

THE *Camellia*
REVIEW

A Publication of the Southern California Camellia Society



'Pink Pagoda'

Courtesy Monrovia Nursery Co.

Vol. 27

October 1965

No. 1

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.

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PUBLISHED BY THE SOUTHERN CALIFORNIA CAMELLIA SOCIETY, INC.

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Six issues per volume — October, November, January, February, March and May.

All manuscript for publication and correspondence should be sent directly to the Editor.

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CHANGE OF ADDRESS: Notify the Secretary at once. Magazines are not forwarded by the Post Office.

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THE COVER FLOWER

This month's cover flower is a glorious deep pink formal, an introduction of Monrovia Nursery Company, Azusa, California. The petals of 'Pink Pagoda' are unusual, topped one on the other in undulating waves that create a fascinating appearance. The plant is vigorous growing, compact branching, with broad oval foliage of lustrous green. It blooms midseason.



Welcome to the start of another volume of CAMELLIA REVIEW, the sixth for which we have been Editor. During the summer months we looked over our past five years' issues. We couldn't discern that we had missed during these years any of the main subjects of camellia culture or many of the miscellaneous subjects of interest to camellia hobbyists. We have covered culture in all its varied aspects. We have written about camellia personalities, occasionally about camellia history, kept you up-to-date on camellias and camellia shows in Southern California. Occasionally we have strayed outside our geographic area, but not often. It looks as though we face another year of the same subject matter, written by different people who will use different words to say the same thing. As in the past years, we shall write for all the different degrees of knowledge of camellias, recognizing in so doing that a part of every issue will have limited interest to some of our readers.

We have some introductions to make of new regular contributors. Melvin Gum will replace Alvin Gunn for the page on "what to do this month". Al called his page "What's Behind the Green Thumb". Mel's title will be "Sharing Experiences". This page is designed for the people who are relatively new at growing camellias, although the suggestions are as good for the old timer as for the new grower.

Wilkins Garner will conduct a question and answer page, for people who have questions for which they want answers. It will be only as good as the questions which are received make it. Readers are urged to send in questions.

Pat Novak will conduct a page about new varieties. He is starting with new Southern California introductions, but as the blooming season progresses he will cover newer varieties that we are seeing bloom for the first time in Southern California or others that we may have seen before but are worthy of having attention called to them.

This issue contains another article by Chandler North, who wrote so authoritatively last year about virus in camellias. Incidentally, he was one of the very first to use gibberellic acid with camellias and helped Frank Reed to get his head start over the others.

Editors of publications such as this regularly ask for suggestions from readers regarding subjects they would like to have covered. Just as regularly, the year goes by with very few if any responses. I again make the request, with the hope of response but also the full realization that if my mind becomes lazy a future issue may be short of material.

Harold E. Dwyer

PLANTING MIXTURES, FERTILIZERS, AND CAMELLIA CULTURE

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The components of different planting media are so diverse that it would be impossible to recommend any single fertilizer program that would include all of these many mixtures. Therefore it is the authors' intent to explain general procedures and some of the basic processes that occur in planting media. It is really up to each grower to find, by experimentation, how to handle his own management problems. He should not expect that his procedures will be the same as those of other growers who may be using a different planting medium with different components. If any general advice can be given to camellia growers it is to keep the growing media on the dry side, rather than the wet side, in order to promote good aeration, root growth, and to prevent attacks by water molds.

The main functions of a planting mixture are to give support for the plant by providing material in which the roots can become anchored, to provide a means of water storage, and to serve as a means for storage of mineral nutrients needed by the plant. Media such as soil, sand, perlite, sawdust, woodchips, fir bark, or mixtures of these materials differ in their ability to support a plant. One reason for this is the texture of the medium with the resulting ability of the plant's roots to grow in it. Texture controls the amount of air and water that a medium will hold. Roots of some plants grow best in a lily pond with almost no air (oxygen) available to the roots while other plants may need a well drained, sandy soil with lots of air space.

Camellia roots appear to be rather adaptable and endure a wide range of growing conditions as long as the

medium does not remain too wet very long after watering or contains more than a small amount of lime (calcium carbonate). Excess water (moisture) in the growing medium contributes to two main types of root damage. It allows growth of any water molds that may be present; usually these are *Pytophthora*, *Pythium*, *Fusarium*, and *Rhizoctonia*. These molds are parasitic and attack the stem and root system at and below the soil level thereby killing the plant by means of killing the root system thus cutting off the supply of water and nutrients to the top of the plant. The other type of damage is that excess water deprives roots of sufficient oxygen by preventing the entrance of air (oxygen) into the soil. Excess moisture also causes an accumulation of excess carbon dioxide in the soil. *Camellia sasanqua* is usually more tolerant of wet soil than *Camellia japonica* but some *C. sasanqua*, such as 'Jean May' and 'Setsugekka', are very sensitive to wet roots.

The water storage capacity of a growing medium is determined largely by the size and relative amounts of component particles and by the amount of colloidal organic matter present. Water is held on the surface of the particles and between small particles by capillary action. There is more surface present if a grain of sand is broken up into smaller pieces than there is if it is left in the relatively larger piece of rock. The more clay particles (particles less than 0.002 millimeters in diameter) a soil contains, the more water it will hold and the harder it is for the soil to drain. Silt holds less water than clay, and sand is the driest medium of all.

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However, even sands differ in particle size but those with the most and smallest particles will hold the most water. For instance, plaster sand is finer than concrete sand and will hold more water (moisture).

Nutrients, the inorganic chemical elements needed for plant growth, were discussed by Stromberg⁵. These elements are generally classified as

MACRONUTRIENTS and MICRONUTRIENTS. Those that are used by the plant in relatively large amounts are MACRONUTRIENTS and those needed in only small amounts or merely traces are MICRONUTRIENTS. Expressed as per cent of dry weight of healthy camellia leaves chemical elements generally considered as essential are listed in table 1.

Table 1

Macronutrients	% dry weight	Micronutrients	% dry weight
Nitrogen	1.5 - 2.5	Iron	0.004 - 0.015
Calcium	1.2 - 2.0	Manganese	0.0035 - 0.22
Potassium	1.2 - 2.0	Zinc	0.0014 - 0.003
Magnesium	0.2 - 0.5	Boron	0.008 - 0.13
Phosphorus	0.1 - 0.24	Copper	trace
Sulfur	0.1 - 0.25	Molybdenum	trace

Carbon, hydrogen, and oxygen are three other elements necessary for growth of any plant, animal, or other organism. Carbon is obtained by plants as carbon dioxide through pores in the leaves called stomata. Hydrogen and oxygen come from water.

Elements present in plants but not known to be essential to all plants include sodium, silicon, and aluminum. Chlorine, not included in table 1, has been determined to be necessary in micronutrient quantities for at least some plants. Deficiency symptoms for sodium, silicon, chlorine, and aluminum have not been recognized in Camellia. Water from a water softener may have excess sodium in it, and chlorinated water from a swimming pool or even some chlorinated city water may contain excess chlorine that will damage camellias and other plants. Camellias appear to be somewhat tolerant of sodium, boron, and chlorine. However, excess quantities of any nutrient element may be toxic in itself or indirectly by reason of interfering with the absorption of another element by the plant or by interference with the use of another element inside the plant. An example of one element interfering with the use of another is phosphorus. Excess phos-

phorus inside a plant may cause "physiological" deficiency of iron by combining with it to "inactivate" the iron. Excess phosphorus outside the plant in the growing medium may prevent a plant from absorbing sufficient iron for its needs.

All of the above mentioned chemicals combine with fractions of the soil to form many organic and inorganic compounds of varying solubility. Generally speaking, nitrogen, chlorine, sodium, and boron compounds are easily soluble. Compounds of calcium, potassium, magnesium, iron, and sulfur are likely to be slowly soluble and therefore, in some soils, may or may not furnish sufficient amounts of these elements to the plant. Generally, all elements are more available to plants in acid soils than in neutral or basic soils. Each time a plant receives water some of each of these chemicals goes into solution. These amounts vary with the solubility of each compound as it occurs in the soil, and as it is affected by other compounds present in the soil.

Plants vary in their ability to obtain nutrients from soils. The so-called acid-loving plants grow best in an acid soil and are unable to live in alkaline (basic) soils. Plants that grow well in alkaline soils either toler-

ate or are able to “refuse” to absorb toxic amounts of sodium, chlorine, boron, calcium, potassium, or carbonates. Camellias are particularly sensitive to lime soils and may become chlorotic when planted beside a house or a concrete curb where the roots may encounter loose plaster or concrete left there by otherwise well-meaning contractors. Nutrient deficiencies are usually apparent as patterns of yellow between the veins of leaves with various green zones along the veins. This chlorosis or yellowing is due to the lack of chlorophyll in the chlorotic (yellow) areas caused by lack of particular nutrient elements in the affected leaves. Different deficiencies usually produce distinct patterns of chlorosis, however, the patterns may be similar when they first become apparent except for nitrogen deficiency. Nitrogen deficiency is usually apparent as overall pale green leaves. Not all camellias develop dark

green leaves therefore the grower must make some distinction between “green” and “palegreen.” Chlorosis due to nutrient deficiencies is not to be confused with yellow mottling of leaves caused by virus infection, fig. 1, although some virus infected leaves may show chlorosis patterns much like those of iron or manganese deficiencies.

Camellias in calcareous locations often develop manganese deficiency. This pattern of chlorosis, fig. 2, is apparent as wedge-shaped green zones along the mid-vein and lateral veins with chlorotic areas between the veins. Necrotic (dead) spots may develop in the yellow areas along the edges and the tip of the leaf, fig. 2. Ryan and North⁴ grew camellias in high lime soil (32 per cent calcium carbonate). Manganese deficiency symptoms appeared which was corrected with the application of chelated manganese.

