

THE *Camellia*
REVIEW

A Publication of the Southern California Camellia Society



'Nuccio's Gem'
Courtesy Nuccio's Nurseries

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One Dollar

Southern California Camellia Society Inc.

An organization devoted to the advancement of the Camellia for the benefit of mankind—physically, mentally, and inspirationally.

The Society holds open meetings on the Second Tuesday of every month, November to April, inclusive at the San Marino Women's Club House, 1800 Huntington Drive, San Marino. A cut-camellia blossom exhibit at 7:30 o'clock regularly precedes the program which starts at 8:00.

Application for membership may be made by letter to the Secretary. Annual dues: \$6.50.

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THE COVER FLOWER

C. Japonica 'Nuccio's Gem'

People who have had the opportunity to visit the back lath house of Nuccio's Nurseries have been watching a white formal seedling with beautiful symmetry and lasting quality, identified as #6506. The Nuccio brothers thought for awhile that they might sell the accumulated stock and all the rights thereto to another nursery. They have changed their minds and are now releasing through normal trade channels the large stock they have built up. They have named it 'Nuccio's Gem', which reflects their high rating of the seedling in that they have elected to associate their own name with it.

NOTICE

The **Huntington Botanical Garden** is seeking a camellia enthusiast to be in charge of their **Camellia Garden**. He will be expected to carry out the more exacting horticultural tasks and to supervise two helpers.

Contact

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or

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I have sat in some recent meetings that were for the purpose of writing schedules and classifications for shows that will be held next show season. How different conditions are now from what they were when I first was Show Chairman of a camellia show back in the mid-1950's. We didn't have many problems then. We were entering japonicas according to form and color, although the 1955 show of the Southern California Camellia Society may have seen our first classification by variety. But no segregation by size. Miniatures were something to cut off to graft on. There were few reticulata blooms and hybrids were for the future. We were not faced with a decision of whether to give a trophy for the Best species bloom.

Times have changed all that, because show schedules must reflect the developments that have occurred in the last 15 years. Size is not the only criterion of a good camellia bloom, so we have separate Classes according to size for japonicas — large, medium, small and miniature. Reticulatas and hybrids with reticulata parentage are so mixed up that a Division is being set up in some shows that puts all of them to compete among themselves for Best. Some of the shows last year in Northern California divided this group according to size. Who is to say what a new seedling is, with most of the new seedlings being chance seedlings and the bees going their merry way from plant to plant without knowledge or concern of what they are doing to camellia geneology.

There must be some authority which people can consult for answers for proper classification of blooms and show schedules generally state that *Camellia Nomenclature* will be such authority. This of course places a tremendous responsibility on the Nomenclature Committee of the Southern California Camellia Society, publisher of *Camellia Nomenclature*, to go to the extent humanly possible to provide reliable guidance. The next issue of *Camellia Nomenclature*, due in December 1971, will combine reticulatas and hybrids with reticulata parentage in a single section, with other hybrids being by themselves. Of equal, possibly greater importance for show purposes, the size of japonicas must be correctly stated; otherwise, show Classes by size can be administered only with uncertainty and difficulty.

This last need, correct statement of size, is the hardest part of camellia nomenclature compilation. Present indications of size are mostly those that were stated in the registration forms that were prepared by the originator of the variety. These have not always proved to be reliable and some practical way should be found before the next book goes to press to correct those listings that are proving troublesome in camellia shows.

Harold E. Oyler

HUMIDITY AND HORMONES FOR CUT BLOOMS¹

Frank F. Reed

Pasadena, California

Camellia blooms respond well to "preharvest" (approximately ten minutes before cutting) treatment with 6-Benzyl-amino-purine² (Benzyl Adenine); treating the blooms after cutting with Naphthalene-Acetic-Acid³ (NAA); and then storing for days and *weeks* in saturated water atmosphere at room temperature (77°F) as well as at lower temperatures will assure fresh blooms.

The Shell Development Laboratory (Van Overbeek et al) at Modesto, California have done outstanding work in increasing the life of leafy vegetables such as lettuce, Brussels sprouts, broccoli, celery, etc., by applying 6-Benzyl-Adenine (their SD 4901) as a pre-harvest spray and a post-harvest dip or wash. The SD 4901 reverses the ageing of vegetables and blooms by providing adenine to restore the Soluble Ribonucleic Acid (S-RNA) molecule. The S-RNA then maintains the protein synthesis which keeps the vegetable fresh and green. The same reaction apparently applies to Camellia and other blooms.

Bonner and Honda did fine work for our Camellia Society in 1950 to prove the efficacy of NAA post harvest treatment (good for two weeks) and equal efficiency of the 100% relative humidity at 77° Fahr. which added another two weeks to the life of cut blooms. The NAA sprayed near the floral axis strengthens the bonds between the petals and the leaves with the stem. The high humidity causes the bloom to maintain its turgidity and fresh appearance.

Preharvest Procedure

Upon advice of Dr. William S. Stewart, presently Research Director of Pacific Tropical Botanical Garden in Hawaii and formerly Director of the Los Angeles County Arboretum, we sprayed our blooms about ten minutes before cutting with a 100

ppm (parts per million) aqueous solution of 6-Benzyl-Amino-Purine*. A few drops are sprayed into the floral axis of each bloom to be cut. Avoid getting the stamens wet if possible. Robert Dorn of the Modesto Camellia Society and the Shell Development Lab uses 100 ppm on his Camellias. The lab tests have used dosages in range from 25 to 200 ppm on other flowers. They point out that a solution applied 24 hours before harvesting a leafy vegetable has no effect on its keeping quality and the same rule should apply to blooms. As stated above, the interval between treatment and cutting should be approximately ten minutes, probably no more than thirty minutes.

Dr. G. Shaw of Bradford Tech says that other Kinins such as Kinetin, Verdan and Zeatin are very efficient in prolonging the life of cut flowers and he reports the use of concentrations as low as 10 ppm⁷.

Mixing of Benzyl-Amino-Purine

In a 3 fluid ounce bottle mix 2 fl. oz. of ethanol (obtainable at a drug store) with 250 mgs. of Benzyl-amino-purine. This is practically a 0.5% solution. Use a brown bottle and normally store in a dark place. Before any spraying is done, mix one tablespoon of this solution with 3 cups of tap water in a quart bottle. Keep this bottle in a dark place. You can fill your windex spray bottle from this quart bottle which is practically 100 ppm Benzyl-amino-purine solution. Show no favorites and keep your windex bottle in the dark when not in use.

Post Harvest Treatment

A 250 ppm aqueous solution of NAA³ can be made by mixing approx-

** I understand that this word should not be hyphenated. I have done so in the interest of simplifying its reading and pronunciation, as has been the case with me. —Ed.*

(Continued on next page)

imately 200 milligrams of the NAA powder in a quart of hot tap water. 200 mg. NAA is about the size of a pencil eraser or would about fill a quarter inch size capsule.

No special storage provisions are necessary for either the dry powder or the aqueous solution. The exact proportions are not necessary. The purpose of the NAA is to strengthen the bonds between the petals and the stem and to delay the petals dropping off (abscission).

With a windex bottle you can spray NAA solution down into the axis of the flower. Generally, I have directed squirts from 3 to 5 directions always avoiding hitting the stamen. The total liquid will be approximately 5 drops.

High Humidity

We customarily use a clear plastic lingerie box⁵, 15 X 13 X 5 inches in size, for storing, carrying and shipping camellias. A damp paper towel is placed on the bottom of the box. Next, about a two inch layer of dry chopped waxed fiber⁶ is put in. For each bloom there should be a small cup such as a milk bottle top, which holds a cotton wad soaked with the NAA solution. The stem of the bloom rests on this wad. The sales pitch on mixing and use of the NAA has been published a few times¹, but has been repeated above.

The morning temperature in Southern California in Camellia season is probably around 55° Fahr. and the relative humidity may be approximately 60%. The expert at your air-conditioner store will tell you that when this air is lowered to the low 40's Fahr., you will get approximately 100% humidity without any added moisture in the air. However, you have plenty of water available in your container even without spraying the chopped fiber. Usually, there is "no sweat" in getting sweat on the inside of your box within an hour or two at 41° F. This indicates 100% humidity and saturated atmosphere. Our purpose in lowering the temperature

in the containers is to obtain the essential high relative humidity.

The airlines generally keep their rear belly compartment between 40° and 60° Fahr. which is better for cut flowers than the forward compartment which they keep near cabin temperature.

Floyd Honn, who has had long experience with the cut Camellia trade, has kept Camellias 2 or 3 weeks at ambient temperature but with high humidity. His experience agrees with the work of Bonner and Honda noted in the 4th paragraph of this article.

You should be warned against refrigerating your blooms down to the low 30's. Under certain high humidity conditions, frost can be formed even though the reported ambient temperature is above 32° Fahr. This happens occasionally in the Los Angeles basin and with official temperatures reported as high as 35 F.

