



PLANT NUTRITION

By Dr. David Appleman,

Associate Professor of Plant Nutrition  
University of California at Los Angeles

(Digest of a talk given at the March 1946 meeting of the  
Southern California Camellia Society.)

I am deeply impressed with the display of color on the flower tables here tonight. But I am thinking of some other beauties—beauties of performance—beauties which only the best gardeners see, those who can judge the welfare of the plant by its looks.

A plant in its performance may be compared to the acrobat high above the circus crowd performing beautifully and rhythmatically. The molecules in the plant, particularly in the leaf, perform in a beautiful synchronous manner; the functions of which culminate in the production of the plant and its fruits.

If one analyzes the dry matter of a plant it is found that 98% of it is organic in nature, while the remaining 2% is inorganic. The 98% consists of Carbon, Hydrogen, and Oxygen—three substances which the plant obtains from the air and water, and Nitrogen, which it obtains from the soil. The 2% are the mineral constituents which the plant obtains from the soil. These are Calcium, Potassium, Phosphorus, Sulphur, Iron, Copper, Manganese, Boron, Zinc, and Molybdenum.

I should like to here distinguish between a plant food and a nutrient. Food is a substance that can yield energy, such as a sugar, fat, or protein. A nutrient is a substance which does not yield energy, but without which neither the plant nor the animal could obtain and assimilate energy from food.

The plant is the only organism which utilizes "atomic energy." It obtains it from the sun and converts it, in the form of foods, into stored energy. This process, which is performed only by green plants, is called photosynthesis—that is, the synthesis of food materials with the aid of light. It is estimated that approximately one billion tons of food are produced daily by the plants on this planet.

In order to perform efficiently the plant requires other conditions besides light. These are: the mineral elements mentioned earlier, sufficient moisture, a suitable temperature and a sufficient supply of carbon dioxide.

There is another process—respiration—which is performed by all plant cells, regardless of whether they are green or not. This process is concerned with the breaking down of the stored food materials and thereby releasing the energy, in a usable form, for functions of the plant such as growth, absorption of elements, and reproduction.

# Southern California Camellia Society

## Roster of Officers

### President:

DR. DAVID W. McLEAN  
2508 South Santa Anita Avenue, Arcadia  
ATwater 7-2703

### Vice-President:

DR. LLOYD J. TAYLOR  
810 Highland Drive, Flintridge  
SYlvan 0-2088

### Secretary:

THOR PETERSEN  
1670 Las Flores Avenue, San Marino  
SYcamore 9-3748

### Treasurer:

ROBERT A. WARD  
4947 Hartwick, Eagle Rock  
ALbany 5721

### Directors:

ROY M. BAUER—ATlantic 1-2183  
MRS. CARLO GALLI—SYcamore 9-2108  
J. HOWARD ASPER—SYlvan 0-1998

### Committee Chairmen:

Membership—  
C. E. PEAK—STate 4-0426  
Program—  
ETHEL CAMPBELL—SYcamore 9-5256  
Prizes  
MRS. VERN O. McCASKILL—SYcamore 3-4677  
Reception—  
JOHN A. HUDLOW—SYcamore 9-3504  
Exhibit—  
MRS. FLORENCE DOUGLASS—CHarleston 6-  
Nomenclature Research—  
MRS. CARLO E. GALLI—SYcamore 9-2108  
314 Arroyo Drive, South Pasadena  
Horticultural Research—  
ROBERT CASAMAJOR—SYcamore 2-7641  
Camellia Book Distribution—  
E. C. TOURJE—SYlvan 0-1630  
Librarian—  
MRS. ROY M. BAUER—ATlantic 1-2183  
2035 Sherwood Road, San Marino