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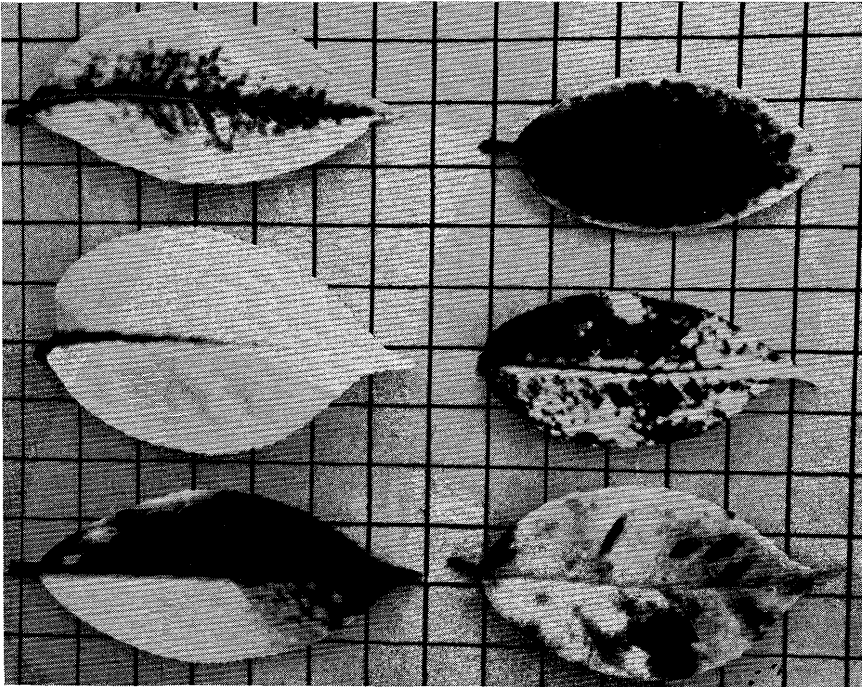


Figure 1. Virus infected camellia leaves

Later these plants developed iron deficiency symptoms in which there are narrow green zones along the veins of the leaves with chlorotic interveinal areas, fig. 3. The iron deficiency symptoms was corrected with chelated iron. Thus it appears that at least some camellias can be grown in calcareous soils with the use of chelated iron and manganese. The authors realize that camellia growers are not going to try to grow camellias in calcareous soil unless there is no alternative. The above experiments are cited to give the camellia growers a better understanding of plant nutrition and to illustrate the fact that many acid-loving plants are termed such because they are not able to absorb some nutrients from basic soils. They will often grow well in such soils if nutrients are made available to them through the use of chelates or other special fertilizer forms.

Chemical elements absorbed by a plant are in exactly the same form

whether they come from the decomposition of organic materials such as manure, blood, and cottonseed meal, or directly from a bottle on the chemist's shelf. The big difference in these fertilizers is the RATE OF AVAILABILITY or speed with which the chemicals from the various fertilizers become available to the plant roots. The chemicals from the so-called organic fertilizers, such as manure and cottonseed meal, are released by decomposition by soil organisms over an extended time depending on the organism population and the degree of incorporation into the soil where they may be open to decomposition. The numbers of bacteria in soil vary widely between 0.3 million and 95 million per gram of soil according to Millar and Turk³; and soil fungi are 8,000 to over 1,000,000 per gram of soil (28.35 grams per ounce). Both bacteria and fungi (soil molds) use the decomposition products in growth of their bodies, therefore much of the

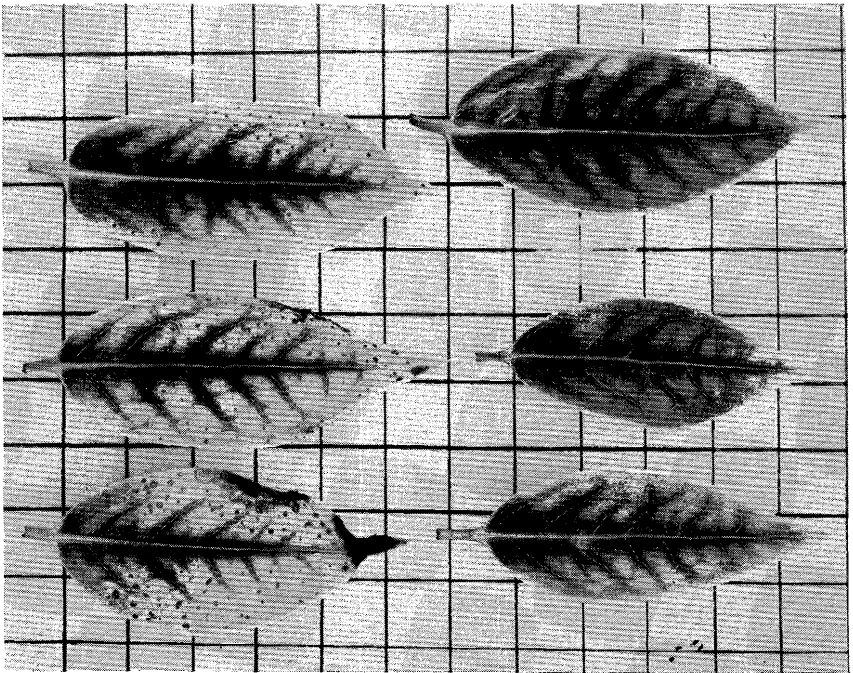


Figure 2. Manganese deficiency

chemicals released by decomposition are immediately used again by soil organisms and must undergo decomposition again when the bacteria and fungi die. The cycle operates perhaps several times before the chemicals reach plant roots. Thus the release of chemicals by decomposition is extended over a much longer period of time than when inorganic fertilizers (natural or synthetic) are used. Natural inorganic fertilizers such as NITRATE OF SODA or ROCK PHOSPHATE do not furnish anything special as fertilizers other than INORGANIC nutrients. Nor do SYNTHETIC FERTILIZERS such as sulfate of ammonia and ammonium nitrate have any toxic properties other than that derived from the high nitrogen content, 21 per cent and 35 per cent respectively. There is no toxicity when inorganic high nitrogen fertilizers are applied in proper amounts. Urea, strictly speaking, is an organic form of nitrogen since it has carbon in its molecule. Urea is synthetic and originally contained damaging quantities of the impurity biuret; and when used as an exclusive source of nitrogen, caused some damage. The biuret content, however, has been greatly re-

duced and the authors would not hesitate to use urea in camellia culture. Biuret is essentially two molecules of urea joined together to form a single larger molecule. The reason for injury by biuret is not clear. Damage from biuret was reported on some plants but no damage has been noted by the authors when using urea to fertilize camellias and macadamia nut. Use of sulfate of ammonia over a very extended period of time has appeared to increase the acidity of some soils due to sulfuric acid accumulation but this again is a very exceptional phenomenon, and is eliminated if other forms of nitrogen fertilizer are used intermittently with sulfate of ammonia.

Nitrate of soda should be used with caution in areas of low to moderate rainfall since excessive accumulation of sodium may occur that will affect soil structure and injure plants. Another factor to be considered is that, in the authors' experience, camellias become deficient in iron and manganese if nitrate nitrogen is the only nitrogen used. It is necessary therefore, in the authors' experience, to furnish some of the nitrogen as
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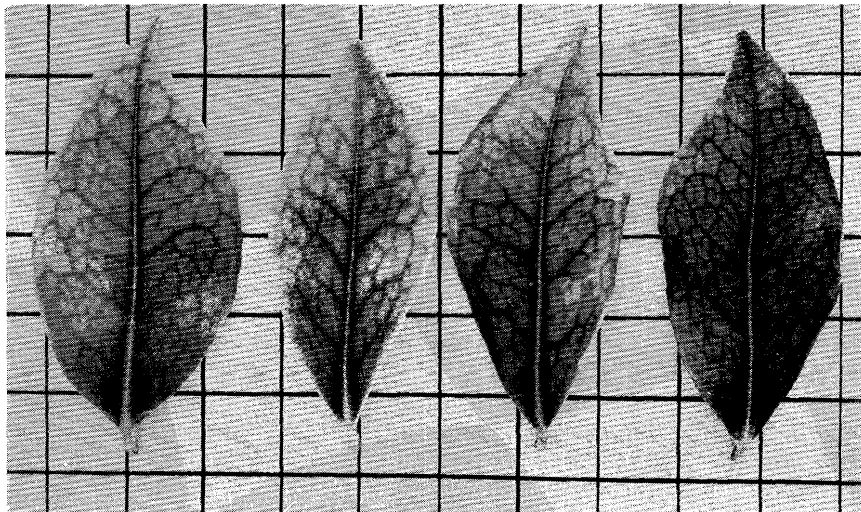


Figure 3. Iron deficiency

AMMONIUM (sulfate of ammonia) or as UREA or AMMONIUM NITRATE. Other "acid-loving" plants such as BLUEBERRY and MACADAMIA NUT may need ammonium as well as nitrate nitrogen. There may be soil conditions where nitrate nitrogen as the only nitrogen source will furnish the correct nitrogen supply for camellias and other acid-loving plants but the authors have no knowledge of these conditions. When AMMONIUM nitrogen is used, some of it is converted to the nitrate form by soil organisms before reaching plant roots; the plants thus receive both forms of nitrogen. This conversion of ammonium to nitrate occurs if the soil acidity (pH) is 6.0 or higher (above pH 7.0 is basic, below is acid). However, the reverse conversion, from nitrate to ammonium does not readily take place. Under anaerobic conditions, which are not conducive to growth of most plants particularly camellia, nitrate is degraded and forms toxic compounds before it can be completely converted to ammonium.

Nitrogen from ORGANIC matter is converted, by decomposition, from proteins and protein components to ammonia and then by combining with water forms ammonium. The ammonium molecule may be adsorbed into the plant, fixed loosely in the soil, or converted further by soil organisms, to nitrate. Thus organic matter furnishes both forms of nitrogen.

Among the organic fertilizers, POULTRY AND ANIMAL MANURES should be used with caution because of the relatively uncertain and varying amounts of some chemicals in different lots of the same product. This depends on leaching (by water) of chemicals to the bottom from the top and middle of a manure pile. There are no magic ingredients such as vitamins in organic fertilizers. Plants synthesize their own vitamins. Other organisms, such as birds and

animals, do not synthesize vitamins and so must get them from their food.

