

THE *Camellia*
REVIEW

A Publication of the Southern California Camellia Society



'Grand Prix'
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: \$6.00.

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THE COVER FLOWER

C. Japonica 'Grand Prix'

The people who have had the good fortune to see Nuccio's Nurseries seedlings as they have developed have looked forward with anticipation to the release of their seedling #6505, which they have named 'Grand Prix'. It is a Very Large irregular semi-double that often shows rabbit ears. The distinctive feature and the one that makes the flower stand out is the color—a deep rich red. Texture of the flower is excellent. It blooms mid-season. The shrub has the characteristics of 'Guilio Nuccio' with its dark green foliage.



THOUGHTS

from the editor

I believe that most of us when we think and talk about enjoying camellias are thinking mostly about our enjoyment of the flowers in our own gardens. Certainly all of us enjoy our own flowers, otherwise we would not be growing them and spending the many hours we do in working for perfection.

The enjoyment of our own camellias is only one way to derive pleasure from the flowers. We can enjoy other people's flowers and make it easy for them to enjoy ours if we will just set out to do so. It isn't enough to say "come over some time". The "some time" doesn't seem to come around with such a general and sometimes casual invitation.

The camellia people in both Australia and New Zealand take care of this situation by scheduling garden visits, which they call Field Days. I read in the June 1968 New South Wales Branch Newsletter, for example, that on June 22nd three gardens would be open for inspection, the Goonan garden in Concord, the Thompson garden in Homebush and the Swinbourne garden in Homebush, both communities being Sydney suburbs. The July Newsletter announced that on July 20th the Jamieson garden at Wahroonga would be open from 11 A.M. and members were asked to take their lunch ("hot water will be provided"). People wanting to learn to graft were asked to bring along their own understock. Scions would be supplied. A Field Day was scheduled for August 4th at "Kelvin Park", the home of Mr. and Mrs. Sim Rubensohn.

I attended a Field Day in 1967 at the Thompson garden in Homebush and can testify that it accomplished three things. First, the people who attended, and there were many such, enjoyed Mr. Thompson's flowers. Second, Mr. Thompson enjoyed showing his flowers to other people. His flowers were beautiful, much too beautiful to be limited to his own viewing. In this connection, don't most of us like to show off our flowers in their natural setting rather than on tables at camellia society meetings or camellia shows? Third, everybody had a good time.

Wouldn't it be good if the camellia societies in our country would schedule Field Days, call them what you will, as a regular part of our camellia society program. Not one during a season but several of them so that the members would have an opportunity, by invitation, to see other peoples' gardens. There isn't enough time at society meetings for members to get acquainted with one another. Field Days provide the time. It would be a wonderful way to encourage new members. And best of all, it would give the host gardeners an opportunity to show off the results of their work. All this could be done before the show season starts or on Sundays that would not conflict with week-end shows.

Harold E. Dwyer

CALIFORNIA INTRODUCTIONS IN 1968

A. H. Dekker
Glendale, California

The camellia nurseries of California are this Fall introducing more than a dozen new varieties, nearly every one of which is outstandingly beautiful and sufficiently different to be wanted by camellia fanciers and collectors.

Nuccio's Nurseries of Altadena, California are introducing five new numbers, two of which were originated in their own nursery.

'**Grand Prix**' is one of their chance japonica seedling, #6505. It is a very large, deep rich red, irregular semi-double, often showing rabbit ears. Texture is excellent. It blooms mid-season. The shrub has the characteristics of 'Guilio Nuccio' with its dark rich green foliage.

'**China Lady**' is a hand pollinated cross of 'Buddha' X *granthamiana*. The bloom is a light orchid pink, very large semi-double with an occasional rabbit ear. It is a profuse early season bloomer. The shrub is a vigorous upright open grower with long narrow dark green foliage, with typical *granthamiana* characteristics.

'**Milo Rowell**' is the outstanding hybrid introduction we have seen. It is a cross of 'Crimson Robe' times 'Tiffany', originated in the gardens of Howard Asper in Escondido, California. The flower is large, warm medium pink in color, blooms midseason. The flower form is the usual semi-double with the center filled with many petaloids. Plant growth is vigorous and upright.

'**Tomorrow's Tropic Dawn**' is a sport of 'Tomorrow's Dawn' which occurred in the garden of Rey Merino of Fresno, California. The bloom is white with an occasional red line or dash, fading to blush as the flower ages. The form, the foliage and the growth habit of the plant are identical to the 'Tomorrow' group.

'**Easter Morn**' is a chance japonica

seedling from the garden of Dr. Carleton C. Wright of Sacramento, California. It is a pale orchid pink, very large, loose peony flower which blooms late in the season, usually in March. The plant is a vigorous spreading grower with large light green foliage.

Tomlinson's Select Nurseries of Whittier, California are making an introduction which they have named for one of the outstanding women leaders of Southern California; namely, '**Vallee Knudsen**', a *saluenensis* X *reticulata* 'Buddha' hybrid that originated in the gardens of Howard Asper. It is a deep rich orchid pink semi-double to loose peony. The plant is a beautifully formed compact shrub.

The *Monrovia Nursery Company* of Monrovia, California will introduce the three *sasanqua* X *reticulata* crosses of Howard Asper that have become identified as "The Girls". They first bloomed in 1960, but have been kept out of circulation and have been seen by only a few people. Members of the Southern California Camellia Society well remember when Mr. Asper showed them 'Flower Girl' blooming on a long branch of *sasanqua* foliage and growth habit, with large *reticulata* type flowers blooming along the length of the branch. The three girls are:

'**Dream Girl**', a cross of *sasanqua* 'Narumi-Gata' times *reticulata* 'Buddha'—Plant Patent #1212. Growth habit is sturdy, upright and vigorous, with strong branching. Estimated height is to about eight feet. The leaves are of good substance, 3½" long and 1½" wide, lanceolate in shape with serrated edges. The flower is large in size, cup shaped with high center, 5¾" in diameter and 3½" in depth. Petals are of good substance with satiny appearance. Color is Ger-

(Continued on next page)

anium Lake 20/2 throughout. Flowers bloom singly along the branches from early Fall through early Winter.

'**Flower Girl**', a cross of 'Narumi-Gata' times 'Lion Head'¹. Growth habit is upright, sturdy, vigorous and strong branching, to an estimated height about 8 feet. The leaves are dark green above, light green beneath. Leaves are ovate with serrated margins, 2½" in length and 1½" wide. The flower is very large, being 5½" inches in diameter and 2½" in depth. Color is Spinel Pink 0625. Petals are of good substance, 14 in number. Flowers are borne singly along the branches and bloom from early Fall through early Winter.

'**Show Girl**', also a cross of 'Narumi-Gata' X 'Lion Head'. The growth habit is vigorous, upright and branching, with an estimated height of about 8 feet. The leaves are of good substance, 3" long and 1¾" wide, elliptic-lanceolate in shape with serrated margins. The flower is very large, 5½" in diameter and 2¾" in depth. Shape of the flower is flat with a high center, becoming more flat as the bloom matures. The color is Scarlet 19/2 throughout. The petals have a satiny appearance. The flowers bloom singly along the branches from early Fall into Winter.

Al and Vera Parker and their partner, Bill Cole, who operate *Redwood Empire Camellias, Inc.* at Sebastopol, California are introducing two new numbers, as follows:

'**Mable Bryan**', a chance japonica seedling produced in the Shade and Shadow Nursery of Steve Bryan in Mountain View, California. The bloom is a semi-double to rose form with fimbriated edges, averaging 4½" or better in diameter. The petals have excellent texture and heavy substance. It does not shatter. The bloom has a pink cast background, is mottled and striped. It occasionally sports a solid

red bloom. The plant is a vigorous, compact upright grower with very dark green foliage.

'**Lady Fair**', a japonica seedling originated in 1965 by Mrs. C. T. Brown of Guyton, Georgia. It is a light pink, very large semi-double with large heavy petals, some of which are creped. Blooming time is early to mid-season.

Mr. and Mrs. William DeFrance who operate *DeFrance's Nursery* in Encinitas, California have arranged to introduce and market some of the outstanding reticulata hybrids which Frank Maitland of San Fernando, California has developed in his Lauderdale Gardens. These are all chance seedlings whose characteristics are such that Mr. Maitland has classified them as hybrid rather than reticulata. The seed parent in all cases has been reticulata.

'**John Taylor**' is a very large (6") dark red semi-double that blooms medium to late. The bloom has excellent substance. The plant is a vigorous upright spreading grower. The bloom has been named in memory of Dr. John Taylor, a past president of Southern California Camellia Society who served after the close of World War II. Dr. Taylor with the help of his wife Dolores devoted weeks of effort in organizing and promoting the first big paid admission camellia show in Southern California at Brookside Park in Pasadena. At \$1.00 a person, this show and the show in the following year were financial successes, so much so that they placed S. C. C. S. in the financial position that has enabled the Society to carry out its varied activities in the interests of camellia hobbyists. Dr. Taylor was an American Camellia Society Director for California from 1953 to 1959.

'**Pink Sparkle**', a large semi-double light pink that blooms medium to late. The plant growth is vigorous, spreading, upright.

'**Silver Mist**', a large semi-double sil.
(Continued on page 32)

¹Correctly named 'Cornelian' according to information obtained from China by Col. T. Durrant of New Zealand. —Ed.

"BEST" CAMELLIAS IN 1967-1968 CALIFORNIA SHOWS

As a new camellia season approaches, it is interesting to review the names of varieties that won "Best" in camellia shows that were held in California during the 1967-1968 camellia season. Thirteen shows were held, not including the Early Show that was held primarily for gibbed blooms in December. The winners in these thirteen shows have been summarized in the following tables. Show schedules were not uniform; consequently, some shows are not represented in the tabulated results. Having in mind that "Best-Runner-up" is only a shade away from "Best" and is always a flower that all exhibitors would be pleased to have entered, the runner-up varieties are included in the tabulation of "Best".

Japonica

Very Large and Large

- Elegans Supreme—3
- Guilio Nuccio and Var.—3
- Carter's Sunburst Pink—2
- Drama Girl—2
- Grand Slam—2
- Tiffany—2
- Berenice Perfection
- Betty Sheffield Blush Supr.
- Clark Hubbs
- Coronation
- Donckelarii
- Erin Farmer
- Glen 40
- Julia France
- Lady Loch
- Mark Alan
- R. L. Wheeler
- Tomorrow Park Hill
- White Nun

Medium

- Ballet Dancer—4
- Lady Kay—2
- Sunset Oaks—2
- Allie Blue
- Annette Gehry
- Co-ed

Emmett Pfingstl

Flame

Herme

Magnoliæflora

Nina Avery

One Alone

Wildfire

Miniature, Small and Boutonniere Divisions

Kitty—4

Pearl's Pet—3

Demi-Tasse—2

Baby Sargent

Dryade Var.