Dividends

Several of us have been able to pick our flowers at their peak and have some ready as much as 10 or more days ahead of competition. I have competed in four Potomac Valley shows and did as well with week-old blooms as I do in Southern California. I am convinced that the blooms will get to their first stop in fine shape if they are in transparent boxes which are practically air tight and are sent by air freight.

After more than a year's correspondence with the Secretary of the Royal Horticultural Society in London and our good friend Dr. Jimmy Smart in Devonshire, England, we had arranged for four boxes of my blooms to be staged at their London show on last Saint Patrick's Day. Each bloom had a label indicating the date cut and whether or not it was gibbed. The shipment was signed, sealed and delivered to the Los Angeles Airport. Just before the airline man picked up my check, he received the telephone message that the strikers had finally

(Continued on page 22)

CALIFORNIA INTRODUCTIONS IN 1970

Wilber W. Foss
San Marino, California

The list of California introductions in 1970 is shorter than has been usual in the past few years. The situation is helped some by stock having been built up of some hybrids from "Down Under" which have been grown by a few people who are fortunate to have friends in these countries. These varieties are listed among those that are being made available for the first time.

Arch of Triumph. A chance seedling with wild form *reticulata* the female parent, originated by David L. Feathers of Lafayette, California and released by Al Parker's Redwood Empire Camellias, Inc. of Sebastopol, California. The flower is a deep red loose peony with yellow stamens. It blooms early to mid-season and has good texture. The plant growth habit is upright and rapid.

Gay Time. A *saluenensis* times *japonica* 'Mathotiana' hybrid that was originated by Les Jury of New Plymouth, New Zealand. The flower is a light orchid pink that blooms from formal to semi-double. Plant growth is upright and bushy. It blooms mid-season. It was introduced to the United States by Mr. Jury as Jury's #171 through Lilette Witman of Macon, Georgia and by scions sent to Southern California camellia hobbyists by their friends in New Zealand. Nuccio's Nurseries now has a stock for release.

Nuccio's Gem. This double formal white of medium to large size has been watched for four years by Nuccio friends who have had the privilege of seeing his seedlings in the "back lath house". It carried the tag #6506. It is a beautifully petaled flower of outstanding quality that stays well on the plant and does not shatter when it falls. The plant is vigorous, bushy and upright in growth. It blooms early to mid-season.

Otto Hopfer. A 'Crimson Robe' X 'Lotus' hybrid that was originated by the late Otto Hopfer of San Francisco and is being released by Nuccio's Nurseries. The flower is large, irregular semi-double, and brilliant light red. It blooms late in the season. It is a vigorous upright grower with large handsome foliage.

Pat Nixon. Pink sport of the white striped rose pink 'Richard Nixon', released by Kramer Bros. Nursery of Upland, California. The sport is bluish pink veined deeper pink.

Pink Sparkle. This is the Frank Maitland seedling that has been known as C-9 and RE-9, a chance hybrid with *reticulata* parentage. The flower is a large to very-large semi-double, light pink with iridescent petals. It blooms in mid-season. Nuccio's Nurseries are releasing it.

Red Emperor. A very large brilliant deep red *reticulata* with irregular semi-double flowers, originated by Howard Asper of Escondido, California. Nuccio's Nurseries are releasing it.

Rob Roy. A hybrid of 'Shot Silk' times 'J. C. Williams', originated by T. E. Croson of Simi, California and released by Nuccio's Nurseries. The flower is medium to large, irregular semi-double, pale pink to a deeper pink edge. The plant is upright and bushy, with small foliage. It blooms mid-season.

Satin's Robe. A 'Satin's Satin' times 'Crimson Robe' hybrid that was originated by David L. Feathers of Lafayette, California and is being introduced by Nuccio's Nurseries. The flower is a brilliant oriental red, large, semi-double. Growth is vigorous and upright. It blooms mid-season to late.

Tiptoe. A Williamsii 'Farfalla' chance seedling that was originated by Camellia Grove Nursery of Sidney,

(Continued on page 8)

CAMELLIA: CENTER STAGE

Mary Bernis Taylor
San Marino, California

EDITOR'S NOTE:

This is the first of a series of six articles by Mary Bernis Taylor, to be run in consecutive issues of CAMELLIA REVIEW, about flower arrangements. Each article will tell about a particular arrangement that is illustrated with the article. Mrs. Taylor is a member of the San Marino League, a fine arts group that renovated and re-furnished the Japanese house in the Japanese Gardens of the Huntington Library and Art Gallery and assisted in reopening the house to the public in 1958. Members of the League study the traditional art of Ikebana in order to keep fresh arrangements in the two Alcoves (tokonomas) of this 16th century house, a community service since 1958. The arrangements illustrated and discussed in the articles have all been a part of this program.

Mrs. Taylor has taught classes in Japanese flower arranging since 1957. She began her studies in this fine art at the Rokkaku-do in Kyoto, Japan where the Ikenobo School of Ikebana began in the 7th century and where its headquarters are today. She has continued her study of arranging plant materials with Madame Senka Okamoto, President of the Ikenobo Society of Southern California. She participates in work shops of the present day flower masters who come here from Japan to teach the ever-changing new freer forms and designs. Teaching credentials have been earned by Mrs. Taylor as a result of her continuous study.

Most of Mrs. Taylor's students have been and still are members of the San Marino League. They present flower designs in annual exhibits on the verandahs of the Japanese house at the Huntington for public viewing, are now making plans for a November show.

The materials for the arrangements that are illustrated were cut from the gardens at the Huntington. Mrs. Taylor was assisted with the arrangements by one of her outstanding students, Mrs. Frederick (Jane) Llewellyn who has also earned teaching credentials.

When you are viewing your camellia blooms as you walk through your garden, you must feel a strong desire to cut a branch of lovely flowers at the peak of their beauty and keep them forever.

There is a way to do this! Make an arrangement and take a picture of your design starring your best ca-

mellia.

During the last blooming season we were asked by your editors of this CAMELLIA REVIEW to make some compositions using camellias and have them photographed for use in this publication. Six designs featuring camellias were chosen to be photographed. The flower arrangements lasted for several days and were enjoyed. The pictures have been a pleasure to view for several months since and will be for a very long time to come as they are reproduced here for camellia aficionados.

A camellia blossom is an actress worthy of a starring media and the experienced flower arranger can give the blossoms the correct container, the supporting material to help feature the blooms and the stage setting needed.

How do you become a good designer of camellia arrangements for your home?

First begin taking a little time in your garden to look at your camellia plants and see how they grow. Some branches have lines which curve this way and that way up to the growing tip. Select one of these branches and visualize where you would cut it; where you would prune away some of the leaves to reveal the most interesting curve. Next notice the placement of the flowers on all of your plants. Which blossoms are placed best; the ones with space around them; the blossoms that are looking up?

Nature doesn't always arrange blossoms and leaves in a balanced pleasing way. But one can learn from looking and looking and choosing the best of nature's arrangements to guide one in cutting and arranging. Some plants have better leaves than others. The smaller the leaf the more subordinate

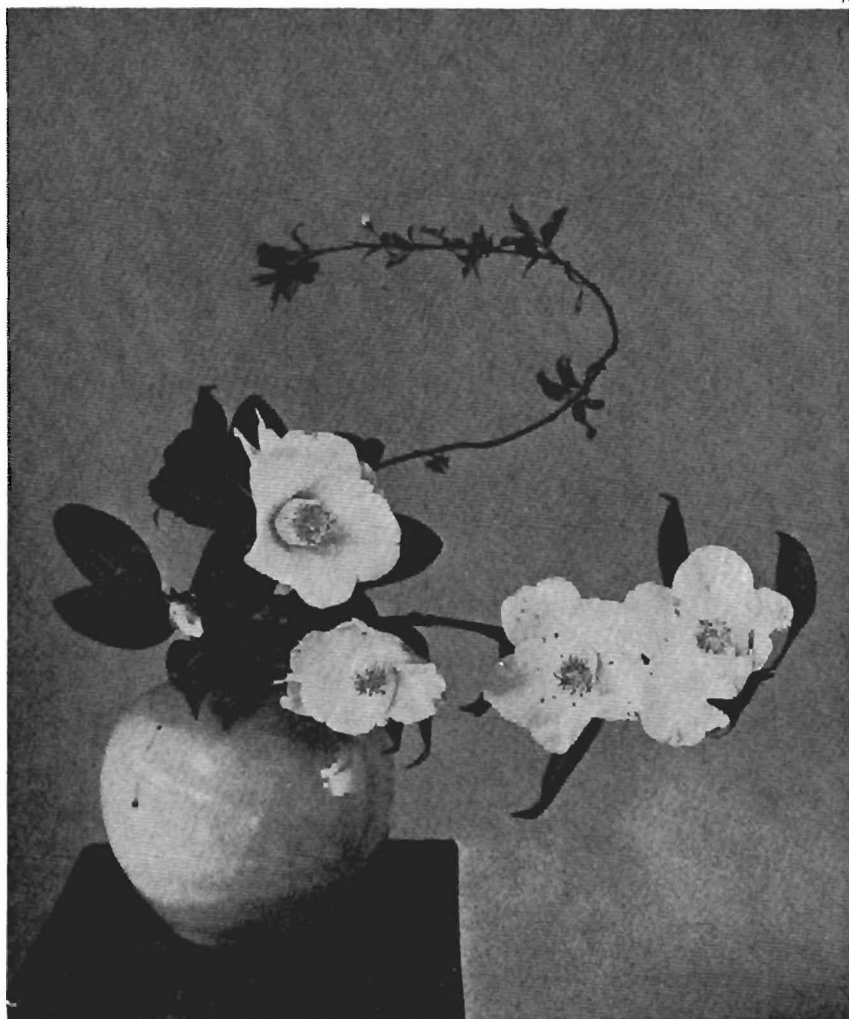
(Continued on next page)