The one thing added to soils as a result of using organic fertilizers, not furnished by inorganic fertilizers, is ORGANIC MATTER which is decomposed, in the soil, to HUMUS. "HUMUS", denotes soil organic matter which has undergone extensive decomposition. It is not a homogeneous compound, it has no definite composition. It is dark-colored, heterogeneous mass, consisting of residue of plant and animal materials together with synthesized cell substances of soil organisms. Humus is not static but dynamic in soil; it is constantly undergoing change." Humus has long been investigated and a recent work², shows that it has a much more complicated structure than the formerly presumed lignin-protein compounds. It is now thought to be composed of HUMIC AND FULVIC acids and their derivatives. These are very complex and diverse compounds that vary in composition depending on the parent materials, on rainfall, and on soil composition. The HUMIC acids have a relatively high cation-exchange capacity. Cations are positively charged elements such as sodium, calcium, iron, potassium, etc. Humic acid structure is "aromatic" or ring (cyclic) not linear, containing nitrogen units. The ratio of carbon to nitrogen is about 10:1. FULVIC acids are smaller molecules than the humic acids. They appear to contain nitrogen and phosphorus in their structure. Millar and Turk³ wrote "Although humus is considered to be organic, it probably contains various inorganic elements which are an integral part of the complex. In acid soils the humus complex is likely to contain large quantities of hydrogen, iron, and aluminum; whereas in soils close to the neutral point the humus is usually nearly saturated with calcium and magnesium, and in strongly alkaline soils it may contain considerable

sodium. It is constantly changing in composition. It is better, therefore, to speak of humus not as a single group of substances but rather as a state of matter, which is different under varying conditions of formation." "HUMUS^{2,3}, is characterized by a high base-exchange capacity (that is it can hold on to chemicals through chemical-electrical bonds, and release them into the soil moisture); it combines with various inorganic soil constituents; it adsorbs large quantities of water and exhibits the properties of adhesion and cohesion as do mineral colloids and is less stable because it is subject to microbial decomposition. IT HAS BEEN SHOWN THAT HUMUS IS AN IMPORTANT FACTOR IN THE CONTROL OF AERATION, WATER-HOLDING CAPACITY, AND GRANULATION OF FIELD SOILS. HUMUS POSSESSES OTHER PHYSICAL AND PHYSIO-CHEMICAL PROPERTIES WHICH MAKE IT A HIGHLY VALUABLE SOIL CONSTITUENT." The foregoing statements concerning humus are brief excerpts from two books^{2,3}, about soils and soil organic matter, to give the reader some idea of the complexity of soil constituents and therefore the reason why the authors do not give specific recommendations for the growing of camellias. The authors, however, have grown very good plants in the absence of humus using silica sand as the growing medium and furnishing all nutrients dissolved in water and applied daily except on weekends.

Brooks¹ used fir bark as a growing medium. In time, he attains a certain amount of humus as the fir bark is decomposed by soil organisms. Therefore he has a slowly available source of nutrients and at the same time maintains good aeration. He mentions the use of fertilizer containing 10 per cent nitrogen, 50 per cent phosphorus, and 15 per cent potassium. Translating these figures to definitions from

the Western Fertilizer Handbook⁶, the chemical content is 10 percent nitrogen, 50 per cent phosphorus pentoxide, and 15 per cent potash. Translated further this fertilizer is 10 per cent nitrogen, 21.8 per cent phosphorus, and 12.4 per cent potassium. It is hoped that old laws governing labeling of fertilizers will be changed so that actual chemical content will be listed on the label rather than as a per cent of the compounds now listed by law. Obviously, fertilizers with higher chemical content should be used in lesser quantities, particularly with regard for those with high nitrogen content.

As to the amounts of nitrogen, phosphorus, and potassium given to a plant, the authors have used as much as 3-4 grams of nitrogen per month on 3-gallon size plants that were 4-5 feet tall with excellent results. High levels of phosphorus and potassium were not tried. Generally these elements are in adequate supply for camellias in most soils that are not strongly leached (by rain). Brooks¹ gave his 'Alba Plena' plant 2½ ounces of 10-50-15 fertilizer three times in one year. This amount contained 7.1 grams nitrogen, 15.5 grams phosphorus, and 8.7 grams of potassium for each 2½ ounces of fertilizer. These amounts may be toxic in a 3-5 gallon container but do not appear excessive for a plant in the ground.

In the authors' experience, nitrogen is the most needed fertilizer when plants are grown in a mixture containing much clay and when watered with tap water. Phosphorus and potassium may be needed only once or twice a year under these conditions. However, in container culture with little clay or humus content, a more complete nutrient fertilizer is needed. After organic materials such as peat, sphagnum, leaf-mold, fir bark, and cottonseed meal are decomposed to

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humus, the planting medium will hold nutrients much better and nitrogen may become the most needed.

Commonly used ORGANIC FERTILIZERS⁶ are listed in table 2.

Table 2 shows the great variation in chemical content among the many organic fertilizers. There is often as great a variation within a single type of manure, etc. Because of the large percentage of organic matter in these materials, chemical (inorganic) nitrogen is needed to the extent of about 1 per cent or more of the dry weight of sawdust, grain straws, and similar low nitrogen organic materials used in a planting mix. The reason for the additional nitrogen is that soil organisms use the carbon from the organic matter to build their own bodies and use the nitrogen in the soil to synthesize proteins and protein components. This process creates a temporary nitrogen deficiency in the soil that lasts until the greatest part of the organic matter is decomposed at which time the soil organism population becomes reduced in numbers to

the more nearly normal population before the organic matter is added.

A word of caution is in order on the use of FRESH REDWOOD FRAGMENTS and perhaps some other wood materials. REDWOOD should be leached or weathered to remove substances that are toxic to some plant roots. Some readers may have experienced trouble with seedlings grown in new redwood flats that resulted in death or reduced growth of the plants. However, this toxicity disappears after the wood has been weathered and washed by water. Therefore, it is best to leach redwood before incorporating it into a soil mix for use in containers. Toxicity problems of redwood bark are not known. Fresh redwood tubs are apparently leached sufficiently by water to remove damaging substances before plant roots reach the side of the container.

It is usually necessary to provide some nutrients more often than others, particularly the micronutrients iron, manganese, and zinc. Manganese and

Table 2
Average Analysis of Organic Materials

	Per cent Nitrogen	Per cent Phosphorus (P ₂ O ₅)	Per cent Potassium (K ₂ O)	Per cent Organic Matter
Bulky Organic Materials				
Goat manure	2.77	1.78	2.88	60
Dairy manure	.7	.3	.65	30
Steer manure	2.0	.54	1.92	60
Poultry droppings	4.0	3.2	1.9	74
Horse manure	.7	.34	.52	60
Alfalfa hay	2.5	.50	2.50	85
Alfalfa straw	1.5	.30	1.5	82
(no leaves)				
Bean straw	1.2	.25	1.25	82
Grain straw	.6	.20	1.10	80
Organic Concentrates				
Dried blood	13.0	1.5		80
Fish meal	10.4	5.9		80
Bat guano	13.0	5.6	2.9	30
Cottonseed meal	6.5	3.0	1.5	80
Castor pomace	6.0	2.5-3.0	.5	80
Bone meal	4.1	30.0		
Tankage	7.0	8.6	2.9	30

zinc are best applied in the chelated form when needed or at intervals during the growing season. Weak chelating agents such as citric acid are effective in some cases to keep nutrients available to the plant root, but are not effective in other cases. Some chelating agents are more effective in acid soils and others are more effective in basic soils. In the authors' experience, the chelating agent that is abbreviated EDDHA and with the trade name Sequestrene 138 Fe, has been the most effective in basic soils to supply iron. In acid soils, iron sulfate may furnish sufficient iron for camellias. If manganese or iron deficiencies occur, chelated materials are the most reliable solution to the problem. Zinc sprays have been effective on some plant species to supply zinc.

The authors' philosophy is, usually, to get the most nutrients for the money, keeping in mind the plant's need and ability of the growing

medium to hold specific chemical nutrients available to the plants over the longest period of time.

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WANTED

BY SERIOUS CAMELLIA HOBBYIST

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- Vol. 6 -- #1
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 Camellias in America..... H. H. Hume — 1955

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 Camellias, History, Culture, Care W. B. Smyth, Ross, Calif. — 1943
 Camellias, As A Hobby Oregon Camellia Society — 1947
 The Classification of Camellias S.C.C.S. — 1942
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OUTSTANDING CAMELLIAS VIEWED DURING 1964-65 SEASON

Spencer C. Walden, Jr.
Camellia Farms, Albany, Georgia

It is very difficult to comment on all of the outstanding camellias exhibited during our last camellia season without omitting many of the outstanding varieties.

It is very noticeable to me that when a new variety is introduced, it takes quite a few years for it to become widely distributed. Many of the new varieties are proclaimed as so outstanding but are quick to take their place among the ordinary varieties. Few of the new varieties can stand the competition that has been shown by many of the favorite old varieties. 'Tomorrow' and its Sports never fail to attract attention. The solid red variety is always striking and outstanding. This also may be said of 'Tomorrow's Dawn' but a highly variegated sport of 'Tomorrow', sometimes called 'Tomorrow's Supreme', will attract more attention than any flower in the Show. Last blooming season I had a large 'Tomorrow' plant to bloom 90% white. At a meeting of the South Georgia Camellia Society held in Albany, while this plant was in bloom, it attracted much attention, and a flower from this plant worn by one of the ladies at the meeting caused her to be singled out and crowded around by many to get a close-up view of this beautiful specimen. Of course, as we all know, 'Tomorrow' and its variegated form won 15 best in Shows last year.

Another that may be termed an old variety which never fails to gain much recognition and admiration is 'Guilio Nuccio', and the more it is variegated, the more attention it attracts. This is also true of the real old variety, 'Ville de Nantes' and 'Lady Kay',

which will always be sought by camellia lovers everywhere. 'Betty Sheffield Supreme' will always take its place among the top as being an unusual, outstanding and beautiful camellia. 'Julia France', particularly in its peony form, has attracted much attention and is admired by many. 'Carter's Sunburst' seems to be the No. 1 in its type flower of the pinkish-red stripe. The pink 'Carter's Sunburst' and variegated form have not yet been widely shown.

One of the most admired flowers of its type last season was 'Annette Gehry' which takes various shades during the year, from a deep apple blossom color to a very light color. The strong tones sometimes found in this flower are outstanding and never cease to be admired. Last season, I saw a 'Kate Smith' which was about 75% white and this, being an old variety, will always be admired.

With the use of gibberellic acid, it is fast bringing many of the old varieties back into favor among camellia lovers; one of which is receiving much attention is the 'Rosea Superba Variegated'. Last season, Les Richard of Mobile, Alabama, had one of the most magnificent I have ever seen at a meeting in Macon, Georgia, and Gordon Moughon, Jr. of Birmingham, Alabama, had its twin in the Birmingham, Alabama, Show.

