pruning operations.

Early Spring is Best

Airlayering may be done at any time of the year. The best time, however, is in the early spring when the plants are beginning to grow. The following steps tell how to do it.

1. Select a healthy limb. If a limb needs pruning, select it and thereby

accomplish two things in one step. Cut away a ring of bark about 2 times the diameter of the branch to be airlayered. The branch may have new growth but the girdled wood must be hardened off.

2. Eliminate all traces of the cambium layer in the ringed space. This can be done by scraping lightly with a knife or by use of fine sandpaper or emery cloth. This step is important because any remaining cambium layer will adversely affect the take.

3. Cover the ringed area with pre-soaked sphagnum moss which has had the excess water squeezed out. Don't try to save the moss but cover more than just the section that has been ringed and scraped. Wrap this ball of sphagnum moss with aluminum foil that is heavy enough to hold the moss and stay together during the rooting period. Twist both ends of the aluminum foil around the branch above and below the moss and tie securely.

Wait for Growth

4. Wait for the roots to grow. Airlayers started in the spring should

have established roots by the fall, maybe earlier. No harm is caused by removing the aluminum foil and inspecting the operation. If roots do not show, the foil may be replaced.

5. When the feeder roots are showing through the moss, cut the limb from the mother plant with sharp clippers. The cut should be made at the bottom edge of the ball of moss.

6. Do not attempt to remove the moss as it will be full of roots. Any effort to remove the moss will damage these new tender roots. Plant the cutting, with the moss still in place, in a container using the soil mix regularly used for your container grown camellias.

7. At the time of planting in the container, prune the new plant. First, do any shaping that is necessary. Second, give the roots plenty of chance to grow by cutting back the top growth. Remember that the objective is to obtain a good sound plant, not to see how tall a plant you can grow in the first year.

You may have flowers the first year.

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PLANT FOOD —

Function of Elements

NITROGEN

- Gives dark green color to plants.
- Promotes leaf, stem, and fruit or seed growth.
- Improve quality of leaf crops.
- Produces rapid growth.
- Increases protein content of food and feed crops.
- Feed soils microorganisms during their decomposition of low-nitrogen organic materials.

PHOSPHORUS

- Stimulates early root formation and growth.
- Gives rapid and vigorous start to plants.
- Hastens maturity.
- Stimulates blooming and aids in seed formation.
- Gives winter hardiness to fall-seeded grains and hay crops.

POTASH

- Imparts increased vigor and disease resistance to plants.
- Produces strong, stiff stalks, thus reduces lodging.
- Increases plumpness of the grain and seed.
- Essential to the formation and transfer of starches, sugars and oils.

Imparts winter hardiness to legumes and other crops.

CALCIUM: Calcium is found abundantly in various limestones, oyster shells, phosphate rock, superphosphate and gypsum.

Promotes early root formation and growth.

Improves general plant vigor and stiffness of straw.

Influences intake of other plant foods.

Neutralizes poisons produced in the plant.

Encourages grain and seed production.

Increases calcium content of food and feed crops.

MAGNESIUM: Magnesium is found in dolomitic limestone, magnesium sulfate, sulfate, potash-magnesium and magnesium oxide.

Aids in maintaining dark green of leaves.

Regulates uptake of other plant foods.

Acts as carrier of phosphoric acid in the plant.

Promotes the formation of oils and fats.

Plays a part in the translocation of starch.

SULFUR: The chief sources of sulfur for crops use are natural sulfur and sulfur obtained from fertilizer materials such as gypsum, ordinary superphosphate, sulfate of ammonia and sulfate of potash. Considerable sulfur liberated into the atmosphere in the burning of coal is returned to the soil in rainwater.

Gives increased root growth.

Helps maintain dark green color.

Promotes nodule formation on legumes.

Stimulated seed production.

Encourages more vigorous plant growth.

MINOR PLANT FOOD

The minor plant food elements, also called "trace elements," are boron, manganese, copper, zinc, iron and molybdenum. Although relatively small quantities are required, all are necessary for plant growth. Much attention now is being given to these elements and their importance in plant nutrition.

Unsatisfactory plant growth in many areas is traceable to the lack of one or more of these minor elements. Lack of boron, for example, may adversely affect yields of alfalfa and other crop. Deficiencies of these minor elements in soils are not so widespread as to warrant their general additions to all fertilizers. When deficiencies do exist in soils, they can be conveniently corrected by the addition of these elements to commercial fertilizers.

In some cases, minor elements also are effectively used as separate ma-

terials applied to the soil and as a spray applied to the growing crop.

With some of these elements the range between beneficial and detrimental amounts is very narrow so they must be carefully used, for too much will cause injury.

Such other elements as sodium and chlorine affect plant growth, although they are not now classified as essential plant foods. This is especially true for sodium which on some crops and under some conditions seems to serve a specific function of its own in promotion plant growth. On other crops and under certain conditions it has the ability to substitute for a portion of the potash requirements.

Hunger Signs in Plants

NITROGEN DEFICIENCY

A sickly yellowish green color.

A distinctly slow and dwarfed growth.

Drying up or "firing" of leaves which starts at the bottom of the plant, proceeding upward. In plants like corn, grains and grasses, the firing starts at the tip of the bottom leaves and proceeds down the center or along the midrib.

PHOSPHORUS DEFICIENCY:

Purplish leaves, stems and branches.

Slow growth and maturity.

Small slender stalk in case of corn.

In small grains, lack of stooling.

Low yields of grain, fruit and seed.

POTASH DEFICIENCY:

Mottling, spotting, streaking or curling of leaves, starting on the lower levels.

Lower leaves scorched or burned on margins and tips. These dead areas may fall out, leaving ragged edges. In corn, grains and grasses, firing starts at the tip of the leaf and proceeds down from the edge, usually leaving the midrib green.

Premature loss of leaves and small, knotting poorly-opened bolls on plants like cotton.

Plants, like corn, falling down prior to maturity due to poor root development.

CALCIUM DEFICIENCY:

Young leaves in terminal bud become "hooked" in appearance and die back at the tips and along the margins.

Leaves have wrinkled appearance. In some cases, young leaves remain folded.

Light green band along margin of leaves.

Short and much-branched roots.

SULFUR DEFICIENCY:

Young leaves light green in color, have even lighter veins.

Short, slender stalks.

Slow, stunted growth.

Spotting of leaves, as with potatoes.

Immature fruit, light green in color.

MAGNESIUM DEFICIENCY:

A general loss of green color which starts in the bottom leaves and later moves up the stalk. The veins of the leaf remain green.

Cotton leaves often turn a pur-

plish red color between the green veins.

Weak stalks with long branched roots.