## OFFICERS ELECT

President .....	Dr. Lloyd J. Taylor, Flintridge
Vice-President .....	Dr. J. Walter Reeves, Pasadena
Secretary .....	C. Elmer Peak, Van Nuys
Treasurer .....	James C. Wright, San Marino
Directors .....	Mrs. J. W. Miller, Glendale
	Mrs. William Viney, Covina
	Dr. Weston W. Shay, Los Angeles
Editor of Bulletin .....	Dr. David W. McLean, San Marino
Business Manager of Bulletin .....	Roy M. Bauer, San Marino

## HONORARY MEMBERS

William Hertrick, Huntington Botanical Gardens, San Marino, Calif.  
Dr. H. Harold Hume, University of Florida

## PLANT NUTRITION (Continued)

I should like to point out that although the process of absorption by the root of the plant is not fully known, one thing is certain; and that is that the plant absorbs against the "gradient." This means that the plant absorbs substances from a very dilute solution and concentrates them within the cell sap. In order to accomplish this "uphill" process the plant has to expend energy. Another condition for adequate absorption by plants is that the substance to be absorbed should be present in the soil in an available state. A plant does not absorb substances at random—it absorbs selectively. For example, the Valonia Seaweed found off the coast of Florida grows in water containing fifty times as much Sodium as Potassium, still in the cell sap only Potassium is found, and that at a concentration very much greater than in the sea water in which it grows. This does not mean, however, that a plant does not absorb substances toxic to it.

In connection with absorption I should like to dispel an old belief among some gardeners that a plant absorbs only at certain times—day or night. Actual experiments show that, other conditions being equal, absorption is equally efficient in the dark or in the light. The conditions necessary for good absorption are that a plant should be in good health and should have a healthy and extensive root system. (A single rye plant may have a root totaling 3 miles in length and having a total surface of 7000 square feet.) A soil which restricts root growth is therefore undesirable.

The importance of studying soils and their reactions is to be able to make them a suitable medium for proper root development. I have pointed out some of the complex processes that take place in a plant which indicate what a se-



organism a plant is and how easily it may be disturbed. The soil in which the plant grows is no less complex. It is not a dead thing—just dirt; on the contrary, it is a well-organized and dynamic body. If you consider that a single cubic centimeter of good soil may be inhabited by as many as 400 million bacteria and in addition by hundreds of the organisms such as fungi, you would be at once that it is not an inert medium. Besides this, there are many interrelated chemical reactions that are constantly taking place in the soil.

The water in the soil reflects to a large extent the dynamic state of the soil. California soils, as a group, are generally high in soluble salts. Usually all of the required elements except nitrogen are found in amounts sufficient for plant growth. In some soils some of these elements, although present in fairly large quantities, are in an unavailable state which may be due to the reaction ("pH") or other conditions of the soil.

Perhaps the most important constituent of soils is the colloidal or clay fraction. This constituent has the ability to fix or hold certain elements either in an available or an unavailable state. Thus, for example, it has been found that soils having colloids of the "Kaolinite Type" hold phosphate with a force too great for most plants to overcome. The force with which substances are held by the colloid may be likened to that of a magnet. Thus, a colloid may hold potassium with a certain force but if the plant root can exert a greater force it can pull the potassium away from the colloid.

The term "base exchange" refers to the process of exchanging a certain iron which the root may give off for another iron which is held on the colloids and which the plant wants.

There is another important fraction of the soil which to you as Camellia growers is of particular interest. It is the organic matter. This fraction originates from plant and animal residues. It is found in amounts from approximately 0.5% to 100% of the total soil. A peat is 100% organic matter. The average, arable, California, virgin soils have approximately 1% organic matter. The amount of organic matter that a natural soil has depends upon the climate of the area. To illustrate: Two adjacent orchards near Redlands, both the same size, were observed. On one has been added approximately 10 tons of organic materials per acre for the last 15 years. On the other no organic material has been added during that time. An analysis shows that the soils in the two orchards have the same amount of organic matter. That does not mean that to add organic matter is a waste of money and effort. Although it does not remain in the soil permanently, it has certain temporary benefits which are extremely important, particularly for such plants as camellias, azaleas, begonias, etc. These benefits are due to the fact that organic matter, as it decomposes, releases, besides the normal constituents required by plants, organic acids which have not only beneficial effects on the plants growing on the soil but also effect on the soil structure.