Fircone Var.

Hishi-Karaito

Hopkins Pink

Jingle Bells

Les-Tay-Home

Little Bit

Maroon and Gold Var.

Reeves Sweetheart

Tinsie

Tinsie Blush

Tom Thumb

Wilamina

Reticulata

Crimson Robe—6

Chang's Temple-Lion Head.

Cornelian Group*—5.

Mouchang—3

Tali Queen—2

William Hertrich—2

Buddha

Capt. Rawes

Mandalay Queen

Purple Gown

Willow Wand

Hybrid with Reticulata

Parentage

Howard Asper—8

Francie L—3

Fire Chief Var.

*The variegated Reticulatas are shown together in accordance with descriptions in the 1968 edition of *Camellia Nomenclature*. Under these descriptions, all 5 should probably be listed as Cornelian.

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OBSERVATIONS ON CAMELLIA SHOW SCHEDULES, RULES AND MANAGEMENT

Harold E. Dryden

I had the pleasure during last camellia season of viewing eight camellia shows in California. I have been going to camellia shows for about twenty years, have participated in the management of a show in most of those years, including Show Chairman of several shows. I enter blooms in most of the shows that I see. My observations are of course personal but I like to think that the years of viewing and working on shows, my conversations with many camellia people in California and my striving for objectivity as Editor of a camellia publication might give some reason for my stating some views at this time.

Camellia shows are for two groups of people: the exhibitors and the viewing public. As long as we encourage the public to attend our shows and in some cases ask them to pay to see the show, I believe that the public should have high consideration unless such would be obviously unfair to exhibitors. Simplifying the work of the show management should have minor consideration.

I believe that the trend to have Awards for the different recognized sizes of japonica blooms should be continued and that shows not having such different Classes should consider adoption of the plan. It was probably all right twenty years ago to have one Best Japonica award for the japonica group. The first break-off was for Miniatures, which was accepted by all camellia shows. It was logical, in my opinion, for some of the Show Committees to throw the Small in with the Miniatures and have a Boutonniere Class, although I think it is just as logical to have separate awards for Small and Miniature. They can be displayed in a common section as was done last year in the Descanso Gardens show. Many of the shows

have not set up separate Classes and Awards for the Medium japonica blooms. The large number of excellent Large and Very Large japonica blooms that have been introduced in the last five or ten years makes it practically impossible for a Medium bloom to win a Best Japonica award. The only step that will assure championship recognition to the excellent Medium blooms of today is to have an Award for them.

I sometimes wonder if the reason for "feet dragging" in adding additional Japonica Classes is the absence of established trophies for additional Classes. Some Show Committees have obtained donated Trophies for specified categories and it would appear that they build their schedules around these Trophies. In one show in which I judged last year, a question as to whether we should pick Best Medium brought the response "I'll have to look to see if we have a trophy for it". That, of course, is putting the cart before the horse. I also get the impression that the reason for continuing the Best Japonica Award is that the American Camellia Society gives a Certificate for Best Japonica, and this is the only way in which the Certificate can be obtained. This also is working backward. In my opinion, Awards should be made for categories that are established for sound reasons; if there are no trophies, maybe it would be better to give the Award without the trophy. Certainly, an Award of Best Medium Japonica is more important to me as an exhibitor than a trophy that I might receive with the Award.

This leads to a discussion of the selection of the Best in a category. This process in judging, to me, is the least satisfactory part of the judging procedure, not because it obviously is

difficult to choose a preference from among several blooms that are all nearly perfect, but rather because of the feeling of pressure to "get the show on the road". Recognizing that one of the qualifications of a camellia show judge must be the ability to reach a decision with reasonable promptness, I believe that more can be done to provide more time for the judges to look over the blooms that are to be judged for Best. First, I see no reason why all the judges should vote for Best Japonica. Choices for Best of some of the categories are made in some of the shows by the judges who work in these groups; for example, the Classes for multiple blooms. The judges who work the single Japonica varieties could select Best without fear of having some personal preferences dominate the thinking.

It is customary in California shows in which I have judged to defer the start of judging Best until all judges are ready. The judges were given pads of blanks for all Classes in the Modesto show in which I judged last year and were instructed that when they had finished their assignments they should look over the flowers to be judged and cast their ballots. The ballots for all categories were tallied as they were cast and results were available within minutes after the last ballot was cast. It seemed to me that this procedure was an improvement over that used in other shows in which I judged.

This desire to "get the show on the road" is reason, I believe, for undue haste in announcing results. One man wrote to me as follows: "I know that time is a factor but when there are 28 judges and the Best flower is awarded the title with a total of seven votes, I do not think that this is the proper way to make the final selection. On another occasion, there were 26 judges and the Best flower had a total of eight votes. When the Best flower receives only 25% of the votes,

it is not much of a victory". Time is a factor, of course, and cannot be disregarded. The factor of number one importance, however, is that the selection should represent the decision of a majority of the judges, and no consideration of time should be permitted to defeat this objective.

The selection of Best ties in for many shows with the selection of blooms to go to the Court of Honor. In a few shows, all the blooms that are sent up for judging for Best are placed on the Court of Honor. In most of the shows, however, only a pre-determined number of the blooms set up for judging go to the Court of Honor. In the Descanso Gardens show, for example, this may be less than one-half of the Large and Medium japonica blooms that are sent up. I speak as an exhibitor when I say that to the exhibitor these Court of Honor blooms have more than casual significance. Their selection deserves time and procedures that will assure that the six or eight that go to the Court of Honor are in truth the choices of the judges.

I believe that, sometime, something should be done with the reticulata groups. First, probably, would be more knowledge regarding reticulata varieties, then a d h e r e n c e to that knowledge in camellia shows. Our entire reticulata nomenclature structure has been built around the 1948 importations that were made by Manchester Boddy and Ralph Peer. Admittedly the structure was weak, as *Camellia Nomenclature* has noted for some of the groups. Some changes were made in the 1968 edition of *Camellia Nomenclature*, based on subsequent information obtained by Colonel T. Durrant of New Zealand. This information should be accepted by American camellia show management and used by them in naming reticulata varieties. Americans cannot expect to obtain knowledge from China sources regarding reticulata
(Continued on next page)

nomenclature and must rely on and use the knowledge that is obtained from people of other countries that maintain diplomatic relations with China. I know that Colonel Durrant will continue to communicate with his contacts in China and I would expect that he will obtain additional information toward clarifying the nomenclature situation. The important thing is that we use this revised nomenclature; otherwise, we shall have the situation for the elimination of which the nomenclature book was devised, duplications and inaccuracies.

Then we have the subject of Hybrids, which will increasingly tie in with the reticulata situation. We have divided them into two groups, reticulata parentage and otherwise, and now 'Julia Hamiter', for example, has a chance, in California at least, at a Best Hybrid award. Maybe that's the answer and maybe not. In the first place, it is commonly accepted that 'Buddha' and 'Confucius' are hybrids, not pure reticulatas if there is such a thing. On the strength of this and other considerations, I entered a 'Confucius' seedling (other parentage unknown) in the Hybrid class at Descanso last year and won a Best. Frank Maitland has some excellent seedlings of reticulata parentage (other parentage unknown) that he calls hybrids because of their propagating characteristics. Both of us could enter these seedlings in reticulata classifications and few would ask questions because they look like reticulatas. Jack Clark in New Zealand has some seedlings that he has registered as reticulata because, as he wrote to me, he did not think of hybrids. This has no bearing on Show Schedules and Rules, of course, only to point out that camellia show management must be alert to changes and revise the schedules and rules as conditions change. It has been suggested that possibly there should be a Division of reticulatas which would include the reticulata hybrids. That can-

not be decided now, but the camellia show management people are the ones who must be looking for the changes that will keep camellia shows in tune with changing conditions. The fact that "we have a trophy" will not be sufficient reason for having a show classification or giving a trophy.

Some people feel that the Seedling Division deserves more attention, both in layout and in the rules and classifications for judging. David L. Feathers of Lafayette, California has an excellent article on this subject in the A. C. S. Year Book for 1968. I believe there is no more reason to think that we can with logic select a Best Seedling than there is that we can select a Best Flower of the show. Some of the Show Schedules now have separate Classes for Japonica, Reticulata and Hybrid Seedlings. I believe that this approach should be adopted by Show Committees that have not been doing so. In addition, Classes should be adopted which will make it possible for Medium and Small seedling blooms to gain attention, as we have done in the Japonica Division. Such steps would be practical, of course, only for shows that have sufficient blooms entered to make several Classes meaningful.

Of chief importance, I think, is the need for awarding Best Seedling, of whatever Class, only to blooms that merit the designation "best". This should not mean, to me, that the bloom is only the best of those entered. It should mean that the new seedling is truly worthy of being rated among what we think of as the best of our camellia varieties. Mr. Feathers has suggested a rule that a seedling should have bloomed for three years before being eligible for Award. Whether the period should be two or three years can be debated. I can provide testimony to support the view that a seedling should not be awarded Best Seedling in its first year of bloom. I received the Best Reticulata Seedling Award at Des-

canso Gardens a few years ago with a beautiful flower that graciously opened full on the morning of the show, the only bloom on the plant. I haven't had a show bloom since, have cut off the parent plant and have retained only a graft for memory reasons.

Here again, I wonder if the availability of a trophy doesn't have a bearing. We did not select a Best Sport in one of the shows in which I judged last season, believing that none of the entries justified being called Best. We were asked to produce a "best" because there was a trophy to award. We picked the best of the lot, which was not a Best from our point of view.

We all like our seedling "babies" and find difficulty in being objective in their evaluation. *Camellia Nomenclature* is full of listings of varieties that should not have left what Joe Pyron calls the seedling patch. This does not relieve a Show Committee, however, from an obligation to award Best Seedling only to seedling blooms that meet a critical test of being judged against the best of what has already been introduced. We should not pick the best of the lot and call it Best.

All that I have suggested can be done within the present framework of camellia show schedules and rules. J. Carroll Reiners of Sacramento, California has suggested some rather radical changes in his article

"Camellia Judging" in the A. C. S. Year Book for 1968. I would underwrite some of his ideas; others would require study. We can all agree that the fact of having done something is not sufficient reason for continuing to do the same thing. Show Committees face a challenge every year to meet, in the schedules and show rules, the changes that are taking place in camellias.

PHYTOPHTHORA (Root Rot)

We carried in the October 1967 issue of *Camellia Review* an article titled "Phytophthora — Nemesis of Camellia Growers", which told about the root rot that is sometimes known as cinnamon rot and about the use by Nuccio's Nurseries of a soil fungicide known as ALCO 345. The article stated that Nuccios would use it again in 1968 in the same period during which they used it in 1967; namely, from June to September.