Definite and sharply defined series of yellowish-green, light yellow, or even white streaks throughout entire leaf as with corn.

Leaves curve upward along the margins.

MINOR ELEMENT DEFICIENCIES:

Boron need is indicated by cracked stem of celery, brown rot of cauliflower, dry rot sugar beets, heart rot of turnips, yellow top of alfalfa, corky core of apples and black heart of table beets.

Manganese deficiency is shown by pale green to yellow and red colors between green veins of leaves of tomatoes and beets, resinous spots on leaves of citrus, chlorosis of crops, such as, spinach and soybeans on overlined soil, and "gray speck" on oats.

Copper deficiency causes die-back in citrus and, on much soils, blasting of onions and truck crops.

Zinc deficiency is indicated by white bud of corn, rosette of pecans and little leaf of fruit trees.

Iron need is shown by pale-yellowish color foliage, in the presence of adequate amounts of nitrogen and on soils that are high in lime or manganese.

(Taken from "Our Land and Its Care", prepared by American Plant Food Council, Inc., 910 Seventeenth Street, N. W., Washington 6, D. C.)

Source of Nitrogen Determines Availability

The average camellia grower usually thinks of nitrogen as being nitrogen. This is of course true but the fact that there are different sources of nitrogen means that the availability of the nitrogen to a plant will vary.

Nitrogen is a colorless gaseous element, tasteless and odorless, constituting about four-fifths (78.03 per cent) of the atmosphere by volume, and is a constituent of all living tissues.

It is not useful as a fertilizer in this form, however, and before it can be used the free nitrogen must be converted, as by the aid of bacteria, into a form suitable for plant growth. We are not concerned with the technical details of this but rather in its proper use as a fertilizer for our plants.

Basically, nitrogen used as a fertilizer is derived from two sources. First, the inorganic, which is derived from matter other than animal or vegetable. Second, there is the organic, which is derived from living organisms.

Examples of the inorganic type nitrogen would be that found in commercial fertilizers while examples of the organic type would be that found

in cow manure, cotton seed meal, and other animal and vegetable products.

We are concerned with the use of fertilizer and in considering the use of nitrogen we must take into consideration the following things: 1. Time of year it is used; 2. Amount used; 3. Availability; 4. Source; 5. Rain or use of water; 6. Type of soil; 7. Frequency.

Time of year it is used

Nitrogen is the element in fertilizer that furnishes most of the food needed for new green growth. Because of this it is not advisable to feed at a time when we do not want new growth forced out. This would mean we should not use nitrogen too late in the summer or too early in the spring since to do either might force a cycle of growth that could be damaged by early or late cold.

Amount to use

We will not attempt to give the amount of fertilizer to be used other than to point out that normally a hand full of commercial inorganic fertilizer would contain more nitrogen than a handful of organic fertilizer.

When you see a commercial fertilizer labeled as being 5-10-10 that

means that 5% is nitrogen or a 4-8-8 is 4% nitrogen or a 0-12-12 means there is no nitrogen in it. The first numeral shows the percentage of nitrogen in the fertilizer. Of course organic fertilizer such as manure is not labeled and the per cent of nitrogen may vary but of course only a small part of the total volume is nitrogen.

Availability

Normally inorganic nitrogen is more readily available than organic. This is due to the fact that inorganic is available immediately when dissolved by a rain or artificial watering. On the other hand, organic nitrogen takes both water and some heat to make it available for it has to decompose before becoming available.

For example if two growers both fertilized on the same day and one used organic and one inorganic nitrogen and a heavy rain occurred that night it is possible for practically all the inorganic nitrogen to be gone before the organic is available, especially if it is in the winter.

Rain

As previously pointed out it takes water to make either the organic or inorganic nitrogen available.

Soil

The soil is another factor that has to be considered in fertilizing. For example, if the soil is a sandy light soil where the water drains through readily there will be considerable leaching. On the other hand if the soil is a clay or heavy type soil there will be less leaching. Thus even if the same fertilizer were used on two different types of soil it would be possible to

use more on the sandy light soil than on the heavy clay type soil due to the leaching.

Frequency

As pointed out above in connection with leaching in different types of soil the frequency of fertilizing would be determined partly by the type of soil. The second factor to be considered in frequency of fertilizing would be the source of the nitrogen. For example, with an inorganic nitrogen used on a light sandy soil with plenty of water it would be possible to fertilize a little every month. On the other hand it would be foolish to fertilize every month, or every two months for that matter, if organic nitrogen is used on a heavier type of soil with less water.

Conclusion

It has not been our desire to try to give instructions on fertilizing but rather we have tried to point out that while nitrogen is nitrogen there is a definite difference in its availability and use depending on whether the source is organic or inorganic. Bear this in mind and you will be able to make a more intelligent use of your fertilizer.

—CAROLINA CAMELLIAS—

Easy Biscuits

- 2 Cups Bisquick
- 2 Tablespoons of sugar
- 6 ounces of Beer

Mix and pour into *well-greased* muffin tins and bake at 400 degrees for about 30 minutes. Can be under-baked for freezing.

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Helpful Hints for Hopeful Hybridizers

By KEN HALLSTONE
LaFayette, Calif.

Introduction

Mixing pollens by haphazard chance is how the bees do it, but if you prefer selective mixing, there are simple techniques anyone can easily practice. I prepared for ACS a set of forty slides that illustrates the process in detail. You or your Society may borrow these slides, or better still talk to someone who has been hybridizing in your area to get the information first hand. It is not the purpose of this article to cover technique but to provide you with some helpful hints that may assist you to a successful hybridizing program. I have tried to jot down from my own and the experience of others, a few essentials to any plant breeding program.

Purpose

First of all you should have an objective or purpose for hybridizing. Working toward an objective gives a concentrated and consistent program instead of floundering around wasting time. Of the many objectives and purposes that hybridizers have been working toward, the most notable are *floral fragrance*, *cold resistance*, *yellow color*, and perhaps the

most widely sought after, *outstanding flowers with new form*. You can join the ranks and pursue one of these or you could skip on to *earliness of bloom*, *floriferousness*, *compact plants*, or whatever you decide—and get started immediately.

Where to Begin?

What ever you do, don't start at the beginning, make use of what has already been done. Read all the relative literature pertaining to your project before you start; this will save you time, may help you avoid errors, and can give direction to your method of procedure. For example, if floral fragrance is your objective don't start by making the same crosses that have already been made. The literature would tell you where to secure scions from those who have been working in your field, and when your grafts develop you will have saved as much as twelve years of work. In the case of floral fragrance, Dr. William Ackerman at the U. S. National Arboretum and I on the West Coast have made floral fragrant scions from our collections, available to any serious breeder.