'Elegans Supreme' attracted much attention in this area last year and, in three instances, won best flower in Show. However, I am a lover of the 'C. M. Wilson' of the 'Elegans' family, which I think is hard to beat anywhere anytime, and a little gib acid will make it even more beautiful.

'Erin Farmer' promises to be a real favorite among the apple blossom colored flowers with its delicate tones. 'Glenwood' has a rich red color with much variegation and gives the contrast greatly desired such as found in 'Miss Charleston Variegated', which is also one of the favorites in this type bloom. 'King Size Variegated' bloomed with much white showing this past season and by use of gib acid, it can be increased up to 7" in size and make a real show flower.

'Fran Mathis Variegated' attracted much attention in this area last year and it has the beautiful shade of pink that will always make it a favorite among the ladies as a corsage.

'Tiffany' has not yet come into its own in this area; however, there have been quite a few blossoms exhibited in various Shows that give warning to all it is here to stay as a real Show Winner.

Two of the newer varieties which

attracted a great deal of attention last year were 'One Alone' and 'Moonlight Sonata'. Both of these are much in demand, and budded plants for sale in this area are scarce. 'One Alone' looks similar to a peony 'Mrs. D. W. Davis', which always stops traffic in every Show; and 'Moonlight Sonata', with its delicate tones of pink and beautiful formation, make it a must among everyone's collection.

In the Macon, Georgia show last year, Terrell Weaver won with the best flower, 'Dixie Knight Variegated', which is a beautiful deep red with a contrasting white peony form flower.

'Snowman' is the most beautiful new white I have seen. It is a large flower with a beautiful formation about 4" deep.

'Mr. Sam', which is named for an outstanding camellia grower, Mr. Sam Hjort of Thomasville Nurseries, Thomasville, Georgia.
(Continued on page 31)

MERLE'S NURSERY

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Sharing Experiences

Melvin L. Gum

I have been asked by your editor to write something for the readers of CAMELLIA REVIEW who are just beginning in this wonderful hobby. I will try to touch on things that should be done all through the year, beginning with this month's procedure.

I'm no expert at this, but I will try to pass on to you some of the experiences I have gained in the time I have worked with camellias. I know of no other hobby in which one can have something to do on every day of the year. This may sound like a lot of work, but remember busy hands make for a strong mind and healthy body.

The average camellia can manage to grow without regular feeding and even survive diseases, but let it go dry for even a short time and the plant dies — or growth is seriously stunted, requiring several months to return to normal. Water is necessary in every life function of the plant, so be certain your's have an adequate supply. To those of you who have had rains or light showers, don't let it fool you; continue to water, it requires a quarter of an inch of rain to penetrate two or three inches. Aside from benefitting plants, deep watering saves both time and money and should be done once a week depending on the climate, soil and size of plants. Most of your light watering will evaporate before the plant can utilize it, however your feeder roots must be kept damp and cool at all times. This can be obtained by giving your camellias a light spraying each morning or evening, except in blooming season, as they love a good bath. This also helps to prevent aphids. Camellias do take a lot of water; always keep in mind that their native lands, China and Japan, get as much as 90 inches of rain a year.

Water should never be applied with heavy force from a garden hose. It should be as much like a general rain as possible. For general watering purposes, always use a sprinkler; hand watering gives spotty, undependable results because you cannot gauge the amount of water applied. Always be sure to water beyond the drip line.

There is a lot of irrigation equipment on the market. For camellias that are planted in the ground, take a series of five shrub head sprinklers spacing the sprinkler heads on pipe so you can water five or six plants at one time. This can be made portable so it can be moved from one location to another. The above system, depending on the soil, can be let run for one to two hours each week for deep watering, or if you don't want to go to this trouble, soil soakers may be used. This will give you more time to disbud and to cut out cross branches that prevent the air from circulating through your plants, or prevent buds from opening. Some of this wood that you cut out may be used for fall cuttings. This is another phase of this wonderful hobby. On this I want to refer you to an article in the July issue of the American Camellia Society Journal. Space here does not permit me to elaborate. Try this, it is a lot of fun.

Most of your sasanquas are in bloom now — a frequent overhead spraying will make the flowers last longer. During the flowering period, your watering should be watched very closely because those beautiful blooms that you are trying to grow for the show contain 90% water, and if you let them get too dry you will have small blooms and a possibility of bud drop. It is essential that moisture be available continuously; without this

you are certain to have inferior plants and blooms.

Tub plants need constant attention. Be sure that the plants are not over potted. If container plants are over potted the soil is inclined to sour. Be sure that you have good drainage. Manufactured tubs usually have only one or two holes in the bottom for drainage; in a fourteen inch tub I drill twelve to eighteen holes $\frac{1}{4}$ inch to $\frac{1}{2}$ inch in size. Place your soil and plant in the container, bringing the soil line within two inches of the top. Water in many areas is alkaline in reaction; this is particularly true in California. To make sure that no large amount of alkaline salts builds up when watering, fill your tub to the top each time, and if your tub is well drained this will leach out the salts. If your plant is properly planted you run little risk of over watering. The real danger lies in underwatering. The soil in the container should always feel moist when touched. It will often look dry on top, so take your finger and lightly brush back the top soil to see if it is moist underneath. In some localities there are hot, windy, dusty days; this is when camellias in lath houses really take a beating, as well as those outside. To hold the humidity up and the air moist one can benefit by using a light mist over your plants. There are several good Mist-ers on the market. Camellias will survive a hot spell in better fashion if the leaves are kept moist.

If you have moved some of your tub plants, and if by oversight you have placed them in a draft, they should be moved at once as a continuous draft is death to a camellia. If they cannot be moved, some growers use burlap but more light is obtained with polyethelene. This may be purchased at any builders hardware at a very nominal price, stapled on a frame and placed by the plant to break the wind.

It is not too late to disbud.

There are many factors in obtaining beautiful flowers and plants, but to me the main ingredient is sufficient water, so when in doubt water.

NEW READERS

Effective with this issue, CAMELLIA REVIEW has two new groups of readers. Following the announcement by the Northern California Camellia Society of its plans for discontinuing its CAMELLIA BULLETIN, inquiries were made regarding a plan under which other than members of S. C.-C. S. and affiliated societies could receive CAMELLIA REVIEW. The Directors approved a plan under which a society can subscribe for all its members, excepting those who are S. C. S. members and therefore receive the magazine, at \$3.00 per member per year. The Modesto and Pacific Camellia Societies have subscribed under this plan.

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THE CAMELLIA -- FLOWER OF THE GOLD RUSH ERA

A. E. Morrison
Sacramento, Calif.

The introduction of camellias to California seems to center around an interesting individual and the credit appears to belong to a Mr. James L. L. F. Warren.

The camellia, like so many other plant species, was introduced into Europe by traders operating throughout the known world, particularly in the seventeenth and eighteenth centuries. Even the hard-boiled sea captains of the early day sailing vessels took a keen interest in the transporting of exotic plants from foreign shores and some vessels were even equipped with facilities for taking care of the plants. It appears some varieties may have been named after sea captains as is indicated by *C. reticulata* 'Captain Rawes'.

The camellia, described by James Petiver, an English apothecary in his 'Gazophylacium' published in 1702, was among the plants brought in from the orient. Interest in this plant did not develop to any extent until after 1792 when a number of the double varieties became known. By 1820 it had become a garden favorite throughout Europe and also in the United States in the vicinity of Boston, New York and Philadelphia where a number of outstanding varieties were developed, some of which were sent to Europe where they became garden favorites. Several nurseries on the east coast featured camellias and listed a number of varieties in their catalogues. They were sold mainly as hot house plants. Among the nurseries we find listed Warren's Floral Saloon in Boston and Warren's Garden and Nurseries, Nonantum Vale, Brighton near Boston. His catalogue of 1845 lists eighty-seven named varieties with mention being made of a number of unnamed seedlings. Mr. James L. L. F. Warren, the proprietor, became interested in two seedlings,

'Mrs. Abby Wilder' and 'Wilderli', developed by Mr. Marshall P. Wilder, President of the Massachusetts Horticultural Society. These were purchased by Warren in 1847 for \$500 each. He disposed of his nursery about this time accepting a Government assignment to Europe where he introduced these two varieties which he had taken with him.

While in Europe he made use of his time to visit gardens, both public and private, and became familiar with the varieties of camellias planted as well as available in nurseries. He also took an active part in the distribution of food supplies furnished by the United States Government for the relief of the Irish famine which was caused by the potato blight disease.

The discovery of gold near Sacramento in January of 1848 focused attention of the world on California and we find the importance of this discovery had its effect on Warren. He came to California apparently not entirely in the role of a miner but as a business man. Numerous mining camps sprang up in the foothills east of Sacramento — Rough and Ready, Yankee Jim, Chinese Camp, Bedbug, Freezeout, Nigger Slide, Red Eye, Roaring Camp, Poker Flat, Dutch Flat, Volcano, Fiddletown, Morman Island and many more with interesting names. In 1849 Mr. Warren chose Morman Island as a site for a store carrying "Miners' hardware"—picks, shovels, cradles, knives, hammers, axes and nails. This activity was housed in a tent partially due to the high cost of lumber and other building material. In the fall of 1850 his activities were enlarged to include a building at 15 J Street in Sacramento with his line of merchandise increased to include seed, fruit and ornamental trees and vines.

Warren's interest in agriculture and

horticulture asserted itself and, considering his background, it was not surprising to find the following advertisement appearing in the Sacramento Union under date of February 7, 1852.

TO FARMERS AND GARDENERS:

3000 pounds of Fresh Garden Seeds, — — We have received by the Panama, the finest lots of fresh Garden Seeds to be found in the country. OUR SEEDS ARE WARRANTED FRESH. The assortment contains every kind of seed; many of them entirely new varieties, and to be found nowhere else in this country.

Also 3,000 paper FLOWER SEEDS, of new and beautiful kinds, HERB seeds of every valuable kind.

A splendid set of Dahlia Roots, Roses, **Camellias***, Grape Vines, Bulbous Roots, etc. will be ready for examination in our hall over the store, on Monday.

Warren & Co's New England Seed Store
J Street near Levee.