they are to the main actress — **THE CAMELLIA BLOOM**. Some bushes produce flowers which do not hold well but the leaves and branches are very usable in arrangements for design. Since these arrangements we are talking about are for decoration and not for specimen display, we do not mind mixing the flowers of one specimen with the leaves and branches of another.

We are prejudiced toward the double and single camellias with the

long yellow barrel shaped stamen. So when we saw the variety, 'Dogwood', producing such purity of blossoms and buds, we had to plan an arrangement. Fortunately we work with a very large collection of containers for flowers so we can easily start with the material with which we want to make a design and then choose the container which suits the material we have cut. If you are limited to a very few flower vases, you have a problem.

The next thing for you to do is



Mrs. Taylor used the single form 'Dogwood' in this arrangement. She is prejudiced toward use of the simpler forms of flowers in her arrangements.

start collecting containers you like wherever and when ever you see one. Visit ceramic studios and college ceramic shows combined with sculpture and art shows. We've found some of the best bargains in Southern California at such places. In little Tokyo around First Street and San Pedro Street in Los Angeles there are many shops.

The moment we saw the blossoming 'Dogwood'; the light green celadon container in our collection of vases was mentally selected as the container to use. The texture of the waxy petals would complement the glaze of the old ceramic form. The forms of the flowers would make a good transition from the round shape of the vase to the circles of the flowers. The weight of the container was large enough to balance the long forward thrust of the longest blossom decorated branch which had been cut.

We looked at the material again. Yes, we had a variety of blossoms. No two shapes were exactly the same. They were in various stages of their life cycles, and we had a lovely shaped tight bud just showing white, and a half opened flower. The story of this variety, The Dogwood, was all there. We held the branch ends together in our hand the way we thought we would place them in the container and pruned away many leaves. We exposed the branch line to show the rugged grey bark and give us contrast. We left only the leaves that gave the uptilt to the tips of the branches and those that set off the blooms. Then we looked for auxiliary material to help complete the arrangement. We needed to bring the viewer's eye back from the long heavy line of blossoms to the center of the container to give the composition unity as well as more balance. A late blossoming plum branch with its new purple leaves was seen and when placed with the camellias, we were ready to place the materials for trial in the container. We then took out the material and gently

wired all the stems together and replaced the material, putting the stems against the vase's wall. This placement of the stems gave the branches a vital growth movement forward out of the opposite side of the container from where the stems rested. We placed the container on a tall teak stand against a plain uncluttered background. A plain wall allows the lines of the arrangement to show very clearly and is of course more enjoyable to the viewer's eye.

After the arrangement was placed we spent time looking at it from every viewpoint to be sure that it was pleasing. We did not forget the back of the composition. One half-opened blossom and its leaves supported the back of the main bloom which you see in the center of the asymmetrical arrangement. You cannot see this part, the back of the composition. We checked to be sure that each leaf and each blossom had its space and did not look crowded or pushed.

Then — The camera was focused by a photographer artist with a good eye (this could be your husband), and we have our 'Dogwood' camellia and plum branch arrangement to enjoy for as long as we enjoy looking.

INTRODUCTIONS *(Continued)*

Australia and has been popular there for several years. It is now available in California at McCaskill Gardens in Pasadena and Nuccio's Nurseries. The flower is medium in size, semi-double in form, and silvery pink deepening to cherry pink at the edge. Plant growth is compact and upright.

Water Lily. A saluenensis times japonica 'K. Sawada' hybrid, originated by Felix Jury of Waitara, New Zealand and available at Nuccio's Nurseries. The flower is lavender tinted light pink, medium in size, formal double. Growth is vigorous, rapid and upright, a good prospect for espalier on the basis of the limited experience in Southern California.

GIBBING SCHEDULE

W. F. (Bill) Goertz

San Marino, California

Although there is no exact science on how long it takes gibberellic acid to mature a super show flower, it is helpful to check results every few years and to use the answers in our endeavor to come close to correct gibbing dates so that the flowers will bloom when we want them. This is particularly important when we are shooting for a show date, such as the December 5th Early Show at Descanso Gardens.

The following statistics are based on the 1969 season, with averages found in our garden in San Marino — using a gib mixture of 90% Eastman powder to $2\frac{1}{4}$ oz. of distilled water. We know that weather conditions greatly influence these results and we also have found out that all flower buds on any given plant do not mature at the same time, even if treated the same day.

My program includes gibbing one or more buds on each plant for 2 or 3 (sometimes 4) successive weeks. The early bloomers of course take a less amount of time while late bloomers (including reticulatas and reticulata hybrids) take longer. Assuming we will gib on Saturday each week and if the early camelila show is held on the first week end in December, then use #1 for September 5th, #2 for September 12th, #3 for September 19th and so on through to November 7th. The following varieties should be gibbed on the Saturday dates as shown by number. The keys 1-2-3 should be used for reticulatas and reticulata hybrids except as otherwise noted below.

Allie Habel 5-6-7

Alta Gavin 4-5-6

Arbutus Gum

(Maitland's #A-1) 3-4-5

Ballet Dancer 7-8-9

Bell of the Ball 5-6

Berenice Beauty 5-6

Berenice Perfection 5-6

Bernadette Karsten 3-4-5

Betty Sheffield (all) 6-7-8

Billie McCaskill 5-6-7

Blood of China 3-4-5

Can Can 5-6

Charlie Bettis 2-3-4

Clarise Carleton 7-8

Commander Mulroy 5-6

Coronation 2-3-4

Covina 4-5-6

Clark Hubbs 4-5-6-7

Daintre Sievers 4-5-6

Debutante 8-9-10

Dream Girl 6-7-8

Ecclefield 6-7-8

Easter Morn 4-5-6

Eleanor K 4-5-6

Eleanor Martin Supreme 6-7-8

Eleana Nobile 2-3-4-5

Elegans Supreme 5-6-7

E. G. Waterhouse 5-6-7

El Dorado 4-5-6

Elegant Beauty 5-6-7

Elsie Jury 4-5-6

Elsie Ruth Marshall 4-5-6

Erin Farmer 6-7-8

Faint Whisper 5-6-7

Faith 4-5-6

Fashionata 5-6-7

Fire Chief 4-5-6

Flame 4-5-6

Flower Girl 6-7-8

Francie L 3-4-5

Georgia Rouse 6-7-8

Glen 40 3-4-5

Grand Prix 5-6-7

Grand Slam 7-8-9

Guilio Nuccio 4-5-6-7

Helen Bower 3-4-5

Herme 5-6-7

Howard Asper 2-3-4

Julia France 5-6-7

Jennie Mills 5-6-7

Kramer's Supreme 4-5-6

Kristin Woodroof 5-6-7

Kumasaka 4-5-6

Lady Clare 5-6-7

(Continued on next page)

Laura Walker 5-6-7
 Laurie Bray 5-6-7
 Lulu Belle 7-8-9
 Margaret Davis 5-6-7
 Marianna Gaete 2-3-4
 Marie Bracey 7-8-9
 Mary Agnes Patin 8-9-10
 Mary Paige 5-6-7
 Mathotiana Supreme 5-6-7-8
 Mercury Var 4-5-6
 Milo Rowell 3-4-5
 Miss Charleston 6-7-8
 Mrs. D. W. Davis 5-6-7
 Mrs. Freeman Weiss 5-6-7
 My Darling 4-5-6
 Mouchang 3-4-5
 Onetia Holland 4-5-6
 Omega 6-7-8
 Owen Henry 5-6-7
 Party Dress 5-6-7
 Pink Pagoda 5-6-7
 Pinnacle 3-4-5
 Pope John XXIII 6-7-8
 Prince Eugene Napoleon 4-5-6
 Purity 2-3-4
 Reg Ragland 3-4-5-6
 Sawada's Dream 6-7-8
 Silver Chalice 5-6-7
 Silver Ruffles 6-7-8
 Snow Man 5-6-7
 Spring Sonnet 5-6-7
 Ted Kohl Var 6-7-8
 Thelma Dale 6-7-8
 Tiffany 5-6-7
 Tom Knudsen 4-5-6
 Tomorrow (all) 5-6-7
 Twilight 4-5-6
 Vallee Knudsen 3-4-5
 Ville de Nantes 3-4-5
 White Nun 6-7-8
 Wildwood 6-7-8

There has been considerable time variation in some varieties such as 'Gulio Nuccio' and 'Reg Ragland' that we list four weeks of gibbing for them. Last year, for example, 'Guilio Nuccio' gibbed buds took from 39 to 79 days to maturity.

