

The
Camellia
Journal

AN OFFICIAL PUBLICATION OF THE AMERICAN CAMELLIA SOCIETY
VOL. 15 NO. 2 MARCH, 1964



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President's Message

Elsewhere in this issue of the *Camellia Journal* will be found an account of the splendid entertainment provided by our hosts, the Jackson Camellia Society. Certainly no finer show and entertainment have been provided for the enjoyment of the members of our wonderful organization. Capt. J. H. Brooks, Convention Chairman, Thurman L. Pitts, President of the Jackson Camellia Society, Show Chairman J. Harvey Johnston, Sr., ACS State Director Fred W. Johnson, their wives and the various committee members, made this an outstanding Annual meeting.

Special thanks go to Governor and Mrs. Paul B. Johnson, who although just inaugurated as Governor of the sovereign state of Mississippi and with the legislature in session gave a reception for ACS members in the magnificent and historic Executive Mansion.

We are deeply grateful to everyone for the splendid hospitality which made the 19th Annual meeting in Jackson an outstanding success.

AUBREY C. HARRIS,
President.

—ACS—

Committees Appointed for Interim Period— February-November, 1964

Membership: Dr. Chester Kitchens,
Al Dekker, William Kemp.

Sources of Species: Maynard
Munger.

Hybrid Stud Book: Dr. P. L.
Hilsman.

Exhibitions and Awards: Milo
Rowell, Chairman, Mark Cannon,
Dr. Habel, Caryll Pitkin

Finance Committee: Spencer
Walden, Chairman, T. J. Smith,
Joseph H. Pyron, C. E. Sharpe

Publications: Dr. W. F. Mathis,
Chairman, Woodford Harrison,
Clay B. Foreman, Horace Smith

Varietal Registrations: Ernest Judice

Nomenclature: Mrs. Jessie Katz,
Mark Cannon

Charter & By-Laws: Charles R.
Butler, Spencer Walden

*Convention Committee for Annual
Meeting:* Fred Johnson, Mrs.

Doris Freeman, Herbert Benson

Fall Meeting Committee: Ernest
Judice, Chairman, Horace Smith

Slide Committee: C. E. Sharpe

—ACS—

Our Cover Girl

The beautiful and wistful young lady on our cover is Miss Sharon Gerhart, aged 7, daughter of Mr. & Mrs. Tibertius Gerhart of New Orleans. She is posing with camellias grown outside by ACS Louisiana

State Director Ernest Judice at his LaCombe home. The photo was made by G. E. Arnold and is used by special permission of Editor Warren C. Ogden of the *New Orleans Times-Picayune Dixie Roto Magazine*. The cost of the color separations was sponsored by Mr. Judice. The Fall meeting of the American Camellia Society will be held in New Orleans, November 12, 13, 14, 1964, with the Men's Camellia Club of New Orleans as host. Headquarters and show will be at the Roosevelt Hotel. More on plans in July *Camellia Journal*.

Photo by G. E. Arnold, *Dixie Roto Magazine*, copyright, 1964, Times-Picayune Publishing Corporation.



Our Cover Girl—Miss Sharon Gerhart

Charles R. Butler, President Elect

Charles R. Butler, Mobile, Alabama, presently ACS Alabama State Director, was unanimously elected President-Elect of the American Camellia Society at the meeting of the Board of Directors in Jackson, Miss. on February 13. Mr. Butler will assume office at the Fall meeting in New Orleans, in November. Charlie has served as Chairman of the ACS Board of Directors for several years, also has served on the important Charter and By-Laws Committee and other assignments. A lawyer by profession, he is a Southerner by adoption. We are fortunate to have a president elect of Mr. Butler's caliber.

Fall and Annual Meetings

Fall meeting to be held in New Orleans, November 12, 13, 14, 1964. Men's Camellia Club of New Orleans to be host. Roosevelt Hotel Headquarters. More later.

Annual Meeting in Tallahassee, January 21-24, 1965, with Tallahassee Men's Camellia Club as host.

The Fall Meeting for 1965 will be held in Macon, Georgia, with the Middle Georgia Camellia Society as host.

Annual Meeting in 1966 will be held in Sacramento, Calif. Date to be announced later.

Annual Meeting in 1967 will be held in New Orleans. Date to be announced.

OFFICIAL PUBLICATION OF THE AMERICAN CAMELLIA SOCIETY

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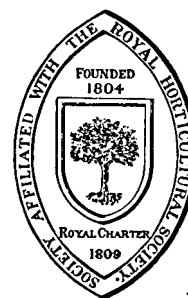
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Annual Members—\$6.00 Sustaining Members—\$12.00; Life Members—\$125.00; Patrons—\$100.00 gift to ACS in addition to Life Membership. Make payment to American Camellia Society, Box 465, Tifton, Georgia.



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President Elect Charles R. Butler, shown in his 180 ft. plastic greenhouse in Mobile

The Camellia Journal

AMERICA'S LARGEST PUBLICATION DEVOTED TO THE GENUS CAMELLIA

Volume 19

Number 2

March, 1964

TABLE OF CONTENTS

	Page
President's Message	1
Committees Appointed for Interim Period	1
Our Cover Girl	1
Charles R. Butler, President Elect	2
Fall and Annual Meetings	2
Some Highlights of Annual Meeting	4
What the Governing Board Accomplished at Annual Meeting	6
Why No Membership Cards?	6
Committees Appointed to Serve Until Fall Meeting	6
Coming in the Journal	6
ZIP	6
"C" Is For Camellia	6
Know These Camellia?	6
Dinner in the Greenhouse	7
Awards	8
How to Determine the Heat Requirements for a Polyethylene Greenhouse	8
One Method of Propagation of Camellias by Rooting Cuttings—Gordon D. Cassels	9
Hold that Bloom—Dr. Lynn B. Stitt	10
The Atlanta Camellia Society—Mrs. Francis L. Edmondson	11
Show Dates	12
Shade Structures	12
Possible Cause and Control of "Bullnosing"—Margorie Washburne	13
Balanced Fertilizers—Charles Lee Keeton	15
New Varieties Registered	18
Minerals, Air and Water—Dr. Edwin Vaughan	19
Additional Show Judges	22
Morality of Gibbing—Frank F. Reed	22
Camellias Seem Almost Human—I. T. Frary	23
Camellia Books	24
Letters to the Editor	24
Fertilizing Camellias at Laurel Lake Gardens and Nursery—J. S. Howard	25
Camellias that Grow in Central Florida Gardens—Ivan Mitchell	28
More Enjoyment of Camellias With Your Startech—Sam M. Zerkowsky	29
Untold Stories About Camellias	30
Why Rooted Cuttings?	31
Unusual Blooms—Dr. I. K. Womack	32

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Some *Highlights* of Annual Meeting

Although the Annual meeting was not scheduled to open until Thursday, members began arriving Tuesday night. By Wednesday a number of members had checked into the King Edward Hotel, our headquarters. This 19th Annual meeting had the best attendance of recent years—well over 300. The Governing Board met Wednesday evening and Thursday morning and disposed of business discussed elsewhere in the Journal.

Our Jackson hosts did everything possible to make our visit enjoyable.

While the Governing Board was in session Thursday morning, early arrivals visited nurseries and private greenhouses.

In spite of a slow rain the bus trip to Vicksburg was most enjoyable. Free entertainment was provided on the buses by Mark Cannon and Harold Cawood. Others contributed their talents to make the 35 mile trip delightful. Guides gave the highlights of the battle of Vicksburg. After a brief tour of the U. S. Waterways

Experiment Station we visited one of the ante bellum houses.

We boarded the huge paddle wheel showboat SPRAGUE anchored in the Yazoo River. Here delicious hors d'oeuvres and drinks were served prior to the sumptuous dinner of hush-puppies and catfish, turkey, ham and salads. Never were so many shrimp consumed by so many in so short a time. A tasty and unusual curry powder dip accompanied the shrimp.

Although this was out of season for the showboat's presentation of the old fashioned melodrama "Gold in the Hills", a special command performance was presented. The plot thickened when the villain seemed to get the upper hand. But right triumphed, Little Nell returned from the wicked city and the villain's mortgage on the old farm was not foreclosed after all, thanks to the pure but dumb hero.

Friday morning we visited the extensive and beautiful Mynelle's Garden (Haywood) and Brent's Nursery. Upon returning to the hotel



Dr. J. M. Habel, Jr., Suffolk, Virginia,
New Virginia State Director

slides of new varieties were shown and a demonstration in corsage making was conducted by Mr. & Mrs. Dennis Videll of Memphis.

The interesting old Capitol was next on the itinerary. This old building, an architectural masterpiece, has been handsomely restored. We then went to the reception at the nearby Governor's Mansion. The charming first



The magnificent Jackson Camellia Show in lobby of First National Bank. (Photo by James Ishee.)



Dr. W. F. Mathis, Moultrie, Ga.,
New Director-at-Large



Judges voting for best flower and court of honor. Jackson show.

lady, Mrs. Paul B. Johnson received her guests with President and Mrs. Aubrey Harris also in the receiving line.

Friday evening Col. Frank Reed of Pasadena, California, discussed "Early Blooms with Gibberellic Acid". The Colonel is a pioneer in research on gibbing.

Jackson staged the finest camellia show ever in the lobby of the First National Bank. Gibbed and ungibbed blooms from the Gulf Coast, Birmingham, Shreveport and other cities. It was good to see our old favorite 'DONCKELARI' win best in show. The twenty flowers selected for the court

of honor were probably the finest collection of camellias ever seen anywhere.

Saturday evening at the annual banquet we were entertained by a superbly trained high school chorus. President Harris presented the awards mentioned elsewhere in this issue, introduced our President Elect Charles Butler and Mr. and Mrs. Reginald Try of St. Leonard's Hill, Windsor, England, who flew over especially to attend the annual meeting.

Dr. William S. Stewart of the Los Angeles Arboretum spoke on the important camellia research being conducted there by the Camellia Research Advisory Committee. Camellias with a delightful fragrance, yellow camellias, possibly blue, cold hardy hybrids and varieties are now a definite possibility.

The end of such a delightful meeting is always sad. Many old friendships were renewed and a number of new friendships were made. Anyone who has not attended an ACS Annual or Fall meeting is missing a great experience. Those reluctant to depart remained over Sunday morning to visit other greenhouses.

Thanks, Jackson Camellia Society, for a wonderful meeting. This set a high standard which will be difficult for subsequent ones to attain.



Mr. and Mrs. Reginald Try of Windsor, England, who came over especially to attend ACS Annual Meeting.



Receiving line at Governor's Mansion, (Left to right) Mrs. J. S. McIlwain, Chairman of the Reception; Mrs. Paul Johnson, wife of the new Governor of Mississippi; President and Mrs. Aubrey Harris; ACS Director and Mrs. Fred Johnson; Jackson Camellia Society President Thurman and Mrs. Pitts; Mrs. Brooks and Capt. J. H. Brooks.

What the Governing Board Accomplished at Annual Meeting

Charter and election By-Laws were changed so as to elect a president at the Annual meeting to be installed at the Fall meeting. This will enable the president elect some eight or nine months to plan his program and appoint committees. In the past the newly elected president has assumed office immediately and has operated under a budget established by the outgoing administration and has had to hurriedly appoint committees and undertake a program toward the end of the camellia season. This change was unaimously approved. President Harris' term of office was extended to the Fall meeting at which time President Elect Charles R. Butler will be installed.

Al H. Dekker of Glendale, Calif., was elected to the Vice Presidency from the Pacific Coast to succeed Al Parker whose term of office expired. Spencer Walden, Jr., of Albany, Georgia, was elected Chairman of the Board of Directors. New Directors installed following their election by the membership in the states or territories covered are: Dr. W. F. Mathis, Moultrie, Gorgia, Director-at-Large for Atlantic Coast; Clay B. Foreman, Elizabeth City, N. C.; Herbert L. Benson, Columbia, S. C.; Dr. J. M. Habel, Jr., Suffolk, Va. They will serve three year terms.

Some changes in rules concerning chemically treated seedlings will be published later.

—ACS—

Why No Membership Cards?

We have received several inquiries as to why no small billfold size membership cards are being issued this year. The postcard size acknowledgment of dues with membership number is being sent in lieu of a form letter and the smaller card formerly used. This saves on printing cost, postage and clerical costs. The old method cost about 15¢ per member. The card method cut this to about 5¢.

This past year due to severe freezes throughout all camellia growing sec-

tions our membership dropped by some 500. Rather than cut the quality of our publications, every possible economy was used not only to maintain but to improve our high standards and yet operate in the black. We did both. This was one of them—Maybe we were wrong.

Next year we plan to issue billfold size again despite higher cost.

—ACS—

Committees Appointed by President Harris to Serve Until Fall Meeting, November 14, 1964

EXHIBITIONS AND AWARDS:

Milo E. Rowel, *Chairman*
Mark S. Cannon
Dr. J. M. Habel, Jr.
Caryll W. Pitkin

FINANCE:

Spencer C. Walden, Jr., *Chairman*
T. J. Smith
C. E. Sharpe
J. H. Pyron

CHARTER AND BY-LAWS:

Charles R. Butler
Spencer C. Walden, Jr.

PUBLICATIONS:

Dr. W. F. Mathis
Woodford F. Harrison
Clay B. Foreman
J. H. Pyron

NOMENCLATURE:

Mrs. Jessie Katz
Mark S. Cannon

VARIETAL REGISTRATIONS:

Ernest A. Judice

MEMBERSHIP:

Albert H. Dekker
William P. Kemp
Dr. Chester Kitchens

SPECIES:

Maynard Munger

HYBRID STUD BOOK:

Dr. P. L. Hilsman

ANNUAL MEETING:

Fred W. Johnson
Herbert L. Benson
Mrs. John Freeman
Payne Midyette

FALL MEETING:

Ernest A. Judice
Horace N. Smith

SLIDE COMMITTEE:

C. E. Sharpe
Russel Gainer

PLANS FOR NEW MOVIE:

Fred W. Johnson
Herbert L. Benson

Coming in the Journal

Recommended Greenhouse varieties—Hody Wilson.

Camellias in warm climate.

Show summaries.

Summer care of plants.

Tally of best varieties in shows.

More Gib findings.

Other special and regular features.

—ACS—

ZIP

If your ZIP code number does not appear on your address label please send it to us. This will speed up your receiving the Journal. If your address has or is to change please notify us. Publications are not forwarded by the Post Office but are destroyed. The Postmaster then charges us 10¢ for notification of your new address and it is necessary to send you a new Journal.