The Panama mentioned in this advertisement was a steamship operated by the Pacific Mail Company between San Francisco and Panama. Marine Intelligence, covering the arrival of this boat, lists it as arriving in San Francisco "from Panama via Acapulco and San Diego carrying 484 passengers and 40 females."

This advertisement by Warren & Co's New England Seed Store is the earliest known printed information concerning camellias available in California. Specific varieties are not mentioned; however, subsequent articles in Mr. Warren's California Farmer indicate that at least the following varieties were included in the first shipment: 'Alba Plena', 'Fimbriata', 'Mrs. Abby Wilder', 'Wilderii' and 'Lady Hume's Blush'.

The origin of the shipment has not been established but it may have originated from some of Mr. Warren's connections in the vicinity of Boston, or even indirect from Europe. The shipment most likely moved by boat down the East coast, was transported across the Isthmus of Panama and then loaded on the S. S. Panama for San Francisco and then by river boat to Sacramento.

Mr. Warren's faith in the West

*Bold face added.—Ed.

Coast as a camellia growing center has been substantiated. His prediction in 1853 that "This truly magnificent plant unsurpassed in loveliness will ere long become acclimated with us to form our pride as an ornamental tree in our gardens" has been fulfilled. A nursery catalog issued by his firm in 1853-54 carried the statement that "we are now constantly receiving collections from the best establishments in Europe and the States; and our collection will be unequalled. The proprietors have just received a new and superb collection of rare kinds, from the most celebrated growers in Europe. A separate sheet catalogue will be issued in the autumn of 1854, giving a description of their character, etc., with their prices, etc."

Mr. Warren's interest in agriculture led to the holding of annual displays of agricultural products in his show rooms in Sacramento as well as in San Francisco, where his activities were being transferred. These exhibitions led directly to the establishing of the California State Fair, the first one of which was held in San Francisco on October 6, 1854. It is not surprising, considering this man's background, to find camellias listed in the floricultural section of this Fair

(Continued on next page)

with the following varieties of plants being displayed: 'Double White', 'Fimbriata', 'Candidissima', 'Caleb Cope', 'Duchesse d'Orleans', 'Double Red' and 'Lady Hume'. The 'Lady Hume' is mentioned as being in flower.

Camellias were offered for sale in San Francisco as early as February 2, 1854. Two nurseries advertised camellias during the year with one nursery mentioning having seventy varieties.

Eastern nurseries were also interested in soliciting business on the west coast and during the period between August 1856 and 1858 three such nurseries inserted advertisements in Sacramento and San Francisco newspapers. Those advertising were: Linnaean Botanical Garden and Nursery, Flushing, New York; Hovey and Co., No. 7 Merchants Row, Boston, Massachusetts and Parsons and Company, Flushing, New York.

The plantings of camellias on the west coast during the nineteenth century were limited mainly to specimen plantings with very few individual collections being made. The Smith Gardens at Sacramento in 1858, however, contained over forty varieties and a few plantings in the San Francisco area may have equalled or exceeded that number.

Unfortunately planting records are not available for the many old specimens growing in the Sacramento area, however it is possible that some may date back to the early days of Warren and his introductions. The largest specimen in California, and possibly in the United States, is growing at Hood, fifteen miles below the city of Sacramento on the Sacramento River. It has reached a height in excess of thirty feet and is known to be at least ninety-five years old.

It is indeed unfortunate that in the rapid spread of interest in a plant like the camellia authentic records of early plantings become lost making

it extremely difficult, in too many instances, to determine exactly the age of an old specimen. The Sacramento Historic Landmarks Commission of the City of Sacramento has placed two of its markers on the site of Warren's New England Seed Store, 115 (15) J Street, Sacramento, one to designate the site of the introduction of the camellia to California and the other as the first general state wide agricultural fair to be held in California.

There are many old specimens of camellias still growing in the gardens of old homes and public parks in the City of Sacramento that form a living link with "The days of old; The days of Gold; The days of '49".

Temple City Breakfast

The Temple City Camellia Society will hold its traditional annual breakfast on Sunday morning, October 24, 1965, at the home of Leslie and Elsie Marshall, 6742 North Sultana Avenue, San Gabriel. Breakfast will be served between 8:30 and 11:00 A.M.

A savory menu of fried eggs, bacon, potatoes, hot biscuits, orange juice and coffee will be served by Society members.

This breakfast will be one of the kickoff events of the 1965-1966 season for California Camellia Society members and their friends. It affords an excellent opportunity to meet old friends, make new ones, and to discuss the progress of our plants since the end of the preceding season.

An added attraction to the breakfast is the opportunity to tour Marshall's Camellia Nursery, one of the oldest established nurseries in the Southland.

The Temple City Society extends a cordial invitation to all camellia enthusiasts to breakfast with them. The success of the breakfasts is measured by the attendance and participation of our many camellia friends.

EARLY CAMELLIA SHOW AT L. A. COUNTY ARBORETUM, DECEMBER 4 and 5, 1965

As announced in the May 1965 issue of CAMELLIA REVIEW, the first early camellia show in Southern California will be held on the week-end of December 4 and 5 in the lecture hall of the Los Angeles County Arboretum, the location of the camellia shows that have been sponsored by the Temple City Camellia Society. The December show will be sponsored by the Los Angeles Camellia Council who are the sponsors of the annual camellia show in Descanso Gardens on the last week-end of February.

While the primary purpose of this show will be the display of flowers whose blooming time has been advanced by the use of gibberellic acid, there will also be a division for non-treated blooms of *C. japonica* varieties that normally bloom in December. There will be additional divisions for sasanquas and for miscellaneous entries such as seedlings (non treated) and hybrids. While the number of entries of seedlings and hybrids in such an early show is uncertain, they will be received for display if entered. This will be the first show for sasanquas in the area. While there are problems in transporting sasanqua blooms, the Show Committee believes that with proper care in handling, by picking enough blooms to allow for losses, and by picking a little ahead of complete maturity of the blooms, a good display can be made.

There will be no Sweepstakes Award for winner of most blue ribbons. There will be suitable Awards, comparable with the standards of special awards in Southern California camellia shows, for the following Divisions and Classes for Best Flower and Best Flower Runner-up. There will also be special Awards for blooms that are selected for the Court of Honor.

- Division I. *C. japonica* treated
 - Class 1. One bloom
 - Class 2. Three blooms of a variety
- Division II. *C. japonica* not treated
 - Class 1. One bloom
 - Class 2. Three blooms of a variety
- Division III. *C. sasanqua* not treated
 - Class 1. One bloom
 - Class 2. Three blooms of a variety
- Division IV. Seedlings not treated
- Division V. Hybrids
 - Class 1. One bloom treated
 - Class 2. One bloom not treated
- Division VI. Species not included in above Divisions

Division VII will be a display of grafted camellia plants with two Classes as follows: Class 1, one-year grafted plants (grafted in the 1964-65 season); Class 2, two-year grafted plants (grafted in the 1963-64 season). Awards will be given to the winner only of each Class in this Division.

There will be no limit to the number of varieties that may be entered in any of the Divisions. Two blooms of a variety may be entered in the single bloom classes. One entry only of a variety will be accepted in the multi-bloom classes.

The Show Committee includes the following:

Chairman—Harold E. Dryden
Asst. Chairman—Al H. Dekker
Staging—Arthur E. Krumm
Placement—Thomas E. Hughes
Chairman of Judges—
A. Wilkins Garner
Clerks—Raymond R. Noyes
Results—Basil Neptune
Information—Frank F. Reed
Publicity—Mark Anthony
Registration—Ernest Pieri
(Continued on page 31)

A TRIP TO NEW ZEALAND AND A VISIT WITH CAMELLIA PEOPLE

W. F. Goertz
San Marino, California

Editor's Note: Bill and Ruth Goertz visited New Zealand and Australia in April and May of this year and saw much of camellia people in both countries. I asked Bill before he left home to write of his trip for CAMELLIA REVIEW readers and he has elected to do so in the form of letters to me. His account of his New Zealand visit follows. His letter covering the visit to Australia will appear in the November issue.

If large scale international relations could be handled on the basis of the relationship of camellia hobbyists between countries, our problems would be solved! Ruth and I have just returned from a wonderful nine weeks' trip throughout the South Pacific and Orient where we had many interesting experiences, but the countries to which we really intend to return are New Zealand and Australia, where we found hospitality beyond anything we could have expected.

By present day jet travel, New Zealand and Australia are not very many hours away and we wholeheartedly recommend going by way of Tahiti and Fiji. Since we visited the camellia country in the "off" season (corresponding to our October) we saw a few early sasanquas in bloom but mostly we saw some beautiful gardens and met what must be some of the most hospitable people in the world.

A word of caution before you go there: Don't refer to the place where camellias grow as "front or back yard". Down there this is an insult since these are "gardens". And be prepared to know all possible about *all* kinds of plants and trees, including botanical names, because these people are generally very knowledgeable about all plants. Most of the camellia hobbyists have many things growing



Tom Durrant, Hubert Hammond, Bettie Durrant, Enid Hammond and Ruth Goertz in the Durrant garden at Tirau, New Zealand

besides camellias — different than the way most of us follow our “hobby”.

In Auckland, Jack Clark, the “retired” nurseryman (known by many Californians) and his wife, Jean, picked us up within thirty minutes of arrival for a tour of Auckland gardens and particularly Eden Garden. I put quotes around retired because Jack is probably working harder than ever and having more fun. He runs a sort of test garden at his home in the manner of Bill Woodroof, but spends most of his time developing Eden Garden, a portion of a large estate given to the Government by Sir Frank Mappin (whom we visited also). Eden Garden is being graded, soil filled in, and planted with a wide collection of hibiscus, magnolias, rhododendrons, camellias, cherries, conifers and native trees. Trees or shrubs may be endowed, usually in memory of a friend — high governmental officials have planted trees here and Jack honored me by having me, as a representative of the Southern California Camellia Society, plant a ‘Guest of Honor’. This is a very worthwhile project and I would like to see it about ten years hence.

We were fortunate to meet Bill Atwell, a keen camellia hobbyist, and Mrs. Roy McLiskey who has a hillside garden with hundreds of camellia plants. We spent several very pleasant hours with the John Murtaghs — friends of Dave Feathers, who have many camellias but whose main interest is trees.