If no statistics are shown for many varieties, then by looking at the above dates it is quite obvious that the dates of October 3, October 10 and October 17 (5-6-7) should be the optimum

dates for most japonicas for gibbing to have flowers for the December 5th Early Show at Descanso Gardens.

AWARD WINNING CAMELLIAS

The following Awards were made by the Southern California Camellia Society for outstanding camellia varieties in the 1969-1970 season.

Margarete Hertrich Award for outstanding japonica seedling: 'Elsie Ruth Marshall', originated, propagated and released by the late Leslie Marshall of Marshall's Camellia Nursery of San Gabriel, California, and named in honor of his wife Elsie. The flower is light pink to light purplish pink, large, rose form double to loose peony form. It blooms mid-season to late.

William Hertrich Award for outstanding mutant: 'Carter's Sunburst Pink', a sport of 'Carter's Sunburst' that was registered in 1964 by Otto Lokken of San Gabriel, California.

Frank L. Stormont Award for outstanding reticulata: 'Mandalay Queen', a seedling of 'Tali Queen' that was originated by Shade and Shadow Nursery of Mountain View, California. It is rose pink, very large, semi-double with fluted petals. It blooms medium to late.

Edwards H. Metcalf Award for outstanding hybrid: 'Julia Hamiter', a seedling of the hybrid 'Donation', originated by Fred Hamiter of Shreveport, Louisiana and propagated by Tammia Nursery of Slidell, Louisiana. It is a medium size semi-double to rose form double. Color is delicate blush pink to white. It blooms mid-season.

William Wylam Award for outstanding boutonniere japonica: 'Demi-Tasse', originated and propagated by McCaskill's Nursery of Pasadena. The flower is small, semi-double with hose-in-hose form with a row of petaloids between petals. Color is peach blossom pink.

VIRUS DISEASE IN THE CAMELLIA

Alex Jessep*

Melbourne, Victoria, Australia

(Reprinted from June 1970 issue of CAMELLIA NEWS, publication of
The Australian Camellia Research Society)

Until comparatively recently the mottling on camellia leaves and the variegation on otherwise solid coloured camellia flowers was thought to be the result of genetic characters, nutritional problems or mutants, but now it is realised that some of these problems are the result of virus infection. As late as 1947 Plakidas¹ was asked by a nurseryman if a scion from a camellia with solid coloured flowers were grafted onto a white or variegated root stock was there any danger that he would get a variegated flower from the graft. Plakidas informed him NO and has regretted the answer ever since.

For the past twenty-odd years he has carried out much research on virus problems and now would definitely not only say it was likely but almost a certainty. Many unsatisfactory looking plants are now known to be suffering from a virus disease and on economic plants such as strawberries, potatoes and tobacco a great deal of research has, and is, being carried out on this problem overseas and in Australia with promising results.

What is a Virus?

In *The Vegetable Growers Digest* No. 26, Spring 1969, issued by the Victorian Plant Institute, Burnley, Victoria, Mr. Taylor² describes viruses and how they differ from other organisms. In spite of the serious disease they cause, they have a very simple structure in comparison with fungi and bacteria. A virus is made up of two main parts — a nucleic acid core and a protein coat which protects and encases the nucleic acid. They are so very small that it would take 25,000 of them placed end on end to extend

to about $\frac{1}{4}$ inch in length. The smaller virus can just be seen through an electron microscope at a magnification of 40,000 times. In comparison, Mr. Sutton³ estimates that a foot rule magnified 40,000 times would be $7\frac{1}{2}$ miles long. They are wholly parasitic and cannot perform any function without using the mechanisms of the individual they infect. When a virus infects a plant it has the power to force the plant cells to produce virus particles and sometimes at an enormous rate and even at the expense of the plant carrying out its normal functions.

In some plants the disease is fatal while in others the symptoms may not be obvious as a virus although present, may be a hidden invader.

What are the Symptoms?

In camellias the symptoms are yellow variegation and blotching of the leaves, somewhat similar to chlorosis, which is a nutritional function and not difficult to rectify. Since petals are modified leaves the virus attacks them causing the breaking of the colour from a solid colour to a variegated one. This fact has been used by horticulturalists to produce new cultivars such as the Rembrandt tulips. Colour breaking of tulips has been going on for centuries but that a virus was the cause has only been established of late years. During the past few years camellias with solid colours have been grafted onto a virus infected stock to give variegated flowers. According to Plakidas there are at least four different strains of the virus attacking camellias and they have been recognized by their behaviour on plants under test.

1. The typical common strain which causes large white blotches on the
- (Continued on next page)

* Mr. Jessep was for many years Director of the Melbourne Botanical Garden. —Ed.

flower and a large amount of variegation on the leaf. Gives blooms of 'Adolph Audusson Special'.

2. Causes small white spots and flecks on the flower and a small amount of leaf variegation as on 'Ville de Nantes'.
3. Causes only a small trace of leaf mottling but prominent variegation on the flower 'Lallarook'.
4. Causes conspicuous leaf variegation but no colour break in the flowers 'Mrs. Charles Cobb' and 'Blood of China'.

The cultivars quoted were those on which these strains were detected but that is not say that a strain is confined to any particular cultivar.

Experiments have indicated that these virus symptoms are constant and can be transmitted. These strains are not important, as yet, but it explains why some plants show leaf variegation but no colour break in the flowers and vice versa. 'Emperor of Russia Var.' shows very little virus symptoms in the leaves as with No. 3 strain, while the writer's 'Tail Queen' although it has had pronounced symptoms on the leaves for some 10 years, there has not been a break in the solid flower colour. However all variegations in camellias are not due to virus disease. The genetic type of leaf variegations is practically constant as with 'Francois West' and it is not transmitted by grafting as the virus can be with genetic breaks.

In the flowers the variegation usually occurs in patterns of bars and stripes and more or less constant whereas virus colour breaks are usually irregular patches and blotches of white. Virus multiplies much more rapidly in young vigorous growths than in the old and some plants appear to partially recover later in the summer but once a plant has virus it seldom, if ever, completely recovers. Although the symptoms may be scarcely visible, the disease is there in a masked form. White flowered

cultivars such as 'Alba Plena', 'Sode Gakushi' and 'Bride's Bouquet' often have symptoms of virus infection in the leaves but the white flowers remain the same.

Chlorosis, a nutritional problem, must not be mistaken for virus trouble and it can be controlled or eliminated by correct feeding. Although white flowers are not affected by the virus, it is transmitted to other camellias if such wood is used in grafting. Experimental evidence is now proving that all white cultivars with yellow blotches on the leaves and most cultivars with irregular white blotches on the petals are virus infected plants.

How is the Virus Spread?

Some viruses are spread by insects such as aphids and leaf hoppers but some, including camellias, have no known vectors and are spread by man when he uses virus infected plants with his propagating by grafting. Camellias are not infected by handling them when cutting blooms, pruning or by contact in any other way. The virus from an infected scion or stock can be transmitted to any part of the plant because it is a disease-producing agent in the sap and can travel freely from stock to scion and vice versa. If a virus-free scion is grafted on to a virus free stock the plant remains free of the disease. A virus infected scion grafted on a virus-free stock such as a seedling, the resulting plant is not only virus infected but the growth from the stock, if allowed to grow, also shows the symptoms of the virus.

If a rooted cutting from a virus infected plant is used for stock, the plant obtained from grafting onto it is infected with the virus and as many of the new cultivars are grafted this way, most of the solid coloured ones produce the variegated flower to which a name is given. 'Reg Ragland' and 'Tomorrow' when grafted in Australia soon produced what is now known as 'Tomorrow Var.' and 'Reg Ragland Var.' and it is not easy to get the solid

'Reg Ragland' and 'Tomorrow' free from virus. That a seedling stock free from virus can be infected is shown from an experiment with a seedling that produced red single flowers.