—ACS—

"C" Is For Camellia

Tifton has a brand new Post Office and we have a new larger box. Our mail has increased to the point that we needed a much larger one. Fortunately, we were able to select Box "C"—easy to remember—"C" for Camellia. We are keeping our old Box 465 also for the time being until everyone is notified of the new box.

—ACS—

Know These Camellias?

'BERTHA HAMILTON'
'BEULAH ALPINE'
'CAROLYN COLEMAN'
'GOLDEN AGE'
'GORGEIOUS'
'GUS ROBERTS'
'KATHY FISCUS'
'VIRGINIA PARRISH'

We need to know the description (size, shape, color), whether a seedling or sport, who originated them and where? We would like slides if available.

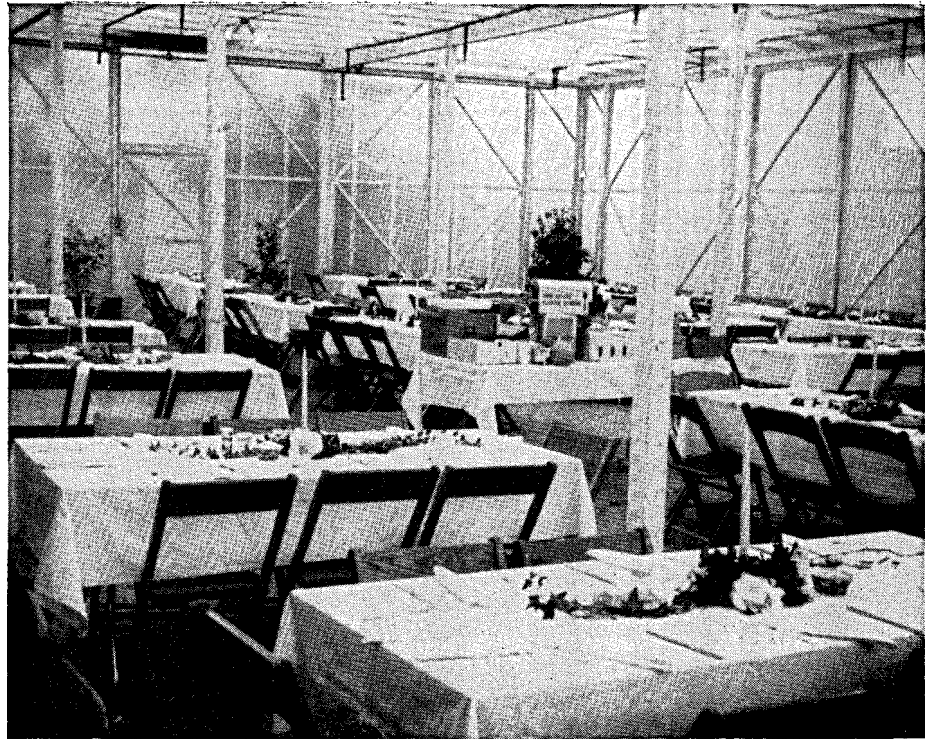
Registration is now free. This insures the protection of the name from being used by others. Free publication in the *Camellia Journal* and *Yearbook* is excellent publicity for those to be introduced. It's worthy of introduction it is worth registering.

Dinner in the Greenhouse

Georgia Camellia enthusiasts had a unique experience on February 19th when a joint meeting of the Georgia Camellia Society and the South Georgia Camellia Society was held in Spencer Walden's new greenhouse in Albany.

Dinner was served to 265 members of the two societies in the newest of Spencer's four greenhouses. Except for a few 'TOMORROW'S DAWN' left in the house all others were moved out to make room for the tables and guests.

Upon arriving the guests were served coffee, toasted pecans and cookies in the largest house which was filled with the most spectacular blooms imaginable. Many of the blooms had been gibbed at intervals



Dinner in Spencer Walden's Greenhouse

so there had been a profusion of huge, fine flowers from early Fall through the season.

Near the entrance several large

plants of 'C. M. WILSON' in full bloom, certainly a sight not to be forgotten. Another old favorite 'FRANCES McLANAHAN' (sport of 'LADY VAN SITTART') is spectacular when gibbed. Many old timers are staging a comeback with this treatment. There were magnificent 'TOMORROWS', 'TOMORROW'S DAWNS', 'HELEN KS', 'VILLES', 'LADY KAYS', 'KING SIZE VARIEGATEDS', and other new and old varieties.

Walden's Camellia Farms greenhouses are directly on busy Highway 82 which runs from Savannah to Lubbock, Texas, where it branches and changes numbers on to the West Coast. Thousands of tourists pass this route and many are availing themselves of Spencer's welcome sign to visit his camellia greenhouses. The huge houses are well lighted to visitors even stopping at night. Albany is only 40 miles on US 82 from Tifton, our headquarters, where the Georgia Coastal Plain Experiment Station has one of the finest outdoor camellia gardens in the country. Here US 82 crosses even busier Interstate 75 which will eventually run from Chicago and connect with the Sunshine Parkway to Miami. This important traffic artery is open from



New officers of the Georgia Camellia Society installed at its joint meeting with South Georgia Camellia Society in Spencer Walden's Greenhouse. L. Spencer Walden, past president; Terrell Weaver, Macon, President; and J. A. Blissett, Avondale Estates, treasurer. Blissett is also president of the North Georgia Camellia Society of Atlanta and is Comptroller of the University System of Georgia. (Photo by Louise Whiting, Albany Herald.)



Mrs. T. U. Hill (Left), of Tifton, well known camellia judge and also garden club leader, and Mrs. W. J. Boswell of Albany, president of the South Georgia Arrangement Judges Council at the Greenhouse camellia dinner.

Perry, Georgia (near Mr. Strother's famous Massee Lane Camellia Gardens) to Lake City, Florida. Thus three very fine camellia collections forming a triangle can easily be reached on fine highways by hundreds of thousands of tourists who pass this way. The Georgia Tourist Bureau should acquaint tourists with these outstanding attractions.

—ACS—

Awards

Illges—'CARTER'S SUNBURST'

The coveted Illges Medal for *Camellia japonica* seedlings was awarded to 'CARTER'S SUNBURST'. The very pale pink striped with deeper pink loose semidouble flowers sometimes are peony form to formal. Even without chemical treatment the flowers are often 5½ inches in diameter. This fine seedling was originated by the late E. H. Carter, Monterey Park, California. Of unknown parentage, it first flowered in 1951.

Sewell—'TOMORROW'S DAWN'

The new Sewell Mutant Award was given for 'TOMORROW'S DAWN' which sported simultaneously from the same

'TOMORROW' plant on grafts made by L. W. Ruffin, Jr., and R. E. Allums of Ellisville, Mississippi. It will be remembered that 'TOMORROW' originated as a seedling by Mrs. Ross Hayes of Tick Tock Nursery, Thomasville, Georgia, won the Illges Medal in 1957, thus 'TOMORROW' is the first to win both awards. The soft pink loose semidouble flower shades out to a pure white border and has an occasional deeper pink stripe.

Peer—'Miss Ed'

The Ralph Peer Sasanqua Seedling Award went to 'Miss Ed', originated by Mrs. T. K. McKnight of Baton Rouge, Louisiana. The flower is a light pink with deeper pink and lavender tints, 2 to 3 inches in diameter. Introduced in 1958.

No Harris Hybrid Award was given this year.

SASANQUA CERTIFICATES AUTHORIZED

Since many more Fall shows are being scheduled, a need has developed for *C. sasanqua* provisional highly commended seedling certificates and best in show sasanqua certificates. These two certificates were authorized at the recent meeting

of the ACS Governing Board in Jackson.

—ACS—

How to Determine the Heat Requirements for a Polyethylene Greenhouse

Polyethylene greenhouses should be constructed so that a double layer of Polyethylene is used, preferably a 2-mil Polyethylene as the inside covering and a 4-mil for the outside covering. These coverings should not be over two inches apart. If they are spaced more than two inches apart the insulating effect is retarded. This is due to the fact that this greater distance lends itself to circulation within the void, thus minimizing the insulating effect.

Research work done recently at Cornell University by Sheldrake and Langhans indicates that for a single layer greenhouse, 14,000 BTU's of heat input are needed for each 1,000 square feet of exposed surface area for each 10 degrees difference to be maintained between inside and outside. For a double layer house, properly constructed, the figure is just under 10,000 BTU's. Therefore, to calculate your requirements, find out the coldest expected day during the period you will be operating, figure the number of square feet of surface area (top, sides and ends) and apply the above information.

Example: House size—8,000 square feet (outside surface area):

Desired inside temperature—

60 degrees F

Coldest night 10 degrees F

Temperature difference .50 degrees F

Single House: 14,000 x 8 x 5 —

560,000 BTU/Hr. output

Double House: 10,000 x 8 x 5 —

400,000 BTU/Hr. output

—Cooperative Extension Service,
U. of Ga. College of
Agriculture and USDA.

—ACS—

They say that Dr. Jack Davis' success in growing big beautiful blooms is due to his dental experience in saying to them "open wider, wider."

One Method of Propagation of Camellias by Rooting Cuttings

GORDON B. CASSELS
Pensacola, Florida

First let us consider some reasons why we should try to propagate camellias by rooting cuttings.

1. To increase varieties you already have that you like, for your own yard or to give to friends.

2. To raise your own grafting stock, for economy reasons or because of the fact that some varieties are easier to graft.

3. To keep a scion alive for later uses; you may obtain several scions of the same variety and graft one, then root the others so if your graft does not succeed you would still have a scion left. This is as good a way as any to keep a scion alive indefinitely.

4. It is a good idea to put in some cuttings of your expensive grafted plants just in case they curl up their toes and die, as they have been known to do, especially with the freezes we have been having.

5. If you do suffer from a severe freeze in your area by all means put in cuttings of your valuable container grown plants as you can save that variety. Your new seedlings that have not bloomed yet should be protected like this. All too often the original dies.

6. To raise a variety that you do not already have. For example, someone gives you a flower you like, root it!

7. To experiment with different types of rooting media. I found out you need a greenhouse for this. I lost most of my cuttings with which I was making this experiment this year.

8. And last, just for the pure fun of raising plants and observing how they grow, You are God's helper, and you cannot help but see Him in camellias.

What is a cutting? It is a tip of a branch of last year's growth. Yes,

older wood may root eventually but it will take a lot longer so why use it. Leave two to four leaves on the cutting; I personally prefer three. Cut at a 45 degree angle to give you more area of the cambium layer exposed. When the cutting is placed in the rooting medium the cambium will continue to grow and form a callous mass over the scar and from this callous roots will go out and down.

What is the rooting medium? You can use sand, sand mixed with peat moss, sand and dirt, or plain old dirt. I guess this is heresy, but I prefer rich dirt. If you space the cuttings a little farther apart than usual, you can leave them in the box all summer and they will grow well enough to go right into gallon cans in the fall.

Cuttings can be put in any time of year that the wood has hardened enough to break when bent. I get a wooden box from a grocery store about six inches in height and oblong, such as fruit and vegetables come in. It already has cracks in it for drainage which I protect by placing gravel or pine straw in and then filling with dirt which I wet well and tamp down with a brick. I have found the little plastic markers on which you write with a pencil to be very satisfactory. Beware of the wooden markers as they will not last. I use Rootone and pour it in a small can and place a large nail in can. Then I get my first variety of cutting, prepare and place marker in front. I make holes in the sand with nail, dip cutting in Rootone, shake off excess and place in hole, then firm dirt down around cutting so it will be up against the cut end. I know everything behind this marker will be of this variety till I reach the next marker. I do this in a shady place. Next or sometimes in advance I get four metal clothes hangers and

cut the hook off and bend to form an arch. I place three across the short side and one across the long side in the middle. I have a large plastic bag ready, one such as comes from the laundry or dry cleaners over a dress, suit, etc. You can purchase better ones if you like from the cleaners for about 25¢ each. I save them up during the year for this purpose. Next, I water box again, let drain and then place bag around the box. This is a little tricky job for one man but can be done. Face wind direction and lift one end of the box up and slip as much as you can of the bag on, then lower and raise the other end and work bag carefully over the box. When on, roll the ends up and fasten with clothespins. Be sure to leave the box in a shady spot where the direct sun never hits it. I set them up on a couple of bricks under an oak tree. The moisture can not escape from the bag and continually forms droplets on the inside which roll back to the dirt. In effect you have a miniature greenhouse. Cuttings put in like this in July will last with no further attention whatsoever until next April and May. When the new growth reaches the top and touches the plastic it is best to take the plastic off as mildew or fungus seems to attack them then. I have never noticed any fungus except on the leaves which touch the plastic. If a small hole or two develops in the plastic it doesn't hurt anything. Before winter is over there probably will be some. Plants fixed in this manner will even stand some freezing and in the nine degree weather we had this winter 90% of my cuttings like this came through safely. As I said before, you can leave these cuttings to grow until fall and then transplant to gallon cans. I use a beer can opener wedged into a

piece of pipe with an angle screwed on the bottom end. Hold your can in your left hand and take the point of the opener and scratch the paper cover from top to bottom and it comes right off. Then punch four or five holes on the side at the bottom of can. You will find that the six-inch handle on the opener makes it very easy to make the holes.

When I transplant into container in May I use different size cans according to the size of the root system. I save up food cans in size 303, No. 2, coffee cans, quart oil cans, gallon food cans I get from restaurants, egg cans I get from bakeries and five gallon lard cans. Each year or two according to how the plants grow and according to the actual size of the root system, I transplant up to the correct size can. I use a mixture of sand, peat moss or stump ash or sawdust, manure and oak leaves. The important thing is to be sure to leave three inches at the top of the can for a mulch. It is much easier to water then as otherwise it will run off. Growing camellias is so much fun I think everybody should do it.

Hold That Bloom

DR. LYNN B. STITT, Dallas, Texas

Here is a little idea I hope will be found worthy of passing along—might be entitled—Hold That Bloom or Togetherness.

For some time a search has been made, and ideas tried, to find a better method to secure a Camellia Bloom to its own wood. In a discussion of methods used to hold bloom and stem together, a Florist mentioned the process of passing a thin wire through a bloom was called sewing.