Physically, soils have two qualities; namely, texture and structure. The former is determined by the size of the particles that make up the soil. Thus heavy soils have a large percentage of very small particles and light or sandy soils have a small percentage of small particles. The structure is dependent upon the way in which these particles are built up into crumbs. A desirable structure is one in which the crumbs are large and fairly loose so that the soil may have good drainage and good aeration. Organic matter helps in producing such a desirable structure. Organic matter also acts as a "buffer"; that is, it prevents the soil from sudden changes. (There are other substances, besides organic matter, that have a buffer effect on soils.) Southern California soils in general are well-buffered.

To summarize, organic matter improves the aeration and drainage of the soil; because of its "sponginess" it increases the water-holding capacity; it improves its structure; has a buffering effect; is a source of food and energy for the microorganisms of the soil; and adds plant nutrients.

Regarding the microorganisms, I should like to indicate that the microorganisms increase depending upon the amount of organic matter available for them. Thus, for example, when organic matter in the form of straw or manure is applied to the soil the number of microorganisms increases rapidly. Then as the food is slowly being exhausted they decrease in number in accordance to the supply of food or organic matter. The value of microorganisms to the soil is very great. They are responsible for decomposing the organic material and making it available to higher plants. They make it possible for the cycle of life to take place.

Now I wish to discuss fertilizers and soil amendments. A fertilizer is a substance used for the purpose of adding a nutrient or nutrients to the soil, such as potassium, nitrogen, phosphate, calcium, etc. An amendment is a substance used to improve the physical condition of the soil. Ammonium Sulphate, Potassium Sulphate, or urea are examples of fertilizers. Lime, sulphur, gypsum, aluminum phosphate are examples of soil amendments. An amendment, by improving the soil, may make fertilizing substances more easily available to the plant. In adding a fertilizer one must keep in mind that the fertilizer and the soil react and that under certain conditions the reaction may be of such a nature as to "fix" the fertilizer so that it may not be available to plants. Under all conditions whenever you add anything to a soil, the equilibrium of the soil is disturbed and a series of reactions take place tending to reestablish the equilibrium. These reactions may be beneficial or harmful. It is thus possible to do harm by adding a fertilizer which one would normally expect to do good. We know, for example, that calcium is a necessary element for plant life. But an excess of calcium may bring about many harmful effects such as lime-induced chlorosis and certain other micro element deficiencies. Again, it is well-established that iron is essential for plants, but it has been equally well-established that an excess of iron may interfere with the metabolism of magnesium and thus produce undesirable effects. Therefore, when applying a fertilizer we must keep in mind the following: Is a fertilizer necessary, and, if so, which fertilizer is best for a particular soil? In general, as has been stated earlier, California soils have sufficient amounts of all necessary elements with the exception of nitrogen. Our soils, being low in organic matter, are naturally low in nitrogen. The question that one might ask oneself regarding the type of fertilizer to use might be of this nature: (1) Is it desired to have an alkaline or acid soil? (2) Will the fertilizer contemplated damage the roots? (3) Will the fertilizer remain long enough in the soil to accomplish the purpose desired or will it drain down quickly and be lost beyond the root zone? (4) What effect will the fertilizer in question have on the physical structure of the soil? (5) Will it increase or decrease the porosity or will it in any other way injure the structure of the soil?

In view of all that I have said of the "complexity" of the plant and the soil you may wonder whether it is possible at all for human beings to grow plants intelligently. Fortunately, both the plant and the soil have compensating forces in them. One can often get by with quite a few mistakes because of these "buffer effects." It is, however, desirable to know something about plants and soils so at least you can guard yourself against some unscrupulous salesmen who may come around trying to sell you "cactus juice" or "photosensin." Besides there is more pleasure in growing plants when one has a better understanding of what is going on.