For reasons unknown to Nuccios, it is now recommended that the fungicide be used in October, November and December and February, March and April rather than during the summer months. They will follow this schedule in 1968-1969. As stated in the October 1967 article, their plants were in excellent condition at the end of the 1967 summer. They now look

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A NEW ZEALANDER LOOKS AT CAMELLIAS

Ben J. Rayner

Stratford, New Zealand

For many years I have been acquiring from camellia enthusiasts in various countries the best varieties available and these have been grafted. Studies as to growth habits and latterly, the blooms themselves have been under close scrutiny. How do they compare with the descriptions given by their raisers and how do they compare with the form shown by photographs from the countries of origin?

Before starting to give you some of the conclusions reached over the last few years, it is imperative that I state some of the major differences between growers in New Zealand and their counterparts in America. In this country, most people grow camellias as part of the overall garden picture and not solely for show blooms. To growers in New Zealand the acquisition of a bloom of show quality is merely incidental. No great pains have been taken to ensure that the plant produces blooms to this standard. In this respect I am talking of the majority of growers. Only a few people prune their plants, only a few disbud. Quite a few fertilize their plants but not consistently and if they do fertilize it is normally after blooming before new growth starts. There are not many people in this country who fertilize to improve the quality of blooms, but those who do are the ones with consistent high quality blooms. Practically all growers, even those with large collections of camellias, also grow large numbers of other genus in the plant world—in fact, one generally finds that they will grow anything that does well in the open in their particular district and will even attempt the impossible.

One of the biggest disappointments in New Zealand is with variegated varieties. Practically all the popular

variegated cultivars in the United States have been brought in to New Zealand, but very few people buy them because they revert to solid colour practically straight away. But twice in the last ten years, these apparently reverted solid colour plants have given us blooms with beautiful variegation. Why?? Last spring we had an unusual drought. Hardly any rain fell at all during the period of maximum growth when flower buds were forming. During this same period the amount of sunshine was far greater than normal. Now during this blooming season we are having a feast of variegated blooms. Was it the lack of water or the extra sunlight? I have made conclusions but have kept no records so cannot tender any proof to support these conclusions.

I am now going to describe some of the more popular American varieties as they perform in this country and, in the main, as they perform in my own garden. *'Tomorrow'* when it first came to New Zealand gave blooms of medium to large formal double and many were the complaints of nurserymen. Customers were certain that they had not received the plant ordered. As plants became larger so did the blooms and today we see large to very large peony form blooms. I personally have never seen a semi-double bloom of this variety. *'Tomorrow's Dawn'* and *'Tomorrow Park Hill'* have not been in this country very long but they have performed well right from the start. In fact, the best bloom I have ever grown, or for that matter, the best that I have ever seen was on a plant of *'Tomorrow's Dawn'* two years ago. My wife and I left for the National Show when the bud was just opening and returned ten days later to a bloom that was over 7 inches across and 4½ inches high. I

drooled over it for days.

'*Guilio Nuccio*' is one of our favourites and has been a consistent performer ever since its introduction, but for some reason, blooms last season came without rabbit ears. Blooms all over the country came flat and uninteresting. This year bud size indicates a return to normal. I certainly hope so.

'*Betty Sheffield Supreme*' comes in many forms. I am growing three plants, all from different sources in America and all are different. First is a pure white with a deep pink border. Second has the white dusted with faint pink spots with the deep pink border and lastly, the white is heavily dusted with deep pink spots and a red border. We like them all.

'*Elegans Supreme*' looks like being one of the best introduced into commerce and is very popular with all who have seen it. One of my favourites is '*Lady in Red*' — the blooms are gorgeous but the plant is a stinker. Have yet to see a healthy plant.

I am now going to list my 20 favourite varieties, not necessarily in order of preference.

'*Coronation*'. A consistent performer with lovely blooms of good texture. Stands the weather extremely well.

'*Sawada's Dream*'. Has excellent blooms and am sure that it will be tops for many years.

'*Guilio Nuccio*'. Does well in all districts.

'*Betty Sheffield Supreme*'. A lovely daughter from a lovely family.

'*Lady in Red*'. If only it had better growth habits.

'*Elsie Jury*'. A hybrid with lovely blooms and named after a very nice person.

'*Guest of Honour*'. Blooms well and is a good performer in the garden.

'*Mrs. D. W. Davis*'. What a picture a large plant makes if the blooms have a little shelter.

'*Flame*'. In my opinion far superior to '*Moshio*' which is a very popular variety in New Zealand.

'*Jessie Katz*'. One of my favourites, but needs to be grown in a raised bed as blooms hang towards the soil.

'*Clark Hubbs*'. Excellent blooms if given shelter but is inclined to open too slowly in our climate.

'*Frances M. Solomon*'. Blooms are similar to '*R. L. Wheeler*' but I regard it as superior.

'*Mattie O'Reilly*'. This one I like very much but not everyone agrees with me.

'*Tomorrow*', '*Tomorrow Park Hill*' and '*Tomorrow's Dawn*'. Have grouped these together. All are good and do well in this country.

'*Elegans Supreme*'. Still very new in this country but indications point to its becoming very popular.

(Continued on page 32)

RELEASING

'**Grand Prix**' (Japonica)

'**China Lady**' ('*Buddha*' X
Granthamiana Hybrid)

'**Milo Rowell**' (Crimson Robe
X Tiffany Hybrid)

'**Easter Morn**' (Japonica)

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TO WHOM IT MAY CONCERN

C. W. Lattin

Lauderdale, Mississippi

In the February 1967 issue of the Southern California Camellia Review I read with absolute amazement, and you might say foreboding — even horror, regarding the ominous future of camellias.

It appears that the Board of Directors of the Los Angeles Camellia Council have taken a very short-sighted, self-centered and arbitrary step which will not only deter the advancement of, but may well be the start of putting a noose around the neck of camellias and their culture. "Their" decision to discontinue competition for Sweepstakes Award is absolutely appalling. It made me ill to think that a little group of supposedly dedicated camellia collectors and/or enthusiasts would or could make such a rash and opinionated decision. It borders on treason to camellias.

If a camellia show is to be competitive, and *all* competitors welcome let it be just that and not for a few favored "upperclass" who can afford, buy or be given all of the new varieties and who then want to compete between themselves for Best Bloom of Show. Apparently they do not want *all* competitors. Where is their sense of fair and complete competition? The main purpose of any camellia show should be to further the popularity of camellias and their culture and not to restrict advancement by such high-minded and narrow minded tactics.

It is recognized in Sweepstakes competition that some greedy ribbon hunters will try to exhibit almost any variety, in any condition, but it is up to the Placement Committee to remove them before judging begins if they are not up to show standards and up to the Judges to pass them by if they are not worthy of a blue ribbon. The very fact they are there gives the public a more accurate picture of camellias and what to expect. The public

does not attend a camellia show to see an exhibit of a few new varieties which they can never hope to grow by normal attention. The public want to see old varieties as well as new varieties. They come to see camellias they can grow and not become frustrated when they cannot or do not succeed in growing Best of Show. It is the "bread and butter" varieties that interest the public and prospective new Society members.

As we all know, most new varieties are passed out ahead of time "under the table" to friends who grow them on so that they may have a blooming size plant when it is released by the nurseries. It is no wonder that people new to camellias have their reservations about them and I am sure that their likes and dislikes will differ greatly from those of the Board of Directors of the Los Angeles Camellia Council. I cannot believe that anyone who is serious about the future of camellias could or would propose or accept a proposition to do away with Sweepstakes competition. Sweepstakes competition is a fundamental and integral part of every camellia show. Making such a decision must have been a case of "sour grapes" and/or selfish motives.

A case in point is that a few years ago the "favored few" made another decision (now retracted) to restrict the number of entries to be entered by an exhibitor and stipulated also that a variety must have three entries before the blue ribbon flower could compete for Sweepstakes. They gave as an excuse for the decision that table space was at a premium and they could not accommodate all of the flowers. Pure poppy-cock — many "tables" had room for three times as many flowers as were exhibited. This selfish decision was aimed at the larger collectors so that their own

members in Southern California would have a better chance at Sweepstakes. It is the Placement Committee's job to plan for any eventuality and to accept and arrange the entries so as to have or make space available for all blooms. Everyone knows that the larger the display the better and more interest it creates. The decision was very unpopular and now they have done away with Sweepstakes to get around it.

In the article on page 3 it is stated: "It was the consensus of the Directors that the Sweepstakes Award probably has contributed more than any other factor of show competition to unpleasant incidents and unhappiness among exhibitors —". My question is — to what exhibitors? Could it be our "sour grape" Council Directors who found that their quality or quantity of blooms was not equal to the winner? Regardless of who exhibits the bloom a blue ribbon flower *is* a blue ribbon flower and should be given recognition and counted toward Sweepstakes.

It appears to me and I firmly believe that the large collectors who strive for Sweepstakes Awards have just as much place and right to compete in an A.C.S. sponsored show as those collectors who strive for Best Flower of a present and "popular" variety. They should be urged not discouraged to exhibit. Most camellia shows have awards for the Best Japonica Very Large, Large, Medium, Small, Miniature and Best Reticulata, Best Hybrid and Best Species as well as Sweepstakes. Any well informed exhibitor knows that percentage-wise a far greater majority of the trophies are taken by new varieties just because they are new. Why not continue to give the large collector the recognition of his time, effort and willingness to exhibit blooms that may be, or may not be, in the present popular group and which may well be of the older varieties but equal to, or even super-

ior, in beauty to the new "hot ones"?

The main purpose of all Camellia Societies and anyone who grows camellias should be to further their popularity and this cannot be done by restricting entries and exhibiting a relatively few varieties. The few competitors who want to restrict the big collector competitor do not have the advancement of camellias and their future in mind. A camellia show with competition among a few "new" or "almost new" camellias is not in the best interest of our hobby.

The American Camellia Society has set forth rules for competition which include Sweepstakes Awards and I strongly recommend that the A.C.S. refuse to sponsor any Society and/or their show that do not follow the rules. I daresay that the Board of Directors of the Los Angeles Camellia Council jammed their decision down the throats of their associated members but will find that their approach is against the will and/or wishes of the majority of camellia collectors. I believe that the "Council" should review their decision and I dare them to put it up to a vote of their members as well as members of the American Camellia Society.

PHYTOPHTHORA (Cont.)

good, better than they did prior to their use of the fungicide. They want to try it another year before drawing conclusions regarding its use on camellias. It is still available only in gallon size containers since it is being packaged only for large scale use, its principal use being with growing crops in the field. Three ounces of the fluid, for example, is sufficient for 500 gallons of the mix. It is hoped that if firm conclusions are reached that the fungicide is effective in curing phytophthora, it will be packaged in a size suitable for use by amateur camellia growers.

WHY SEEDS?

Dr. Norman Palmer
North Hollywood, California

In a nut shell, because they are fun and rewarding! Do you remember when we were kids and bought Cracker Jack because in each package there was a surprise such as a ring or whistle? To me camellia seeds are much like that.