Seed Setters

Once you have learned how to hybridize and have gathered together all the available material for your project it becomes important for you to acquire, if you don't already have, several plants that set seeds readily, and have good growth habits and vigor to be used as parent plants. In my area I find that 'MRS. BERTHA HARMS' and 'REG RAGLAND' among the japonicas are very satisfactory; 'BUDDHA', 'CRIMSON ROBE' and 'CORNELIAN' among the reticulatas are excellent. Where one is attempting difficult crosses such as interspecific or intergeneric breeding, the need for these good seed setting plants becomes most important.

Basic Hybridizing Knowledge

To generalize from Dr. Clifford Parks' study (1) on when is the best time to make a cross, I have found that during the peak of the blooming season is best. In California it is usually the last week in February and the first three weeks in March. Climate conditions vary each year, so use the peak of the Blooming season for that particular year as a guide.

Warm sunny days are best. I have found through keeping records that unless the temperature is above 60° F. I am wasting my time making crosses. When you see the bees out visiting the flowers you can be sure the time is right for pollenizing. If you have a temperature controlled glass house, the time is always right because you can avoid the micro climatic conditions going on outside.

Complete emasculation of a flower (removing the male parts—anthers) is only necessary when the species you are working with is known to self. With *C. japonica* and *C. reticulata* removing enough of the anthers to get to the stigma is all that is required. With other species such as *C. sasanqua* and *C. fraterna* I recommend complete emasculation.

Keep your pollen dry. Wet pollen loses its viability within a few days. Dry pollen properly stored in the refrigerator may last as long as one year. This could be necessary if the flowers you wish to cross do not bloom at the same time of the year. Because of the loss of viability of pollen with moisture there is a strong argument in favor of bagging each cross, and providing some kind of protection such as under an overhang or in a glass house.

Use plenty of pollen. When available cover the stigma with as much pollen as possible so you can see it plainly with the naked eye. If pollen is scarce check the stigma for pollen grains with a small hand-magnifying glass. Because many of our F_1 hybrids have only 0% to 10% viable pollen the quantity of pollen used on a cross is important. The greater the number of pollen grains on the stigma the greater the chances that one of them will be viable and will fertilize the ovules in the ovary. Applying the pollen may be done more than once and one succeeding days. Complete coverage of the stigma with pollen may physically help prevent contamination by foreign pollen.

Before using, warm stored pollen to room temperature. This can be ac-

complished by placing the capsule under a reading lamp which is about eighteen inches above the pollen. Five minutes will do the job. When pollen from a flower is needed immediately but it is not quite ripe, ripening may be accomplished in a similar manner if the lamp is applied for a longer period of time.

When crossing two flowers to achieve a certain goal, make as many of the same crosses as you can. Hybridizing is based on chance. The more seeds produced and plants grown the greater your chances are of achieving your goal.

Backcross to achieve your goal. Backcrossing is applying the pollen of the seedling to the stigma of either one of its parents, or applying the pollen of either one of the parents to

a stigma of one of the offspring. Select from the F_1 seedlings those that show the most of the characteristics for which they were crossed, and backcross as indicated above. The breeder should always raise a second generation, since the appearance of the F_1 hybrid is often no guide as to what it may yield in the next or later generations.

Chromosomes

Mention of the word "chromosomes" mistakenly scares off some beginning hybridizers. A simple approach to understanding a few things about them should remove the bug-a-boo about this necessary word. Camellia flowers with the same number of chromosomes are generally more compatible and therefore easier to cross,

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such as *C. japonica* (30) x *C. japonica* (30) or *C. japonica* (30) x *C. saluenensis* (30). Inter specific crosses are more difficult when they possess a different number of chromosomes, such as *C. japonica* (30) x *C. sasanqua* (90). Intergeneric crosses are the most difficult and generally require special knowledge and breeding conditions.

Below is a partial listing of the chromosome counts of many of the camellia species. It is based on the fact that the sex cells of the camellia have fifteen chromosomes. The various species come together in numerous multiples of fifteen and it depends on how many sets of fifteen chromosomes unite.

Diploid, $2 \times 15 = 30$, *C. japonica*, *C. hongkongensis*, *S. lutchuensis*, *C. pitardii*, *C. rusticana*, *C. saluenensis*, *C. sinensis*, *C. taliensis*.

Triploid, $3 \times 15 = 45$, *C. japonica* 'LADY CLARE' along with several others are reputed to be in this class.

Tetraploid, $4 \times 15 = 60$, *C. granthamiana*, most of our *C. japonica* x *C. reticulata* hybrids.

Pentaploid, $5 \times 15 = 75$, *C. sasanqua* 'NURUMI-GATA'.

Hexaploid, $6 \times 15 = 90$, *C. fraterna*, *C. miyagii*, *C. oleifera*, *C. reticulata*, *C. sasanqua*.

Without any knowledge of the laws of inheritance, it is certainly possible to breed plants with a reasonable amount of success. However, as you move along in your breeding program you will learn some of the vocabulary and perhaps seek out some easy-to-understand book on plant breeding. I heartily recommend W. J. C. Lawrence's *Practical Plant Breeding*, published by George Allen & Unwin Ltd., London.

WHY NOT GET STARTED NOW?

Hybridizing is fascinating and stimulates that inner feeling that you are creating something new, much like the artist and his canvass.

LITERATURE CITED

1. Parks, Dr. Clifford R. *When is the best time to make a pollination?* American Camellia Society, Yearbook, 1967, p. 29.

—CAROLINA CAMELLIAS—

Some Observations on Judging

There have been many articles written on judging and this is not intended to add to or improve upon the ideas of accredited judges of long experience. It is simply an observation of several points for show chairmen and chairmen of judges to consider in shows for the coming seasons.

Changing Names on Entry Cards

Most judging teams in any given show find blooms that are mis-named.

The normal procedure is to simply change the name to that which is correct and move the bloom to its proper classification. Judges are human, however, and in all innocence and good faith can change the name from the correct to the incorrect. We recall one show this season in which a group of the hybrid 'VALENTINE DAY' and 'VALENTINE DAY VARIEGATED' were moved to the Japonica Class and re-labeled 'AKEBONO'. Obviously

a judge who does not grow hybrids recognized that 'VALENTINE' is a synonym for Akebono, and believed several exhibitors had mis-named their blooms. We wonder, however, if all three judges in the team could have made the same mistake, which may give great meaning to Bill Woodroof's statement that "judges should be flexible with fellow judges but not to the extent of giving in to less expertise."

We believe that all blooms suspected of incorrect labeling should be returned to the classification committee for possible correction.