It was fun to motor to Hamilton — beautiful green countryside along the banks of the Waikato River — where Mr. and Mrs. Hubert Hammond had twenty-five camellia people to visit with us at their home. I felt very inadequate because these New Zealand folks have such a broad knowledge of all kinds of plants, while my knowledge concerns mostly the practical aspect of growing and showing camellias only. Mr. Hammond is President

of the New Zealand Camellia Society and here again, although he has lots of camellias, he is nationally known for his work in daffodils and gerberas. These people were interested in hearing about our results with Gibberellic Acid but very definitely don't recommend its use in New Zealand. Several camellia hobbyists have done a little experimenting and I believe that when more details of the results are known, it will become more popular. They were mostly interested in learning of our new popular varieties, some details regarding our camellia culture, and the nature of our shows and society meetings.

From Hamilton we went to Tirau and visited the Tom Durrants and their unique garden which is beautifully laid out with the use of huge rocks and many kinds of plants along pathways so that all the plants are near the path — and easily accessible. Colonel and Mrs. Durrant came to Tirau from England after the war in 1947 and now enjoy life on this beautiful 300-acre farm. You haven't seen a beautiful green countryside until you have seen this New Zealand North Island, with its lush green grass, rolling hills, beautiful trees with cattle and sheep lazily enjoying it all! Durrants live right in the lake country; we visited six beautiful lakes — where the world renowned trout are caught — anything less than 12" long must be thrown back. Tom is Editor of the New Zealand Camellia Bulletin and he and his wife Bettie are spending a great deal of time on the research of New Zealand camellias, the early plantings and their history. They found one which had been planted in 1834. We saw some very large camellia trees in the Rotorua Park district, measuring 25 feet high and 25 feet across, and heard of another tree at Gordonton measuring 33 feet across and 40 feet high. Tom is the founder, (at the sug-

(Continued on next page)

gestion, originally, of the late Ralph Peer) and first president of the New Zealand Camellia Society, and has some very interesting seedlings coming along as a result of some hybridizing they have been doing. The Durants have done much to help popularize camellias in their country also by giving away plants and seeds to individuals as well as to numerous horticultural societies.

Although the *reticulata* plants appear very lush with abundant foliage, there is a great deal of virus showing up in the leaves which spoils their beauty. This seems to be a typical New Zealand situation.

New Zealand people certainly grow camellias a lot more easily than we do in our country. In this area they get an annual rainfall of 60" — spread over twelve months — as much as 120" in some more mountainous areas nearby. Very little peat is used; camellias are planted directly into native soil — very little fertilizing is done, according to our standards. No pruning or disbudding is done, and the old camellia blooms are allowed to drop and accumulate and act as a "mulch". Imagine what a mess of petal blight we would have in Southern California with such a program! They spray for scale once or twice a year and the only other pests (according to Tom) are little birds which often spoil a potential blue ribbon bloom while going after the honey.

From Tirau and Hamilton, we "motorcoached" to New Plymouth, through the Awakino and Mōkan gorges, then along the West Coast — to Mount Egmont, which is a symmetrical cone very similar to Mt. Fuji in Japan. Ben and Wynne Rayner live about thirty miles from New Plymouth — in Stratford — also on a large farm in beautiful country at the foot of the mountain. Due to clouds, this peak is rarely visible — but the typical Goertz luck persisted

and we saw it "loud and clear" the first morning.

The Rayners took us to visit three very interesting gardens in New Plymouth. The Les Jurys have acres of beautiful plantings surrounding a small lake, with their home overlooking it all from a hill. Mr. Jury's reputation in the camellia world as pertains to his many hybrids is well known to most hobbyists. He explained why so many branches of his camellia plants are pulled below horizontal and tied down. Apparently this causes flower buds to form sooner than normally, an especially interesting procedure for new seedlings. Mr. Jury is a perfectionist and will release new hybrids only after they have been proved over a period of years. Of the Jury Hybrids, 'Elegant Beauty' and 'Elsie Jury' seem to be most popular in New Zealand so far, and much is expected of 'Grand Jury' which is to be on the market soon.

We were fortunate to meet Jack and Helen Fairbrother who have a most interesting garden on the side of a steep hill, extending from their home on top down to a beautiful river. They had a few very large early sasanquas in bloom. Mr. Russell Mathews has a very large estate, beautifully planted with all species of plants and trees — and the hundreds of rhododendrons must afford a tremendous sight during blooming season. Here again — the home on a hill, overlooking the gardens on all sides, with the river at the bottom and the inevitable New Zealand sheep keeping the grass mowed short!

The Rayners' garden is new and like in other New Zealand and Australian gardens, many camellias are planted in full sun. Since this farm is at 1200-foot elevation, they get a great deal of rain and the temperature is lower so that their blooming season is about four weeks behind other nearby areas. Being a new garden, most of the plants are small, with many

seedlings coming (one of which Ben is quite excited about). A more enthusiastic camelliaite you won't find anywhere!

The Rayners took us to Hawera where we had a nice visit with Dick and Jean Clere, and saw their nice gardens planned around a swimming pool. Here's another typical pretty New Zealand garden with many plants and flowers to blend in with their camellias. The dahlias were gorgeous. The Rayners, Cleres and Goertzes then proceeded to drive to Wanganui to visit Mr. and Mrs. Roland Young and Keith Brushfield. Roland and Keith have been to our California shows and are known by many here. They are still very enthusiastic about grafting all the new varieties — although the Youngs have their garden pretty well filled up — almost as crowded as the Goertz' place. I couldn't resist taking a picture of an immense tree of 'Capt. Rawes' in the Young garden. Also, I'm waiting with much anticipation to learn more of a seedling Keith Brushfield has with possibility of some yellow!

After lunch Roland and Keith drove us to Wellington and to the home of Mr. and Mrs. Eric Clere. They live across the bay from Wellington and their garden runs right up the side of the hill behind their home. You have to be in good physical condition to navigate all these hillside gardens. (Al Dekker has had plenty

of experience and would have no trouble!) The Cleres have a great "View Point" from the camellia garden, overlooking the harbor. Wellington is a beautiful harbor city — reminds one somewhat of Rio de Janeiro; a combination of green mountains and blue waters, everywhere! Eric Clere is Chairman of the Wellington Branch of the Camellia Society. We also were pleased to meet Mr. and Mrs. Shayle-George (Secretary of the local group) and their lovely garden which they keep expanding over the five acres. (Sure would be fun to have one percent of the available garden space some of these people have!) This Branch has sixty members and is growing each year.

Now to the South Island and to Christchurch. Tom Durrant had telephoned the Tony Armstrongs (he is Chairman of the Christchurch group) so they were waiting for us, and showed us the city — and the fine botanical garden with huge sasanqua and japonica plants — all of which was beautiful — even in the rain (the first and only we encountered in New Zealand). We also met Mr. and Mrs. Ivan Wood who have a large garden of camellias, azaleas and rhododendrons. She is well known in international rhododendron activities. Here again, these people have grand gardens — and they are just as enthusi-

(Continued on page 32)

MARSHALL'S CAMELLIA NURSERY

(AT THE SIGN OF THE CAMELLIA)

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PROJECT TO STUDY EFFECT OF GIBBERELIC ACID ON CAMELLIA PLANTS

While experience is accumulating on the effect of the application of gibberellic acid to camellia plants, there have been few efforts to study the subject and maintain data on a collective basis with an objective approach. It is generally recognized and accepted that gib applied to growth buds associated with flower buds advances the time of blooming and in most cases increases flower size, although there are indications that some varieties do not respond as favorably as do others and that gib applied late in the season has only moderate effect, if any, on the size of the flower. There is not agreement, however, and on some points there is insufficient or lack of knowledge, with regard to other consequences of the use of gib. The Southern California Camellia Society has instituted a project that will continue for at least two years with the object of obtaining answers to at least some of these questions.

The immediate primary objectives of the project are as follows:

1. To determine whether and to what extent the application of gibberellic acid to growth buds associated with flower buds has any effect on flower buds on the same branch that are not treated, including laterals of that branch,

and on flower buds on branches not treated.

2. To determine whether and to what extent a "gibbed" bloom remains in good condition on the plant for longer or shorter time than is the case for blooms not gibbed.
3. To determine what effect, if any, the application of gibberellic acid has on the following year's growth on branches treated.

The Society recognizes in undertaking this project that many people who have been using gibberellic acid may have answered these questions for themselves and to their own satisfaction. It is believed, however, that there is sufficient uncertainty and doubt on the subject in the camellia growing field to warrant the project. Other questions than those listed above may arise and answers sought as the project progresses.

The project will be under the direction of a Committee consisting of Harold Dryden, Douglas Thompson and Ernie Pieri, working with the advice of Mr. Chandler North of the University of California Staff, Seven plants of nine different varieties of *C. japonica* will be assigned to nine members of S. C. C. S. for propagation and treatment, all of the nine

(Continued on page 27)

JUST RELEASED

BELLE OF THE BALL • BLAZE OF GLORY • DOVE OF PEACE
KIMI YAMAMOTO • COTTONTAIL (Miniature)
LITTLE RED RIDINGHOOD (Miniature) • SNOW BABY (Miniature)
BLACK KNIGHT (Hybrid) • LITTLE LAVENDAR (Hybrid Miniature)

McCASKILL GARDENS

25 SOUTH MICHILLINDA AVENUE

PASADENA, CALIFORNIA

QUESTIONS and ANSWERS

A. Wilkins Garner

Q. Should camellias be fertilized at this time?

A. Assuming regular program of fertilization has been followed this season to the present; only a very light fertilizing should be followed, the low Nitrogen liquid type (2-10-10), or the dry organic such as cotton seed meal. Only flower bud development is desired at this time. The amount of fertilizer can vary slightly depending on previous program but keep it on the light side.

Q. Is it good to prune in October?

A. If an adequate job of pruning was done after last blooming season; examine plants thoroughly now and remove all dead wood, weak branches and inside crossing limbs. Major pruning at this time might induce new growth and greatly effect blooms as well as make plants more easily effected by frost.

Q. What spraying is advisable at this season?

A. It is well to spray for the crawlers which eat the holes in camellia leaves. A partially destroyed leaf greatly detracts from a camellia blossom on display. The use of Malathion and Lindane in combination will give adequate control and by adding light oil, control of scale will be obtained. There are brands on the market which combine all these materials or they can be added individually, always following instruction on the labels.