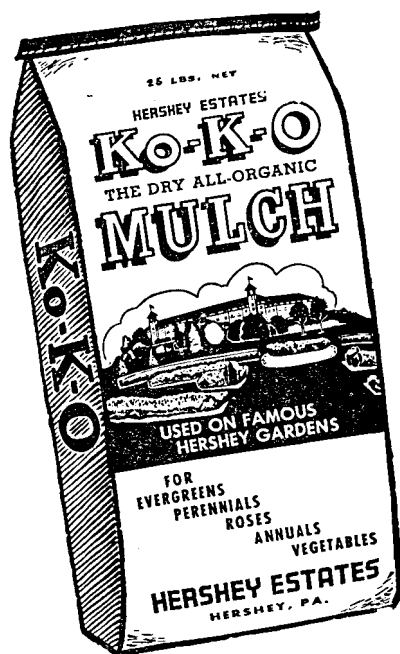
The word sewing brought to mind needle and thread. A curved needle would go into one side of the base of the bloom deep enough to grasp the toughened base of the petals and pass out the other side of the base. A large, tapered point, one-half circle, Surgeon's needle was purchased and found adequate for the larger blooms. Experimentation showed different sized needles should be used for different sized blooms.

Thread was first used, gave way to dental floss and was discarded for dental tape, which was found to be

best. As the needle and tape are pulled through the bloom it is best to pull through only enough tape to make a tie and after removing the needle a simple square knot can be used to secure over the wood. Pulling extra lengths of tape through the bloom might lead to unnecessary bruising. Rethreading the needle is easy with the waxed tape and large eyed needle. For additional retention extra ties may be made from different angles.

—ACS—

Maynard Munger, Pacific Coast Director, tells this one on himself. An itinerant peddler comes around several times a year making embossed key identification tags. Maynard decided these would be ideal for labels for his plants. He gave the old man a list of twelve names: 'BETTY SHEFFELD', 'ETHEL DAVIS', 'MADAME HAHN' and others. The old man gave Maynard a knowing wink and said "You really know the ladies, don't you?" Maynard hastened to explain that these were names of camellias. Nevertheless, the old man looked at him dubiously and smiled.



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The Atlanta Camellia Society

MRS. FRANCIS L. EDMONDSON, *President*

The Atlanta Camellia Society was organized in November 1942, by Mr. Eugene Schofield Heath, with Mrs. Fletcher Pearson Crown as a co-worker. Three or four meetings were held during camellia season at Wooding's Cafeteria on Marietta Street until 1944. Then, through the courtesy of Rich's, with whom Mrs. Crown was at that time associated as Garden Consultant, invitations were issued to a luncheon at Rich's on December 1, 1944. The invitations were sent to a list of people known to be interested in the culture of Camellias. The luncheon was well attended, with many people bringing beautiful blossoms. Rich's presented each guest with a beautiful brochure which had been prepared from a paper written by Robert B. Wilby. There was much enthusiasm exhibited at the meeting. Mr. Heath was asked to serve as Director, and it was decided to have regular meetings during the camellia season. It was not felt that any formal organization was necessary at that time. Some of the meetings were luncheon meetings, some were in the evening. Many enjoyable trips were made to visit camellia collections and gardens. Interest was maintained and increased in the following years, largely due to Mr. Heath, who continued to act as Director until the early part of 1949, at which time regular officers, including a President, Vice-President, Secretary and Treasurer, were elected.

From 1942 until 1949, the Atlanta Camellia Society met informally in some of Atlanta's most distinctive homes and gardens, including those of Dr. and Mrs. F. Phinizy Calhoun, Sr., Mr. and Mrs. Samuel C. Porter, Mrs. Frank Fleming and Miss Nellie Hightower, and Mrs. John Sanford.

Then, on February 15th, 1949, the Atlanta Camellia Society met in Davison's Tea Room with Miss Nellie Hightower, the first President, presiding. Other officers serving with our beloved "Miss Nellie", were Philip Shutze, Vice-President; Mrs. Erwin

Catts, Secretary; and Mrs. J. R. Dunn, Treasurer.

Mr. Eugene Heath, who had served so devotedly as Director of the group up to this time was made an Honorary Life Member of the Society.

Hal Hentz was much a part of the group in these early days, often presenting programs as speaker or showing his magnificent slides. Claud Harold Bishop, Sr., of Sears-Roebuck Company, also lent much active support.

The Membership Roster reveals many illustrious Atlanta citizens—the late R. B. Wilby and Ed Wight among them.

The late Mrs. Laurie Davis Webster, the effervescent and devoted spirit behind Atlanta's first Camellia Show, presented in 1945, continued her tenure until 1955. Under her indomitable force, Shows were held consecutively (even on February 15th, 1951, after the disastrous "Freeze of '50"). Interest mounted as did the improvements for the garden at Eggleston Memorial Hospital for Children, for which all the proceeds were given. The Eggleston Hos-

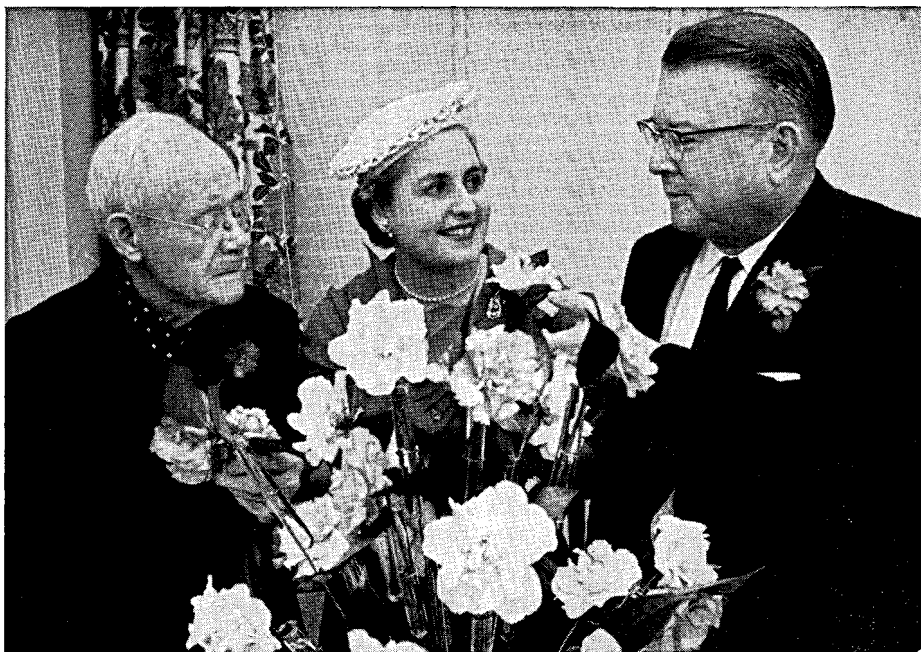
pital Auxiliary was active in all aspects of the Show.

Philip Shutze, a member, also of the famed architectural firm and colleague of the late Neal Reid, was the creator and producer of the most beautiful background scenes ever exhibited at any Flower Shows held anywhere in the South.

Mrs. Phinizy Calhoun, Sr., and Mr. and Mrs. Samuel C. Porter were camellia growers of great distinction, lending support and enthusiasm.

In October 1953, the gavel, presently in use, was presented by Mrs. F. Phinizy Calhoun, Sr., to the Society. The wood came from a camellia plant of Mrs. Calhoun's—A sasanqua considered dead as a result of the freeze of '50, but sprouted from its old roots into a thriving camellia plant.

Others who have served successively as Presidents after the illustrious leadership of Mr. Heath and Miss Hightower are: Mrs. Erwin Catts, Mrs. J. R. Dunn, Mrs. Carl Good (the late), Mrs. E. Fay Pearce, Mrs. J. Ben Kilbride, and Mrs. Francis L. Edmondson.



Mr. Eugene Schofield Heath, former President; Mrs. Francis Edmondson, President of the Atlanta Camellia Society and ACS Secretary Pyron at meeting of Atlanta Camellia Society. (Courtesy Atlanta Journal-Constitution.)

SHOW DATES

Place and Sponsor

Date

Elizabeth City, North Carolina, The Men's Horticultural Society.....	March 21-22, 1964
Norfolk, Virginia, Virginia Camellia Society.....	March 28-29, 1964
Richmond, Virginia, The Richmond Camellia Society.....	April 4-5, 1964
Baltimore, Maryland, Pioneer Camellia Society of Maryland.....	April 10-11, 1964
Washington, D. C., Camellia Society of the Potomac Valley.....	April 17-18, 1964
New Orleans, Louisiana, Gulf Coast Camellia Society.....	January 9-10, 1965
Tallahassee, Florida, Tallahassee Men's Camellia and Garden Club in connection with ACS Annual meeting.....	January 21-24, 1965
Liberty, Texas, Atascosito Camellia Society.....	February 6-7, 1965
Savannah, Georgia, Men's Garden Club of Savannah.....	February 6-7, 1965
Slidell, Louisiana, Ozone Camellia Club.....	February 6-7, 1965
Gulfport, Mississippi, Gulfport Men's Camellia Society.....	February 13-14, 1965
Mobile, Alabama, Men's Camellia Club of Mobile, Inc.....	February 13-14, 1965
Thomasville, Georgia, Thomasville Garden Club, Inc.....	February 13-14, 1965
Kilgore, Texas, Kilgore Camellia Society.....	February 21, 1965
Wilmington, N. C., Tidewater Camellia Club.....	February 27-28, 1965

Shade Structures

One of the requisites for growing fine camellias either inside or outside is partial shade. In their native habitat camellias usually grow as an understory with a protecting canopy of taller trees. We must simulate this shade, yet allow filtered light or alternate patterns of light and shade

on the foliage. Pines and certain other trees make an ideal canopy.

Shade or filtered light may be provided in several ways. Fiberglass or other cloth, especially plastic screen such as 50% shade Saran is effective.

Probably the most satisfactory type of shade is provided by woven redwood lath. Redwood lasts indefinitely

and is bound with galvanized wire. This strong material is able to withstand the weight of snow and is not ripped off by high winds. This material is similar to snow fencing used along highways in cold climates. This provides about 50% shade and conserves moisture. Redwood woven lath also serves as a windbreak in protecting plants from being whipped and bruised by high winds.

A shade structure need not be unsightly. If well planned it can be an asset to your garden. The Journal will be interested in photographs of attractive shade structures.

General Specifications for Building a Lath House

Have your post and stringers 10 feet square. Your post should be 3"x3"x10' long or 4"x4"x10' long. Put your post 2 feet in the ground which will give you a net height of 7½ feet, including 6" header. Use 1"x6" rough for your stringers 10 feet long. Unroll the lath house covering for the top east and west or have your lath pointing north and south. The reason for placing the lath house covering in this position is because the rotation of the sun changes the shade on your plants every ten minutes. As for the sides of your lath house you can run your lath the way that will give you the best protection.

Lath house covering is fabricated in 50-foot rolls, 4 and 6-foot widths, giving you 50 to 60 per cent shade.

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'LUCIOUS LADY'
'GUSTAV GERBING'
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'JUDY MATTHEWS'
'JUDGE MARVIN MANN VAR.'
'HIT PARADE'
'PINK DOVE'
'VELMA GRANTHAM'
'FELICE HARRIS'
'ARTHUR WEISNER'
'I BELIEVE'



WRITE FOR PRICE LIST

Possible Cause and Control of "Bullnosing"

MARJORIE WASHBURN
Port Arthur, Texas

It has been observed that bullnosing usually occurs on varieties of peony form with petals of heavy substance, while semi-doubles with thick petals usually form a long tube when they fail to open. Flowers of the type of 'MARIE BRACEY', 'TOMORROW', and 'DON MAC' may sometimes open, but may be inferior, with under-developed petals and large stamens. 'JOSHUA YOUTZ' will sometimes bullnose and sometimes open only partially, to remain at that stage until it deteriorates with age. Flower forms like 'DRAMA GIRL' and the 'AUDUSSONS' sometimes open into a flared tubular shape, stop developing, and eventually fall. It seems probable that all of these failures to open are due to one and the same thing, that is, the lack of sufficient plant energy to open the flowers.

Many container plants that survived the January, 1962, freeze, appeared in reasonably good condition until it was time for buds to open. Apparently it takes more plant energy to open a large bud than for any other plant function, and if for any reason a plant is in less than prime condition, it may not be evidenced until buds have swelled to the opening stage. Several container plants that failed to open buds the season following our big freeze died after trying to make spring growth, more than a year from the time the damage occurred.

Plants that have a tendency toward late summer growth may have inferior flowers, just as those with too many buds never produce blooms of top quality. During such late growth, it has been observed that already formed buds stop developing until new growth has hardened, indicating that plants cannot sustain new growth and bud development at the same time. Excessive growth is usually accompanied by few, if any, buds, further substantiating that growth and bud development are separate func-

tions, and that when one progresses, the other is to some extent static. An old, twiggy plant will normally set many buds, and if in good health, will open many flowers, none of high quality. Best flowers seem to occur on strong stems, usually on young plants.

Temperatures, as we all know, influence opening of buds. Prolonged

cold will cause varieties to bloom later than usual, while periods of warm, muggy weather following cold of short duration tend to cause rapid opening of flowers. A partially open bud, if arrested by temperatures too low for progress to continue, may deteriorate or bullnose and never open at all.

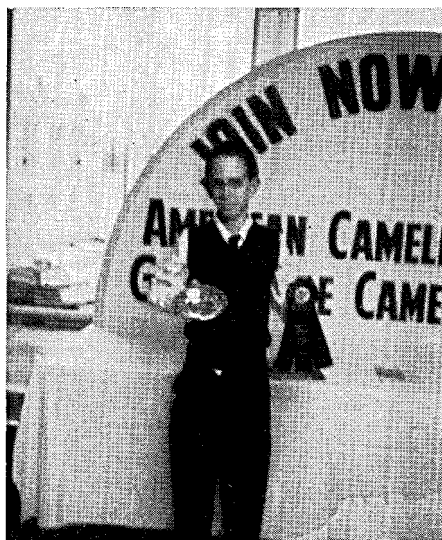
Generally, a strong plant with few buds will make fine flowers. If there is too much strong growth, however, so much of the plant's energy may be channeled into its leaves and branches that not enough is available for flower development. This can be compared to an electrical system with more outlets than the size of the service wire can handle. In such a case the



Mrs. Louis Squyres of Tyler, Texas, in the Squyres' greenhouse with their young son last winter

picture on the TV set will shrink or darken momentarily when the refrigerator motor kicks on; or if the TV and washing machine are operated at the same time a sudden surge of current may cause a fuse to blow. To correct the difficulty, a larger service wire may be installed or fewer appliances operated. So it is with the camellia plant. Too many branches and/or too many buds will demand more energy than is available, with the result that buds will swell for a time, only to have the petals become shiny, dry, and tight. Such a bud continues to expand in the center and becomes a typical "bullnose", or opens into a distorted flower.