Color Variation

We have noticed that the color shade of a variety may differ considerably from location to location and even on the same plant. The hybrid mentioned earlier is a good example. We recall one show this season where a bloom of such quality and beauty that it stood out from the many at a distance of 50 feet was given the red ribbon because the color "wasn't right". It would seem, that unless the color of a bloom is so far from the "norm" as to put the bloom in the category of a sport or unless the color districts from the beauty of the bloom, it should not be penalized for color variation.

Judging Own Blooms

Normally, a judge will step back from the team if he has a bloom in a class. There have been a few instances however, when the judges were told to go ahead and judge their

assigned classes irregardless of their own entries. This would be ideal if all judges could look at their own blooms objectively. Our blooms, however, are somewhat like our children and who can look at this children objectively? The ACS solves this problem for us in the Rules and Regulations Governing Procedure of Judging of American Camellia Society Cooperative Shows", Chapter IV, Section 24 states: "A judge shall never vote for his own flower if his flower is under consideration for the award". It appears, then, that a judge has the option of not voting at all, in a class including his flower, or of voting for a bloom in that class other than his own. The former is the only reasonable option.

Judging Indoor vs Outdoor

We believe it is helpful to have on any judging team at least one judge who grows the section being judged. Ideally, an accredited judge should be capable of judging any bloom, indoor or outdoor. Practically a judge who grows indoor blooms only may need help from an outdoor grower to do justice to the judging of outdoor blooms, and vice versa.

Roving Judges

Occasionally, a bloom of exceptional quality is overlooked and not sent up for consideration. Imagine the growers' disappointment. A team of roving judges as used in this season's Atlanta Show would insure against such occasional oversight.

PLEASE PATRONIZE OUR ADVERTISERS

Show Results

BEAUFORT, S. C.—January 17 and 18, 1976

Best in show—"DR. CLIFFORD PARKS"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best untreated, unprotected—Bill Mayer, Savannah, Ga.

Best Treated, Unprotected—Mrs. W. V. Tyson, Savannah, Ga.

Best Protected—"EASTER MORN"—E. O. Aycock, Smithfield, N. C.

Best in Beaufort County—Mrs. John Bull

Best Retic Hybrid—"VALLEY KNUDSEN"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best Non-Retic Hybrid—"ELMIE JURY"—C. T. Freeman, New Ellenton, S. C.

Best Seedling—Mrs. Arthur Wilson, Beaufort, S. C.

Best Miniature—"MAN SIZE"—Mr. and Mrs. M. F. Miller, Ridgeland, S. C.

Sweepstakes, Untreated, Unprotected—John and Jeanette Graham, Mt. Pleasant, S. C.

Sweepstakes, Treated, Unprotected—John Marshner, Sweepstakes Protected—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

AIKEN, S. C.—January 24 and 25, 1976

Best in Show—"LEANNE'S TOMORROW"—Tom and Doty Evans, Aiken, S. C.

Best Japonica, Unprotected—"CLARK HUBBS" (Var.)—Bill Mayer, Savannah, Ga.

Best Japonica Protected, Large—"TOMORROW PARK HILL"—L. G. Wilhelm, Columbia, S. C.

Best Japonica Protected (medium to small)—"MARGARET DAVIS"—Dr. Olin Owens, Charlotte, N. C.

Best White—"CHARLIE BETTES"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best Seedling—Jack Hendrix, Rock Hill, S. C.

Best Hybrid (medium to small)—"ROSE PARADE"—Mr. and Mrs. Jack Teague, Columbia, S. C.

Best Miniature—"MAN SIZE"—Mr. and Mrs. M. F. Miller, Ridgeland, S. C.

Best Hybrid (large to very large)—"HOWARD ASPEN" (Var.)—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best Junior Exhibitor—"ROSEA SUPERRA"—Kyle Elliott, Clinton, S. C.

Sweepstakes, Unprotected—Bill Mayer, Savannah, Ga.

Sweepstakes, Unprotected, Runnerup—A. R. Andrews

Sweepstakes, Protected—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Sweepstakes, Protected, Runnerup—Mrs. Wm. K. Laughlin, Aiken, S. C.

SAVANNAH, GA.—February 7 and 8, 1976

Best in Show—Unprotected (over 4½")—Bill Mayer, Savannah, Ga. "H. L. WHEELER" (Var.)

Best in Show, Unprotected (under 4½")—Gus Dubus, Savannah, Ga.

Best in Show, Protected (over 4½")—Tom and Doty Evans, Aiken, S. C.

Best in Show, Protected (under 4½")—Mr. J. C. Bickley

Best White Bloom (over 4½"), Unprotected—Don Norburg, Savannah, Ga. "WHITE NUN"

Best White Bloom (under 4½"), Unprotected—Mrs. A. P. Harms

Best White Bloom (over 4½"), Protected—C. T. Freeman, New Ellenton, S. C.

Best White (under 4½") Protected—Tom and Dot Evans, Aiken, S. C.

Best Hybrid or Retic (over 4½")—Jack Hendrix, Rock Hill, S. C.

Best Hybrid or Retic (under 4½")—J. A. Timmerman, Greenwood, S. C.

Best Miniature (grown locally)—Scotty Forbes

GEORGETOWN, S. C.—February 7 and 8, 1976

Best Japonica, Protected, Treated—"HELEN BOWER"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Runnerup—"TOMORROW PARK HILL"—J. O. Jackson, Wilson, N. C.

Best Japonica, Unprotected—"JESSIE BURGESS" (Var.)—W. T. Shepard, N. Charleston, S. C.

Best Japonica, Protected, Untreated—"EASTER MORN"—Sadie & Ernest Aycock, Smithfield, N. C.

Best Seedling—Mr. and Mrs. J. K. Blanchard, Wallace, N. C.

Best Hybrid—"EL DORADO"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best Retic—"VALENTINE DAY"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best in Georgetown County (Each receives a membership in S. C. Camellia Society)

1. "CUP OF BEAUTY"—Mrs. M. D. Nesmith

2. "DONCELARI"—Mrs. John Sprawls

3. "GULLIO NECCIO"—Mrs. J. B. Bass

4. "PROF. SARGENT"—Mrs. R. C. Griffith

5. "VILLE DE NANCE"—Mrs. Ralph Hills

Runnerup—"EMMETT PHANFSTAL"—A. S. THOMPSON

COLUMBIA—February 14 and 15, 1976

Best Bloom, Protected (over 5")—"EASTER MORN"—Gladys and Jim Pinkerton

Runnerup—"ELEGANS SUPREME"—Wm. Olliff

Best White—"DOROTHY COPELAND"—Mr. and Mrs. F. N. Bush

Best Miniature—"MAN SIZE"—Mr. and Mrs. Charles Hendrix

Best Bloom (under 5")—"SAWADA'S DREAM"—Mr. and Mrs. D. G. Elliott

Runnerup—"MARGARET DAVIS"—Jane Robertson

Best Hybrid—Retic Parentage—"CORNEALLAN"—Mr. and Mrs. Linton D. Boggs

Runnerup—"HOWARD ASPEN"—W. G. Dubois, Jr.