The virus infected scion grafted on to the seedling died but the stock (seedling) developed and produced single variegated flowers. Although the virus symptoms appeared on the leaves and flowers the form of the flowers remained the same. It must be remembered that all plants showing virus symptoms in the leaves do not produce variegated flowers. 'Alba Plena' and other white flowered cultivars with virus leaf symptoms do not change colour in the blooms. The reticulata 'Lion Head' and 'Purple Gown' with virus symptom leaves produce the variegated blooms 'Cornelian' and 'Purple Gown Var.' respectively but although the writer's 12 year old 'Crimson Robe' and 'Tali Queen' have pronounced virus infected leaves, the blooms have never shown any white on them.

Effect on the Plant

Although virus is a disease, and can be a very serious one on some other plants, it seems to have little effect on the physical condition of a camellia plant. The chlorotic leaves are undesirable being susceptible to cold and sunshine injury which scorches and makes that portion brown and unattractive. However, it must be harmful as the chlorotic leaves must reduce the photosynthetic activity which is necessary in the production of carbohydrate used by the plant. It is thought that the growth is weaker and propagation less successful but sufficient data is not available to verify this. With the increase of virus infected plants it may be difficult in the future to obtain cultivars free of this disease and solid coloured camellias would then be at a premium.

How Can Virus be Controlled?

Virus in decorative plants have become such a serious factor that horticulturalists have given monetary as-

sistance and the Victorian Department of Agriculture has decided to have research made to assist in controlling or eliminating this disease. At the Victorian Plant Institute a virologist—Mr. John Sutton³—has been appointed and has made a start on the project. At the Institute a virology laboratory has been equipped including an electron microscope which gives sufficient magnification to see and sometimes recognise the virus and this is a basis for attack.

Control of Virus

There is no direct control by chemical means as the nucleic acid of the virus and of the host plant are so similar that chemical treatment is not practicable. Heat treatment has been carried out for some years and with better equipment much investigation will be carried out with this method. The meristem method of producing plants by cuttings is in its infancy in Australia but it is giving promising results overseas. Once virus-free material is obtained it must be indexed frequently to ensure that it remains healthy and does not become re-infected, and this is another problem to be further investigated.

1. Plakidas, A. G., Plant Pathologist, Louisiana Agricultural Experimental Station.
2. Mr. Taylor, R. H., Principal Pathologist, Victorian Plant Research Institute, Burnley, Victoria.
3. Mr. John Sutton, Virologist, Plant Research Institute, Burnley, Victoria.

CAMELLIA NOMENCLATURE

A GOOD CHRISTMAS GIFT
TO CAMELLIA FRIENDS
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WINNING VARIETIES IN 1970 CALIFORNIA SHOWS

One of the yardsticks that measures camellia varieties is the winning of Best in camellia shows. CAMELLIA REVIEW has tabulated show results from time to time in former years and presents herewith the list of winning varieties in the thirteen camellia shows that were held in California during the regular camellia season in February and March 1970. Results of the Early Show in December 1969 are not included. As has been done in former tabulations, winners of both Best and Runner-up are included where Runner-up awards were given, on the reasoning that a variety that wins the runner-up award merits more than mere also-ran consideration. The numbers indicate the number of times a variety won the award. Those not having numbers won once.

JAPONICA

Winning varieties are listed for Large and Very Large, Medium, Small and Miniature. Some shows had Divisions for Boutonnieres, including both Small and Miniature, while other shows had separate Divisions for these two sizes of japonica. The varieties are listed according to size regardless of the name of the Division in which they competed.

Large and Very Large

Tomorrow Park Hill (5)
Mrs. D. W. Davis Peony (2)
Elegans Supreme (2)
Kramer's Supreme (2)
Lady in Red
Tiffany
Tomorrow Var
Guilio Nuccio
Guilio Nuccio Var
Elsie Ruth Marshall
Drama Girl Var
Tomorrow's Dawn
Mrs. D. W. Davis
Grand Slam
Fashionata
Easter Morn

Medium

Sawada's Dream (3)
Betty Sheffield Supreme (2)
Betty Sheffield Blush Supreme (2)
Sunset Oaks (2)
Margaret Davis (2)
Ballet Dancer
Twilight
Spring Sonnet
Herme
Berenice Boddy
Jennie Mills
Wildfire
Betty Sheffield
Annette Gehry
Pink Pagoda
Lady Kay

Small

Kitty (5)
Maroon and Gold (3)
Demi-Tasse (2)
Alison Leigh Woodroof (2)
Wilamina (2)
Pink Perfection (2)
Reeves Sweetheart
Little Man

Miniature

Fircone Var (3)
Angel's Blush (2)
Bright Sprite
Memento
Rosy Posy
Sugar Babe
Pearl's Pet
Hopkin's Pink
Baby Sargent

RETICULATA

Reticulatas were entered in two Divisions, depending on the Show Schedule of the particular show. Most of the shows had a Division for Reticulatas. In some shows there was a Division for "Reticulatas and Hybrids With Reticulata Parentage". The following tabulation lists varieties that won Best or Best Runner-up regardless of the title of the Division in which the blooms were entered. The inclusion of eleven varieties of reticu-

lata suggests there are no favorites among the judges of reticulata varieties.

- Purple Gown (3)
- Buddha (2)
- William Hertrich (2)
- Tali Queen (2)
- Crimson Robe (2)
- Moutancha (2)
- Mandalay Queen (2)
- Lila Naff
- Pagoda
- Mouchang
- Cornelian

HYBRIDS

Most of the shows classified hybrids according to parentage; namely, with reticulata or other parentage. Two shows classified them according to size without regard to parentage, although it is of interest that the winning varieties in the Division for Large were of reticulata parentage and those in the Division for Medium were of other parentage. As stated above under "RETICULATAS", hybrids with reticulata parentage were entered in some shows in a Division "Reticulatas and Hybrids With Reticulata Parentage". The following tabulation lists varieties that won Best or Best-Runner-up regardless of the title of the Division in which the blooms were entered.

- Reticulata Parentage**
- Howard Asper (8)
 - Francie L (4)
 - Valentine Day (4)
 - Fire Chief

Other Parentage

- Elsie Jury (6)
- Julia Hamiter (3)
- E. G. Waterhouse (2)
- Rose Parade
- Elegant Beauty
- Waltz Time Var
- Waterlily
- Dorothy James
- Anticipation
- Charlean

California Camellia Show Dates

- Dec. 5-6 —Early Show,
- Feb. 6-7 —San Diego
- Feb. 13-14—Pomona
- Feb. 13-14—Peninsula Society at Redwood City
- Feb. 20-21—Temple City Society at L. A. Arboretum
- Feb. 20-21—Delta Society at Pittsburg
- Feb. 20-21—Santa Clara Society at San Jose
- Feb. 27-28—Descanso Gardens
- Mar. 6-7 —Sacramento
- Mar. 6-7 —Bakersfield
- Mar. 7 —Fresno
- Mar. 13-14—Northern Calif. Society at Concord
- Mar. 20-21—Modesto
- Mar. 27-28—Sonoma County Society at Santa Rosa

RELEASING

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CAMELLIA SEEDLING CULTURE

(THE MOST EXCITING HOBBY)

James McCoy

Fayetteville, North Carolina

(Reprinted from Winter 1970 issue of CAROLINA CAMELLIAS)

Hardly any camellia publication is complete without an article on seedlings, but I have had a feeling for some time that they do not go far enough. Most articles cover sprouting them very well but in many cases, the subject is dropped right there. What do you do after that. Perhaps if the culture of seedlings were covered step by step from sprouting to blooming, more people would participate. Anyway, for what it might be worth, this is the way we grow our seedlings.

Pick seeds about 15 September whether they appear mature or not. Leave them in the container for about a week until the hull dries out a little. Then remove the dark shiny seeds from the pods. Crack the shell slightly and carefully with a hammer. Do not crush the seed.

Seeds are sprouted by placing them in a plastic bag with damp peat. Put about a gallon of water in a pail with about 2 tablespoons of Captan. Wet the peat thoroughly. Squeeze out as much of the water as possible. Seal the bag with a rubber band and place it in a dark, warm place like a closet or under the bed. Check them every two weeks to see if they have sprouted. Those that have sprouted and the radicle (root) has reached a length of at least an inch, may be removed.

For their next stage of growth, prepare a miniature greenhouse as follows: Take a shallow box such as a soft drink box crate. Cover the bottom and sides with an unbroken sheet of polyethylene, preferably a construction grade, to prevent the passage of water. Set the crate on the plastic, pull it up on all sides and fasten it with staples, thumb tacks or

masking tape. Fill it with a half and half mixture of sand and peat. Wet the mixture thoroughly. Cut off the tip of the radicle, make a hole in the sand-peat with a large nail and insert the radicle. Leave the seed sitting on top of the sand-peat. They may be placed close together, almost touching. Cover the box with polyethylene, the type clothes come back from the dry cleaners in. Use a frame work of coat hangers to keep the plastic 8 to 12 inches above the seeds. Fasten the plastic with thumb tacks or tape to the crate, creating a small greenhouse. Place the box near a window where it can get plenty of light but no sun. You may apply a light sprinkling of water every time you open the plastic to insert more sprouted seeds.