Q. Is it too late in October and November to disbud?

A. No. If you haven't disbudded at all, do it now. If you have disbudded, there are two reasons for keeping at it. First, you will probably find that you did not take off enough buds the first time. Sometimes it is good to set the stage in an initial disbudding for the final disbudding step. Second, some varieties keep setting buds and this requires attention into the blooming season.

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HARVEY F. SHORT

First release -- 'Owen Henry' and 'Gay Chieftain'

SASANQUAS -- SOME QUESTIONS AND THEIR ANSWERS BY JULIUS NUCCIO

- Q. Mr. Nuccio, they tell me that sasanqua camellias are a wonderful addition to the garden. I have some camellias now but won't you please explain the essential differences between sasanquas and japonicas?**
- A.** Sasanquas have no limit as to how they can be used—specimen, espalier, trained on fences and ground covers. Also no limitations as to exposure, shade, semi-shade or full sun. Their ever increasing popularity is due to their early blooming period (Oct., Nov., Dec.) when the average garden is so very much in need of color.
- Q. What is the greatest argument for sasanquas in your opinion?**
- A.** Profusion and early bloom and versatility as to growth habit and exposure.
- Q. How shall I begin my sasanqua collection? What varieties would you recommend for such an amateur as I? I am, of course, anxious to see results so what varieties are fast growers?**
- A.** First of all you should, in your own mind, classify sasanquas and flowering shrubs for home landscape value. For fast and open growth I would recommend 'Yae Arare', 'Narumigata', 'Hugh Evans', 'Shishi-Fukujin', 'Hana-Jiman', 'Nodami-Ushirt', and 'Hinode-Gumo'.
For compact, upright growth: — 'Cleopatra', 'Dawn', 'Hiryu', 'Jean May', 'Setsugekka', 'Yuletide', 'Interlude', 'Dazzler', and 'Miss Ed'.
For bushy, spreading growth: — 'Showa-No-Sakae', 'Shishi-Gashira', 'Pink Snow', 'Tanya', and 'White Frills'.
- Q. Shall I graft, plant seed or buy plants? And what is the best time of year to start?**
- A.** Grafting or seed culture would be the same as for the japonica. With seedlings one would have the same guessing game. However, sasanqua seedlings, regardless of how choice they may or may not be, are always good landscape material. Buying plants, of course, would be the best method of being certain to get proven varieties. They can be planted any time but blooming time, now, is the time to choose them.
- Q. How will the culture of my sasanquas vary from the way I grow my japonicas now: type of soil, watering, fertilizing, etc?**
- A.** It has often been said the sasanqua tolerates a poorer drainage condition and less care than the japonica, but we have always given the same soil, water and fertilizer condition as applied to the japonicas and see no reason to purposely abuse them.
- Q. Why don't more camellia people grow sasanquas?**
- A.** Most camellia hobbyists grow camellias for the cut blossoms, in camellia shows, in the house or on the plants. Let's face it, sasanquas generally do not cut well — for shows or the house. Likewise, they don't hang on the plants. There are some exceptions such as 'Yule Tide', 'Interlude', 'Miss Ed', and 'Shishi-Gashira', but the list is not long. In my opinion, camellia people let this fault outweigh the great landscape value of the sasanqua.
-
- New 1966 CAMELLIA NOMENCLATURE**
will be sent early in December 1965 to
members who have paid their 1966 dues.

THE PHONE CALL

Ben Rayner

Stratford, New Zealand

Yesterday morning the phone rang and I was called to answer it. My friend Richard Clive was on the other end with a query as to whether we would like to go to Wanganui for the day. He had received a letter from Roland Young inviting us down to see Keith Brushfield's yellow seedling, with the added attraction of a garden tour with local members of the Camellia Society. Naturally we jumped at the chance as a visit to Wanganui and Roland Young's is always a treat.

We arrived in Wanganui in time for lunch and after looking after the inner man, had a drive around some of Wanganui's very attractive homes and gardens before moving on to Roland's and the start of the garden tour. As we were a little early it was suggested that we have a preview of the Young's garden — and boy, what a preview. First and foremost was the yellow seedling. A very attractive anemone form bloom, it is four inches across by two inches high. The flat outer guard petals, eleven in number and ivory white in colour, surround the anemone centre of butter yellow. These petaloids have a definite yellow colouring and the bloom is very attractive indeed. I was extremely fortunate to receive two of these blooms, so over the next few days will be very busy pollinating everything that is capable of setting seed — that is, until the pollen runs out.

Next door to this lovely seedling was a plant of 'Betty Sheffield Supreme' with the most gorgeous bloom that I have ever seen of this variety. Other lovely blooms seen in this garden were 'Shiro Chan', 'Sunset Glory', 'Mrs. Freeman Weiss' and 'Giulio Nuccio'. One we liked very much was

a hybrid 'Senorita'. This plant was smothered with lovely pink blooms.

We traveled along to the Baddeley's garden where we met other local members, met old friends and made new ones. In this garden we saw several large lovely plants, particularly nice ones being 'Lady Clare' and 'Hana-Fuki'. We then passed through a very convenient gate in the wall into Miss Taylor's garden, where once again we saw both lovely plants and blooms with the outstanding one being 'Lady Loch'. Then back to Roland Young's for another look and afternoon tea before leaving for home. As I write this I have the yellow seedling bloom beside me and every so often stop writing to look and admire. Congratulations, Keith, on a definite colour break and a lovely camellia.

PROJECT *(Continued)*

individually having the seven plants of a variety. Specific plans and procedures will be spelled out in detail with regard to the gibberellic acid mix to be used, how and when it will be applied, how buds will be identified on the plants, what records will be kept and how they will be maintained, and such other items of instruction that will assure uniformity, accuracy and objectivity in the study. The data will be analyzed at the conclusion of the project and a report prepared and published.

In addition to the members of the Committee, the following are participating in the project: Robert Briggs, Fred Byers, Peter Folino, Wilber Foss, Ed Franklin, Walter Harmsen, Thomas Hughes, Raymond Noyes and Dr. Herbert Shirley.

"HOT NUMBERS"

Pat Novak

This month's hot numbers are 1965-66 introductions of Southern California nurserymen. This group of new varieties is always sizeable, but this year it is larger than usual. They are listed alphabetically by name of variety, and because of the number will be concluded in the November issue of CAMELLIA REVIEW.

BELL OF THE BALL

This seedling of 'Casilda' will be introduced in 1965 by McCaskill Gardens. The male parent is unknown. It first bloomed in 1960. The blooms are 4½ to 5" in diameter and 2½" in depth, a midseason bloomer. The color is a rosy salmon. Form is semi-double. The plant has large dark green leaves, is a vigorous grower, compact and upright.

BERENICE BEAUTY

A japonica seedling of 'Berenice Boddy' that will be introduced this year by Nuccio Nursery. The male parent is unknown. It first bloomed in 1959. The plant growth habits are upright and spreading with a medium rate of growth. The leaf size is average with a dark green color. The flower form is semi-double to loose peony form. The bloom is 4½ to 5" in diameter and 2½" in depth, with 20 to 30 petaloids. The color is light pink to deeper pink tone on the edge of the flower. Blooming season is from November through February.

BERENICE PERFECTION

A japonica seedling of 'Berenice Boddy' that will be introduced in 1965 by Nuccio's Nursery. The male parent is unknown. It first bloomed in 1961.

The plant growth habit is upright, average and dense. It is a medium grower. The flower is a formal double like 'Alba Plena', the leaf is average in size and dark green in color. The bloom is 3½ to 4" in diameter with 15 or more petals, is a pale pink in color with deeper pink on the edges like its parent. The blooming season is January through April.

BLACK KNIGHT (Hybrid)

This hybrid will be introduced in 1965 by McCaskill Gardens. It first bloomed in 1964. Parents are 'Phillipa Forwood' and 'Kuro-Tsubaki'. The flower color is black-red with 4" diameter and 2" depth. The plant is vigorous, compact and an upright grower. 'Black Knight' blooms in a rose form and is midseason to late.

BLAZE OF GLORY

This seedling of 'Lindsay Neill' will be introduced this year by McCaskill Gardens. The flower is anemone in form and a brilliant red in color, 5 to 5½" in diameter and 2½" high. The flower blooms early to midseason. The leaves are large dark green. The plant is a medium, compact upright grower. It first bloomed in 1956.

COTTON TAIL (Miniature)

This miniature japonica will be released in 1965 by McCaskill Gardens. This is a chance seedling that first bloomed in 1962. The bloom is 2 to 2½" in diameter and 2" in depth. The plant growth is upright, medium, average. The flower is peony form somewhat like 'Debutante', and is white.

DOVE OF PEACE

A japonica seedling of 'Purity' x 'Pax' that will be introduced in 1965 by McCaskill Gardens. This seedling first bloomed in 1949. The size of the flower is 4" in diameter with 2" in depth. The flower is white, formal double and blooms midseason to late. The plant is vigorous and an upright grower. All of the best characteristics of both parents show up in this variety, the vigor of 'Purity' and the form of 'Pax'.

GAY CHIEFTAIN

A large semi-peony to full peony high built flower 5½ inches in diameter. Petals are offwhite to flesh pink with heavy striping of oxblood red and a center sunburst of strong gold stamens gives this flower startling and vivid coloring. Medium to late bloom on a vigorous medium bushy plant. A good keeper and definitely a show flower. Many sports are likely to occur, from light pink to clear deep red. A Harvey Short introduction, will be sold and propagated by Nuccio's Nursery.

KIMI YAMAMOTO

Introduced by McCaskill Gardens in 1965, a seedling of 'Magnoliaeflora' that first bloomed in 1955. The male parent is unknown. The flower is a very pale pink, 4" in diameter and 2" in depth. The flower is a semi-double that blooms in midseason. The plant is bushier and has larger leaves than 'Magnoliaeflora', is medium, compact and an upright grower.

LITTLE LAVENDER (Hybrid)

This hybrid will be released in 1965 by McCaskill Gardens. The female parent is 'Phillipa Forwood' the other parent unknown. The flower is a lavender pink and will bloom 2" to 2½" in diameter and 2" high. The form is anemone. It blooms in mid-season. The plant is vigorous, compact and an upright grower.

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THE WHY AND HOW OF SPORTS*

as reported by Vern McCaskill

According to the dictionary a sport, mutant (used either as an adjective or noun) or mutation are synonymous, all meaning the variation of an offspring from its parent.