These theories relative to failure-to-open began to take shape several years ago in connection with the capricious performance of a 'JOSHUA YOUTZ'. After several successive years when all flowers on this plant bull-nosed, on impulse I pruned some branches. That was during last year's show season, and I was enabled to exhibit several blue ribbon blooms from the plant. So far this year, in



Young Man with first Trophy. Jay Ellis, Jr., at Gainesville Show.

spite of the continued cold, no buds have bullnosed or failed otherwise to open. It would seem that pruning to prevent bullnosing should be done after the plant's urge to grow has been checked by cold weather, as stimulation of new growth would defeat its purpose.

Sometimes the first few buds on

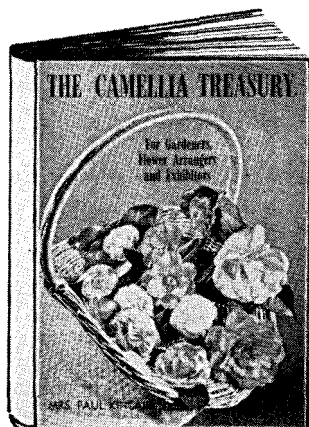
a plant will open normally and beautifully, and later buds will either fail to open or make inferior flowers. Obviously, the plant is just as strong as it was earlier, and it is assumed that whatever the substance is that gives impetus to opening of flowers, it was depleted by the earlier blooms. This condition, too, has been improved by pruning, even after the inferior flowers were open. Perhaps with fewer leaves and branches to support, more of the plant's energy is channeled to the flowers.

There are probably other factors involved in failure-to-open, including low humidity, lack of plant nutrients, exposure to wind, etc. However, I believe most of the difficulty can be traced to condition of the plant, with attention invited to the fact that it is not always possible to judge this from appearance only. With proper attention to plant care and balancing of the top and buds against the root system, it is believed that bullnosing and other types of "failure-to-open" can be controlled to the extent that it will no longer be a major problem.

GARDENERS • FLOWER ARRANGERS • EXHIBITORS

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BY MRS. PAUL KINCAID



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Balanced Fertilizers

CHARLES LEE KEETON, Long Beach, Miss.

Because we have long been advised to use "balanced" fertilizers we fail to recognize the message shouted by the increasingly high percentage of chlorotic leaves on our camellia plants. Or we may even recognize these as symptoms of iron starvation, and by applying chelated iron temporarily decrease chlorosis.

Now, it is high time to hit directly at the cause of most iron starvation and try to prevent it rather than attempt to cure it. And this means that we must for once and all explode the myth of continued use of "balanced" fertilizers for camellias.

The truth is that use of a "balanced" fertilizer (one containing nitrogen, phosphorus and potash) several times a year over a period of very few years will build up an imbalance in your soil.

This imbalance is caused by an accumulation of phosphates which linger on long after the nitrogen and potash are used. Phosphorus is the only one of the three major elements which doesn't leach away even in sand, and it is this unused surplus which attracts the iron in your soil into chemical compounds unusable by the plants.

According to Dr. Walter J. Peevy, agronomist with the Louisiana State University Experiment Station and Extension Service, this is the cause of most of our chlorosis with camellias. With azaleas this is also true, he says, and tells a story about a nurseryman who puts on repeated applications of a "balanced" fertilizer which ties up available iron and then applies chelated iron between fertilizer treatments to relieve the consequent iron starvation. This sounds ridiculous, but many of us growing camellias are caught up in the same vicious circle!

Dr. Peevy's advice is simple and worth the consideration of every ACS member. Basically, here it is: NEVER apply more than one application of a fertilizer containing phosphorus (a "balanced" fertilizer) each year, regardless of your soil type! If you are gardening in sandy soil or in containers and wish to fertilize more often during the season, apply nitrogen (cottonseed meal or ammonia sulphate or some other ammonia) to give the growth you want. If you are getting too much growth, cut down on the nitrogen, for beyond a reasonable point it is just wasted or can do damage.

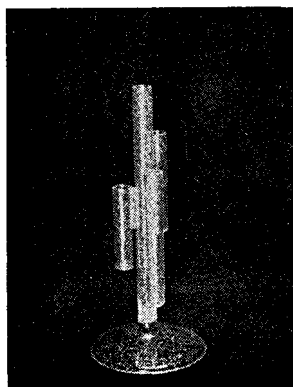
In the fall to make certain that your plants are prepared for both the blooming season and the cold weather, apply muriate of potash (about 60% potash) at the rate of one ounce per square yard if you feel this element is needed. Don't use 0-14-14 for "hardening off" (remember, that middle number is phosphorus which you don't need more of). Dr. Peevy doesn't feel that either phosphorus or potash "harden off" a plant, but he does know that plants not lacking potash are in better shape to stand blooming and cold weather.

As to the quantity of the one ap-

plication of "balanced" fertilizer, Dr. Peevy suggests that one-half cup of 8-8-8 per square yard is sufficient. He advises against the more refined and concentrated fertilizers such as 13-13-13 because he rates the filler in the ordinary fertilizers as an excellent source of minor elements.

Increasing the pH a bit higher than is general in the South will be helpful in keeping minor elements available. Though more iron is available in soil of lower pH, it is also true that surplus phosphorus is then more efficient in locking it in unusable compounds than when the soil is just barely acid, say in the range 6 to 6.5. In this range plants require only about half as much phosphorus as in soils of greater acidity—another reason for cutting down on the phosphorus and increasing the pH. And still another reason for increasing the pH about a point from the generally advised 5.5 is that magnesium is not available below 6. We'd have lots more chlorosis from magnesium starvation if calcium did not have the remarkable ability to substitute for magnesium under certain circumstances. Possible magnesium shortage is most easily remedied by annual application of a teaspoonful of magnesium sulphate to each plant.

Though plants absorb at least 26 elements with about 15 being essential to healthy growth, nature takes care of things fairly well if we but use common sense in our efforts to help. The balance which really counts is "Nature's balance", and we must not upset it by being too generous with phosphorus!



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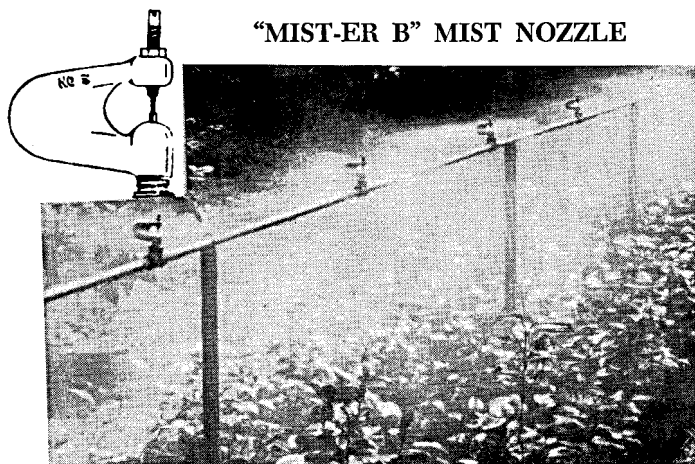
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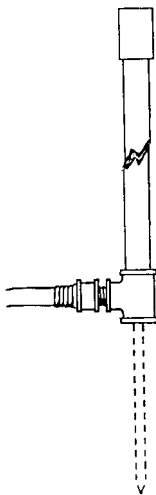
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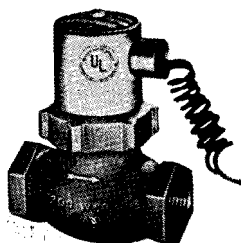


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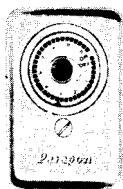
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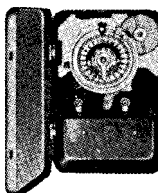
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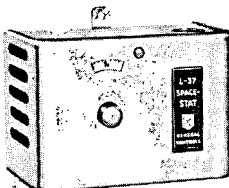
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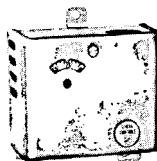
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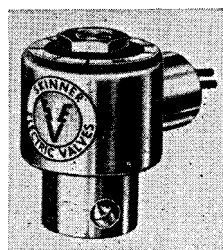
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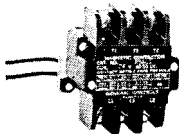
PILOT DUTY THERMOSTAT. Available for heating or cooling. MERCURY SWITCH. Range 15-95. Differential approx. 3°F. Case $2\frac{2}{3} \times 3\frac{1}{2}$ ". Rating 125/60. Specify whether heating or cooling type desired. Price \$14.65.



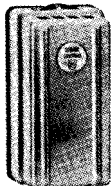
SKINNER MINIATURE SOLENOID VALVE for hobbyist or home gardener. Good for output of 50 gph. Brass body, Stainless steel valve. Good for millions of cycles. Install in any position. WATER-PROOF coils to UL standards. Max pressure 130#. Pipe size (NPTF) $\frac{1}{8}$ "; $\frac{1}{2}$ " NPT conduit housing. 8 watts power consumption. Rating 115/60. Price, including brass bushings and nipples for installing in $\frac{3}{8}$ " line, \$11.95.



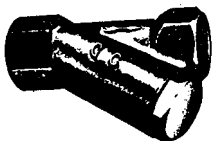
HEAVY DUTY LINE VOLTAGE HEATING THERMOSTAT. For direct control of electric heater for small greenhouses, where relays are not used. Range 40-70°F. Closes circuit on temperature drop. Actuated by sensitive vapor filled bellows. Rating: Heating, 13 amp full load, 78 amp locked rotor at 120v60cy AC. 2-wire installation. Price \$18.95.



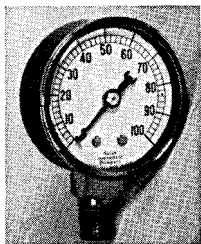
CONTRACTOR—UL approved, low wattage, suitable for use with air conditioning and refrigeration compressors, fans, pumps, blowers, motors, etc. when actuated by pilot duty thermostat. Rating 120/60, 2-pole, double break, 20 amps per pole. Price bare, \$12.95; with heavy grey enameled case, \$15.95.



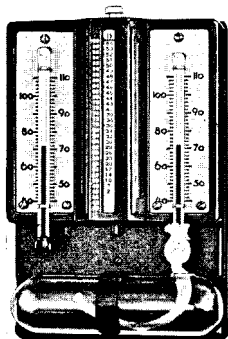
HUMIDISTAT for humidity control. Range 10-100%. Human hair mechanism. Air circulates freely around element. Differential 4% non-adjustable. Contacts SPDT, magnetic snap-action. Rating: Pilot duty 125VA at 120/240v AC. 3-wire control. $2 \times 4 \times 1\frac{1}{2}$ ". Price \$17.95.



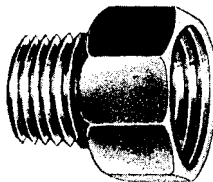
LINE STRAINER—The Best! Protects valve seats and nozzle strainers from grit, trash. Bronze body, 100-mesh MONEL WIRE STRAINER. Strainer and screwed cap joined to facilitate easy removal for inspection and cleaning. Prices: $\frac{3}{8}$ " \$4.75; $\frac{1}{2}$ " \$4.95; $\frac{3}{4}$ " \$8.75; 1" \$13.95; $1\frac{1}{4}$ " \$19.95.



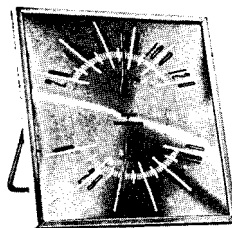
WATER PRESSURE GAUGE Eliminates pressure guesswork. **HEAVY DUTY BRONZE BUSHED MOVEMENT.** Made by Marsh Instrument Co. Glass crystal for easy reading. $\frac{1}{4}$ NPT male bottom connection. Price \$2.80.



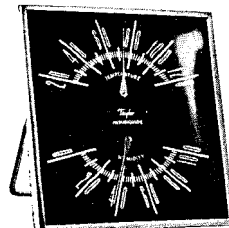
TAYLOR HYGROMETER—Choice of greenhouse owners. Brown plastic case, $5\frac{1}{2} \times 3\frac{3}{4}$ ". Range 40-110°F. Revolving humidity table. Boxed with spare wicks and instructions. Price \$10.00.



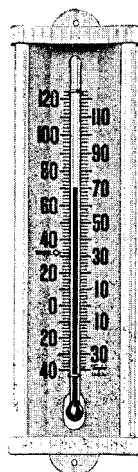
HOSE SPUDS. Wrought brass 2-piece for connecting water hose to stand or propagation line. $\frac{3}{4}$ HT Nut $\times \frac{3}{8}$ " IPT. Price 70¢. Carton of 10 \$6.50.



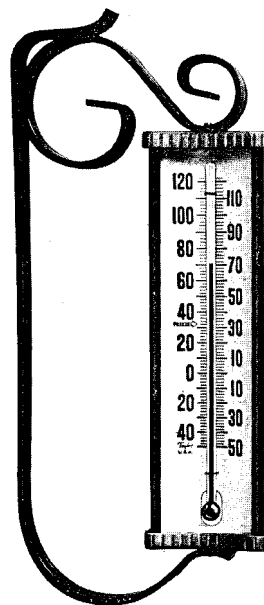
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'THELMA DALE BLUSH' (Reg. No. 753). A sport of 'THELMA DALE' that was first observed in 1957 by Ewell F. Wilkerson, Biloxi, Mississippi. First propagated in 1958 and has bloomed 100% true for four years. Propagated by Frasier's Nursery, Biloxi, Miss., and was introduced commercially in 1962.

Plant growth is same as parent. The semidouble flower, $3\frac{1}{2}$ to $4\frac{1}{2}$ inches in diameter and 2 to 3 inches in depth, is a very pale pink.

'ONE ALONE' (Reg. No. 754). A 12-year old chance seedling that first bloomed in 1957, originated by H. E. Ashby, Charleston, S. C. Introduced commercially in 1961. Plant growth is upright, rapid in rate, and has light green leaves.

The semidouble flower, similar to 'FRIZZLE WHITE', is 5 inches in diameter and 2 inches in depth. Color is blush pink with gold anthers and white filaments. Blooms midseason.

'SHELBY BROTHERS' (Reg. No. 756). A 10-year old chance seedling that first bloomed in 1957, originated by S. L. Brothers, Madison, Florida, and propagated by Hjort's Nursery, Thomasville, Georgia.

Plant growth is upright and spreading, medium in rate, with dark green

leaves averaging $3\frac{1}{4}$ inches in length and $1\frac{1}{4}$ inches in width.

The semidouble flower, similar to 'DONCKELARIJ', is $4\frac{1}{2}$ inches in diameter and $\frac{3}{4}$ inches in depth and has 25 to 28 petals and 2 to 4 petaloids. Color is rose pink with yellow stamens. Heavy bloomer, flower holds good and is long lasting. Blooms December to February.