## QUESTIONS:

Your program chairman has stated a few questions which you have asked from time to time and asked me to answer.

(1) Should we use Aluminum Sulphate, Iron Sulphate, or Epsom Salts?

Aluminum sulphate is used as an acidifying medium. It has the capacity to hydrolyze and thus produce acid. This produces an acidic soil. If you dissolve approximately 140 gm. Aluminum Sulphate in a quart of water you will get a solution which will be four times as acid as vinegar. This would normally be too acid a medium for plants to grow in. However, aluminum sulphate does not dissolve at once in the soil. It goes into the soil slowly and that gives compensating factors in the soil time to go to work and prevent the soil from becoming too acidic. Iron sulphate may be also used for acidifying the soil. It produces a less-acid condition. It also increases the iron content of the soil and is there

is used in cases of iron deficiency. Epsom Salts ( $MgSO_4$ ) is used only if there is a magnesium deficiency in the soil. There is no other purpose for using it. Sulphur may also be used as an acidifying medium. It acts more slowly than aluminum sulphate or iron sulphate. Gypsum is used for its slight acidifying tendency, but primarily for the effect it has in aiding the penetration of water through the soil—in other words, in "opening" the soil. Gypsum should be used with care because it may increase the calcium of the soil to a dangerous concentration.

Question (2) What is the value of redwood bark and shavings and tan bark?

Redwood resists moistening and therefore is not readily incorporated into the soil. Redwood shavings become incorporated better but sometimes have a toxic effect on certain plants. I know only that in the case of orchids they produce no bad effects. As far as tan bark is concerned, it is useful only in that it is organic matter. Off-hand, I can see no reason why it should be preferable to other forms of organic matter. If tannic acid is desired for some particular purpose, then it would be cheaper to buy a pound of tannic acid than a ton of tan bark.

Question (3) Shall we use soil-testing kits, and if so, what kind?

Tests made by ordinary soil-testing kits may be very misleading when done by a novice. Particularly when used on the extract from soils as high in organic matter as those which are used for growing camellias. These extracts would be highly colored and would therefore obscure most of the tests which depend on color reactions. Personally, I would advise against the use of soil-testing kits unless you are familiar with chemistry.

Question (4) What is this pH stuff?

pH is a measure of acidity or basicity of a substance, in the same way that the inch or the foot are measures of length. It runs from pH 0 to pH 14, pH 0 being very acidic such as Hydrochloric acid, and pH 14 being very basic such as lye. pH 7 is the neutral point where the substance is neither acidic or basic. For the sake of clarity, an acid is a substance which we recognize by its sour taste, like vinegar or lemon juice. A base is a substance such as soda, which has properties opposite to that of an acid. Soda and lye are examples of bases.

The pH of a soil is a very important property since it determines the solubility of certain soil constituents and in turn their availability for plants.

Question (5) How do you provide drainage in a heavy soil?

Drainage in a heavy soil may be bettered by improving the soil structure. A soil that has a sufficient amount of calcium will as a rule have good drainage, and therefore, calcium sulphate is quite often used for that purpose. However, if the soil has an impervious layer in its sub-soil nothing could be done except to provide drainage through tiles.

Question (6) Does barnyard manure contain hormones or growth activators?

Undoubtedly it does, but there is nothing specific to indicate that it is beneficial primarily because of that. Manure is a very good material both for improving soil structure and as a source of plant nutrients. It is, in most cases, a safe fertilizer to use.

## THE MARCH AND APRIL MEETINGS

Both the March 14 and April 11 meetings, held in Odd Fellows Temple, were marked by short business sessions, unusual in our routine.

In the March meeting, the amendments to the constitution and by-laws printed in the March bulletin were adopted. These related principally to the creation of an editor and business manager for the Bulletin. The report of the nominating committee was received, after which the Program Chairman, Ethel Campbell, introduced the speaker of the evening, Professor David Appleman, who spoke on the subject of plant nutrition. Dr. Appleman's talk was exceedingly valuable in giving a broad understanding of the biotic mechanism by which plants are nourished, together with the part played by soil characteristics and soil condition. Dr. Appleman's talk, in digest, appears in this issue of the bulletin.