Since the seeds do not produce the same variety as the plants from which they come, each seed has inherent in it that surprise of a new bloom. This might be a little tin whistle, or you might hit the jack pot with one like Tiffany, and what a thrill that would be!

Camellia seeds are produced by the pollination of the blooms either by insects, such as bees, or by human hand. (Imbricated formal double blooms, such as 'Pink Perfection' and 'Alba Plena', do not produce seeds.)

After pollination, the petals of the bloom fall off, and the tiny seed pod starts its growth. This continues until about September or October, at which time the pods ripen and start to crack open. When the first pod cracks open, all the pods on that plant should be harvested, placed in a shallow container (such as a pie plate), and kept in a warm place. These pods will also crack open in a short time. This method prevents loss of seeds, since the pods may crack open over night and seeds fall to the ground, eventually being covered or carried away by birds.

If you have no seeds, they may be purchased from the Southern California Camellia Society. (See ad in this issue.)

Now that we have our seeds, what are we going to do with them? Since our ultimate goal is that final beautiful bloom, we are going to plant them as soon as possible. Seeds lose their viability with age—although I have had them in the refrigerator for over a year (I forgot about them), and

found that they were still viable.

Seeds will germinate much more rapidly if placed in dampened peat moss and kept in a warm place, such as on top of, or near, a water heater.

For containers, I use wide-mouth gallon jars, which may be obtained from restaurants. Place a layer of peat moss in the jar, then a layer of seeds, another layer of peat, and so on. A jar will hold about 75 seeds without crowding.

Place the jar cap on top leaving it slightly open. This will prevent evaporation, while allowing air to enter to prevent mould. The moss should be kept damp, but not soaking wet. Probably no more water will be needed. In three to four weeks, the seeds will be pretty well germinated. (They may be examined at any time and replaced in the jar.)

Pat Novak reports that he scores his seeds with a file, and then soaks them in a 1000 parts per million gibberellic acid solution for 48 hours before planting. According to him, they really take off and grow!

When the tap root has grown to 2 or 3 inches in length, the seeds are ready for planting. The tap root should be pinched off to a length of about 1 inch, and dipped in hormone powder, such as Root Tone, and planted in a mixture of 1/2 peat moss (again pre-soaked and squeezed), and 1/2 sand, vermiculite, or Perlite. I prefer the peat moss and Perlite because it is much lighter.

For a container, I use a double flat, made by knocking the bottom out of one flat and cleating it on top of another. This gives us much greater bulk with resulting room for the seeds to produce a much more profuse and healthier root system.

If only a few seeds are available, they may be planted in 3" or 4" pots or 1/2 of a quart milk carton with

drainage holes cut on two sides at the bottom.

If you are using a flat, wet it thoroughly and then put in your planting mix. Firm this down with a brick. With a pencil, or small dowel, punch holes about 3 inches apart, and insert the seeds, root end down. (I have seen them planted with roots up, believe it or not.) Leave the seed resting on top of the mix, and firm it with fingers around the root.

In 6 to 8 months, the seedlings should be 5 or 6 inches tall and well rooted.

Now they should be transplanted to a regular soil mix. My soil mix is one part loam, one part sand, and one part Silver Spade (which has been fortified). To this I add a little cotton seed meal. For containers, I use one-pound coffee cans with 3 drainage holes punched on the sides around the bottom. These will hold them for about 2 years, at which time they should be stepped up to one-gallon containers. This will hold them until they bloom.

To produce very rapid growth (almost continuous), place 100 watt Mazda lamps about 2 feet above the seedlings and turn them on at night and off in the morning (Grolux bulbs work well, too). Also give them plenty of nutrients.

And so, good luck, and may all your seedlings produce prize-winning blooms for you.

Late Disbudding -- A Reminder

The need for disbudding has not ceased when the buds on the first cycle of growth have been pinched off. The second cycle will produce its own buds and will require the same attention that was given to the first cycle growth during July, August and September. Distasteful as it may be, therefore, disbudding is a continuous process that extends into the camellia blooming time.

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THE PLANT AND ITS ENVIRONMENT

J. P. HUDSON, M.B.E., G.M., M.S.C., PH.D., N.D.H., A.H.R.I.H. (N.Z.), F.I. BIOL.

(Lecture given on October 31, 1967 to members of the Royal Horticultural Society. Reprinted, with minor editing, from JOURNAL OF THE ROYAL HORTICULTURAL SOCIETY)

THE CHAIRMAN: "PROFESSOR HUDSON has been in horticulture all his life. After the war he held for some years the post of Horticulturist to the Government of New Zealand, and he returned from there after a few years to the Department of Horticulture at Nottingham. From there he has now moved to the post of Director of the Long Ashton Research Station.

PROFESSOR HUDSON was concerned throughout his time at Nottingham in directing and carrying out personal research into many aspects of plant physiology, particularly, as you know from the title of this Lecture, on aspects of the environment of the plant and, in particular, the influence of light on the physiology of the plant and the influence of water supply. He has done a great deal of work on the water relations of plants under glass—tomatoes and so on—and also on the effect of environment on the onset of that strange phenomenon, dormancy in plants. He clarified for us the problems of the dormancy of the raspberry and the peculiar way in which the raspberry responds to various factors of the environment.

PROFESSOR J. P. HUDSON: The plant environment consists of a complex of physical and chemical factors, all of which influence the way in which the plant develops and grows. The current meteorological conditions at any particular place, and short-term fluctuations in those conditions, are usually referred to as "the weather", whereas long-term average conditions are used to define "the climate". Climatology, the study of physical conditions of the environment in all their variability and complexity, is rapidly being put on to a more secure footing, thanks to various improvements in the basic instruments, the

advent of computers, and a vast increase in the scale on which the subject is studied because of the importance of weather forecasting for aviation.

These lectures are not concerned with forecasting weather, but with the effects of weather on plants. In the last eight years the weather has not changed much, but is still made up of an apparently random mixture of good, bad and indifferent. Plants have not changed much, either, apart from the introduction of the normal stream of "improved" varieties. What has changed astonishingly is our understanding of the causes of weather, and the relations between plants and their environment. The rapid growth of this branch of science has been due in no small part to the efforts of a relatively small band of physicists in Britain, Holland, Australia and the United States, whose work has encouraged biologists to look in a new and much more critical way at the plant/environment relationship.

Factors of the Plant Environment

The physical factors of the plant environment comprise an extremely variable and complicated system, that shows certain fairly regular and major seasonal changes and a multitude of irregular and unpredictable local and temporary variations. In electrical terms, the climate can be regarded as the "signal" and the weather as the "noise"; in agronomic terms, the climate determines what crops will be grown and the weather determines their growth and yield in any particular season (WATSON, 1963); whilst from the point of view of the gardener, the climate determines which plants it is worth while trying to grow (based on their "hardiness" to exceptional weather and the

probability of them growing well in most years) whereas the weather will largely determine how well they do in any particular season. All the factors of the environment are important, and almost any one of them might be "critical" under certain circumstances, in the sense that it may prevent plants from growing well.

Radiation and Light

The overriding factor, that probably has more influence on the plant environment than any other, is the *amount of radiant energy* that reaches the particular part of the earth's surface where the plant is growing, and the way in which that energy is dissipated. Virtually all the energy is received from the sun, as direct or diffuse visible sunlight, as heat, and to a much lesser extent as radiation in other wavelengths that we can neither see nor feel. The amount of energy that arrives at the earth's surface depends on latitude, altitude, time of day, slope, aspect, degree of cloudiness and amount of local shade.

The earth tends to heat up by day and cool again by night, and considerable amounts of energy can be carried sideways in the wind under some circumstances, but the earth's balance as a whole changes little. There are always big differences between one place and another, providing the basis for different climates, whilst at any one place the radiation situation can vary rapidly and unpredictably over a wide range of conditions.

There is need for a great deal more information about the effects of altitude, aspects and slope on the potential value of land for agriculture and horticulture. Such information could be specially valuable in deciding on the suitability of sites for particular crops, such as fruit, where the effects of temperature and wind speed during a few days at blossom time may be highly critical, and largely determine the yield.

Those parts of the sun's radiation that arrive at the earth's surface con-

sist mainly of light and heat. The relations between plants and light are most easily comprehended if it is realized that light has three separate attributes, namely daylength, spectral distribution, and intensity, each of which has different effects on the plant.

The progress of a plant in time is marked by its *development* through a succession of phases, in each of which its behaviour is different (i.e. juvenile vegetative phase, mature vegetative, dormant, flowering, etc.) and its *growth*, which relates to increase in size in any particular phase. Development and growth are different. The former relates to *what type* of processes are taking place, and the latter to *how fast* those processes are occurring. It is essential to distinguish between these qualitative and quantitative attributes, although of course both occur at the same time. In anthropomorphic terms, the difference lies between "What a plant is doing" and "How fast it is being done". The duration of light (daylength) often plays a key role in development, whilst the amount of light may affect the process of photosynthesis, in which light provides energy for the production of high-energy chemical compounds such as sugars and starch.

Effects of Light

Taking the effects of each attribute of light in turn, the duration of light each day (*daylength*) is one of the most stable meteorological phenomena. There is little difference between the longest and shortest days of the year in the tropics, but the difference increases with distance from the equator. At any particular latitude, the length of the day is often closely associated with important changes in seasonal weather, so it is not surprising to find that daylength has a profound influence on many plants. The most obvious effect is where a certain length of day (which may be either

(Continued on next page)

short or long, according to the species concerned) causes flowers to be initiated. It is this mechanism, known as photoperiodism, that causes some species to flower at the same time each year, though many species are day-neutral and do not apparently respond to daylength as such.

One of the most fascinating discoveries of the last decade is that photoperiodism is controlled by the measurement of night length, through the reversible reactions of a system of two pigments, phytochrome A and phytochrome B. These are related forms of a bluish green protein present in minute amounts in plant tissues. Many reactions in plants, apart from flowering, are known to be controlled by this phytochrome system.

There are big differences in daylength in temperate regions, where the phytochrome system easily distinguishes between, say, summer and autumn days, but work in the tropics has shown that the flowering of some varieties of rice is determined by changes in daylength of less than fifteen minutes.

The formative effects of daylength show particularly well in chrysanthemums which will not normally produce flower buds in the long days of summer, but readily do so when days become shorter in August and September. Use is now made of this knowledge on a commercial scale in the production of chrysanthemum flowers all through the year. Buds form naturally at some seasons, but at other times the days may be too short to induce growth or too long to permit initiation of flower buds. When this is the case, the effective length of day may be increased by the use of relatively low intensities of electric light, using ordinary household bulbs, or the days may be shortened by covering the plants each evening with sheets of black polythene, and taking it off again before dawn. Although this process is referred to as *photoperiodism*, and it is usual to talk

about the effects of *daylength*, in fact the critical attribute is the length of the *dark period*, as can be shown by giving a short period of light in the middle of a long night.