Best Hybrid—Non-Retic Parentage—"ELMIE JURY"—Graham Yates

Gold Sweepstakes—Mr. and Mrs. Jack Teague

Silver Sweepstakes—Mr. and Mrs. D. G. Elliott

Best Seedling—Jack Hendrix

Grown Unprotected:

Best Bloom—"VILLIE DE NANTES"—W. T. Shepperd
Runnerup—"HALLMARK"—J. J. Seelig
Gold Sweepstakes—Mr. and Mrs. C. A. Sanders
Silver Sweepstakes—Mr. and Mrs. J. J. Seelig

ATLANTA, GA.—February 21 and 22, 1970

Best Bloom in Show—"SILVER CHALICE"—Mr. and Mrs. Robert Edge, Spartanburg S. C.

Best White—"SILVER CHALICE"—Mr. and Mrs. Robert Edge—Spartanburg, S. C.

Best Bloom, Runnerup—"PARK HILL TOMORROW"—Dr. Olin Owen, Charlotte, N. C.

Best Bloom, Unprotected, in Metropolitan Atlanta—"VILLE DE NANTES"—Rev. Bonneau H. Dickson

Best Bloom, Unprotected, Untreated—"TIFFANY" (Var.) Doris and J. Ellis, Keystone Hgts., Fla.

Best Retic, Retic Hybrid—"PHAROAH"—Marshall H. Rhyne, Belmont, N. C.

Best Hybrid, Without Retic Parentage—"ELSIE JURY"—Tom and Dot Evans, Aiken, S. C.

Seedling—Dr. Olin W. Owen, Charlotte, N. C.

Best Miniature—"TAMMIA"—Dr. Olin W. Owen, Charlotte, N. C.

Sweepstakes, grown inside metropolitan Atlanta—T. P. Lang

Sweepstakes, Unprotected—J. R. Comber, Pensacola, Fla.

Sweepstakes, Protected—Dr. Olin W. Owens, Charlotte, N. C.

NASHVILLE, TENN. March 6 and 7, 1970

Best Japonica and Winner of the ARMITA CAWOOD Memorial Award—"ELEGANS SUPREME"—W. D. Stewart, Sacramento, Calif.

Best (large to very large)—"CLARK HUBBS" (Var.)—Mr. and Mrs. Wm. Robertson, Aiken, S. C.

Best (med. to large)—"LADY KAY"—Jack Lewis, Concord, Calif.

Best (medium)—"DIDDY'S PINK ORGANDY"—Chas. B. Malone, Jr., Arlington, Tex.

Best (small)—"GRACE ALBRITTON"—Jon Corvain, Ft. Worth, Texas

Best Miniature—"TAMMIA"—Jon Corvain, Ft. Worth, Tex.

Best Retic or Hybrid—"AZTEC"—Mr. and Mrs. D. G. Elliott, Clinton, S. C.

Best Non-Retic Hybrid—"ANTICIPATION"—Doug and Marilyn Batt, Windsor, Calif.

Julia Bainbridge Memorial Trophy for outstanding Camellia by member of Middle Tennessee Society—"BLACK LACE"—G. N. Griffin

Australian Camellia Research Society Trophy for best bloom of Australian Origin Hybrid—"SWAN LAKE"—Mr. and Mrs. A. B. Cooper, Nashville, Tenn.

Gold Sweepstakes—Mr. and Mrs. A. B. Cooper, Nashville, Tenn.

Silver Sweepstakes—George Garrison, Birmingham, Ala.

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WE DO NOT SHIP

Charlie and His Camellias

By TITA HEINS

Since that early Spring Day that my husband and I visited the Nursery, our household has not been the same. We went with the intention of buying shrubbery to complete the landscaping in front of our house. We had carefully estimated the number and color of azaleas, crepe myrtle, dogwood trees, redbuds, etc. (The "etc." had not included camellias.) I went down our list carefully making our selection. Then I missed Charlie. After years of experience tracking down children on public outings, I used the same diligence in locating my husband. I found him in the green house quietly examining camellias and setting aside a "few" for purchase.

"Charlie, we don't have room for all those in the car!"

"Oh, we'll find space."

The other shrubs were jammed carefully in the trunk and the back floor board of the car, where as the camellias had the honor of riding on the back seat and in my lap.

That is how it began that Spring Day two years ago. Now every afternoon we stroll in the Camellia Garden under the Pines examining leaves, growth buds, and the unfolding of

each flower. (Lord help any alien bug or scale that thinks it will establish residency on one of Charlie's camellias.)

Each bloom is brought to me with tenderness and pride. (It reminds me of the days when our youngsters would bring me a sample of spring's beauty from the open fields. Chubby little hands clutching wilted clover blossoms. They were handed to me with adoring eyes waiting for a token of love.) With much ceremony I place the precious bloom in the brandy snifter on the center of the dining room table where the family can have a visual feast of beauty during our evening meal. The conversation usually drifts to the topic of camellias. "What's the name of that one, Dad?" We listen attentively to the latest knowledge Charlie has gleaned from his books on camellias.

I soon came to the realization that Charlie had exhausted his supply of information on camellias. He read books, pamphlets, newspaper articles, magazine articles and was still seeking more. I was discussing this with my dearest friend and chief advisor in child-rearing, interior decorating, fashions, husband handling, dietetics,

horticulture, and bargain sales. Her name is Nell. No woman's life is complete without a Nell.

"Yes, Tita, I have noticed Charlie's interest in camellias. That is good. Do you realize that before you know it he will be retired and all the children will be grown and gone? You need to develop an interest together."

(After a weekend of having gangly teenagers in and out of the house and refrigerator, Rock records blaring and phone ringing, I was secretly nurturing the idea of when they would be "grown and gone" and leave me a little peace and quiet. I had not faced the stark reality of Charlie's retirement, since that is at least nine years away.)

"Nell, I need another interest like a hole in the head. I have barely enough time trying to keep my sanity managing this household."

"Also, you've got to consider that Charlie is reaching that 'dangerous age', if you get what I mean. We wives have to look out for such things."

"Charlie, dangerous age? Do, Nell."