The members' door prize was won by Albert Wirz; the exhibitors' prize by Mrs. Albert Collins; publication fund prize, Mrs. Russell Loar; test garden fund prize, No. 1, Robert Casamajor; No. 2, Frances Merritt. Three redwood tubs were donated by George Woodman of San Gabriel. The name of the first winner was not obtained; tub No. 2 was won by Mrs. Bessie Ashenbrenner and the third by Mrs. Herbert Milliken. The attendance was approximately 325 and a fine display of camellia blossoms marked the occasion.

The April meeting opened with a short business session. Treasurer's report was accepted and is printed elsewhere in this issue.

A resolution from the Board of Directors recommending that the Society be incorporated, was placed before the membership and adopted. Resolutions were adopted empowering the Board of Directors to take all necessary steps leading to the incorporation of the Society. The business session was then adjourned until the October meeting. This action postponed the election of officers until that time, a technicality which is fully explained elsewhere in this issue.

Robert Casamajor, chairman of the Horticultural Research Committee, introduced the speaker of the evening, Dr. James Bonner, Associate Professor of Plant Physiology, California Institute of Technology. Dr. Bonner gave a most interesting report of research carried on with camellias at Caltech. A digest of

Dr. Bonner's talk will appear in an early issue of the Bulletin.

Leslie Marshall gave a short talk on the problems of camellia transplanting. Look for it in an early Bulletin.

This meeting marked an innovation in that the prizes were all donated by amateur members of the Society. Nineteen camellia plants were donated by C. E. Peak, Dr. John Taylor, Henry Prucha, Thor Petersen, Mrs. Wm. Vine, Wm. Husted, Dick Wagoner, Mrs. John Long, Ebon Carl Tourje, Mr. and Mrs. Boorman, Monty O'Reilly, Pete Flamminio, Wm. Back, Dr. J. Walter Reeve, Robt. Ward, Anne Galli, J. K. Krum, and one from "a friend." Plants donated were: Mathotiana, Empress, Blood of China, John Ingels, Colonel Firey, Josephine Hearn, "R. C.", Adolph Audossan, Matosi, Dai Kagura, Elena Nobil, Youtz, Belgiana, Chandleri Elegans, Crane, Chandleri, Meredith Lake, Empress, Wilhelm, Ruby Glow, Alexander Nowlin. The prizes added \$96.25 to the state funds.

Certainly "amateur night" was a great success and appreciation goes to the new secretary, Stephen Peak, whose suggestion it was.

### MEMBERSHIP AND ATTENDANCE

It is interesting to trace the trend of membership as compared with the attendance during the last two years. While membership has climbed steadily, attendance rises to the height of the blooming season, then tapers off to the end of the season.

1944-45 Season	Members	Attendance	1945-46 Season		
November	185	160	November	290	250
December	—	125	December	333	220
January	—	174	January	—	280
February	210	227	February	412	415
March	239	218	March	469	325
April	253	181	April (?)		

The curve of attendance rising from a low at the first meeting of the blooming season reaching its height in February at the height of the blooming season and tapering off to the close, indicates that our Informal Flower Show must play a large part in attendance, even though we grant that the general interest of all growers, both professional and amateur, members and non-members, rises to a peak during the most active part of the blooming season.

It was at the February meeting of 1946, when there were ten large library tables covered with blossoms, in the formal flower show, that 415 persons crowded the room and the corridor beyond. It was then too that casual visitors

crowded old members from their seats. All this suggests the thought that February is the time to put on a formal flower show—a real show—and let non-members pay for admission!