The next attribute of light is its *quality*, which refers to the proportion or amount of light of each different colour. Visible light spans the colours of the prism, namely red, orange, yellow, green, blue, indigo and violet which grade imperceptibly into one another. Blue light comes mainly from the sky (i.e. the "blue" sky), and red mainly direct from the sun itself, but the mixture of all colours gives what we refer to as "white" light or daylight. White light seems generally to be the most suitable for plant growth, which is not perhaps surprising since that is mainly what they get, but more work is needed on the effects of light in the different colour ranges, and in the range just beyond the visible red.

Turning to the *intensity of light*, until recently this attribute has been rather poorly understood because the eyes are so efficient that they give little help in assessing the amount of light. It is apparent that the growth potential for certain crops, such as glasshouse tomatoes, is much higher in areas which tend to have clear skies on winter days. There are also big differences between one time of year and another. For instance, it is not always recognized that we commonly get ten times as much light on a summer day than on a day in mid-winter (i.e. the product of double the daylength and five times the average intensity).

The response of plants to different light intensities varies over a wide range. Some species, notably the subterranean clover that has proved to be so successful under the high light intensities of Australia, grow poorly under shady or cloudy conditions. Other species, such as *Impatiens parviflora*, which happens to have been the subject of much intensive study,

will grow efficiently under a wide range of light conditions, though the type of growth (e.g. size of leaf) is of course much affected by the amount of light.

There is still much more to be learned about the relations between light and plants, but we seem to be coming a little closer to an understanding of the light factors that can limit growth, especially those connected with the geometry of crops. If, in fact, the prime purpose of agriculture and horticulture is to "fix" radiant energy in the form of high-energy chemicals such as carbohydrates and proteins, then it is obvious that we should try to ensure that all the light that falls on an area actually "hits" plant leaves, since light falling on bare ground is almost all wasted. For this reason it seems likely that increasing intensity of crop production may involve new ways of growing some of the traditional crops, to ensure a more rapid coverage of the land and thus the interception of a higher proportion of the available light.

Before leaving light it is worth while to consider ways in which it can be increased or decreased, to the advantage of horticulture. The only practicable method of increasing light is by electric lamps, not all of which are suitable for horticultural use. It is first essential to decide whether the extra light is needed to *affect flowering* or to *encourage more rapid growth*. Flowering in photoperiodic plants is determined by relatively low light intensities, for which purpose household tungsten lamps, spaced widely apart, are quite suitable. On the other hand, growth rates can only be increased by much higher light intensities, that could not be got by using household bulbs without grossly overheating the plants, and other types of lamp have therefore to be used.

Under some circumstances it is desirable to reduce light, by using shade,

rather than to increase it. Use may be made of natural shade, as is often provided for cocoa by leaving some trees growing when clearing undergrowth for planting, or by planting shade trees amongst tea bushes; or shade houses clad with laths or leaves, as are frequently used in tropical nurseries; or by growing plants in vast tents of muslin, as is practised in Connecticut for producing the special quality of leaf needed for wrapping cigars.

Effects of Temperature

Temperature is another obviously important factor of the plant environment, and one that we understand better than light, perhaps because we are ourselves more aware of changes in this factor. The usual way of measuring the temperature of the air is to expose thermometers or thermographs (recording thermometers) in the specially-constructed Stevenson screen that prevents the instruments from being heated by direct radiation but exposes them to the air. The result is to produce data that are not in doubt as a record of the temperature of the air, and may have some value in characterizing this aspect of the weather of the place where the readings are made. However, their value as a record of plant temperature is another matter altogether. This is partly because it is the custom to average the maximum and minimum temperature and produce figures for daily and monthly means that tend to obscure those very extremes and aspects that affect plants most! The value of screen temperatures is also limited by the fact that leaves may be significantly cooler or warmer than the air around them.

A disappointment of the last decade has been the lack of progress in what seemed to be a promising line, concerned with the use of *heat units*. The heat unit theory was based on the assumption that a plant requires a certain amount of heat in order to

(Continued on next page)

reach a certain stage in its development, and that only a part of the heat, i.e. that part above a certain base level, is "useful". The theory seemed likely to provide interesting information on the relation between plant growth and average temperatures, but has not lived up to its early promise.

Much more exciting has been the discovery that fruit blossoms are not killed by cold until they are cooled one or two degrees below freezing point. This led to the novel suggestion that blossoms could be protected against frost by sprinkling them continuously with water, that freezes on the blossoms but prevents their temperature from falling below freezing point. This method is now in regular use for protecting commercial orchards against the effects of disastrous spring frosts.

Wind and Water

Weather forecasting is much concerned with *barometric pressure*, because variations in pressure are amongst the main causes of air movements and hence of "weather". Nevertheless this factor, by itself, is of negligible importance to the grower since plants, so far as we know, are not sensitive to changes in atmospheric pressure of the order that usually occurs in nature.

Wind, on the other hand, is of obvious importance, and all gardeners are well aware of the effects of wind, which can vary from the catastrophic, when plants are blown down, to the minor multiple injuries, caused when plants are blown about in the wind, that are probably more important than is often realized. Windiness of a site can affect the earliness of growth, the setting of fruit, the quality of foliage and many other plant attributes, and shelter has very different effects according to its permeability to wind and height relative to the crop.

Another attribute of the wind, quite apart from the way it blows, is its

degree of wetness or dryness. This depends on the actual amount of water vapour which the air is carrying compared with the maximum amount that it could hold at its current temperature, i.e. the relative humidity or vapour pressure deficit of the air.

Precipitation in All Its Forms

Condensation of water in the air, in droplets that remain suspended, is the cause of *cloud*, *mist* and *fog*; condensation direct on to the leaf is the main cause of *dew*; and condensed droplets that fall from the sky may arrive at the ground in the form of *rain*, *sleet*, *snow* or *hail*. All these manifestations are of importance to plants, but in quite different ways. Cloud, mist and fog reduce light intensity, and tend also to reduce the rate at which the ambient temperature changes, from hour to hour and from day to night. Perhaps the most interesting horticultural aspect of cloudiness is the way in which a high incidence of cloud, as in some mountain ranges, so tempers the heat of the sun that high-quality tea can be grown in the Tropics at latitudes where evaporation rates would be much too high if there were no clouds.

Rain is the most important form of precipitation in Britain, where, despite our grumbles, precipitation generally matches evaporation rates much more closely than in most parts of the world. The big difference between growing crops in temperate climates like ours and drier conditions in the tropics and subtropics is that we nearly always have an excessive amount of rain in the winter, and growth in spring thus starts in a soil that is usually fully charged with water to the full rooting depth. This is a favourable state of affairs, since the substantial reserves of soil water enable plants to grow for a considerable time in the absence of rain, thus buffering them against the effects of drought. Under more arid tropical conditions, on the other hand,

the soil is usually dry to a considerable depth when growth starts with the first rains. Thus plants tend to grow under conditions where there is often little reserve of water in the soil, and crops often fail entirely unless rainstorms follow each other at rather frequent intervals.

Perhaps the most unusual feature of the British climate is that many areas get almost the same average rainfall in each month of the year. Indeed, in the last hundred years, every month has been the driest of the year in one year or another, and every month (except April) the wettest! There are few countries where that can happen, and we must conclude that ours tends to be *nice* rain from a horticultural point of view.

Composition of the Atmosphere

The last of the main environmental factors of the ærial environment is the composition of the atmosphere. Four-fifths of the atmosphere consists of the relatively inert gas *nitrogen*, which is an essential part of all living tissues yet which plants cannot take up directly from the air. Some nitrogen is "fixed" in a form available to plants by lightning, and by bacteria that inhabit the root nodules of leguminous crops, both of which are important sources of nitrogen in nature, but commercial agriculture and horticulture largely rely on nitrogen fertilizer that is fixed in expensive chemical processes. It is a curious fact that plants spend their lives bathed in nitrogen gas, yet their growth and yield are often severely restricted by lack of combined nitrogen, especially in the poorer agricultural countries where farmers lack the money or knowledge to use fertilizers properly.

Almost all the rest of the atmosphere, about one-fifth of the total volume, consists of *oxygen*, which is essential for the respiration of animals and plants alike. In the soil there can be a distastefully low amount of oxygen for respiration of roots but oxygen is never likely to be in serious

shortage in the air above ground, so this factor can be ignored.

As mentioned earlier, the air also contains some *water vapour*, the amount of which determines whether the air is dry or wet. A dry air encourages rapid loss of water from the leaves, so this factor must be taken into account when considering the water relations of plants, but it is an interesting fact that leaves lose little water if the air is virtually saturated. Under those circumstances the stomata can stay open by day, and the leaf can thus continue to photosynthesize, even though a plant has few roots. This is probably the reason why mist propagation is so successful, because it enables soft-wooded cuttings to continue to grow even before they develop a root system.

Next we come to *carbon dioxide*, a gas of which the air contains only about 0.03 per cent, i.e. 300 parts per million by volume. Nevertheless, despite the small amount of carbon dioxide in the air, the whole of life on this planet depends on the ability of plants to take up carbon dioxide and combine it into chemical forms which have a high energy status. It is these materials, notably sugars, which provide the substrate for the process of respiration, in plants, animals and man, releasing the energy on which all life is based.

The total amount of carbon dioxide in the atmosphere seems to be increasing steadily, mainly because of the vast amounts of fossil fuels (coal and oil) that are being burned. It is difficult to get precise details about this increase, because it was not easy to make accurate measurements until recently, but it has been estimated that the amount of carbon dioxide in the general circulation of air was about 290 parts per million (p.p.m.) in 1900, 315 p.p.m. in 1960 and might reach 400 p.p.m. by the year A.D. 2000. This is of more than academic interest, because it has recently

(Continued on next page)

been found that plants growing in glasshouses will respond to enrichment of the air with more carbon dioxide by making more rapid growth. If this also happens in the open, it is just possible that crops may grow better by the end of the century because of the greater amount of carbon dioxide in the air. It will indeed be a queer turn of fate if it turns out that man's profligate folly, in using up the irreplaceable fossil fuels, increases the world's potential for producing food—a stroke of luck that man has perhaps hardly merited!

In the long term, too, the increase in percentage of carbon dioxide in the air could lead to a slow but significant increase in temperature, though this effect might be counteracted by changes in the aerosol content that would have an opposite effect by increasing the reflectivity of the earth's atmosphere. Only time will tell.

Turning to *pollution*, many of man's activities seem to result in loading the atmosphere with undesirable components, that are often grouped together as "pollution". "Los Angeles smog", due to local accumulation of photochemical or oxidant materials in relatively windless areas, can be unpleasant to man and damaging to plants. Fortunately, the steady increase in smokeless zones in Britain is leading to a significant reduction in the amount of soot, tar, grit and ash in city air.