'BETTY SHEFFIELD CORAL' (Reg. No. 757). A sport of 'BETTY SHEFFIELD' first observed in 1960 by A. P. Hjort of Thomasville, Georgia. Has bloomed 100% true for 2 years on 10 different plants. Commercially introduced in 1963-64 by Thomasville Nurseries, Inc., Thomasville, Georgia.

Plant growth is upright and average, medium in rate, with dark green leaves averaging $3\frac{1}{2}$ inches in length and 2 inches in width.

The semidouble to loose peony form flower is Coral Pink with golden anthers and white filaments. Bush and bloom like parent 'BETTY SHEFFIELD' except for color. Bush has same hardiness as parent. Blooms December to March.

'SNOWMAN' (Reg. No. 758). A six-year old chance seedling that first bloomed in 1961, originated and propagated by Wilmer Stewart,

Savannah, Georgia. Plant growth is upright and spreading, rapid in rate, with dark green leaves averaging 4 inches in length and $1\frac{1}{2}$ inches in width.

The semidouble flower, similar to 'FRIZZLE WHITE', is 6 inches in diameter and 4 inches in depth and has 35 petals and 12 petaloids. Flower is pure white with white filaments and yellow anthers. The inner petals are curled and twisted, showing extremely high center, outer petals being distinctly notched and curving backward in graceful lines. Blooms midseason.

'PINK PAGODA' (Reg. 759). A 10-year old chance seedling of 'PINK STAR', that first bloomed in 1957, originated by Robert D. Moore, Los Gatos, Calif., and is being propagated by Monrovia Nursery Co., Azusa, Calif., for commercial introduction in the Fall of 1965. Patented variety No. 2257.

Plant growth is vigorous, compact and upright.

The formal double flower, $4\frac{1}{2}$ inches in diameter and $1\frac{1}{4}$ inches in depth, is Neyron Rose 623/1, veined, RHCC. Blooms midseason.

'MISS ORLANDO' (Reg. 755). A 7-year old chance seedling that first bloomed in 1960, originated by W. H. Veo, Orlando, Fla. Plant growth is upright and open, medium in rate, with light green leaves averaging 4 inches in length and 1 inch in width.

The formal double flower, $3\frac{1}{2}$ inches in diameter and 1 inch in depth, is blush pink, striped rose, with 80 petals. Petals curve like 'LALLAROOK'. Keeps well when cut; stays on bush real well.

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Minerals, Air and Water

DR. EDWIN VAUGHAN
Greensboro, N. C.

In thinking of a subject to write about, plant nutrition always looms as an intriguing and challenging subject. I chose the title, "Minerals, Air and Water" because these elements, in essence, spell camellia nutrition. I will discuss them in the order given. Minerals come from the soil which is an extremely complex substance. It is composed of (1) inorganic matter derived from the weathering of rock; (2) organic matter derived from decomposed plant life; (3) micro-organisms (and I understand there are more micro-organisms per cubic inch of soil than there are people on this earth); (4) air; (5) water. A typical soil, in the dry state, contains about one-half solid particles and one-half air space. Water occupies the same voids as the air, thus a soil saturated with water contains no air. The function of a good soil is four-fold; it provides anchorage for the plant, aeration for the roots, water, and serves as a custodian for the fifteen nutrients essential to plant growth, namely: carbon, hydrogen, oxygen, nitrogen, phosphorus, potassium, sulfur, calcium, iron, manganese, magnesium, zinc, boron, copper and molybdenum. These elements are all found in the soil and in the presence of moisture can be absorbed by the plant roots, providing the pH of the soil is correct. PH is a symbol used to express hydrogen ion concentration. The pH range is from zero to fourteen with seven being neutral. Any number below seven is acid while numbers above seven are alkalines. PH values are logarithmic in character and each whole number represents ten. This means that a pH of six is ten times more acid than alkaline and a pH of five is one hundred times more acid than alkaline, and so on.

The old saying that camellias need an acid soil has caused trouble for many growers. Year after year we added aluminum sulfate or other acidifying agents to our soil to keep it acid, when most probably our soils had the correct acidity in the be-

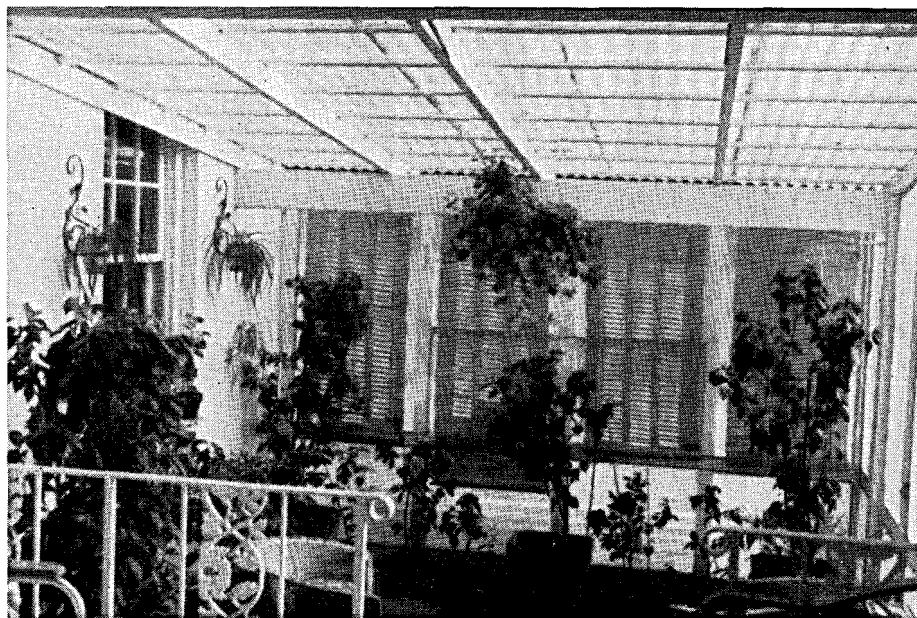
ginning. This may have caused our soils to become too acid and as a result some of the essential mineral elements became tied up in an insoluble state and thus were unavailable to the plant roots. Many of our plants have died from deficiency diseases brought about by too acid a soil. The question then is how acid should the soil be. The ideal pH range for camellias is from 5 to 6.5.

We consider, as available food for plants, those chemicals which are in solution or which are capable of being dissolved under conditions existing at the time. The soil solution, like the soil, is very complex and is constantly undergoing changes due to dissolved and undissolved chemicals present, bacteria, temperature, moisture, drainage and other conditions including the degree of acidity or alkalinity of the soil. When the pH range is 5.5 to 6.5 all essential elements necessary to plant growth and health become available but when the pH drops below 5, plants become deficient in magnesium and

phosphorus and at the same time develop an excess (toxicity) of manganese and aluminum. When the pH is above 7, plants become deficient in manganese and iron and may develop excesses of other elements. As the pH gets lower or higher, most essential elements can be rendered insoluble or unavailable for plant use.

Nitrogen is one of the most important elements the plant extracts from the soil. It is essential for the formation of plant proteins and consequently necessary for cell growth. A deficiency may cause poor growth and a yellowing of the leaves, while an excess may result in poor bud set, poor flower development and excessive twig growth which could cause winter damage to the plant. Nitrogen is the most elusive element of plant food and it is not directly affected by the pH of the soil, remaining soluble at almost any range, however, in an indirect way, nitrogen is affected by the pH because bacteria which convert organic matter into nitrogen work best at a pH range of 6-7.3. Fungi work better at a lower pH and perform some of the same services as bacteria, but less efficiently.

Phosphorus is essential for cell division, thus plant growth and particularly flower, seed and root growth,



BREEZEWAY GREENHOUSE. "This greenhouse was an outgrowth of a breezeway and a trellis over a small flagstone terrace. I put a fiberglass roof over the lath and made removable panels of 1" by 2" covered with 4 mil clear plastic on both sides, providing a dead air space. A small Stewart-Warner space heater keeps the greenhouse at 46° during below zero weather. The cost was quite reasonable as the arbor gave all the support needed. If any of your members have a similar setup I would be glad to send more detailed plans. There are 492 buds on the 26 plants. I have read and re-read the July 1962, *Camellia Journal* on Greenhouse culture." (Paul F. Watkeys, 440 Hartung Drive, Wyckoff, N. J.)

are dependent upon it. A deficiency of phosphorus results in stunted growth with dark, irregularly necrotic leaves, with a tendency to lose the young leaves. It is strongly affected by the pH of the soil, thus when the pH drops below 5, phosphorus combines with iron and other chemicals to form insoluble compounds. When the pH goes above 7.3 it will combine with calcium to form insoluble tri-calcium phosphate.

Potassium is probably most useful as a neutralizer of oxalic acid, a by-

product in the photosynthesis of carbon dioxide and water to glucose. If oxalic acid is allowed to accumulate in the leaves, it becomes toxic to the plant. When potassium is present, it reacts with oxalic acid to form potassium oxalate, a soluble and harmless substance which is readily moved from the leaf cells to the plant stems and there it combines with calcium to form calcium oxalate. This releases the potassium to return to the leaves and repeat the process. Thus a deficiency of potassium may allow toxic

accumulations of oxalic acid within the plant and thus render it more susceptible to diseases, particularly fungus diseases.

Magnesium is an essential element in chlorophyll, the green coloring matter in the foliage. Since chlorophyll is necessary in photosynthesis, a lack of this element may cause a definite malnutrition.

Calcium is a part of the outer wall of plant cells and is the element that gives the cells strength. A deficiency may cause stunted growth. A deficiency of sulfur may also cause stunted growth.

The other elements are known as trace elements since they are needed by the plants only in minute amounts, and they probably act as catalysts in the various processes of oxidation within the plant. Unless iron is present the transfer from potassium to calcium oxalate cannot take place, thus iron acts as a catalyst in the reaction. A catalyst is a substance which helps promote a reaction without itself entering into the chemical reaction.

It is of prime importance to remember that camellias like all plants need a well-balanced diet. Over-fertilizing with one element and using too little of another, may result in improper growth, bud drop, small flowers and winter injury. Indiscriminate use of cotton seed meal and other similar materials high in nitrogen and low in phosphorus and potassium may result in abnormal growth and a weak plant. Most trace elements are found in a good soil; however, some soils may be deficient, therefore a well-balanced fertilizer with trace elements added should solve the problem of a nutritional deficiency, provided the pH of the soil is correct.

Soil, and the elements mentioned, provide only a part of the plant's nutrition. The remainder comes from the sun, the atmosphere and the plant's green leaves in the presence of an adequate supply of water. Numerous photobiological and photochemical processes take place in the green leaves of a plant. These processes or reactions are called photosynthesis, which means putting together in the presence of light. The most important pigment in the leaves is chlorophyll,



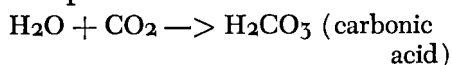
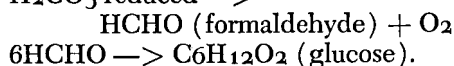
As delicate as a new born baby, as fresh as mountain air, a neophyte plant breaks through the earth and unobtrusively exposes itself for all to behold. ■ Whether it will bear fruits or flowers the time-proved fact remains...its very being will improve the world it has just entered. ■ This miraculous gift from God deserves the very best

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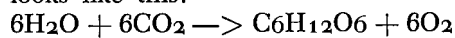


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a substance in the form of small granules (chloroplasts) which gives the green color to the leaves. The word comes from two Greek words: chloros, which means green, and phyllon which means leaf. In the process of photosynthesis, water and carbon dioxide are combined to give glucose. Some of the chemical reactions that take place are as follows:



Written more simply, the formula looks like this:



Oxygen is given off by the leaves through the same pores that carbon dioxide is taken in. Oxalic acid is a by-product in this photosynthetic reaction and has been mentioned previously. The rate of photosynthesis depends upon a number of factors: the availability of water and carbon dioxide, the quantity and nature of the light (about 1/10 intensity of sunlight is best), the temperature 60-100° F is best), and the physiologic state of the chlorophyll and the cell protoplasm. Chlorophyll is a catalyst in this reaction and thus it does not enter into the overall chemical reaction.

A six carbon sugar such as glucose is an excellent source of food and energy. The molecules are small and can be transported from one part of a plant to another easily. In every cell it can be broken down to make energy available for various processes. When glucose builds up in excess in the plant circulation, chemical reactions take place to convert it to starch, an insoluble substance ($\text{C}_6\text{H}_{10}\text{O}_5$) $\times$ which can be easily stored. When the plant needs quick energy again, and if glucose is not readily available, a chemical reaction will convert the starch (by adding water) back into glucose. This process in the camellia plant is called digestion.

The vital organs of a camellia plant are its root system, its vascular system and the leaves. The roots are constantly extending themselves into fresh regions of the soil in search of food and water. The mineral salts and water are absorbed through the

plasma membrane of the root hair cells and carried to the plant tissues and the leaves through zylem tubes, which constitute the upward part of the plant circulation. Glucose and other products of photosynthesis are carried from the leaves downward to the plant tissues through the phloem tubes, the counterpart of the plant circulation. If the concentration of the soil solution builds up in excess of .2% (the concentration of organic substances in the plant sap), then water freely leaves the plant tissues by a reverse osmosis, the plant tissues become dehydrated and the plant dies. This is one explanation of how over-fertilizing a plant can kill it. Ten percent of the water that reaches the leaves by the normal process of osmosis is utilized in the process of photosynthesis, while 90% is given off by the leaves in a process called transpiration.

We have heard repeatedly that camellias are dormant from about October until March, or during the colder months, but this is far from being correct. A camellia plant is not dormant during any season of the year, unless it is dead. This dormancy refers only to growth because as we have already mentioned, photosynthesis takes place almost every day of the year that the sun shines, unless the temperature is extremely low. This continuous process of photosynthesis maintains sugar reserves in the leaves, thus creating an osmotic gradient from the roots to the leaves which promotes a continuous upward flow of water. Some people have tried to ex-

plain the upward flow of water and sap in the camellia plant on a theory of root pressure, while others claim it is due to a transpiration "pull."