**SPEAKING OF FLOWER SHOWS.** Incoming President Dr. Lloyd J. Taylor and Director J. Howard Asper attended the recent Camellia Show in Sacramento. They were quite embarrassed by the enthusiasm with which they were received and the eagerness with which the Sacramento Society members quizzed them about putting on a Camellia Show. Not long ago the Secretary had an inquiry from a newspaper in another part of the State, asking particulars as to how we did on our Flower Show! It was embarrassing to explain that we had never put on a show of our own! We have, of course, joined twice with the Horticultural Institute to put on a camellia show for a special joint camellia meeting in Los Angeles; twice we have put on a camellia division in the Pasadena Spring Flower Show at Brookside Park. It still remains, however, to put on a real camellia show of our own.

**CONCERNING THOSE RETURN POST CARDS—REMEMBER?** Eighty-three cards were returned with a list of favorite varieties in the latest poll. Eighty-three cards from over 400 members is not too good a showing! Is your list still lying around or tucked in a pigeon-hole in your desk? Please dig it out, make up your list and send it in. Just in passing—Debutante still takes the lead in the 83 cards returned, with Alba Plena a close second.

We have more material concerning favorite varieties; lists from several of our experts, amateur and professional; also the list given and described by William Woodroof at a recent meeting. We will dole this material out to you through the summer—it will be both interesting and a valuable guide—if you will do your part by sending in that return post card!

**THE BOARD OF DIRECTORS—AND INCORPORATION.** On Tuesday, March 26, the Board of Directors devoted an evening very largely to problems of organization induced by the increase in membership, assets and activities of the Society. The work of the officers has become considerably more burdensome; this was especially true of the Secretary, Treasurer and Editor of the Bulletin. The Secretary was authorized to employ an assistant to be known as "Assistant to the Secretary," whose duties shall be to do all the clerical work for the Secretary and Treasurer, Editor and Business Manager of the Bulletin. Roy Palmer moved that a vote of the members be taken to ascertain the late season's favorite camellias. This was done in the return post card mentioned above. Another reminder—send in your card with your list of favorites! The question of incorporating the Society was discussed at considerable length and a motion to obtain legal opinion relative to it, was moved, seconded and carried.

On April 2 the Board of Directors met again with the Society's legal advisor. The question of incorporation was exhaustively discussed and a resolution was adopted recommending to the membership that the Society be incorporated.

On April 11 the resolution from the Board of Directors recommending incorporation was read to the members. The membership adopted the resolutions previously prepared for it by the legal advisor, authorizing the Officers and Directors to proceed with the incorporation, to turn over to the new incorporated Society all of the assets of the old unincorporated Society on condition that all members in good standing of the old Society should become members in good standing of the new, incorporated Society.

At this point it was explained to the membership that the legal advisor had given his considered opinion that it would be preferable to postpone the election of officers until the October meeting. This in order that the present Officers and Directors, who had been educated in the various aspects of the problems of incorporation, should continue to the completion of the process. At the first meeting of the Directors of the new corporation, the old Directors whose terms of office in the old Society had expired, would resign and in their places



would be elected the new Directors nominated for office in the old Society, who stood unopposed, ready for election to office. This Board of Directors thereupon receive into full active membership all members in good standing in the old Society. The assets of the old Society would then be turned over to the new Corporation. The Directors of the new Corporation would then proceed to elect the officers nominated and ready for election in the old Society at the April meeting.

Shortly after the April meeting of the Society, the Board of Directors again met with the Legal Advisor who read to the Board the Charter and By-laws for the new corporation. After discussion of the various features of these documents, they were approved and the Legal Advisor was authorized to proceed with incorporation.

The organizational set-up of the Society will remain practically unchanged. As in all corporations, the officers will be elected by the Board of Directors. The Board of Directors will nominate new Directors prior to the annual election of officers. Provision is made for additional nominations to be made by the members, should they so desire.

The number of Directors will be increased from five to seven. Five of the Directors will be elected from zones within a stated radius of Pasadena. The zones will be surveyed annually and their boundaries adjusted so that membership in the various zones will be approximately equal. This will provide equal representation on the Board of Directors. We have, however, many members throughout the State and quite a few from other states outside of California. In order that these might be represented also, there will in future be two Directors at Large who may be elected from within or without the five zones, but will represent the membership living outside the zones.