When the seedlings have begun to grow and have developed at least two well defined leaves, they may be moved to individual containers. We use 3-inch plastic cups with two cigarette holes burned in the bottoms. Use the same half and half mixture. We do not sterilize potting soil as we haven't found that we needed to. We lose a few but not enough to justify the extra work of sterilizing. They may now be placed in the greenhouse. We have a 24- by 36-inch slatted frame in our greenhouse which will hold more than 200 cups, which is about all we can handle at a time. Do not fertilize. Water them about once a week and do nothing else. They do not grow much but the roots develop nicely. Move them outside in the spring along with your other plants. I move frame and all. Keep them watered and sprayed (once or twice with Cygon), nothing else until about the first of July. They will have

used up the food stored in the seed and application of fertilizer will be necessary. Use ortho Camellia-Azalea fertilizer in liquid form, mixed 1 tablespoon per gallon of water. Apply this fertilizer liberally every other week until 15 October. Of course keep them watered as necessary, about twice a week or whenever they seem dry.

By 15 October, most of them will have grown to from 8 inches to a foot in height with stems about half as big as a pencil.

They may now be potted in your regular potting soil. We use half gallon containers for this move. Here you have to make a decision: Are you going to keep them all or only the biggest? If you are like we are, you cannot throw any of them away. We always wonder if the puny little plant might not turn out to be another 'TOMORROW'. Those that we don't have cans for or room for, we plant in the ground. This is alright but it delays blooming several years. We continue the same fertilizing program (liquid fertilizer every other week) until they bloom. This is a little expensive but there is no danger of damaging your little plants.

The next October they may be moved to gallon containers and kept in this container until they bloom. When will they bloom? About half of them will bloom after they've been in the gallon can for a year: about three years after sprouting. The other half will bloom the next year.

If you think it's exciting to watch your brand new, show winning variety develop buds and finally open, you should try seedlings. Most buds on seedlings are long and narrow, obviously singles long before they open, but occasionally one will set big, fat, peony type buds. Here's where the excitement comes in. Is it going to be a full peony type? Is it going to be very large? Is it going to win the seedling class wherever it's shown? Is it going to be—yellow?

CAMELLIA SEEDS

1970

JAPONICA SEEDS

Mixed seeds, including a small percentage of seeds from seedling trees in the Huntington Botanical Gardens.

\$3.75 per 100 (minimum order)

Note: In former years, seeds of the white camellia 'Snow Bell' have been kept separately. They are now included with the mixed group.

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RETICULATA, OTHER SPECIES & HYBRID SEEDS

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CAMELLIA TOUR OF JAPAN

Gladys R. Boynton

Lodi, California

One of the most interesting trips I have ever experienced was Jack Craig's Camellia Tour of Japan from March 15 to April 5, 1970.

There were twelve of us in the group. Besides members from California, Mississippi, Georgia, Louisiana, and Florida, there was a couple from England. Not only did we learn about camellias in Japan, but we also enjoyed exchanging ideas from our home lands. Everywhere we went members of Japanese Camellia Societies met us and seemed happy to show us their gardens. Thus we had greater opportunities than most tourists to meet the Japanese people and to view their country. Our escorts, Jack Craig and Mrs. Judy H. Hara, from the Japanese Travel Bureau, could speak both Japanese and English fluently so interpretation was no problem.

We first visited Tokyo and nearby places where camellias might be seen. Japan was having an unusually cold spring which delayed blooming of some varieties. The small red Wabisukes were showing bloom more than any others, and might be seen in many small gardens artistically tucked into a corner, along with a few rocks and a Japanese pine tree.

We saw the beautiful garden and waterfall at Chinzanso Restaurant, and a few camellias blooming. We also visited the well known Kyukaen Bonsai Garden near Tokyo.

The president of the Japanese Camellia Society went in the bus with us to Kamakura, where we saw a very nice camellia garden of many varieties, which belonged to the secretary of the Camellia Society. There were blossoms on most of the bushes and she had names attached to every bush, written in English for us. We also enjoyed a lovely tea there. In fact, after visiting any garden or nursery

throughout Japan we were usually entertained at tea. Many times refreshments were little cakes made like camellia blossoms.

From Tokyo we went by boat to Oshima Island in Tokyo Bay. This proved to be one of the highlights of the whole trip. Wild camellias grow abundantly on the slopes of this volcanic island. Some of the trees in the lower elevations arched over the road forming a tunnel where our bus went. Higher up we could see the shiny leaves of camellia bushes in many places, and most had the typical red single *Camellia Japonica* flowers.

On one slope was the Oshima Botanic Garden where hybridizing is going on and where we saw many cultivars of *Camellia Japonica* in bloom.

It is on this island that jewelry is made of camellia seeds — stick pins, necklaces, and key rings. We also saw charcoal being made of wild camellia wood, to be used in restaurants and for barbecues. In the distance we saw smoke rising from the volcano on one of the higher mountains.

By boat we went from Oshima to Atami where many cherry trees were in bloom. Then we took the Bullet Train, passed Mt. Fuji, and on to Nagoya. There we visited the famed Higashiyama Botanic Garden. Not many blossoms were yet out, but there were many varieties growing on a hillside right out in the open.

The summer climate in Japan may get as hot as ours in California, but we were told camellias there do not need shade. With Japan's high humidity an atmospheric cover of haze always forms as the temperature rises, softening the effect of the sun.

It was near Nagoya that we saw our first Higo Camellias when we visited the garden of Dr. Ueda, a professor from the Nagoya University. He had beautiful Higo Camellia bon-

sai in a glass enclosure next to the tea room where we were served. After tea, a group of Japanese men were anxious to exchange camellia ideas with us. They wanted to know America's favorite varieties. They provided a tape recorder so they could remember how to pronounce the names. They also asked about Descanso Gardens in Southern California, and the Sacramento Camellia Show.

From Nagoya our bus took us over the mountains on the Meishen Expressway to Kyoto. We passed much farm land with rice paddies in the lower flat country and rows of tea shrubs higher up. To cover rows of more tender vegetables or plants the Japanese were using transparent plastic strips held up by arches of split bamboo.

In some of the ancient temple grounds of Kyoto we saw some very old camellia trees. One tree at the Tsubaki-Dera Temple was planted in 1592 we were told.

From Kyoto we drove to Kobe, where we took a steamer across the Inland Sea to Takamatsu on Shikoku Island. It was a beautiful day and the views of islands as we glided along were lovely.

In Takamatsu we again visited parks and gardens to see camellias, and hospitable Japanese invited us to teas. It was here we saw a non-competitive camellia show. Branches of flowers were attractive in tall bamboo vases, which were used instead of low, flat containers like we have at shows.

From Takamatsu we went by plane to Kumamoto on Kyushu Island. We looked down on beautiful views of the Inland Sea and snow covered mountains on the way. Kumamoto is known as the home of Higo Camellias. Here we visited both nurseries and private gardens and saw beautiful flowers. Higo flowers are large single ones with a bunch of spreading stamens in the center. They come in red, white,

(Continued on next page)



Mr. Jihei Yoshimura of Meika-en Nursery in Kumamoto, demonstrates the initial training of a two year old Higo bonsai graft. Onlookers are enthusiasts, Mr. R. Smith Ward of Atlanta, Georgia, Mrs. Houghton Hall of San Anselmo, California, and Mrs. Reginald Try of Windsor, England.

pink, or variegated colors, and are much used for bonsai. We saw some large trees also, in full bloom. We visited the Kurume Horticultural Research Station where we saw large plantings of both camellias and azaleas.

Then we visited in the north-western region of Honshu Island at Kanazawa, Toyama, and Niigata. This is the home of *Species Rusticana*, the Snow Camellia. At the University of Niigata, Dr. Kaoru Hagiya, leading authority on *Camellia Rusticana*, led us on a tour of camellia plantings containing 1,500 named *Camellia Rusticana* cultivars.

Here in the west there was still much snow in the mountain areas. We especially enjoyed visiting the town of Kamo, in the mountains out of Niigata. There we were met by the mayor and town people, and presented with a large bouquet of red Snow Camellias. Then they led us up a ravine into their Snow Camellia Park, where, beneath tall old cryptomeria trees, wild Snow Camellias were just emerging from several feet of snow. It seems the snow protects the sprawling shrubs in the winter, and after the snow melts the branches spring up again and are soon covered with small red single blossoms.

After our hike, we were treated to a lovely tea in the town hall. We were served by pretty Japanese girls in kimonos. Each of us was presented with gifts of a history of the town and of Snow Camellias, and also a lovely china plate with red camellias painted on it.