When an imbalance exists between the amount of water taken up by the roots and the amount given off by the leaves in transpiration, the plant suffers. Dr. Victor Cutter explained very clearly, in an excellent article entitled "Cold Damage and Winter Killing of Camellias in the Piedmont", how and why we lose some of our plants in the winter. When the ground is frozen to a depth of 3-6 inches and remains so for several days or longer, water is immobilized and thus is unavailable to the plant roots. During the day the sun is shining and the wind is blowing and photosynthesis and transpiration are continuing. The leaves and plant tissues are continuing to lose water and none is being absorbed by the roots. The longer the ground stays frozen, the drier the plant becomes and eventually death will be the result. We may not notice immediately that the plant is sick, but in one to two months it will begin to lose its leaves and in the spring when other plants are beginning to look healthy and putting out new growth, we will realize that the plant which lost its leaves is dead. Most of us will blame the cold winter for the death of our plant, whereas in reality it was not directly due to the cold weather, but due to the fact that water was not available to the plant roots and the plant tissues dried out. No matter how cold it gets during the winter months, if the ground can



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be kept from freezing continuously for a period of several days, then the plant should not die.

Many of us have experienced a similar type thing this past fall when we had very little precipitation for three months. The same processes of photosynthesis and transpiration took place and there was no water in the ground or containers for the roots to absorb unless we watered them sufficiently. I lost several container plants before I realized they had completely dried up.

When you or a nurseryman dig up a plant, many feeder roots are cut. When this plant is transplanted the remaining roots may not be able to absorb as much water as the leaves lose through photosynthesis, evaporation and transpiration, so if the leaves become rubbery or begin to wilt, defoliate some of the leaves and shade the plant. This slows up all the processes of water loss and may help save the plant.

Thus the camellia plant, in some respects, might be likened to the human body: the functioning of its various organs; its need for water; its ability to absorb and then convert raw materials to plant food; the transportation of this food through its vascular system to various parts of the plant where it is needed for quick energy and growth; the storage of excess food and its later digestion; its ability to "breathe"; the development of recognizable deficiency diseases when some essential element is denied the plant; its ability to get sick also from bacterial, viral and fungal diseases; and lastly, but most important, its ability to be a healthy, beautiful evergreen plant when it is properly taken care of.

BIBLIOGRAPHY

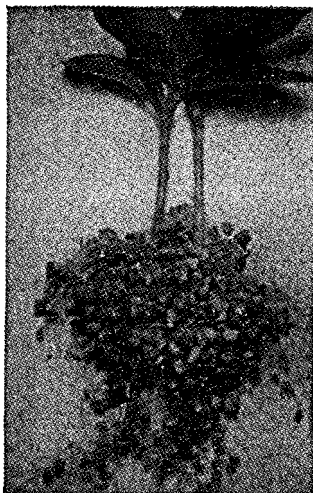
- General Chemistry—Kendall
The Care and Feeding of Garden Plants—
Published by the American Camellia Society for Horticultural Science.
Camellia Culture—Tourje
Chemistry As Applied to the Growing of Camellias—R. A. Merritt—American Camellia Yearbook 1951.
Soil Management and Nutrition of Camellias—W. C. Barnes—American Camellia Yearbook 1957.
Experiments on Camellia Nutrition—James Bonner and Shigora Honda—American Camellia Yearbook 1949.

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—ACS—

Morality of Gibbing

FRANK F. REED
Pasadena, Calif.

Unless there be some conclusive evidence that the use of gibberellins is basically different from numerous time-honored but less effective means of producing fine camellias, the gibbed flowers should not be barred from regular competition.

Camellia folklore and "culture" books are filled with schemes for improving camellias: (a) employment of fertilizers, "foods" and magic mixes; (b) abortive experiments with colchicine; (c) pruning and disbudding to channel growth substances* into the few remaining buds to increase size and quality; (d) use of artificial lights to increase bud set and stimulate flowering; (e) poisoning insects and fungus which could spoil blooms; (f) increasing the life of cut camellias with hormones, humidity, chemicals and refrigeration; (g) and of course, expending a judicious amount of water especially in oases like ours.

Now look at a modern but truly not sacrilegious method: a modicum of gibberellic, the obvious means furnished by Nature, has been eminently successful in stimulating earlier and superior flowers which also have improved keeping qualities. If you must oppose success and efficiency, it is suggested that you take research and development from the masthead of your camellia societies.

* Possibly a gibberellin like substance many of which have recently been identified in young fruit, seed and other plant parts.

Camellias Seem *Almost* Human

I. T. FRARY
Winter Park, Florida

Do you ever have a feeling that your Camellias are trying to talk to you; trying to tell you how much they appreciate what you do for them, or how much they resent neglect? Watch 'em.

Some years ago I added a 'LALLA-rook' to my Camellia family. I gave her a home beside a little lily pool, where the shade and sunshine seemed to be prescribed exactly to her needs. I took care of the rest. She responded, as only a happy Camellia can. She grew and she blossomed likewise.

Several years later, I needed a fine upstanding shrub for an important spot opposite the front door. 'LALLA' was exactly what I wanted. She filled the bill perfectly, so in spite of the fact that it was the hottest part of

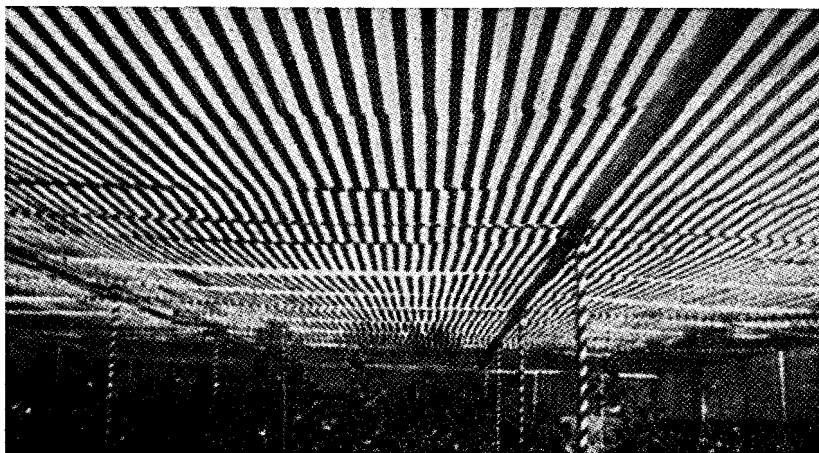
the Florida summer, and a terrifically hot summer at that, my charming shrub was moved.

She just didn't like the idea but she couldn't tell me how she felt, so she began to look sorry for herself. I watered her until I thought she would drown, taking care, of course, not to get the leaves wet when the sun was shining on them.

Then I noticed that the leaves were acquiring a sort of bronze cast. My pet shrub was obviously not happy in her new location, she was pining for the shady nook beside the little pool. Finally, I gave up, decided that there was no sense in trying to make a sunflower of a Camellia, so during another especially hot spell, I trundled her off to another prominent location, this time near the front walk, with

just about the ideal mixture of sun and shade. I watered her generously, but not too much; I swathed her in old newspapers during the sunshine and heat of the days; I sprayed her leaves lightly in the evening. You have noticed probably that your Camellias enjoy a light shower bath after a hot day, but can not endure sprinkling when the sun is looking on.

The result? It was not many weeks before the bronzed leaves began to assume a healthy green color, the bronze faded away, and every morning when I went to say "Good morning," to that Camellia, I could just see her nodding and trying to say, "Thank you, Sir, we Camellias appreciate kind treatment. We are, as you well know, Aristocrats. We do not just appreciate kindness, we demand it. Yet, we can be long suffering!"



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Camellia Books

THE RHODODENDRON AND CAMELLIA YEARBOOK NO. 18— 1964

Edited by Synge and Platt. 156 pages; 4 color plates—59 black and white illustrations. The Royal Horticultural Society, London. \$2.50 postpaid.

Although this Year Book is primarily concerned with Rhododendrons, there are several articles of interest on camellias.

Sir James Horlick discusses "Growing Camellias off the South West Coast of Scotland." The gardens here are exposed to the gales of the Irish Sea. It is thus surprising that camellias grow at all. The writer concludes that it is a waste of time to attempt to grow the species *reticulata*, *sasanqua* and even *Japonica*. Rather he grows *saluenensis* and its *Williamsii* hybrids. This note is of considerable interest to hybridizers seeking to produce cold hardy hybrids. 'ADOLPHE AUDUSSON', 'LADY CLARE', 'DONCKELARI' and 'MATHOTIANA ROSEA' have bloomed with some success, although their size was disappointing.

The Kunming *Reticulata* Camellias are discussed by Mr. Findlay. He recommends growing them in the soil rather than in

pots. These are in cool greenhouses. He rates 'SHOT SILK' as the best variety, with 'BUDDHA' a close second.

Propagation of camellias is discussed, also the camellia as a hardy shrub.

Some of the finer American varieties are just now being shown in competition: 'DRAMA GIRL', 'GUILIO NUCCIO', 'MATHOTIANA SUPREME', 'LAURA WALKER', 'R. L. WHEELER' and 'EDELWEISS'.

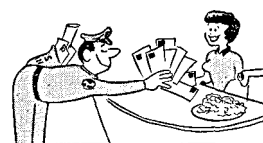
CAMELLIAS FOR EVERYONE

By Claude Chidamian. 140 pages; 4 color plates; 23 illustrations. Faber & Faber, London, 30 shillings.

This is a British edition of the well known and practical camellia book published in United States in 1959. The text is almost identical; however, the color plates and black and white illustrations have been changed.

This little book traces the history of camellias, species, varieties and hybrids; camellias in the garden, greenhouse and in the home; culture and pests and diseases. The more important camellia literature is listed.

LETTERS TO THE EDITOR



I'm having a barrel of fun treating outside camellia bloom buds with Gibberellic Acid. I started on Sept. 5th and today had a garden full of very good blooms. Five buds treated on 'ALBA PLENA' are all in full bloom while untreated buds are same as a month ago. Same is true with 'DEBUTANTE', 'EMMETT BARNES', 'LADY CLARE', 'MARGARET RATCLIFFE'. Also have one excellent bloom on 'WOODVILLE RED', 'RAGGEDY ANN', 'DRAMA GIRL', 'PINK BALLET', etc. It really works and I think its greatest value lies in promoting early blooms before J. Frost gets 'em. Have several 'MATHOTIANA' buds showing color also several others that will bloom long before the first freeze.

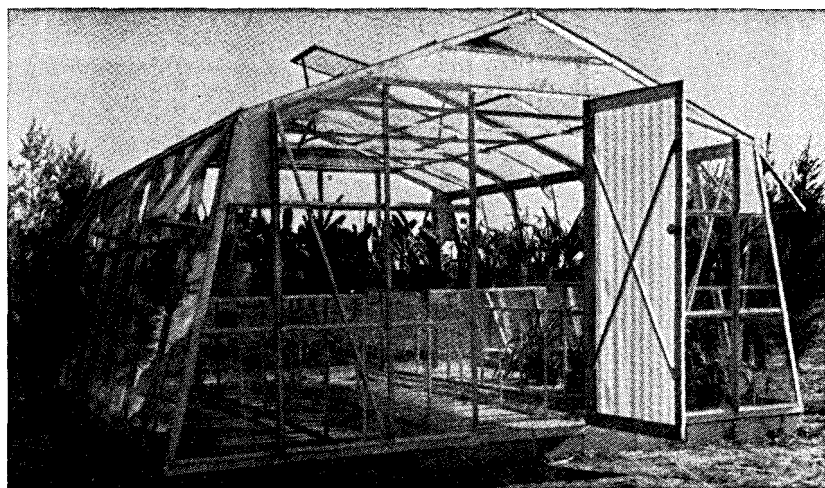
Am planning to go down to Grand Bahama about the end of the month and think I may try Gibberellic on some of the Hibiscus and other tropical things down there.

SCOTTY FORBES,
Savannah, Georgia.

You may be interested to know that this year I have germinated and have growing two seedlings of a cross, *Granthamiana* × 'R. L. WHEELER' using Granth. as the seed parent. I also have Granth. × by a *Reticulata* hybrid of mine and by Les Jury's 'TINKLE BELLS'. It is interesting to note that the seeds from *Granthamiana* took 14 months to mature. This year the plant flowered well, and at a time when many blooms of other types were out, so the conditions were appropriate for many cross pollinations. I have noted however that it takes three months after pollination of the blooms for the results to become apparent. Other plants show a result in from 3-12 days. Have you heard anything in your travels of others noticing this effect?

Another question I have to ask you is, have you seen any hybrids from *Granthamiana*, using it as the seed bearing parent? I would be interested to hear of them.

COLIN R. SPICER,
New Zealand.



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Fertilizing Camellias at **Laurel Lake Gardens and Nursery**

J. S. HOWARD
Salemberg, N. C.

This subject has more diverse opinions than most any other phase of camellia culture. Some will swear by a particular program while others will swear it is no good. Some growers insist that no fertilizer in any form should ever be applied. It is quite evident that the camellia is capable of growth under a wide range of fertilizer treatments and materials. The writer hastens to say that he makes no claim that the program outlined herein is the best to be had. From the limited research conducted to date with fertilizing camellias and other evergreen ornamentals and from our tests and observations the program is the best we know to follow at the present time. With the stepped up research program now under way at North Carolina State College, a better program may emerge. The program we are following is safe, simple and easy to follow, time and labor saving and is getting very satisfactory results. If you are not satisfied with the results you are now getting with your present fertilizer practices, it is our hope that you may find some suggestion in our program that will help you to improve it. Please understand we are not trying to get you to adopt our program. If you are satisfied with your present program — DON'T CHANGE!

Our camellias are propagated under intermittent mist in a rooting medium of coarse, sharp washed sand that has been sterilized with methyl bromide. The cuttings are stuck as soon as the present season's new growth has hardened sufficiently which usually occurs from June 15 to August 15. As soon as the cuttings are rooted they are transferred to cold frames for the winter. The soil in these frames is sterilized with methyl bromide to kill any soil pests and weed seeds that may be present. One large

bale of sterile sphagnum peat moss is then spread over each 100 square feet of bed and mixed with the sterilized soil to a depth of 8 or 9 inches. Immediately preceding the transfer of the rooted cuttings to the cold frames, 10 pounds of the following fertilizer mixture is applied to each 100 square feet of bed and mixed well with the top 6 inches of soil and thoroughly soaked with water.

3 lbs. Uramite (38% nitrogen)
3 lbs. Superphosphate (18 or 20%)
7½ lbs. Dolomitic Limestone
8 oz. Sulphate of Potash

As soon as the first cycle of growth has sufficiently hardened the follow-

ing spring (usually about the last of May or early June) we begin transferring the liners from the cold frame to gallon containers. We use the "Plantainer" for canning our camellias. It is attractive, is smaller at bottom than top which permits the root ball to slip from the can without having to cut the can and has large holes at the bottom for drainage. One inch of planer chips is placed in the bottom of each can to further insure perfect drainage.