The procedures for incorporation are proceeding toward fruition and it is our hope that the next Bulletin will be able to announce the completion of the incorporating of the Society.

Meanwhile the new President and Officers are laying their plans, building their organization, to carry on the work of the Society during the coming year.

**THE TREASURER'S REPORT** for the period beginning April 12, 1945, and ending April 11, 1946.

#### General Fund

Balance on hand as of April 12, 1945.....	\$162.52
Memberships paid during period.....	676.00
	<hr/>
	838.52

#### Less Expenses

Books purchased for library.....	\$ 22.05	
Rent .....	60.00	
Printing .....	267.47	
Postage and envelopes .....	78.42	
Badges .....	20.50	
Camellias purchased .....	40.75	
Black velveteen .....	53.06	
Stenographic service .....	28.50	
Miscellaneous .....	10.37	581.12
	<hr/>	
Balance on hand in general fund.....		257.40



## TREASURER'S REPORT (Continued)

### Publication Fund

Balance on hand as of April 12, 1945.....	259.45
Received from drawings.....	270.15
Received from sale of Camellia classification book.....	264.10
	793.70

### Less Expenses

Envelopes .....	4.00	
Printing of Camellia Classification Book.....	138.38	
Stenographic service .....	16.75	159.13

Balance on hand in Publication Fund.....	634.57
--	--------

### Public Address System Maintenance Fund

Received from drawings during period.....	165.00
Received from rental .....	10.00

175.00

Purchase of one public address system.....	150.00
--	--------

Balance to be maintained for repairs.....	25.00
---	-------

### Test Garden Fund

Received from drawings during period.....	78.75
Received from rental of public address system.....	10.00
Received from sale of pamphlet "Reticulata".....	11.50

100.25

### Less Expenses

Camellias purchased for test garden.....	26.39	26.39
--	-------	-------

Balance on hand, Test Garden Fund.....	73.86
--	-------

### Registration Fees

Received from registration fees .....	4.00
General Fund .....	257.40
Publication Fund .....	634.57
Maintenance Fund .....	25.00
Test Garden Fund .....	73.86
Registration Fees .....	4.00

Grand Total .....	994.83	994.83
-------------------	--------	--------

Memberships as of April 12, 1945.....	253
Memberships as of April 11, 1946.....	453
Total increase for period.....	200

(Signed) ROBERT A. WARD, Treasurer.

## SAN DIEGO CAMELLIA SOCIETY

On April 12 the San Diego Camellia Society elected the following officers for the coming year:

President.....	E. W. Miller	Treasurer.....	Stanley W. Miller
Vice-President.....	Mrs. Genevieve Bovet	Directors.....	Joseph W. Sefton
Secretary.....	Mrs. Clarisse M. Carlton		A. L. Moore, M.D.
			L. H. Murdock, M.D.

Mrs. W. C. Brown demonstrated the making of corsages from camellias and cymbidium orchids, as well as cellophane containers to hold them! The ladies drew for the corsages and Mrs. Alice M. Clark, a guest, drew one; Mrs. J. D. Kelly the other. A. P. Carlton gave a talk on "Summer Care of Your Camellias."

On May 9 the final meeting of the year was held at Grant's Rancho, north of Old Town. It seemed as though all of the sixty-two members must have been present, to which add one caravan from "The Mother Society" as the San Diego members call it. By special invitation, President and Mrs. Dave McLean, President-elect and Mrs. John Taylor, Secretary and Mrs. Thor, Treasurer and Mr. Bob Ward and Reception Chairman and Mrs. Jack Hudlow also graced (?) the scene.

A short wait in an anti-room was marked by all the spontaneous social enjoyment you'd expect in a group of friends gathered for a birthday surprise for someone. No use talking, one of the penalties of a large organization is the loss of that camaraderie which makes a smaller group.