Ozone in the air has been shown to cause a form of damage to tobacco leaves in the Lake Erie area that had previously been attributed to "the weather". The ozone is believed to be mainly generated by photochemical processes from oxides of nitrogen and the hydrocarbons emitted in industrial areas to the south and by motor vehicles.

Interactions Between Factors

For simplicity, each factor of the plant environment has so far been discussed in turn, but this is not to

suggest that the effects of each factor on the plant are separate and independent. The response of a plant to one factor is often dependent on the level of another factor, in which case the two factors are said to "interact". There are many well-established interactions, such as that the hearting of winter lettuce is affected both by the total amount of light per day (the light integral) and the temperature. At low temperatures lettuce plants are likely to heart over a wide range of light conditions, whereas at higher temperatures plants will only heart when they get high light, and one cannot compensate for lack of light by raising the temperature.

The Root Environment

One of the curious features of plant life, as we know it in the garden, is the great difference between the conditions in which shoots and roots live. The aerial environment, which has been dealt with, is characterized by the extreme rapidity with which many of the factors change. This applies specially to light intensity, temperature, wind speed and relative humidity (though the actual amount of water vapour per unit volume of air does not usually vary quickly).

By contrast, conditions in the soil are much more stable, and changes occur more slowly except very near the surface. On the other hand, quite different conditions can occur at the same time in neighbouring volumes of soil. Thus pockets of dry and wet soil may be found quite near to each other, and it is common for soil temperatures to be very different at different depths in the root zone. It would be too broad a generalization to say that aerial conditions vary most *in time* and soil conditions *in space*, but there is a germ of truth in the statement.

Taking the factors of the soil environment in turn, the *temperature of the soil* at any particular time and depth is the result of heat being gained at the surface by day, espe-

cially in hot weather, and lost again from the surface, both by radiation to space and by conduction to the air in contact with the soil. Thus there are set up complicated waves of heat travelling slowly upwards and downwards through the soil. One practical implication of this is that it is quite common for roots to be inactive in a cold soil in spring, at a time when the shoot is in "good growing conditions" above ground, and conversely roots often continue to grow under cold winter conditions that maintain the shoot in a dormant condition.

The soil has a great heat-holding capacity, especially when it is wet. By April the soil has usually warmed up to well above freezing point and thus gives off heat on cold frosty nights. This movement of heat is slow if the soil surface is loose and friable, or covered with an insulating layer of long grass, but is much more rapid if the surface is firm, moist, and bare. Thus blossoms of fruit trees are less liable to be harmed by late spring frosts if the orchard soil is firmly rolled and any grass present is closely cut before the blossoms open.

Soil moisture is a factor of the utmost importance to plants, often determining whether or not plants grow and even whether or not they survive. We sometimes talk of soils as though they are either wet or dry, but there is nothing "on-off" about soil moisture, which can occur in a continuous range of conditions from waterlogged (where all the pores are filled with water to the exclusion of air), field capacity (the wettest condition in a freely-drained soil, such as occurs a day or two after heavy rain), wilting point (where plants wilt and will not recover unless the soil is wetted) and death point (where plants actually die). Somewhere between field capacity and wilting point is a stage where plant growth rate is slowed down, even though the plant does not necessarily show any visible signs of distress. It is tempting to christen this

the "critical condition for growth", or to use some other term that suggests this is the right time to irrigate plants, since (by definition) irrigation before that stage would not encourage plants to grow any better, whereas growth will be lost if irrigation is withheld beyond that stage. However, this is too simple. There is no unique "critical stage", but the condition in the drying of a soil when growth begins to be affected is likely to be different in each drying cycle, depending on the size of the root system, the size and exposure of the aerial part of the plant and the evaporative demands imposed by the environmental conditions.

Most important advances have been made in the last few years in our understanding of the relations between water in the soil, plant and atmosphere, in a concept that was spelled out by the physicists just twenty years ago but is only now being taken widely into our understanding of the irrigation of crops. Briefly, the "new thinking" in this subject is that the rate of evaporation of water from a well-watered plant canopy (transpiration from the leaves together with evaporative losses from the soil) is mainly dependent on four factors of aerial environment (temperature, amount of radiation, humidity of the air, and wind run). Provided water is readily available in the soil, and the plant has a well-branched root system that is commensurate in size with the shoot, the rate at which water will be lost will be roughly at a "potential" rate that can be calculated from the four factors and is remarkably little affected by the size or type of crop, provided the plants are fully covering the ground. If, however, the soil is dry or the plants have a poorly-developed root system, the *actual* rate of evaporation may be less than the *potential* rate, simply because water does not reach the leaves fast enough. In those circumstances growth is like-

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ly to be reduced by lack of water but, as stated above, the stage in the drying cycle at which growth begins to be affected by drought may vary greatly from one part of the growing season to another, as well as being much affected by the weather.

This concept shows that it is as important to know about the character of the root system as about the character of the soil, and also highlights the need for more knowledge about the *availability* of soil water as well as its *amount*. Research is showing that plant growth and yield are often affected long before plants have extracted more than a small proportion of the available water from a soil. For example, tomatoes growing under glass have been found to suffer from water shortage, to the extent of significant reductions in yields, unless they were irrigated before the soil water deficit reached half an inch, *by which time the plants had removed only one-twelfth of the water that was available in the soil to the depth to which the roots had penetrated.*

A special attribute of soil water is its *degree of salinity*. All water in the soil contains some dissolved salts, which have the effect of reducing its "free energy status" and making it rather less readily available to plants. However, this is not often troublesome in Britain, where winter rainfall usually reduces the amount of readily soluble salts in the soil by leaching out excessive amounts. The remaining salts, and those that are applied as fertilizers, are not usually present in sufficiently large amounts to have a significant effect on the availability of the soil water. The situation is much more threatening in arid tropical countries which lack the beneficial effects of regular leaching by rain, and much good land is going out of cultivation for this reason in countries like Pakistan.

The *soil atmosphere* consists of about four-fifths of nitrogen, as in the air above ground, but the relation be-

tween oxygen and carbon dioxide can be very different. Plant roots, small animals and the incredible wealth of micro-organisms that inhabit the soil are all respiring continuously and tending to increase the proportion of carbon dioxide at the expense of oxygen. The balance is kept by the rate at which gases can diffuse into and out of the soil. If the soil is open, with plenty of continuous air spaces, carbon dioxide readily diffuses out of the soil to the air, but the rate of diffusion falls off rapidly if the surface of the soil is closely packed, muddy or very wet. Under those conditions carbon dioxide can accumulate in the soil atmosphere, with extremely damaging effects on the health of plant roots.

Finally, a word about the *texture of the soil*, which depends on the way in which the fine particles are aggregated into small crumbs. It cannot be doubted that plant roots grow better in a relatively loose, well-aerated soil, and it has been amply shown that plants with large and well-branched root systems are less liable to suffer from shortage of water, because the much greater surface of contact between absorbing root and soil increases the availability of the soil water that is present.

Cultivation by digging and ploughing have no doubt helped to produce this desirable well-aerated condition. However, apart from aerating and loosening the soil, cultivation was also a necessary part of the technique for keeping weeds under control, and the attitude towards cultivation is changing rapidly with the advent of the wide range of herbicides that is now available to prevent most weeds from growing. We now need information on whether cultivation, as such, is worthwhile just for the purpose of stirring the soil, and work is urgently needed on this aspect.

Fortunately, the soil is a remarkably effective buffer against most forms of what might be called bad

management, even lack of cultivation, since the movement of worms, insects and other creatures, and the growth, death and decay of roots, all help to produce a network of air ducts in the soil.

Conclusions

It is difficult to summarize the many recent advances in our understanding of the ways in which weather affects plants. Who would have dreamed that we should have been able to produce dwarf chrysanthemums, azaleas or poinsettias all the year round, timing each batch precisely to fit a closely-planned schedule? Who could have foreseen the development of chemical weed control, mist propagation, the identification and inactivation of virus disease, the calculation of irrigation needs and the use of carbon dioxide to encourage growth of glasshouse crops? If the last twenty years has seen the advent of all these aids to better gardening, what will the next twenty years be likely to produce?

THE CHAIRMAN: I am sure that you will all join me in feeling that we have had an extremely stimulating afternoon from PROFESSOR HUDSON. We now have a short time available for any questions which members of the audience would like to put to PROFESSOR HUDSON on this subject.

Q. Can you tell me something about fog? I have a greenhouse in Hampstead where a paraffin stove is alight all night. I was told that if there is fog by day we must always keep it going. Will you tell me if that is correct?

A. I am glad that you raised the question of fog because I had meant to say a word about that factor. Fog is just the presence of droplets of water in the air, which do no harm so far as we know. What matters is that fog occurs under conditions when the atmosphere stays unmixed close to the ground and atmospheric pollution — various chemicals classed as smog — also tend to concentrate. It is

this which does the damage. The A.R.C. has recently produced the first book that has been published bringing together the evidence about the effects of air pollution on plants and soil which are much more important than we had realized. Scientists first started to investigate this phenomenon some six or seven years ago in Los Angeles, where there is a very high concentration of motor cars and where they were getting all sorts of markings on the leaves of growing plants, for which nobody could account. I might have said "Weather", which is what we always used to say when we did not really know the answer, but it turned out to be due to what has been called "Los Angeles smog", one of the products of motor-car fumes in the air. If a wind is blowing, this smog blows away and does not matter, but under conditions where the fumes do not mix, it can cause serious trouble to plants. In the same way keeping the paraffin stove going and the ventilator open a crack will tend to keep conditions inside more buoyant and circulate the air so that the risk of damage may be reduced.

THE CHAIRMAN: Perhaps I might interject, referring to the question that PROFESSOR HUDSON was answering. I am sure that if SIR GEORGE TAYLOR had been here he would have risen to the defence of his own institution and said that intensive work on the effects of the London fogs on plants was going on at the Jodell Laboratory at Kew in 1936. The trouble is not all in America. We do have some here!

CAMELLIA NOMENCLATURE

\$2.50 a copy

SOUTHERN CALIFORNIA CAMELLIA SOCIETY
2465 SHERWOOD ROAD
SAN MARINO, CALIFORNIA 91108

START NOW TO PREPARE FOR 1969 GRAFTING

October is not too early to start preparation for the 1969 grafting program. Some people seem suddenly to awake to the fact that January or February has arrived and therefore it is in order to start to get ready for grafting—buy some under stock and look around for a friend or two from whom to obtain some scions. Better results will be obtained in the long run if the thinking and some of the acting starts ahead of time.

Some people use their own seedlings as the primary source of understock. The better growers of seedlings will have given the same attention to seedlings with regard to cultivation that they give to their named varieties, particularly as to soil mix. Even in such cases, however, there is merit in looking at the roots of the seedlings in the Fall to make certain that they are healthy. Some will require re-potting because of the heavy season's growth. The first requirement for a healthy graft is a healthy root system.