"I have a friend that knows all about camellias. He judges some of the shows and belongs to all kinds of camellia societies. Real nice fellow. I'll call him the first chance I get and see how you and Charlie can join. I know you will love it."

Several days later Nell called.

"Get a pencil and paper—I have that information on the camellia societies. My friend is going to send me some applications for you and Charlie to join the American Camellia

Society and the South Carolina Camellia Society. And be sure to ask for a book called *Camellia* by Norman Clature."

"Come again, Nell. Who wrote the book? Norman Clature? Spell it for me."

"C A M E L L - -"

"I've got that. The name of the author, please."

"Okay, here it is. NORMAN CLATURE."

"That's with a capital "N" and a capital "C". Right?"

"Right, hon, gotta go, Bridge Club Night. Bye."

I hung up the phone.

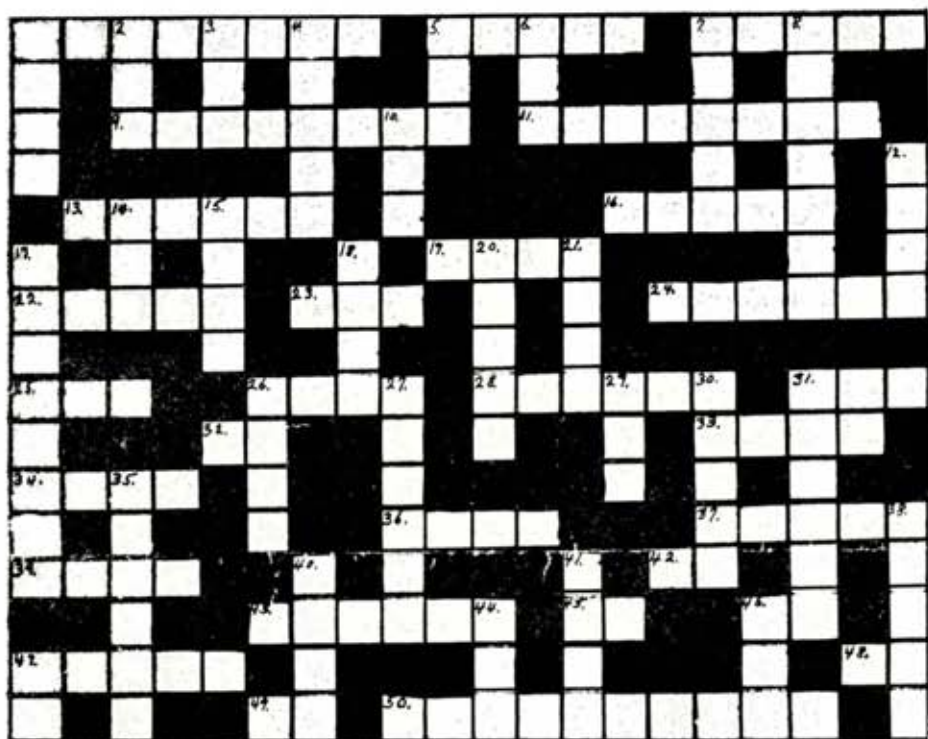
"Charlie, that was Nell with the information about the camellia societies. Somebody in the organization either has a weird name or a good sense of humor."

Epilogue.

We joined the American Camellia Society, the South Carolina Camellia Society and the Coastal Carolina Camellia Society. Charlie has learned to root, prune, gib, graft, fertilize, and combat various ailments and insects that are always ready to "do in" his treasured bushes. He has been introduced to the complexities of helping with the Camellia Show. I, in turn, am fascinated by the Camellia People. My grandmother would have described them as "genteel with sterling qualities." My son calls them "flower children."

God has blessed our home in many ways. Again He has touched us with the marvel of another of His creations . . . The Camellia.

Camellia Crossword Puzzle



ACROSS

1. Diddy's Pink _____ Sport of Diddy Mealing. Dawn Pink at base blending to light Pink toward edge of petals and edged white.
5. Mary Agnes _____ China Rose. Large rose form double with some upright, fimbriated petals.
7. Alba _____ White. Medium, formal double.
9. Carter's _____ Pale Pink, striped or marked deeper Pink.
11. _____ Davis' Sport of Aspasia Mac-Arthur. White to Cream White with a few Rose Red lines and dashed and edged bright Vermillion.
13. Moonlight _____ Soft Light Pink. Med. to Lg. semi-double to loose peony.
16. _____ France Light Pink, Large, semi-double with fluted petals.
19. Bob _____ Black Red. Large, semi-double with irregular petals.
22. _____ Blush White edged Coral. Large, semi-double. (U. S. 1965—Wilson).
23. _____ Baldwin Wood White striped Phlox Pink. (Has two popular sports: Thelma Dale and Charlotte Bradford.)
24. _____ Katz (Plant Patent No. 1107) Sport of Troubadour. Large Watermelon Pink. Semi-double with creped & wavy petals.
25. Kick _____ Pale Pink marked deep Pink. Large to very large, loose peony form. (Has a sport named Touchdown.)

26. Judge Marvin _____ Dark Red. Large, semi-double to formal double.
28. _____ E. Youtz White Daikagura.
31. _____ Parade Pink. Large, semi-double with upright petals.
32. _____ Peppermint White to pale Pink striped Carmine. Med. rose form double.
33. _____ Head Reticulata. Deep Turkey Red. Large to very large with irregular, heavy, crinkled petals near base, arching over and covering center as flower develops.
34. Elsie _____ Marshall Light Pink to light Purplish Pink. Large rose form double to loose peony form.
36. Magic _____ Fire Red variegated White. Medium peony form.
37. Jean _____ Sport of Aspasia Mac-Arthur—Red with narrow band of White around edge of petals.
39. Suzy _____ Light to medium Salmon Pink. Large, peony form.
42. Ville _____ Nantes Sport of Donckelarii—Dark Red blotched White.
43. Frances _____ Soft Rose Pink. Medium to large, loose peony form with twisted, fluted petals.
45. _____ Dorado Hybrid. Light Pink. Large, full peony form.
46. Mrs. _____ Wheeler Light Pink with occasional deeper Pink or Red marking Med. formal double with pointed petals toward center.
47. _____ Wilson Light Pink. Medium, semi-double to loose peony form.

48. _____ Tinsley Very pale Pink at base shading to deeper Pink at edge with reverse side Flesh Pink. Medium, semi-double.
49. Elizabeth _____ Bey Light Rose Pink. Large, loose to full peony form with large petals and large, erect petaloids.
50. Miss _____ Deep Red. Large, semi-double with high center.