An excellent dinner was served during which the "visiting firemen" were introduced and called on for a few remarks. Honors in this round went to guess—none other than our own Secretary Thor, who has always claimed he just **couldn't** make a speech! . . . The new San Diego officers were installed . . . The group then retired to another room and the northern visitors showed the Verschaelt color slides and views of the California Camellia Test Garden, ending the show with a picture of Henry Prucha's invention for preventing Lotus blooms from burning in the sun.

The visiting firemen retired to Mr. Ulysses Grant's hostelry in San Diego, feeling that if all of the meetings were as enjoyable as that one, it was no wonder the San Diego Society has grown so rapidly.

Next morning, on the homeward trek, the caravan stopped first at the Carlton nursery on Reynaud Way. While some of the group inspected a fine collection of camellias, we must regretfully state that certain pillars of our camellia church ran rapidly from one cymbidium table to another with the feverish zeal of the cymbidium hound on the scent.

Next stop, the Boyle place in Del Mar where there were thousands of camellias in the making and where a brash cymbidium hound, after sniffing around, asked if there were no cymbidiums about, was properly subdued by three loud boos from the host. Boo and tush, tush, say we. But it was a swell trip.

## HERE AND THERE

Some of our local grafters are looking a bit glum. The long, moist, sunless period since the cute little scions were placed "in the stocks," has not been conducive to light hearts in either the scions, the stocks or the surgeons. All in all, though, it has been a good season not only for camellia societies but for camellias themselves. Some are still in bloom—plants, we mean.

Herbert Swim is the author of an article to be published in the American Camellia Society's Annual. The topic assigned was "Camellia Culture in Southern California." Herb knows his Southern California and his Camellias both, and wrote a most interesting article telling why such an article couldn't be written. He modified the title to: "The Camellia—The Chameleon." Enticing title . . . How does one obtain the Year Book? Simple. Join the American Camellia Society. Our Secretary has application forms. And after all, what is (or are) three bucks to a camellia fancier?

One of our members has been carrying on a neat little research all his own and producing large results. We have already worked upon this chap, who is afflicted with a violent form of modesty. The time is showing when the good of society at large and camellia lovers in particular will demand that this researcher report his stuff to the S.C.C.S. Wishing him no ill will and no hard luck, we still hope the new program chairman persuades him.

**THE AMERICAN CAMELLIA SOCIETY** has now attained a membership of 10, has \$9,106.40 in the treasury. Nice going for an organization less than a year old. Membership by states (A.C.S. News Letter, April 1, 1946): Georgia, 215; Florida, 157; Louisiana, 108; California, 84; South Carolina, 80; Virginia, 76; Alabama, 70; Mississippi, 557; Texas, 49; North Carolina, 31; Oregon, 29; Washington, 5; Arkansas, and Massachusetts, 6; Illinois and New Jersey, 4; New York and Tennessee, 3; Michigan, 2; 1 each from Wisconsin, Nebraska, Connecticut, Kentucky, Oklahoma, Delaware, Pennsylvania, New Mexico, Indiana, Washington, D.C., Canada and Australia.

First affiliated societies are: The Savannah Men's Garden Club, Savannah, Georgia; Sand Hills Garden Club, Augusta, Georgia; The Virginia Chapter is made up of members of the Norfolk Yacht Club. A majority of the members of these organizations are members of the A.C.S.

**FEEDING YOUR CAMELLIAS?** Prevent (or minimize?) bud drop next fall by watering your plants plenty to drink during the hot dry spells ahead. True, they don't like chronic wet feet; neither do they like to parch and parch—and parch.

Cheerio!



Southern California  
Camellia Society  
175 N. Los Robles Ave.  
Pasadena, California

---

CAMELLIA  
*Bulletin*

---



Mr. R. J. Wilmot,  
Asst. Horticulturist,  
Univeristy of Florida,  
Gainesville, Fla.

---