Some people will plan to cut off some of their present varieties. This is necessary for some growers to provide space for the ever increase in the number of plants because of grafts and purchases. Regardless of this consideration, it is a desirable step toward keeping one's collection up-to-date; not necessarily with regard to newness of the varieties but more particularly that every plant produces flowers to one's liking and, if the grower enters shows, flowers that win ribbons in the shows. Two steps are recommended for this group. First, prepare now on the basis of memory of last year, a list of the varieties that are suspect, then evaluate them during the blooming season. This list need not be on paper, although this may help to save one's memory process for other things that are not easily written down. Second, look at the roots if there is reason to believe they need to be checked. Maybe your

displeasure with the variety may be due to the fact that its root system has not given it a fair chance. If this proves to be the situation, there is no reason to believe that another variety grafted onto the roots will do better than its predecessor has done. You may want to report it as is to give it another chance, or possibly this is the time to throw the whole plant in the trash can.

Maybe you plan to buy some stock from a good nurseryman who has understock for sale. There is no reason why this should not be done now. First, you will get a better choice. Second, you will have time for re-potting to your own soil mix.

Now about the varieties you will graft in January or February. People who are new in the camellia hobby should know and remember that camellia hobbyists as a group are pleased to give scions, provided of course their plant is large enough to provide the wood and they do not have the variety on a restricted basis. The important thing, therefore, is for the person who is planning his grafting program for next year to choose the varieties he likes at camellia society meetings and camellia shows, determining as he does so who has them and therefore might be able to give him scions. Then when the time for grafting arrives, he will not be faced with calling a friend or fellow member of a camellia society and, when asked what he wants, be forced to reply "I don't know, what do you have that is good". His grafting program will be designed to fit his own desires and pleasures when he plans ahead of time.

A hobby is something you get goofy about to keep from going crazy about things in general.

CAMELLIA PERSONALITIES -- HAROLD E. DRYDEN

Willard F. Goertz
San Marino, California

Last June at the Southern California Camellia Society awards picnic Harold Dryden received the highest honor which the Society can offer; namely, an honorary life membership in the Society. This was richly deserved because no one person has done more for the Society in its history.

Harold is a typical camellia hobbyist with about 350 japonicas, reticulatas and sasanquas plus about 100 seedlings, some of which he delights in starting each year. Most of his plants are in containers to conserve space. He has no one or two favorites but likes all varieties including the small and medium blooms as well as the large ones.

Harold is a native Californian, having been born in Hemet where he lived until he entered Occidental Col-

lege. After graduating in business economics he remained one year as graduate manager. Deciding to study accounting at night school he took a temporary job with the Pacific Telephone Company and this resulted in a life-time job — he remained there until retirement in 1961. Harold met his charming wife Elsie, also a native Californian, during a business trip to San Diego in 1927. Elsie is a very accomplished flower arranger, so their hobbies blend together nicely.

His love for growing flowers came from his mother. Some camellia cuttings which she had started were planted in the Dryden garden at their present Winston Avenue address but these soon died due to poor soil, so Harold's education on the importance of proper soil mix came early and "the hard way". The late Clifton Johnson (who in 1950 also twisted the author's arm to get into the camellia hobby) invited Harold to a grafting party, and since the first Dryden graft was successful, the camellia world happily had another convert.

The Brookside Park Camellia Show in 1948 signed Harold as a S.C.C.S. member. In 1953 to 1955 he served as president, he was secretary the past six years and is still — after eight years — editor of THE CAMELLIA REVIEW. He was chairman of the last S.C.C.S. camellia show held in the San Marino Womans Club in 1955, chairman of a subsequent Los Angeles Camellia Council Show and more recently, chairman of the L.A.-C.C. Early (gib) Show at the Arboretum. His trophy case holds a great deal of silver including three Best Seedling awards.

Besides his camellia activity he was also very active in San Marino civic affairs such as heading the Cub Scout
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Elsie and Harold Dryden

SCCS AWARDS DINNER AT DESCANSO GARDENS

The annual Awards Dinner of the Southern California Camellia Society was held June 15, 1968 at the Hospitality House in Descanso Gardens with about 100 people in attendance. A pot luck dinner was served at 4 P.M. under the supervision of Ernie Pieri. Following the dinner, President W. F. Goertz presided at the presentation of Awards for the past camellia season.

Frank Reed was presented the Award for first place in number of points won in the flower competition that is held at the monthly meetings of the Society. Bill Goertz was awarded second place.

Chairman Wilber Foss announced the following winners of Awards presented annually by the Society for outstanding camellias.

The Margarete Hertrich Award for outstanding Japonica to 'Grand Slam', propagated and introduced by Nuccio's Nurseries of Altadena, California. Julius Nuccio accepted the Award on behalf of his nursery.

The William Hertrich Award for outstanding mutant (sport) to 'Tomorrow Park Hill', introduced by Mrs. Monique Peer of Los Angeles, California. James Tuliano accepted the Award on behalf of Mrs. Peer.

The Edwards H. Metcalf Award for outstanding hybrid to 'Elsie Jury', introduced by Les Jury of New Plymouth, New Zealand. It was announced that a letter informing Mr. Jury of the Award had been sent to him and that he had accepted it with thanks.

The Frank L. Storment Award for outstanding Reticulata to 'Mouchang', introduced by Mr. Howard Asper of Escondido, California. Mr. Asper expressed, by letter, his regret for being

unable to be present to accept the Award.

Mr. Foss announced that the Awards Committee had been unable to agree on a candidate for the William E. Wylam Award for Best Miniature.

In the plant drawing, A. Wilkins Garner won the plant of 'Easter Morn' which will be one of the Nuccios Nurseries introductions for 1968.

President Goertz announced that by unanimous action of the Board of Directors, an Honorary Life Membership in the Society has been awarded to Harold E. Dryden. The presentation made to Mr. Dryden by Mr. Goertz stated: "The endless hours and fine work that you have given the Society for many years are greatly appreciated—not only by the Directors but also by the entire membership." Mr. Goertz stated that Dryden will relinquish the duties of Secretary-Treasurer to Mrs. Mildred Pitkin but will continue as Editor of Camellia Review.

I'm a New Member

I see you at the meetings, but you
never say "Hello."
You're busy all the time you're there
With those you already know.
I sit amongst the members, And yet
I'm a lonesome guy.
Why can't you nod or say hello,
Or stop and shake my hand,
Then go and sit among your friends.
Now that I understand,
I'll be at your next meeting;
Perhaps a nicer one to spend;
Do you think you could introduce
yourself,
I'd like to be your friend.

—Anonymous

EARLY SHOW AT DESCANSO -- JAN. 4 & 5, 1969

Mildred Pitkin
San Marino, California

Not so early as in previous years, but still the first camellia show to be held in California in 1969, the Early Show will be staged at the Hospitality House in Descanso Gardens on January 4 and 5, 1969.

Known as the "Gib Show" it attracts many visitors who know nothing more about camellias than the red or pink or white which was planted in the yard "when we moved there". After seeing the blooms on display they aren't even sure that what they thought was a camellia at their house really is one.

This will be the fourth annual "Gib Show". The first two were held at the Los Angeles County Arboretum. Last year it was moved to the Hospitality House which most agreed was a far better setting. But because December dates were already taken for 1968, January 4 and 5, 1969 were the first available. Only four days after the Parade of Roses in Pasadena a Parade of Camellias will take place in La Canada.

This advanced date will undoubtedly be responsible for a larger show than in other years. More flowers will be in bloom in their natural cycle and gibberellic acid will help the very late bloomers to open by that time. Some of the old timers like 'Blood of China', 'Eleanor Haygood' and 'Captain Rawes' had been practically discarded in this area because they never opened until after all the shows were over. 'Blood of China' especially has really blossomed out since the advent of Gib.

Because the buds will naturally be more advanced on January 4 than they were at last year's December 4th show, this year's gibbing schedule will be a little different. That is, it will be if you are scientifically minded. Otherwise you will begin to gib about October 1st and will do some

every week thereafter. Just remember to hit the latest bloomers first. Results are greatly affected by the weather—humidity and temperature. Some varieties respond more readily than do others. Gib has less effect as the season progresses. Carefully kept records over a period of several years have failed to establish any dependable schedule. So — just gib away — and trust to luck and the weather. There will be plenty of time for all who are interested to obtain Gib and have Gibbed blooms for the show.

The number of classes has been increased so more trophies await the winners. In most cases awards will be made for both treated and non-treated blooms. The Japonica division will include classes for blooms under 2½ inches, medium to large and large and very large. Seedlings will be separated as to those having reticulata blood and all others. For the first time, since this is essentially a gib show, an award will be made for treated seedlings.

Melvin Gum, Show Chairman, and those who are working with him, have things well planned and this promises to be a show no one will want to miss either as an exhibitor or a spectator.

PERSONALITIES (Cont.)

program, being president of the San Marino Community Council (Community Chest), and managing the city's 50th birthday celebration recently.

Having been a popular visitor to Australia and New Zealand last year, Harold expects to visit camellia gardens and personalities in England next year. It is hoped that the Drydens continue their camellia interest and activity for many years to come.

SOUTH SEAS NEWS FROM THE EDITOR'S MAILBAG

Bill Goertz and the Editor collaborated in a taped program for the New South Wales Branch of the Australian Society that consisted largely of discussion of cultural methods in Southern California, including soil mix and watering. Pat Goonan wrote as follows after listening to a preview of the tape. "Up till about two years ago I had much trouble with root rot in my tubs, due to a combination of over watering in a soil mix that was too heavy. I switched over to a mix of equal parts of river sand, peat moss and pulverized cow manure and find now that within reason it is almost impossible to over water. Root rot seems to be a thing of the past."

Hubert Hammond of Hamilton, New Zealand writes about how the camellia growers participate in their meetings with garden people who enjoy other flowers. He writes: "We have in Hamilton a monthly meeting of our branch of the New Zealand Institute of Horticulture. Members are invited to bring interesting specimens of plants, flowers, foliage, berries, etc. from their gardens. Two members comment on the quality and value of the specimens and with rare subjects the owner is often called on for comments. We generally have a speaker on some topic of general interest for about 30 to 40 minutes. Coloured slides are often used. Then we have a "sales table" for all the "bits and pieces" people bring in from their gardens. Many members of the Institute are also members of the New Zealand Camellia Society. Tom Durrant was the speaker at the last meeting of the Institute. The members of the Camellia Society were invited to put their best flowers on display and these attracted tremendous interest. Your people would probably find it difficult to understand that those flowers were brought without the

slightest suggestion of anyone collecting a red or blue ribbon¹—much less a piece of hardware!! On August 23rd we will be holding our Branch Exhibition (open to the public). Again, members will bring along their best flowers but there will be no classes, no competition, no "Best Japonica", no ribbons or champion awards. My flowers will be broken up, so that my three best 'Guilio Nuccio' will be grouped with the same variety brought in by other growers. This will result in two or three displays of this wonderful Camellia on different tables, without any recognition whatever being given to the individual exhibitors. At our National Show in Wellington next month there will be competitive classes."