If you are an old time camellia grower and know all about sports, then this article is not for you. If, however, you are a fairly new amateur in the camellia world and once in a while see a totally unexpected bloom that looks as out of place as a single cloud on a sunny day, then read on and learn how to tell a sport and what to do if you find a promising-looking one.

Are sports really important, you may ask. They certainly are. Some of our loveliest cultivars are sports, and some are more beautiful and embody finer characteristics than their mother plants. 'Lookaway' is one such as it is of finer texture and superior substance than 'Herme'.

Sports appear of course during the blooming season and are to be found normally on the weaker branches coming from a main trunk of the bush. Sometimes they are quite well hidden by thick foliage so it may pay you to look up underneath the leaves near main stems if you are checking for a sport. Again, a sport may bloom on the end of any branch. For example, 'Jack McCaskill' was discovered on a weak twig low on the trunk of a 'TeDeum' while 'Spring Sonnet' appeared on the top of a branch of 'Colonial Lady'.

How to Distinguish

True sports are readily detected through their variation in color or form from other flowers on the same plant. It is important that you distinguish between what is a real sport

or what might be simply a variation of the established plant. The sport must be definitely different in color or have a real change of form. For example, 'Conrad Hilton' is a fine new white cultivar sported from the pink 'High Hat', while the peony form 'Lady Kay' appeared on a bush of the semi-double 'Ville de Nantes'. White camellias rarely throw a color. Thus 'Alba Plena' sports 'Fimbriata', 'Henningham Smith' and 'Hooper Connell', all white. Its only sport with any tinge of color is the 'Blush Plena'.

In looking for sports or in deciding to propagate them, remember that as in all breeding, better sports are born of better plants. Thus we find the fine 'Pink Herme', 'Beauty of Holland', 'Quaintance', 'Spring Sonnet', 'Colonial Lady', 'Lookaway', and 'Mikado' all springing from the tried and true 'Herme'. Another well established group of cultivars are sports of 'Finlandia', namely 'Finlandia, var.', 'King Lear', 'Monte Carlo', and 'Blush Finlandia'.

And Now What To Do?

When you are absolutely satisfied that your "odd" bloom is a sport and worth working with, cut it off the plant and graft the scion. Be sure to leave enough wood on the main stem so that you can check the following season and see if there will be another bloom there. Mark the place with a label or string. Your graft will not bloom for at least two years but by checking its birthplace you may find out by another year whether the sport you have grafted is a good one.

It is not uncommon for one plant to throw several good sports. For example, the wonderful 'Daikagura' is the mother of 'Daikagura, var.' and 'High Hat', the latter being in turn

*Reprinted from February 1958 issue of CAMELLIA REVIEW.

responsible for the white 'Conrad Hilton' as noted above. A newer noteworthy group of distinct sports is reported from the seedling 'Betty Sheffield' which are named 'Betty Sheffield Pink', 'Betty Sheffield Blush', which is light pink with a few deep pink markings, 'Betty Sheffield, var.', which is deep pink with white blotches and the 'Betty Sheffield Supreme', which is a white bloom with pink edge.

One of the most universally noted sporting plants is the ancient Chinese camellia called 'Eighteen Scholars', which has bloomed on the Island of Formosa for some hundreds of years. It is reputed to floresce eighteen different colored flowers at the same time.

A nearer to home example is the large old plant of 'Lady Edinger' at the Huntington Gardens in San Marino, California. On this bush as many as five different types of camellias may be seen blooming simultaneously. While the 'Lady Edinger' is a white striped pink bloom, white, pink, red and variegated flowers charm the viewer. The Lady is a mid-season bloomer so if you are in the vicinity at this time, go and look for her interesting bush. It is located about 100 feet from the top of the steps on the east side of the Central Path over the Japanese Garden.

Probably many who read this can note other plants with like propensity for throwing sports. Many varieties of camellias, *japonicas* in particular with their characteristic flair for doing the unexpected, will seem to delight in adding strange notes to sedate bushes. So don't let your sports go unnoticed, for they are truly as the dictionary says, "a diversion".

OUTSTANDING CAMELLIAS

(Continued)

asville, Georgia, is a beautiful shade of blush pink which holds its color, and will be much sought after this

Fall by camellia growers everywhere.

Other new varieties which show real promise are 'Allie Blue', 'Tom Cat', 'Julia Hamiter', 'Helen Bower'. 'Cover Girl' has done well in Georgia, as well as 'Twilight'. 'Howard Asper', among the hybrids, should really steal the Shows this coming Fall. One other variety which is unusual in form with many long thin petals is 'Mark Alan Variegated' and is one of the most unusual recent introductions.

Camellia Farms is located on U. S. Highway #82 (Dawson Road), Albany, Georgia, where thousands of camellia lovers come annually. Last year, visitors from 3 Foreign Countries, 40-odd States, and 100 different Cities, visited Camellia Farms. We are told by those who travel far and wide that we have the largest collection of rare specimen plants grown anywhere in the world, with 18,000 square feet in greenhouses. Visitors are always welcome at Camellia Farms!

EARLY SHOW *(Continued)*

Receiving—Alvin L. Gunn

Court of Honor—

I. John Movich

Trophies—Karl M. Anderson

Gib Advisory Committee—

W. F. Goertz

Caryll W. Pitkin

Frank F. Reed

The purpose of the Gib Advisory Committee is to advise and assist those who request it in the time and method of application of the gibberellic acid. Frank Reed's article "Gibbing for the December Show" in the May 1965 issue of CAMELLIA REVIEW contains guides for time of gibbing to have flowers at the time of the show. Mr. Reed recognized while writing this article that data are both incomplete and inconclusive with regard to

(Continued on next page)

the time lag between date of gibbing and the full opening of the bloom. His chart is based largely on his own data, although others have provided some of it. There are two good rules to follow. First, call one of the three men on the Committee for advice. All of them have had considerable experience in gibbing. Second, spread the gibbing over several weeks and do not attempt to rely on hitting the bull's eye with one shot.

TRIP TO NEW ZEALAND (Continued)

astic about other plants as about camellias. The Christchurch group is new, having 72 members; but in 1966 the National Show will be held there which should boom this hobby. Since the camellia hobbyists' gardens there are young, most of the show blooms will be brought and shipped down there from North Island. I noticed the nursery catalog showed one-gallon

plants of newer varieties listed at \$6 to \$10 — older varieties \$2 to \$6. "New 1964 varieties" included 'Cara Mia', 'Sweetheart', 'Edelweiss' and 'Irene Rester'.

After Christchurch, we toured some of the scenic spots in the South Island such as Mt. Cook, Queenstown, Lake Te Anau and Milford Sound. Just writing about it makes my mouth water — if you see our slides you will know what I mean! If I set down details of every pleasant experience we had in New Zealand, it would take you a week to read.

Anyone who plans to go to New Zealand has a wonderful treat in store — especially if he is fortunate enough to meet the people we met. It's an experience Ruth and I will never forget.

(I'll write you later about Australia.)

Bill Goertz

June 21, 1965



AN INVITATION TO JOIN *American Camellia Society*

Annual Membership \$6.00

The American Camellia Society is a worldwide scientific, horticultural and hobby organization of more than 7,500 members in 40 states and 15 foreign countries. The Society was founded as a non-profit organization in October, 1945.

Among other benefits, membership entitles you to five issues of THE CAMELLIA JOURNAL issued in January, March, July, September and November. Each issue of 32 to 40 pages of interesting articles, news and photographs, has a four-color reproduction of a new variety on the cover.

Each December, members receive a handsome cloth bound Yearbook of some 350 pages, containing the latest information on both greenhouse and outdoor culture, breeding, disease control, history, arrangements, and descriptions of gardens. There are several full color plates of new varieties in addition to numerous photographs illustrating the articles. A roster of members is published in each Yearbook. All new varieties registered with the Society are described.

The American Camellia Society will welcome you to its program of mutual pleasure and interest.

AMERICAN CAMELLIA SOCIETY
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Directory of Affiliated Societies

- Camellia Society of Kern County.....Bakersfield
 President: Walter Stiern.
 Secretary: Melvin G. Canfield, 2709 Scott Dr., Bakersfield.
 Meetings held 2nd Monday of the month, October through April, in Police Building, 1620 Truxton Ave., Bakersfield.
- Camellia Society of Orange County.....Santa Ana
 President: Paul M. McClelland.
 Secretary: Mrs. George T. Butler, 1121 Orange, Santa Ana.
 Meetings held first Thursday of month, October through April, in Orange County Farm Bureau Building, 1916 W. Chapman, Orange.
- Central California Camellia Society.....Fresno
 President: Kenneth E. Thompson.
 Secretary: Mrs. Glenn S. Wise, 5493 E. Liberty, Fresno.
 Meetings held at Heaton School, Del Mar Ave., Fresno on Nov. 17, Dec. 15, Jan. 26, Feb. 23, Mar. 23.
- Huntington Camellia Garden.....San Marino
 Henry E. Huntington Library and Art Gallery, Oxford Road, San Marino.
- Pomona Valley Camellia Society.....Pomona
 President: I. John Movich, 932 N. Park Ave., Pomona.
 Secretary: Nelson R. Gatov, 552 N. Park Ave., Pomona, 91767.
 Meetings held 2nd Thursday of each month, November through April, in the Pomona First Federal Savings & Loan Assn. Bldg., Garey Ave. & Center St. Pomona (1 block South of Holt).
- San Diego Camellia Society.....San Diego
 President: Ray Greer.
 Secretary: Lewis Greenleaf, 4389 Copeland Ave., San Diego 5, Calif.
 Meetings held in Floral Association Building, Balboa Park, San Diego, Nov. 12, Dec. 10, Jan. 14, Feb. 4, Mar. 11, April 8, May 13 (dinner).
- Southern California Camellia Society.....San Marino
 President: Alvin L. Gunn.
 Secretary: Harold E. Dryden, 820 Winston Ave., San Marino.
 Meetings held Second Tuesday of every month, November to April, inclusive at the San Marino Women's Club House, 1800 Huntington Drive, San Marino.
- Temple City Camellia Society.....Temple City
 President: Basil J. Neptune.
 Secretary: Mrs. Violet Shuey, 5813 N. Golden West Ave., Temple City.
 Meetings held on 3rd Friday of November and December and 4th Thursday January through March in Lecture Hall of Los Angeles County Arboretum.
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