The soil mixture used in the cans is composed of equal parts by volume of fine sand and sphagnum peat moss. We first sterilize the soil with methyl



Newly formed Middle Tennessee Camellia Society. Only a few years ago Nashville was considered too cold for camellias. Now with greenhouse know-how, a very active group has been formed. On February 17, 1963, the Middle Tennessee Camellia Society was formed at the home of Mrs. M. M. Hurst. On November 5, the society sponsored its first public educational program at Cheekwood, the magnificent Cheek Estate, now a cultural center. Shown above are Mrs. J. Edgar Kennedy, secretary of the Middle Tennessee Camellia Society, Henry F. Lochte, president, Horace N. Smith of Memphis, Tennessee, director of the American Camellia Society, Dennis Videll of the Memphis Camellia Society, William B. Connell, Jr., treasurer of the local group, James M. White and Mrs. Smith. Mrs. Robert W. Studivant, Vice-President, is not shown in the picture. (Courtesy Nashville Banner Photo.)

bromide. After allowing the treated soil to air for 48 hours the sterile peat moss is mixed with the soil. To each cubic yard of this mix we add the following fertilizer:

3 lbs. Uramite
3 lbs. Superphosphate
7½ lbs. Dolomitic Limestone
8 oz. Sulphate of Potash

The above mixture should be used as soon as mixed and should not be stored over a few days. The can should be filled to within one inch of the top to hold water. After the plants are set in the cans they are placed on a layer of wood chips or sawdust under pines. The cans are then filled with water using a water breaker rather than a nozzle on the end of a hose. This allows the water to flow gently and does not disturb or pack the soil. The cans are filled with water again the next day. Thereafter an inch of water is applied every ten days to two weeks unless we have at least one inch of rain in the meantime. The more the cans are exposed to the sun the more often they will need water. Enough water is applied at each watering to completely saturate the cans and also have water run out of the drainage holes at the bottom of the can. This flushing is an insurance against an accumulation of harmful soluble salts. We examine our cans every day and water as often as

is necessary. The soil in the cans is never allowed to run dry.

The amount of fertilizer mixed with the soil at the time the plants are canned has been sufficient to give the desired growth without adding any more until the first of June the following year at which time we have the soil checked for the pH level. About June 1 we apply one tablespoonful of the following mixture to each can:

3 lbs. Uramite
3 lbs. Superphosphate
7½ lbs. Dolomitic Limestone
8 oz. Sulphate of Potash

If the pH level is 5.5 or above we omit the limestone and reduce the amount per can to one rounded teaspoonful. The fertilizer is spread evenly over the surface of the can and watered immediately. Cans are watered the day before fertilizer is applied. This application of fertilizer has been sufficient to carry the plants through the second year.

Before freezing weather sets in all cans are banked with planer chips or sawdust to prevent freezing and killing the plants. As soon as danger from freezing is past, the cans are lifted and placed on top of the chips. It is better to be safe than sorry.

The camellias are kept in gallon containers only through two growing seasons to avoid having root bound plants. Before growth starts in

the spring of the third season all plants are either transferred to larger containers or planted out in the open ground. If they are transferred to larger containers the same soil and fertilizer mixture is used as previously indicated for gallon cans.

For camellias planted in the open ground we dig a hole at least three times as wide as the root ball. The soil mixture for backfilling the hole consists of equal parts by volume of sandy top soil and sphagnum peat moss. To this mixture is added one-third (1/3) cup of an 8-8-8 neutral fertilizer plus one tablespoonful of Uramite for each foot in height of plant and mixed well before backfilling the hole. Each year thereafter one-third (1/3) cup of an 8-8-8 neutral fertilizer and 1 tablespoon of Uramite is applied in a wide band around the plant at the outer edge of the branches for each foot in height of plant in March. The above fertilizer application is repeated from May 15 to June 1. The soil should be thoroughly saturated before and after each application of fertilizer.

When we first started growing camellias we used a fertilizer ration of 1 unit of nitrogen, 2 units of phosphorus and 2 units of potash. Two years ago we switched to a 1-1-1 ratio. In the open ground we are now using an 8-8-8 mixed fertilizer plus enough uramite to bring the total fertilizer applied to a 2-1-1 ratio. We are convinced that nitrogen is the most important element in the growth of camellias and most evergreen ornamentals and that organic forms such as uramite that breakdown slowly and release the nitrogen over a period of several months are safer to use and give better results than the water soluble forms that release all their nitrogen in a comparatively short time. The use of slow organics makes it unnecessary to make frequent applications during the growing season and greatly minimizes the danger of excess ammonia and soluble salts harmful to camellias and especially those grown in containers. We have also found that slow acting organics such as uramite that release nitrogen into the late fall help plants to withstand severe freezes better than those

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COLUMBIA, S. C.

that approached winter with all the nitrogen in the soil used up.

A high level of phosphorus in camellia soils is conducive to iron chlorosis. High rates of phosphorus such as 10-20-10 cannot be justified as it ties up iron as insoluble iron sulphates.

All sources of potash in common use are completely water soluble and must be used with care to avoid an excess of soluble salts. We prefer sulphate of potash of the readily available sources. Glass frits and potassium frit are being tried experimentally and as sources of potash should be a much safer source when they are available commercially.

Camellias seem to be fairly tolerant of a rather wide range of pH level in soils. The optimum level seems to be from 5.5 to 6.5. The pH level of the soil is very important because it controls the availability of most plant nutrients. It is important to have soils tested regularly. When the pH level goes below 5., camellias and most evergreen plants suffer from Phosphorus and Magnesium deficiency. When the pH goes above 6.5 the plants are likely to suffer from Manganese and Iron deficiency. Since peat moss has a pH of 4., it should be mixed with the soil before drawing samples for testing for the pH level.

There is probably no one plant or flower more rewarding than the camellia if given a good home and plain, common sense care. Remember you can do more for your camellia before you plant it than you can ever do thereafter.



CAMELLIA TIARA. Miss Julie Van DeVort, a former Sacramento Camellia queen, wears a beautiful crown of pink camellias.



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Camellias that Grow in Central Florida Gardens

IVAN MITCHELL
Jacksonville, Florida

1. The Magnificent 'AUDUSSONS'!
(Huge, bold semi-double, mid-season)
 - a. 'ADOLPHE AUDUSSON' (solid red)
 - b. 'ADOLPHE AUDUSSON VAR.' (red, blotched white)
 - c. 'ADOLPHE AUDUSSON SPECIAL' (predominantly white)
2. The Aristocratic 'ALBA PLENAS'!
(Porcelain White, early, dependable)
 - a. 'ALBA PLENA' (Solid white, full formal, no stamens)
 - b. 'FIMBRIATA' (formal, white, with fringed petals)
 - c. 'HOOPER CONNELL' (white, peony form of 'ALBA PLENA')
 - d. 'HENNINGHAM SMITH' ('ALBA PLENA' with stamens)
 - e. 'BLUSH PLENA' (Blush pink when first opens, fading to solid white)
3. The Early 'ARJISHIS'! (Full peony—sometimes bloom in July)
 - a. 'AREJISHI' (pink to red)
 - b. 'AREJISHI VAR.' (variegated with white)
4. The Delightful 'AUNT JETTYS'!
(Semi-double to loose peony, mid-season)
 - a. 'AUNT JETTY' (Oriental red, with occasional white dots and splotches)
 - b. 'GOVERNOR MOUTON' (Red and white variegated, receding to solid red)
5. The Bold 'BEAU HARPS'! (Early, large, peony form)
 - a. 'BEAU HARP' (Solid red. Illges Award 1949)
 - b. 'DR. JOHN BELL' (Heavily variegated with white)
6. The 'DUCHESS OF SUTHERLAND' Royalty! (Large, flat semi-double. Mid-season)
 - a. 'DUCHESS OF SUTHERLAND' (White with a touch of pink on 1 petal)
 - b. 'CLAUDIA PHELPS' (Delicate pink, shading to white)
 - c. 'RUTH ROYER' (Clear pink, shading to clear white. Same as 'THELMA SANFORD')
 - d. 'DUCHESS OF COVINGTON' (The reverse of 'RUTH ROYER')
 - e. 'PINK DUCHESS OF SUTHERLAND' (Solid pink sport)
7. The Gallant 'CRUSADERS'! (Large, orange red. Loose peony to anemone. Mid-season)
 - a. 'CRUSADER' (Correct name: 'PRINCE OF ORANGE'. Deep orange red)
 - b. 'GOVERNOR WILLIAM BRADFORD' (Variegated sport)
8. The 'DAIK' Dynasty! (Large variable peony form. Very early. Very slow grower)
 - a. 'DAIKAGURA' (Rose pink, splotched white)
 - b. 'DAIKAGURA RED' (Deep pink to rose red sport)
 - c. 'HIGH HAT' (Light pink sport fading to white. Similar coloring as 'C. M. WILSON')
 - d. 'JOSHUA E. YOUTZ' (Solid white seedling of 'DAIKAGURA')
 - e. 'WARD' Strain of 'DAIKAGURA' (Predominantly white—up to 90%—of 'DAIKAGURA')
 - f. 'CONRAD HILTON' (Egg shell white sport of 'HIGH HAT')
 - g. 'WHITE HIGH HAT' (SAWADA's white sport of 'HIGH HAT')
 - h. 'INDIAN SUMMER' (New deep rose red seedling of 'DAIKAGURA'—and a vigorous grower)
9. The Superb 'DONCK' Family!
(Huge, semi-double, beautiful. Very slow grower. Mid-season)
 - a. 'DONCKELARI' (Red, marbled white)
 - b. 'EUGENE BOLEN' (Solid red sport)
 - c. 'EUGENE LIZE' (Light rose pink variegated white. Semi-double to peony)
 - d. 'VILLE DE NANTES' (Fimbriated and "rabbit eared" sport of 'DONCKELARI')
 - e. 'VILLE DE NANTES RED' (Solid red sport of 'VILLE')
 - f. 'LADY KAY' (Sport of 'VILLE'. Heavier peony and more deeply serrated)
 - g. 'LADY KAY RED' (Solid red sport of 'LADY KAY')
10. The Delectable 'DEBUTANTES' (Large and early full peony form)
 - a. 'DEBUTANTE' (Light pink)
 - b. 'DEBUTANTE VAR.' (Light pink, variegated with white)
11. The Elegant 'ELEGANS' Family! (Very large semi-double to peony to anemone. Early to mid-season)
 - a. 'ELEGANS VAR.' (Rose pink variegated white)
 - b. 'ELEGANS' (Solid pink, with central petaloids spotted white. Same as 'FRANCINE')
 - c. 'C. M. WILSON' (Light pink in throat, fading to white on edge)
 - d. 'C. M. WILSON VAR.' (Variegated sport of 'C. M. WILSON')
 - e. 'SHIRO CHAN' (White sport of 'C. M. WILSON')
12. The Fabulous 'PFINGSTLS'! (Large, semi-double to peony. Early)
 - a. 'JOSEPH PFINGSTL' (Dark red. Sometimes throws formal blooms. Illges Award 1950)
 - b. 'EMMETT PFINGSTL' (Dark red sport of 'JOE', heavily variegated with white)
13. The Lovely 'ELIZABETH ARDENS'! (Medium large formal to semi-double. Mid-season)
 - a. 'ELIZABETH ARDEN' (Soft pink and white, striped rose pink)
 - b. 'ELIZABETH ARDEN PINK' (Solid pink sport)
14. The 'EMPEROR OF RUSSIA' Line! (Large multi-centered peony. Mid-season)
 - a. 'EMPEROR OF RUSSIA' (Scarlet, showing vivid contrasts to 5 centers of stamen)

- b. 'EMPEROR OF RUSSIA VAR.' (Variegated form. Also known as 'ASPACIA')
15. The Striking 'EMPRESS' Strains! (Very large semi-double. Early)
- a. 'LADY CLARE' (Deep pink. Popularly known and grown as 'EMPRESS')
- b. 'ONJI' (Variegated sport. Popularly known as 'VARIEGATED EMPRESS')
- c. 'DESTINY' (Variegated sport of 'LADY CLARE'. White streaked with deep pink)
16. The Pleasing 'PURITIES'! (Large formal flowers, some semi-double. Mid-season to late)
- a. 'PURITY' (Pure white)
- b. 'GENERAL GEORGE PATTON' (Bright pink. Said to be a seedling of 'PURITY')
17. The Gigantic 'GIGANTEAS'! (Very large, from semi-double to anemone to rose form. Mid-season)
- a. 'GIGANTEA' (Red marbled white)
- b. 'JACKSON' (Solid red form of 'GIGANTEA')
- c. 'LIGHT GIGANTEA' (A predominantly white sport of 'GIGANTEA')
18. The Beautiful 'GLEN 40's'! (Huge, formal to rose form doubles. Mid-season to late)
- a. 'GLEN 40' (Deep scarlet red. One of the few good late bloomers)
- b. 'GLEN 40 VAR.' (Heavily variegated sport of 'GLEN 40'. All 'GLENS' very slow grower)
19. The 'HARLEQUIN' Clowns! (Variable in form and color. Mid-season to late)
- a. 'HARLEQUIN' (Usually white and pink. Peony to formal)
- b. 'HARLEQUIN PINK' (Solid pink sport. Predominantly formal on some plants)
20. The Matchless 'MATHOTIANAS'! (Very large rose formed double. Mid-season to late)
- a. 'MATHOTIANA' (Red, turning purplish as flower ages. Purple "smut" in cold weather)
- b. 'MATHOTIANA VAR.' (Variegated sport of 'MATHOTIANA')
- c. 'FLOWERWOOD' (Fimbriated sport of 'MATHOTIANA')
- d. 'FLOWERWOOD VAR.' (Variegated sport of 'FLOWERWOOD')
- e. 'MATHOTIANA SUPREME' (Rose form sport of 'MATHOTIANA' with stamens interspersed)
- f. 'AVERY ISLAND' (Variegated sport of 'MATHOTIANA SUPREME')
- g. 'ISLAND ECHO' (Semi-double sport with red stamen and fimbriated inner petals)
- h. 'ISLAND ECHO VAR.' (Variegated sport of 'ISLAND ECHO')
- i. 'RED WONDER' (Irregular rose formed sport with curled and folded inner petals)
- j. 'ROSEA SUPERBA' (A deep pink, much lighter than 'MATHOTIANA', also longer petals)
- k. 'ROSEA SUPERBA VAR.' (Deep pink sport of 'ROSEA SUPERBA', splotted with white)
21. The 'SWEETI VERA' Sweethearts! (Large peony form. Mid-season)
- a. 'SWEETI VERA' (White and pale pink)
- b. 'PINK SWEETI VERA' (Pale pink sport of 'SWEETI VERA')
22. The Dependable 'LATIFOLIAS'! (Medium large semi-double. Mid-season)
- a. 'LATIFOLIA VAR.' ('FANNY BOLIS'. Soft rose red, heavily variegated with white)
- b. 'LATIFOLIA' (Incorrectly known as 'GLORIA DE NANTES'. Solid rose red form)

NOTICE!