Jim Fisher of Camellia Grove Nursery in Sydney (he visited us in February-March 1967) writes about varieties that are new to them: "We flowered 'Tomorrow Park Hill' for the first time this year and have it under way. 'Erin Farmer', 'First Prom', 'Grand Slam' and 'Wildfire' are four others that have been very good with us this year. 'First Prom' is incredibly good and 'Wildfire' unquestionably the most brilliant red we have flowered in Sydney, where 'Kramer's Supreme' lacks the Los Angeles brilliance. 'Julia France' and 'Twilight' have also given some lovely blooms but rather late in the season, possibly due to the dry Autumn we encountered. 'Tiptoe', whilst not a Show flower, is an excellent and most aesthetic garden variety and I think it should perform well in your climate. 'Margaret Davis' has been excellent with us this season and obviously likes

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¹In both New Zealand and Australia, red is used for First, blue for Second.

GAVELS OF CAMELLIA WOOD

One of the hobbies of Dr. Herbert Shirley of Hollywood, California is making gavels of camellia wood. It is rather common knowledge that he is always seeking old camellia trees that have lost their usefulness for growing flowers. He started this hobby some years ago when his daughters were small and belonged to Girl Scouts, Camp Fire Girls, etc.; he made gavels for the leaders of the various groups.

He says that camellia wood is one of the hardest of woods. He has not been able to stain the wood, and polishes the gavels with floor wax.

When his daughters reached the age where he ran out of a market in their organizations for his gavels, he made them for the Honorary Mayors of Hollywood, Jack Bailey and all the others. He has also made them for many years for the retiring presidents of the Hollywood Kiwanis Club, Southern California Camellia Society, Los Angeles Camellia Society and American Camellia Society, to all of which he belongs.

A couple of years ago Bill Wylam gave Dr. Shirley the wood of a large camellia tree from the Huntington Botanical Gardens, the diameter of which was about six inches. He made a gavel with this wood, which when finished was nearly five inches long and about three inches across. He decided that a gavel of such size should go to the President of the United States, whether a Democrat or a Republican, so he sent it to President Johnson. He stated in his letter to the President that he is a Republican, not a Democrat, and was not looking for a job; told him where the wood came from and that because of its size the President of the United States should have the gavel. He also told the President that we grow bigger camellia trees in California than grow in Texas. To his surprise, Dr. Shirley

received a nice letter of thanks from the President.

Then, at the suggestion of a friend, Dr. Shirley made gavels for Vice President Humphrey and Speaker McCormack so that both Houses of Congress could be "brought to order from Hollywood". He received letters of thanks from both men. Speaker McCormack stated in his letter that he could not imagine anyone spending the time required to make a gavel for him. Dr. Shirley's representative in Congress, Congressman Reinecke, personally presented the gavels.

Dr. Shirley is now looking hopefully for the election of Richard Nixon to the Presidency. When he thought that Nixon was going to defeat John Kennedy in 1960, Dr. Shirley made a gavel for him, with Nixon's initials cast in gold and inlaid in the gavel. Dr. Shirley makes it clear that he did not use old crowns and fillings (Shirley is a dentist) but ground some quartz that came from a little gold mine that he owns in Nevada. So Dr. Shirley is now hopeful that he can present the gavel to Richard Nixon in January 1969.

Sometimes the why of a camellia culture practice has as much reason behind it as the following anecdote illustrates. A bride served baked ham and her husband asked why she cut the ends off. "Well, that's the way mother did it," she replied. The next time his mother-in-law stopped by, he asked her why she cut off the ends of the ham. She replied, "That's the way my mother did it." And when grandma visited, she too was asked why she sliced the ends off. She said: "That's the only way I could get it into the pan."

A NEW ZEALANDER (Cont.)

'Ballet Dancer'. Occasionally marks badly in our climate, but a good bloom makes up for former disappointments.

'Mynelle Hayward'. Excellent blooms and a lovely garden variety.

'Donation'. Would be my first choice if restricted to one variety. Prefer 'Donation Var' if variegation could be relied on.

'Hawaii'. This one does very well here and all visitors ooh and aah.

'Margaret Davis'. My plant has given some lovely blooms but friends have complained of poor quality.

Well, there they are. Some perhaps should be replaced by others, but in a list like this, personal preference takes over. I would have liked to include 'Clarise Carleton' but blooms open slowly and are invariably marked if not given protection. My plant could do with more shelter and this has been provided. After looking over my list and comparing with similar lists compiled in America, it is obvious that the better varieties do well in both countries.

SOUTH SEAS (Cont.)

the rather dry conditions which bodes well for it in Los Angeles. We have had larger blooms than ever before and it is certainly very striking when the borders are deeply coloured, although this is not always the case. I now realize that a really good flower of it is up to 'Betty Sheffield Supreme' standard."²

2. 'Tiptoe' and 'Margaret Davis' are Camellia Grove Nursery Introductions. Mr. Fisher told us in 1967 that in his opinion, 'Betty Sheffield Supreme' was superior to 'Margaret Davis'. I saw it blooming in his nursery in August 1967 and disagreed with his statement made in California. His present statement is with reference to our conversation in Australia and to subsequent correspondence from me. —Ed.

CALIFORNIA INTRODUCTIONS (Cont.)

ver pink flower that blooms medium to late. The plant is a vigorous, spreading upright grower.

'Temple Mist', a rose pink, large semi-double that blooms medium to late. This is a vigorous compact grower.

'Bernadette Karsten', named for the wife of the Danish consul in California. Mr. Maitland had released some scions of this flower under the name 'Two Ton Tony' before it was registered. During the 1967-1968 camellia blooming season, Mrs. Karsten visited Mr. Maitland's gardens many times and admired the flower, and Mr. Maitland decided to register it in her name. The flower is a light pink, large semi-double that has reached 6 to 7 inches in diameter and up to 5 inches in height. It blooms medium to late on a shrub that is vigorous and upright. This flower under the name 'Two Ton Tony' earned for Mr. Charles Butler of Mobile, Alabama the first place Hybrid Award at the 1968 Mobile and Birmingham shows. It also received the A. C. S. Highly Commended Certificate.

BEST CAMELLIAS (Cont.)

Hybrid with Other
Parentage

- Charlean—2
- Charlean Var.—2
- Elsie Jury—2
- Julia Hamiter—2
- E. G. Waterhouse
- E. G. Waterhouse Var.
- Phyl Doak

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Directory of California Camellia Societies

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

*CAMELLIA SOCIETY OF KERN COUNTY

President: Frank Anderson; Secretary, Melvin Canfield, 2709 Scott Pl., Bakersfield 93306
Meetings: 2nd Monday October through April in Police Bldg., 1620 Truxton Ave., Bakersfield

*CAMELLIA SOCIETY OF ORANGE COUNTY

President: Ronald Cowan; Secretary, Mrs. George T. Butler, 1813 Windsor Lane,
Santa Ana 92705
Meetings: 1st Thursday October through April in Orange County Farm Bldg., 1916 W. Chapman,
Orange

CAMELLIA SOCIETY OF SACRAMENTO

President: Dr. Roy O'Neal; Secretary: Mrs. Martha Derr, 6454 Oakridge Way, Sacramento 95831
Meetings: 4th Wednesday October through April in Garden & Art Center, McKinley Park,
Sacramento

*CENTRAL CALIFORNIA CAMELLIA SOCIETY

President: Robert Kellas; Secretary, Mrs. Glenn S. Wise, 5493 E. Liberty Ave., Fresno 93702
Meetings: Nov. 20, Dec. 18, Jan. 15, Feb. 19 in Mayfair School, Fresno

DELTA CAMELLIA SOCIETY

President: Wm. H. Hayes; Secretary: Mrs. Juanita Luther, 3408 Camby Rd., Antioch 94509
Meetings: 4th Tuesday October through April in School Adm. Bldg., 510 G St., Antioch

JOAQUIN CAMELLIA SOCIETY

President: Karn Hoertling; Secretary: Mrs. Ethel S. Willits, 502 N. Pleasant Ave., Lodi 95240
Meetings: 1st Tuesday November through April in Micke Grove Memorial Bldg., Lodi

LOS ANGELES CAMELLIA SOCIETY

President: James Tuliano; Secretary: Mrs. Joe L. Vendracek, 13176 Fenton, Sylmar 91342
Meetings: 1st Tues., Dec. through April, Hollywood Women's Club, 1749 N. La Brea, Hollywood

MODESTO CAMELLIA SOCIETY

President: Anthony F. Pinheiro; Secretary: Mrs. Hazel Grosso, 1424 Encina Ave., Modesto 95351
Meetings: 2nd Monday October through May in "Ag" Bldg. of Modesto Junior College

NORTHERN CALIFORNIA CAMELLIA SOCIETY

President: Robert E. Ehrhart; Secretary: Carl W. Schroeder, 41 Van Ripper Lane, Orinda 94563
Meetings: 1st Monday November through May in Claremont Junior High School, 5750 College
Ave., Oakland

PACIFIC CAMELLIA SOCIETY

President: Albert H. Dekker; 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: Louis J. Giomi; Secretary: Mrs. Pauline Moore, 80 Wheeler Ave.,
Redwood City 94061
Meetings: 4th Tuesday September through April in Hospitality Room, First Federal Savings
Bldg., 700 El Camino Real, Redwood City

*POMONA VALLEY CAMELLIA SOCIETY

President: Walter Harmsen; Secretary: Mrs. Janet Meyers, 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: Charles B. Persing; Secretary: Mrs. William Schmitt, 101 Minot St., Chula Vista
Meetings: 2nd Friday (except February which is 1st Friday) November through May in Floral
Assn. Bldg., Balboa Park, San Diego

SONOMA COUNTY CAMELLIA SOCIETY

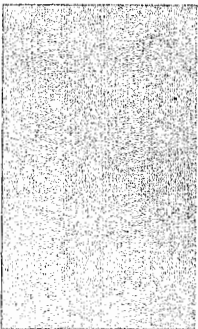
President: James Grant; Secretary: Mrs. Inez Tryon, 614 Forest Dr., Sebastopol
Meetings: 4th Thursday, except Nov. (3rd Thursday) and Dec. (to be decided) in Redwood
Empire S/L Assn., 1201 Guerneville Rd., Santa Rosa

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: 2nd Thursday of Nov., 4th Friday of Dec. and 4th Thursday Jan. through April
in Lecture Hall of Los Angeles County Arboretum, Arcadia



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