Later we visited a nursery near Niigata where there were beautiful Snow Camellias in many sizes and colors. We were surprised to learn that these were all natural selections found in the mountains. The flowers we saw had been brought into bloom in a glass house because of the late cold weather.

I think we all enjoyed this trip especially because, besides learning

more intimately about camellias of Japan, it gave us fine opportunities to meet the people and see many places in the country not often visited by tourists. We found that progressive Japan still retains very much of its ancient customs and charm.

Bernice Gunn Is S. C. C. S. Secretary

Mrs. Bernice Gunn is Secretary of the Southern California Camellia Society, having replaced on September 1st Mrs. Mildred Pitkin who resigned the position. Mrs. Gunn's address is 12022 Gertrude Dr., Lynwood 90263.



Bernice Gunn

Mrs. Gunn has been active with her husband Al in the activities of the Southern California Camellia Society for over ten years. She brings to the position of Secretary not only a knowledge of camellia society activities but also a broad acquaintance with the members of the Southern California Society.

A FEW HISTORICAL NOTES ON GRAFTING

W. F. "Hody" Wilson
Hammond, Louisiana

The following material has been used on several occasions during the past year or two as introductory remarks when discussing certain aspects of grafting. Surprisingly, this brief history aroused more interest among camellia growers, I honestly believe, than the text of the talk.

Your editor somehow keeps informed and suggested that I send the material to him, as it would be of interest to camellia growers in general. As all of this material is in the literature on propagation and is well known to workers and students in this disciplinary area, I shall not present the sources of the references used.

Grafting is the art of joining parts of plants together in such a manner as they will unite and continue their growth as one plant. These parts are commonly called scion, or cion and stock, rootstock, or understock. It has been suggested that the plant of the combination be called stion, a term that has not been adopted for usage by propagators.

Some reasons for grafting:

1. Perpetuation of clones
2. Rapid increase of clones
3. To change varieties
4. To gain benefits of certain rootstocks; for example, roots, vigor, dwarfing, fruit size, nematode resistance, etc.
5. For pollination
6. Hasten growth of seedlings and sometimes longevity and vigor
7. For study of diseases—viruses and their indexing
8. Repairing damage to plants, etc.
9. Intermediate stocks — for dwarfing, disease resistance, etc.

It was not until the 17th century that detailed information on the propagation of plants by means of layers

and cuttings was available. This is not true of grafting which has been intriguing from ancient to modern times, not only to the novice but to professional gardeners as well. This is true I know with the camellia growers and probably accounts for their interest in a few interesting historical facts concerning grafting.

Top working was so well known that over 1900 years ago the Apostle Paul used it as a metaphor in his epistle to the Romans. (Romans 11: 16-24) The Gentile Romans were compared to twigs that had been grafted on the olive tree of Judeo — Christian faith thus replacing the natural branches — the Jews who had been blighted by unbelief.

The poet Virgil, in the first century before Christ, lists in verse many types of grafts.

Pliny in the next century described many of the techniques of grafting used at that time — many of which were beyond the realm of conjecture — I might add here that among the camellia grafters even Pliny probably could learn some new techniques.

In 1672 the literature showed grafting as an art had progressed rapidly in Western Europe. In the latter part of the last century, literature in many countries indicated the development of this art.

The next two statements interest me very much, as you could almost substitute other practices which have developed more recently for grafting; and these statements would rather accurately reflect some of the reactions to the practices.

An article in the journal "The Gardner" January 26, 1889, made this statement — Probably the greatest nuisance in the practice of gardening is the art of grafting. It is clever, interesting — but will be no great

(Continued on page 23)

Critique for Camellia Show Judges Oct. 24

A critique for camellia show judges will be held on Saturday, October 24, 1970, at the Tuesday Afternoon Club House in Glendale. It will be a dinner meeting, with the serving of dinner to start promptly at 7:00 P.M. Price of the dinner will be \$4.50 each. Dinner reservations, with check, should be sent to A. Wilkins Garner, 1444 El Rito Ave., Glendale 91208. Discussion will start at 8:00 P.M. and people not wishing to attend the dinner will be welcome for the discussion part of the evening. The Los Angeles Camellia Council will sponsor the event.

The objective of the meeting will be to bring out through discussion the principles and practical aspects of camellia show judging. Harold E. Dryden, Camellia Council President, will serve as Moderator. The Council believes that such a discussion will be helpful toward a more uniform approach toward judging during the new camellia show season which will start with the Early Show at Descanso Gardens on December 5th. Accredited camellia show judges are urged to attend so that they can contribute their own experiences as well as benefit from the contributions of others. People who are not judges but aspire to qualify are also invited to both the dinner and the following discussion.

There are ample motel facilities in Glendale, close to the site of the meeting, for people who do not live in the area adjacent to Glendale. It is hoped that the attendance will include people from all parts of California so that the discussion will reflect points of view that are broadly representative of all the California camellia areas. While notices will be sent to all accredited judges, Dryden urges that reservations be sent to Wilkins Garner early. Dinners will not be served without advance reservations.

HUMIDITY (Continued)

closed the Heathrow (London) Airport.

I dare to put on a special exhibit of my week-old flowers in London. There were no pre-alibis in my explanation of bloom treating methods. Incidentally, Dr. Smart was to translate my song-and-dance on treating technics from American into English.

If you get hepped up about the Roundup of Camellias From East of Dodge and the Pecos* for the Descanso Gardens show during the Annual A. C. S. Meeting in Pasadena next February, you can check back on this article and the "Pony Express" story reference, below¹. Details of this new competition will be covered in the November 1970 issue of CAMELLIA REVIEW and will be broadcast in other camellia publications. You can rest assured that your blooms will receive headwaiter service by Pat Novak, Earl Blake and yours truly.

* This is "Reedeze" for "outside of California". —Ed.

1. Apr. 1968 Camellia Journal "The Pony Express Rides Again"; 1967 ACS Yearbook P22; Nov. 1966 Camellia Review, "Increasing Life, etc." by Reed; and Nov. 1969 Camellia Journal P6.
2. Catalogue No. 200241, Calbiochem Corp., 3625 E. Medford, Los Angeles 90063, \$7.20 for 250 mgm.
3. NAA Catalogue Number is 4773 with Calbiochem Corp. \$2.50 for 25 grams (25,000 mgm).
4. Mar. 1955 Camellia Review "Treatments for Increasing the Life of Cut Camellia Flowers" by Bonner and Honda.
5. Acme Fixture Display Co., 1055 S. Olive, Los Angeles 90015. \$3.75 per box.
6. Moskatel's, 633 San Julian, L.A. 90014. \$3.00 for 5 lb. box.
7. 25 Mar. 1965 New Scientist "The Third Plant Hormone" by G. Shaw.

California vs New Zealand Camellias

I am occasionally asked how California and New Zealand camellias
(Continued on next page)

compare, although it has been three years since I visited New Zealand during their camellia season. I think, therefore, that the following comments on this subject by Colonel Tom Durrant of New Zealand are newsworthy. They are extracted from an article by Colonel Durrant in the March 1970 issue of the New Zealand *Camellia Bulletin* in which he reports on his 1969 visit to California under the title "California Camellia Scene".

"Here are some general observations on the comparisons between the standards of flowers in California and New Zealand. Though at the Descanso show many flowers on the bench showed the damage caused by heavy storms on the previous days, the general standard of blooms in the japonica classes was far higher than we could at present achieve in New Zealand. No doubt, this is largely due to the careful cultivation, constant feeding, and extensive disbudding which is possible when the object of the exercise is to produce champion show blooms, rather than pleasant displays of flowers in the garden during the winter and spring. Something, too, must be added for the immaculate presentation of entries on the bench, foliage clean and shining, blooms facing the judges in exactly the right manner and no bits of moss, litter or odd, disfigured petaloids or stamens to be seen. Our very best japonica exhibits would do themselves justice on California show benches but the average quality there is way out in front of anything we have so far produced.

"Curiously enough, in the case of *reticulata* exhibits their average was well below what we can expect in New Zealand. This proves, presumably, that *C. reticulata* responds better to our climate and growing conditions than it does to the detailed container cultivation and low humidity it experiences in California."

—EDITOR

Early Show Dec. 5-6

The Early Show, sponsored by the Los Angeles Camellia Council, will be held in Descanso Gardens on December 5 and 6, 1970. Inasmuch as Hospitality House, where the show was held in 1969, will be occupied by a showing of Holiday decorations, an event held in alternate years and sponsored by the Descanso Gardens Guild, the 1970 show will be held outdoors in the gardens. Plans are being made to protect the blooms should the weather be inclement. Show schedules can be obtained from Larry Shuey, Show Chairman.

There will be the usual Divisions for treated japonicas, non-treated japonicas, *reticulatas* (an open Division for both treated and non-treated blooms) *sasanquas* (non-treated) and seedlings.