Because I have been disabled for months from an accident no catalog has been mailed out this season. Our entire mailing list will receive one this Fall.

We have plenty Camellias, Grafts and own root, most of which are in containers and can be shipped at any time—Both rare and standard varieties.

Write us about your needs. We appreciate your business. Thanks!

"Willie" Hite

Hite's Florist and Nursery

Florence Highway Marion, S. C.

More Enjoyment of Camellias With Your Startech

SAM M. ZERKOWSKY, Tammia Nursery
Slidell, La.

After over three years of using a Kodak Startech Camera and many hundreds of pictures I find that some of my first slides and prints are just as good as my best now. The big difference is that I have fewer rejects today and I know how to get the best results.

Experience and practice are the best teachers. This you must do for yourself. Some of the things I have learned may be of help to you and save some unnecessary mistakes. I hope so.

The Startech Camera outfit by Kodak is simple to use and contains everything needed to take good close-up pictures of Camellias. No previous photographic experience is required to operate this outfit, for there is only one setting to make.

A book of instructions is part of every Startech outfit. Read it carefully several times *until you understand* the directions and suggestions. (Ask your dealer to explain anything you don't understand about the camera.)

Attach the string to the camera as suggested on page 9. Put in the photo-flash penlite batteries. Load the camera with a roll of Ex 127 Ektachrome Kodak film. Install blue flash bulbs (M2B) with Ex 127 film to make color slides. Use clear flash bulbs (M2) with C 127 Kodacolor to make color prints. You are now ready to take color pictures with the Startech.

Practice taking pictures of camellias with at least two rolls of film. Keep a list of each picture as you take it so you will know the names of the camellias. Try the Red lens which will give good results with flowers up to six inches in diameter. Then take some with the Green lens, which can cover an area ten inches square to sixteen inches square. You can get

foliage as well as the camellia in the picture with this lens.

To get the best results from your picture taking be sure to read and study the directions in the Startech handbook on pages 7, 8, 9 and 10 covering steps number 1 through 8. The closer you follow these the more exciting and life-like your pictures will be.

In addition to the above, I hope the suggestions from my experience may help you in getting better pictures. Whether you are a beginner with a new Kodak Startech or an old hand I recommend this check list before snapping each shot:

1. Check to see that the Distance Range Lever is set on Red when you use the Red lens and on Green when you use the Green lens.

2. Check your listing to see that you have advanced your film to the next number.

3. Check to see if you have put in a new flash bulb.

4. Check the distance to the camellia with the string, attached to your camera, to determine whether you need to use the Red or Green lens to get the flower in the lens area (the Red lens will record from 4 to 8 inches from the lens cover an area slightly more than 6 inches square in sharp focus; The green lens will record 10 to 16 inches from the lens and cover a 10-inch square area to a 16-inch square area).

5. Compose the picture with your eye close to the finder window. Be sure you can see all four corners of the front finder frame around the camellia. Now select the view that shows the camellia's best side or face.

You should take at least two shots of every camellia. One looking directly into the face of the flower—the other at about a 45 degree angle so you will see part of the top and part of the side of the camellia to show its depth. Follow step No. 5 in the instruction book most carefully to get picture centered in the frame.

6. Use the "Frosted Shield" inside the clear flash shield to reduce the light one-half stop when taking pictures of white, blush, pink, and light colored camellias. Use only the clear flash shield when taking pictures of clear red and dark reds. Use the Frosted Shield with the green lens on all colors. Even so the colors will be slightly over-exposed.

7. Have a small note book and pencil in your camera outfit to keep a record of every picture you make at the time you make it.

I take many pictures of camellias on the plants rather than cut them off. I hold the camellia in my left hand at the best angle and the camera in the right hand. This requires that both hands be steady so the picture will not be blurred.

The easy way is to cut the flower from the plant, place it in a low green plastic cup (I took the top from an aerosol spray can. It measures 2½ inches in diameter and is 1½ inches deep.) Use a dark green background, either a piece of dull velveteen or a green cushion. Try to use the same green background for all pictures. This gives a better comparison of shades of color of the different varieties of camellias. (In most cases where the flower is 4½ inches or more in diameter the background will not show in the picture if the

flower is an inch to two inches above it.)

For maximum enjoyment—file your color slides in a portable storage tray so you can find them readily. Montgomery Ward sells a metal tray (67 R 3351 for \$1.89) which holds 600 cardboard mounts 2 x 2. For color prints I use a Parker Heatseal Album.

A good collection of color slides or prints will afford you and your friends much camellia pleasure throughout the entire year. For me there is an additional enjoyment. Since my wife is the Horticulturist I see her and her T. L. C. (tender loving care) in every camellia picture I take at home.

—ACS—

Untold Stories About Camellias

As regards ELLEN SAMPSON, I see an article about it in the ACS Journal for September, 1960, page 39. Apparently Camellia Grove Nursery has already released it. The story I have been told about this plant is a version as given by Mr. and Mrs. H. Chittick of Wanganui, two very enthusiastic camellia fans. Mrs. Chittick's mother, a Mrs. Mullan, was a personal friend of Mrs. Sampson, and

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Write for new price list including 'KICKOFF', 'GRAND SLAM'
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Container grown Camellias picked up at Nursery \$1.00 up

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therefore the niece, Mrs. Haines, is well known by Mrs. Chittick.

The story Mrs. Haines (Kelburn, Wellington) tells is that about 20-30 years ago a friend brought her some camellia blooms from her Grandmother's garden (Mrs. Sampson). Mrs. Haines was so impressed by the size and shape of the blooms she was determined to have a plant, so stuck one of the cuttings in the soil in her garden. This subsequently grew and formed the plant from which Mr. Fisher obtained his cuttings. Mrs. Haines asked her friend if the camellia had a name, but as the friend did not know, Mrs. Haines decided that until they could find the true name she would call it after her Grandmother. This name has since stuck, and would seem to constitute its proper title. The original plant has since perished beneath the wheels of progress (or is it progress?) as this area is now a housing suburb of Wellington. The original plant was probably bought about 80-100 years ago from one of the first nurserymen in Wellington located probably in Thorndon, now one of Wellington's suburbs. Mrs. Chittick says that she can remember as a young woman, huge camellia trees in Mrs. Sampson's garden.

The variety is in all probability a seedling, so its present name should

Why Rooted Cuttings?

Nurserymen still propagate older standard varieties of camellias by means of rooting cuttings but amateurs rarely do so anymore.

With the desire to have a flowering size plant of a new variety as quickly as possible, grafted plants have pushed own root plants into the background. Scions of new varieties are naturally at a premium, whether bought or scrounged, hence for the first few years of availability most wood is

hold true. The plant Mrs. Haines grew was cut so severely by nurserymen for cuttings that it eventually succumbed. However, before this occurred she gave several scions to a nurseryman in Palmerston North, who was successful in striking them. One of the plants went back to Mrs. Haines who still has a plant of the variety. As for the plant being introduced back from Australia, well I tend to doubt this. People are definitely importing plants from there as they are so readily available from that source. But large plants of ELLEN SAMPSON are in existence here in New Zealand so I will have to check definitely on that point.

Contributed by COLIN SPICER,
Palmerston North,
Massey College,
New Zealand.

used in grating rather than in rooting cuttings.

Naturally there are some varieties which grow so slowly on their own roots that rooting is impractical and grafting is the best practical solution. Examples of this are VILLE DE NANTES and ALBA PLENA.

There are many reasons for propagation by rooting cuttings. Some varieties are not completely compatible on any understock, Japonica or Sasanqua. DAIKAGURA is one of these. Even after some years grafted DAIKAGURAS often gradually lose branches and if not carefully checked shoots appear from the understock and gradually replace the top portion.

With many of the fine newer varieties such as TOMORROW, GULIO NUCCIO and BETTY SHEFFIELD SUPREME the grower will want more than one plant of the variety. Greenhouse growers like to have young vigorous plants coming along to replace the larger plants which not only take up considerable room but also produce more but smaller flowers as they age.

When it is desired to maintain a solid color of a variety it is well to propagate by rooting cuttings. Solid red VILLES and some other varieties are often difficult to find and perpetuate.

With good care rooted cuttings will bloom in 2 to 3 years. With the use of CCC (2-chloroethyl) trimethyl ammonium chloride and phosphon growth retardants, flower bud formation is stimulated. This interesting phenomenon is discussed in Gill's and Stuart's article in the 1961 American Camellia Yearbook.

Small own root plants in quart or gallon cans make very acceptable gifts. Some generous growers keep a few of these on hand to give visitors who appear to be interested in getting started with camellias. They make fine door prizes at meetings and shows. At least one show offered a canned one- or two-year-old own root plant to each new ACS member.

Try rooting some cuttings this August. It's fun and easy. Children enjoy such a project. With the recent interest in science fairs in schools, such a project could be carried out even by lower grade students.

1964 Camellia Nomenclature Available

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The 1964 CAMELLIA NOMENCLATURE, edited by Wm. E. Woodroof for the Southern California Camellia Society, is available immediately.

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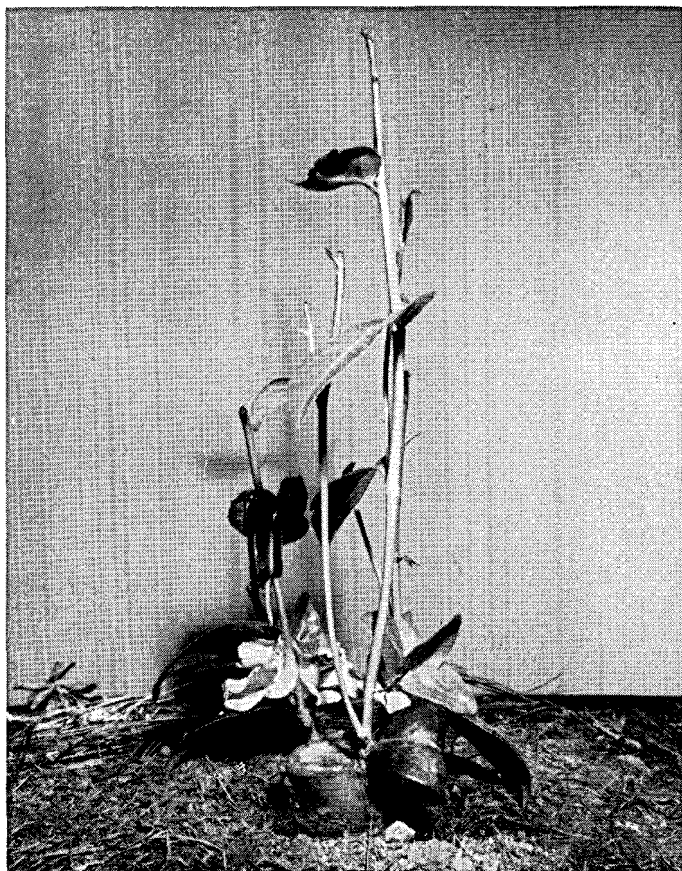
Unusual Blooms

DR. I. K. WOMACK
Shreveport, La.

An interesting freak phenomenon happened this past season to Dr. Kenneth B. Jones, 641 Southfield Road, Shreveport, La. Maybe this has happened elsewhere, but we thought it unusually odd and Dr. Jones has gone to the trouble of making a bunch of pictures and slides. During last grafting season Dr. Jones placed three scions



New growth shoot growing out of center of flower



Dr. Kenneth B. Jones' 'TOMORROW'S DAWN' grafts, showing flowers at first growth bud. (Courtesy Gordon Maxcy.)

of 'TOMORROW'S DAWN' on a large Sasanqua understock. Good union was obtained on all three, but on two of these (as you will notice from the photographs) a blossom appeared at the area of the first growth bud and through the center of each bloom appeared a vigorous shoot of new growth.

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Kit sufficient to treat approximately 150 buds.

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We invite all of you who have not advertised with us before to join us by placing your order for space.

Introducers of new varieties will find the 4-color Journal covers the best possible advertisement. Write the Editor for price and dates available.

Date _____

TAMMIA NURSERY INTRODUCES

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A brilliant, verbenia red semidouble to peony. Very large flower.

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This flower has a definite place among the miniatures for its unusual color. A two-toned burgundy semidouble with an anemone center—the anthers seem to be painted on, they are so golden. Originated by Tommie Patin and named for his son-in-law.

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'Allison Leigh Woodroof'	'Eleanor Greenway'	'Julia Francis'	'Sultana,' Var.
'Aroma'	'Evelina'	'Judge Marvin Mann'	'Spring Sennett'
'Alma Armstrong'	'Ethel Davis Var.'	'Jessie Burgess' and Var.	'Tomorrow's Dawn'
'Ballad Dancer'	(very good)	'Kick Off'	'Tom Hamie'
'Bambino'	'Eugene Howell Var.'	'King Size,' Var.	'Tickled Pink'
'Bimbo'	(very good)	'King Size,' Var.	'Tinker Bell'
'Bing Crosby'	'Eucharistia'	'Katherine Maryott'	'Topsy Eller'
'Bismillah'	'Elizabeth Dowd'	'Lady in Red' and Var.	'Velma Grantham'
'Brookline's Suprise'	'Funny Face Betty'	'Lady Linda'	'Velma Grantham Pink'
'Betty Sheffield Supreme'	'Felice Harris' (Hybrid)	'Linda Abbott'	'Velma Grantham Blush'
(and all others)	'Frances Garon' and Var.	'Magic Moments'	'Vulcan,' Var. (very good)
'Carter's Carnival'	'Golden Spangles'	'Marie Brody'	'Virginia Robinson'
'Celebrity'	'Gullie Nuccio' and Var.	'Mutahalis'	'Walt,' Min.
'China Doll'	'Gold Tone'	'Margaret Wallis'	'Wonderland'
'Cherry Blossom' (Species?)	'Gustav Gerbing'	'Purple Swirl'	'Wildwood,' Peony
'Congo Gem'	'Grand Slam'	'Prelude'	'White Nun'
'Conquistador'	'Gloria Stuart'	'Red Cap,' Min.	'White by the Gate'
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