DOWN

1. Sunset _____ Sport of Finlandia. Pale Pink edged deep Pink.
2. _____ Menard White with Canary Yellow petaloids. Large, anemone form with center petals divided by petaloids.
3. White _____ White. Very large, semi-double.
4. _____ White. Medium to large, semi-double. (U. S. 1939—Overlook)
5. _____ La Motte Jones Glowing Pink. Lg. full peony to rose form double.
6. _____ Cat Light Rose Pink. Lg. semi-double with irregular fluted petals.
7. _____ Harbor Dark Red. Medium, semi-double with irregular petals.
8. _____ Splendor Sport of C. M. Wilson. Light Pink edged White with deep petal serrations.
10. _____ Hackney Blush Pink. Large, semi-double to loose peony form with twisted petals.
12. Thelma _____ Phlox Pink form of Mrs. Baldwin Wood.
14. _____ Alone Blush Pink. Large, loose peony form. (U. S. 1961—Ashby)
15. Mark _____ Wine Red. Large, semi-double to loose peony with small petals.

17. _____ Park Hill Light soft Pink generally deepening toward edge with some White variegation.
18. _____ Farmer White washed and shaded Orchid Pink. Large, semi-double to loose peony form with twisted, curled petals.
20. _____ Variegated form of Lady Clare (Pink Empress) Deep Pink marbled White.
21. Mrs. Leroy _____ Sport of Lady Clare. Pink striped White and Rose.
26. _____ Eleven Cherry Red. Large, semi-double with wavy upright petals.
27. Guilio _____ Coral Rose Pink. Large to very large, semi-double with irregular petals.
29. High _____ Light Pink sport of Daikagura.
30. Mary _____ Cox White. Medium to large, formal double with slightly cupped petal ends.
31. Eugenia _____ Sport of Mathotiana Variegated. Deep Pink to Red splotted and flecked White. Very large, loose peony form.
35. _____ Miniature. Red outer guard petals and White peony center.
38. _____ Prevatt Deep Purplish Pink. Large, full peony form.
40. Massee _____ Red. Large, anemone form (Seedling of Hybrid 'Phyl Doak').
41. Rebel _____ White striped, speckled and mottled Red. Large, semi-double to peony form with creped, twisted and curled petals.
44. _____ King Blush. Large, semi-double with stamens intermingled with petaloids. (U. S. 1969 E. J. Prevatt, Bonneau, S. C.)
46. _____ Rita Red Sport of Anita.
47. _____ Waterhouse Hybrid. Light Pink. Medium, formal double.

—CAROLINA CAMELLIAS—

New Zealand Visitors Have Busy Schedule

Camellia growers in many states enjoyed the followship of Harold and Phyllis Austin of Christchurch, New Zealand, during the 1976 show season. As guests of the Jay Ellis Family, they attended the Orlando Show and continued on to Mobile where they were welcomed at Mobile's ribbon cutting ceremony. Next stop was ACS Headquarters where they were taken under the wing of Brownie and Ann Brown and visited Jack Jones at Macon. At a cocktail party for the Austins in Fort Valley, Brownie showed a fine collection of camellia slides from New Zealand. Aiken was the next stop where the Austins enjoyed a party at the home of Carroll

and Pearle Moon, hosted by the Moons and the Lee Poes. At the Aiken Show the Austins judged an exceptional display of quality blooms and later found themselves enjoying the hospitality of ACS Social Director Son Hackney and his lovely wife Ann at a Charlotte stopover, before proceeding with the Hackneys to the Tuscaloosa, Alabama Camellia Show.

The south bid a reluctant farewell to the Austins as they left Tuscaloosa to Judge San Diego and other California Shows. All who met the Austins hope they will return soon and continue to bring the World of Camellias closer together.



New Zealand visitors join Carolina Camellia group at Aiken. *Back Row Standing, Left to Right:* Paul Dahlen, Bill Kemp, Willis Herndon, Lee Poe, Harold Austin, Milton Brown. *Front Row, Seated:* Betty Kemp, Phyllis Austin, Ann Brown.

—CAROLINA CAMELLIAS—

Clemson Plant Pathologist Doctors Roses

People who think roses have to be pampered are mistaken, says plant pathologist, and chairman of *Carolina Camellia's* test gardens, Luther Baxter.

The Clemson University professor says, "Taking simple steps to keep them healthy is all a grower has to do."

"The roots of roses go deep and as a result they need little water," Baxter points out as he walks through his research garden at Clemson. "We watered our roses here only once last summer and that was during a period of severe drought."

Dr. Baxter's ornamental research is concerned with disease. His 288

bushes are divided into 24 plots of 12 bushes each. The plots are planted identically as to varieties. Some plots are treated with spray regularly. Others are not. In most cases, the difference is dramatic.

"Weekly spraying is about the only constant care roses need," says Baxter. "It is necessary to keep an eye out for black spot, powdery mildew and canker, the three prime diseases."

"Other than this, roses need only sunshine (at least six hours a day), weeding and twice-a-year applications of fertilizer."



ROSE RESEARCH—Dr. Luther Baxter, Clemson plant pathologist, says a grower must look out for three prime diseases of the rose—black spot, powdery mildew and canker.

A mistake growers often make in the fall is cutting back their bushes. He says the bushes should retain their leaves as an aid in warding off disease and should be pruned in late February or early March.

Prof. Baxter advises growers to buy prime quality bushes if they want early results. He finds that other bushes, while less expensive, rarely produce blooms the first year.

Responding to a comment that men seem particularly attracted to growing roses, Baxter says, "Not only roses but also their cousin, the camellia."

A trip with Dr. Baxter through his rose garden convinces even a novice that roses wouldn't be all that hard to grow. The fragrant blooms of the unusual lavender "Angel Face," the dark red "Mr. Lincoln" and the sea

of talismans, yellows and pinks spur the imagination for future planting.

—CAROLINA CAMELLIAS—

ANSWERS TO CROSSWORD PUZZLE

ACROSS

1. Organdie
5. Patin
7. Plena
9. Sunburst
11. Margaret
13. Sonata
16. Julia
19. Hope
22. Omega
23. Mrs.
24. Jessie
25. Off
26. Mann
28. Joshua
31. Hit
32. La
33. Lion
34. Ruth
36. City
37. Clere
39. Wong
42. De
43. Garoni
45. El
46. R. L.
47. Emily
48. Dr.
49. Le
50. Charleston

DOWN

1. Oaks
2. Gus
3. Nnn
4. Immira
5. Pat
6. Tom
7. Pearl
8. Elegans
10. Son
12. Dale
14. One
15. Alan
17. Tomorrow
18. Erin
20. Oniji
21. Epps
26. Marc
27. Nuccio
29. Hat
30. Alice
31. Howell
35. Tinsie
38. Emory
40. Lane
41. Yell
44. Ida
46. Rio
47. E. G.