Since the success of the Show will depend largely on the number of treated blooms entered, exhibitors should start promptly, if they have not already done so, to gib. The article in this issue by Bill Goertz includes a schedule for gibbing which is based on Mr. Goertz' experience.

A FEW HISTORICAL (Continued)

loss if abolished altogether. In nine out of ten cases, it is for the convenience of the nurserymen and in nearly all cases is not only needless but harmful.

In 1892 Liberty Hyde Bailey, the great horticulturist, in an address defended the practice of grafting due to the misconception that grafting is in principle and essence opposed to nature and fundamentally wrong.

Today we have many useful and essential practices for this art, but it still remains an intriguing, interesting, and sometimes controversial art for both novice and professional.

NOTES FROM "NEWSLETTER"

PUBLISHED MONTHLY BY NEW SOUTH WALES BRANCH OF AUSTRALIAN CAMELLIA RESEARCH SOCIETY

FIRST COMPETITIVE SHOW

More than 1000 blooms were entered in the New South Wales Branch's first competitive camellia show that was held on June 6, 1970 in Gordan, a Sydney suburb. (Americans must remember that Australia is in the Southern Hemisphere and their camellia season is during our summer months. —Ed.) For the first time new rules were in force, blooms competing only against blooms of the same variety. Championship Ribbon in the Cultural classes was won by 15 year-old Michael Goonan with 'Tomorrow'. There were over 300 cultivars represented in the Japonica Section.



E. G. WATERHOUSE CAMELLIA GARDEN

The E. G. Waterhouse Camellia Garden, a project of the New South Wales Branch of the Australian Camellia Research Society, was officially opened on July 18, 1970, with Lady Cutler, wife of the Governor of New South Wales, performing the opening ceremony. The official dais was surrounded by a large crowd of people representing nurserymen, garden enthusiasts, local civilians and parliamentarians of varying political color, proving the universal popularity of gardens and camellias. On declaring the garden open, Lady Cutler unveiled a plaque to commemorate the occasion, followed by the planting of 'Lady Cutler', a *saluenensis* X 'Ville de Nantes' hybrid that was developed by Mr. Les Jury of New Zealand. The plant had been propagated and donated by Mr. and Mrs. Neville McMinn of Camellia Lodge Nursery, Noble Park, a suburb of Melbourne.

The Garden was conceived and work was started in 1969, under the direction of Mr. Eric Utick, Chairman of the Southern Districts Branch

of the Australian Society. Opening ceremonies for the Garden were held in August 1969. Plants have been donated by the camellia society branches throughout Australia.



INTERNATIONAL CAMELLIA FESTIVAL

The organizing executive of the Australian Camellia Research Society was delighted with the result of the camellia show that was held on August 3, 4 and 5 in the Blaxland Gallery of Farmer's Department Store in Sydney. Fifteen thousand visitors attended the affair. This camellia show is non-competitive in purpose, and is designed to show camellias at their best in artistic placement.

Locally grown blooms were artistically arranged according to country of origin and appropriate floral arrangements displayed at focal points.

Some magnificent camellia blooms were air-expressed from South Australia (Adelaide), Victoria (Melbourne) and New Zealand. Special permission was obtained from the Australian government to import the blooms from New Zealand.

Of great interest to spectators was the unique presentation of Bonsai camellia plants by Len and Edith Webber of Epping. Mr. Webber is Australia's only official teacher of Bonsai horticulture. The beautifully shaped camellias were a revelation. Some plants eight or nine years old were thriving in pots as small as two inches square. The exhibit contained fifty specimens.

The camellia show was officially opened by Mrs. William McMahon, wife of the Minister for External Affairs. (It is Australian custom for camellia shows to have a formal opening ceremony, with a person of local prominence or a foreign visitor officially opening the show. —Ed.)

Directory of California Camellia Societies

Societies with asterisk () are Affiliates of Southern California Camellia Society*

*CAMELLIA SOCIETY OF KERN COUNTY

President: John J. Fortenberry; Secretary: Lemuel Freeman, 209 S. Garnsey Ave., Bakersfield 93309
Meetings: 2nd Monday Oct. through Apr. at Franklin School, Truxton and A St., Bakersfield

*CAMELLIA SOCIETY OF ORANGE COUNTY

President: Ronald Cowan; Secretary: Mrs. George T. Butler, 1813 Windsor Lane, Santa Ana 92705
Meetings: 1st Thursday Oct. through April at Altadena Savings & Loan, 2400 E. 17th St., Santa Ana

CAMELLIA SOCIETY OF SACRAMENTO

President: Richard Ray; Secretary: Mrs. Frank P. Mack, 2222 G. St., Sacramento 95816
Meetings: 4th Wednesday Oct. through May in Garden & Art Center, McKinley Park, Sacramento

*CENTRAL CALIFORNIA CAMELLIA SOCIETY

President: Richard Pozdol; Secretary: Mrs. Jack Evans, P.O. Box 108, Ivanhoe 93235
Meetings: Nov. 18, Dec. 16, Jan. 20, Feb. 17 at Mayfair School, Mar. 24 at Fresno State College

DELTA CAMELLIA SOCIETY

President: Douglas R. Abernethy; Secretary: Mrs. Anita Abernethy, 2962 Boies Dr., Pleasant Hill 94523

Meetings: Second Thursday, October through April, in Room B, Sun Valley Mall, Concord

JOAQUIN CAMELLIA SOCIETY

President: Joseph H. Baker; Secretary: Mrs. Ethel S. Willits, 502 W. Pleasant Ave., Lodi 95240
Meetings: 1st Tuesday November through April in Micke Grove Memorial Bldg., Lodi

LOS ANGELES CAMELLIA SOCIETY

President: George K. Bulk; Secretary: Mrs. Robert Jackson, 415 N. Plymouth Blvd., Los Angeles 90004

Meetings: 1st Tues., Dec. through April, Hollywood Women's Club, 1749 N. La Brea, Hollywood

MODESTO CAMELLIA SOCIETY

President: Mrs. Virginia Rankin; Secretary: Dr. J. Holtzman, 2987 Marshall Rd., Crow's Landing 95313

Meetings: 2nd Monday October through May in "Ag" Bldg. of Modesto Junior College

NORTHERN CALIFORNIA CAMELLIA SOCIETY

President: Dr. Fred Fisher; Secretary: Jules Wilson, 18248 Lamson Rd., Castro Valley 94546

Meetings: 1st Mon. Nov. through May in Claremont Jr. High School, 5750 College Ave., Oakland

PACIFIC CAMELLIA SOCIETY

President: A. Wilkins Garner; Secretary: Mrs. A. L. Summerson, 1370 San Luis Rey Dr., Glendale 91208

Meetings: 1st Thursday November through April in Tuesday Afternoon Club House, 400 N. Central Ave., Glendale

PENINSULA CAMELLIA SOCIETY

President: Jack Mandarich; Secretary: Mrs. Charles F. O'Malley, 65 Robles Drive, Woodside 94062

Meetings: 4th Tuesday September through April in First Federal Savings & Loan Bldg., 700 El Camino Real, Redwood City, Calif. 94061

*POMONA VALLEY CAMELLIA SOCIETY

President: John I. Tami; Secretary: Mrs. Janet Meyer, 744 E. Dover, Glendora

Meetings: 2nd Thursday October through April in First Federal Savings & Loan Bldg., 399 N. Garey Ave., Pomona

*SAN DIEGO CAMELLIA SOCIETY

President: William L. Gibson; Secretary: Miss Edna Francis, 615 W. Pennsylvania, San Diego 92103

Meetings: 2nd Friday (except February which is 1st Friday) November through May in Floral Assn. Bldg., Balboa Park, San Diego

SANTA CLARA COUNTY CAMELLIA SOCIETY

President: Abe D'Innocenti; Secretary: Miss Pat McIntyre, 1810 Olive Ave., Apt. 4, San Jose 95128

Meetings: 2nd Thursday at Willow Glen Branch, American S/L, San Jose

SONOMA COUNTY CAMELLIA SOCIETY

President: C. O. McCorkle; Secretary: Miss Joy Monte Leone, 505 Olive St., Santa Rosa 95401

Meetings: 4th Thurs. Nov. through April, except Nov. (3rd Thur.) and Dec. (to be decided) in Multipurpose room, Steel Lane School, Santa Rosa

SOUTHERN CALIFORNIA CAMELLIA SOCIETY

See inside front cover of this issue of CAMELLIA REVIEW

*TEMPLE CITY CAMELLIA SOCIETY

President: Grady L. Perigan; Secretary: Mrs. Marie Perigan, 1147 Daines Dr., Arcadia 91006

Meetings: Nov. 19 (Thur.), Dec. 17 (Thur.), Jan. 28 (Thur.), Feb. 24 (Wed.), Mar. 25 (Thur.), Apr. 22 (Thur.) in Lecture Hall of Los Angeles County Arboretum, Arcadia

**SOUTHERN
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