Away Down South in Georgetown

By J. O. "JACK" JACKSON

On February 7th I had the pleasure of attending a Camellia Show in Georgetown, South Carolina. And I must say I saw the most attractive display of artistic arrangements I have seen yet, along with a house full of beautiful camellias. The Garden Club really did a wonderful job in helping out to put on a delightful show. The coffee was delicious. It makes me feel real sorry for the folks who live up North—missing out on all this good ole Southern hospitality. I think the reason they live up there is because they have jobs up there—I don't think I've ever heard of anyone retiring to the North.

Getting back to the show—after the flowers were all put out and before the judging started, a certain lady walked around and looked them over. Then she came back over to me and said, "Jack, I can tell you now what flower will win the show." I said, "I'll bet you a quarter you can't," cause the odds were a thousand to one in my favor. Of course that was gambling but it was so much in my favor I put up my quarter. Guess who won—she did. She has learned a lot from her husband. It wouldn't be fair to call her name since she was gambling. But her husband is Ernest Aycock. They have so much silver they could

open a silver store. My good friend, Joe Austin, has won so much silver I think his wife, Mable, is using it for flower pots.

Irene and I visited the Gene Worrells in Norfolk, Virginia a couple of years back one Friday. If we had stayed to see all their silver we would have been late for Sunday School Sunday morning.

Back to the show in Georgetown. Irene couldn't go with me so I got so excited and nervous I couldn't write my name. But little Lela Watson came to my rescue and helped me get my flowers out (Bless her Heart). Her husband, Bill Watson, is a very lucky guy to have a wife as smart and sweet as she is. But don't tell him I said that cause he is twice the size I am.

Our first acquaintance in or around Georgetown was Neal and Mary Alice Cox a couple that runs The Little Red Barn. And a fine couple if I have ever known one. Of course Neal has aged *just* a little since we met them in 1957, but little Mary Alice looks the same now that she did then.

Oh well, guess the Editor is getting tired of all this chit-chat so I will get my bicycle pump and go out in the greenhouse and blow up a few blooms for the next show!

Spring Care of Outdoor Camellias

By T. HAYWOOD CURLEE, Orangeburg, S. C.

One can get as much varied advise about spring care of camellias as multiple prescriptions for curing a cold. In spite of what pills a doctor may prescribe for a cold most patients suffer and live anyway. In spite of my advise you may get on spring care of camellias—some of them will survive. If you walk off and leave them from now until next blooming season you may still have a few live plants and a few good show flowers. It is amazing how well established plants perform with a minimum of care.

Fertilizing: Amateur and Commercial growers with years of experience still like to gamble on getting that maximum of growth or that super bloom by adding an extra feeding of fertilizer. Leave that forced feeding to the greenhouse "experts". The outside growers should strive to have healthy plants, moderately grown with a minimum of fertilizer. We "plug feed" our out-door plants (that is the only kind we have). We plug feed with cotton seed meal once each year if it is convenient. Some time we feed in the fall and some time in the spring; then some years we miss completely. That is inconsistent, but we just do the best we can with the time we have.

A few years ago I made a talk to a camellia club and told about our plug feeding program. One grower in the audience requested that I try to get the "experts" in Charlotte and Greenville to follow my "cotton seed meal

advise." He felt sure if they followed my advise that he would have little trouble in beating them for the top awards the following year. I was really talking about outside camellias—not greenhouse camellias. I was talking for the beginners not the experts.

The only talks I make, now, about camellias are in my own back yard. Yes, it's a fact—I talk to our camellias. A few years ago I threatened to cut a large plant down because it had not performed well; the following season that variety was the finest specimen display in our yard. Other plants we brag about "bull nose" the following season. You have to be careful what you say around your camellias—they may hear you! Just go easy on your fertilizer and your plants will last longer. Let the greenhouse boys "burn up" their plants in 3 or 4 years. Keep your outside plants growing but not too fast.

Buying plants: Recently a beginner brought a camellia leaf into my office and asked me what was wrong with his plant. If the other leaves were in the same condition as that one the plant was about dead. After asking him a lot of questions this was his situation:

1. He bought 1 gal. canned plants 30" tall which had been rapidly grown by heavy fertilizing.
2. He carefully placed the plant in the ground without breaking the ball of dirt.

3. A few weeks later the leaves began turning yellow and falling off.
4. Some one had sold him \$2.79 fast grown potted plant and now he needed \$10 worth of advise.
5. He was putting his plants out in late spring rather than in early fall.
6. He had also bought some field-grown plants wrapped in burlap—no feeder roots left—just nubs.

The advice given him was to bare-root his container grown plants before putting them in the ground. That's when he found that his fieldgrown plants did not have any roots and little change of living. Then this "beginner" was furious with the nurseryman for selling him those plants.

My advice to the beginner is: Subscribe to "Carolina Camellias" and learn something from the experienced growers. There is not enough time left for you to make all the mistakes yourself.

Spraying: An oil emulsion spray such as Volck is good to use, but it must be applied properly; the underside of the leaves must be reached in order to kill the scale. This spray cannot be applied when the temperature outside reaches 90 degrees or more nor can it be applied when there is danger of frost or freezing—the leaves will be burned in both cases.

Systemic insecticides (Cygon and Scope) seem to be the answer for those of us with unprofessional help and limited equipment.

If you have more camellias than your wife can take care of, two boys in college, plus inflation—then you

have trouble—you have "scale"—camellia scale and tea scale. It seems to multiply day and night. We have streamline mass production on this "scale" production. The camellia enemies have never heard of "birth control." Now's the time! Use systemic insecticide!

—CAROLINA CAMELLIAS—

James U. Smith Dies

James Ulmer Smith, 66, died Jan. 30, 1976 in the VA Hospital in Columbia after a long illness.

Born in Cottageville, he was a son of the late Jessie A. and Lovie Hill Smith.

Mr. Smith was a graduate of Wofford College and a member of the Washington Street United Methodist Church.

He was a veteran of World War II.

Following his discharge he was the first chief of education and training for the Veterans Administration in South Carolina. Upon retirement in 1971 he was a disability evaluation rating specialist.

Mr. Smith was an expert on Camellia culture and a founding member of the S. C. Camellia Society and the Mid-Carolina Camellia Society. He was also a national accredited judge and a member of the American Camellia Society.

Surviving are his widow, Mrs. Ruth McCoy Smith; a daughter, Mrs. Jerry "Jean" Sansbury of Hartsville; two sisters, Mrs. Elias Skovron of Nashville, Tenn. and Mrs. Mary Hendericks of North Charleston, and two grandchildren.

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