

# *Northern California Camellia Society, Inc.*

A Non-Profit Organization

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OFFICIAL BULLETIN

December, 1950



*Mrs. Freeman Weiss Vgt.*

Photo by Herbert V. Mitchell, Walnut Creek.

## NORTHERN CALIFORNIA CAMELLIA SOCIETY, INC.

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The Northern California Camellia Society, Inc. is a non-profit organization of camellia fanciers interested in the culture, propagation, and development of camellias. Meetings are held on the first Monday in each month from October to May inclusive, at 8 p.m., at the Chabot School Auditorium, Oakland. Membership is open to all those with a serious interest in the subject. Annual Dues \$5.00. Membership application blanks may be obtained from Bruce Harless, Secretary, 1301 Stannage Avenue, Berkeley.

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## COVER ILLUSTRATION

**MRS. FREEMAN WEISS VGT.** Rich, deep pink with white variegation; incomplete double with large, wavy petals, intermixed with stamens. Floriferous. Compact, upright growth. Same fine characteristics as Mrs. Freeman Weiss, Magnolia Garden seedling, of which it is a sport.

## PRACTICAL SUGGESTIONS RESULTING FROM CAMELLIA RESEARCH

By Dr. Walter E. Lammerts, Horticultural Consultant and Plant Breeder,  
La Canada, California

Knowledge gained from recent research has greatly increased the usefulness and enjoyment of the camellia.

It is my belief that camellia sales in the past have suffered from four major restrictions, due to lack of understanding of their:

- 1) Cold resistance;
- 2) Shade requirements;
- 3) Adaptability to wide range of acidity or alkalinity;
- 4) Salt tolerance and ways of combating high salinity.

### Cold Resistance

In Southern California we have been blessed with very cold weather the last two years. At Descanso Gardens temperatures dropped to as low as 12 degrees F. and observations showed no injury to plants; the only varieties showing slight bud drop were Alba Plena and Fimbriata which were beginning to bloom. Daikagura showed no bud drop. Open flowers, of course, were spoiled. Otherwise the plants seemed to profit by cold weather. Spring blooms were more exquisite than ever.

Cooperative experiments with Long Island Agricultural and Technical Institute showed camellias can stand temperatures down to 4 degrees F. These camellias were planted under protection of a yew hedge.

This means that most of us are far too fussy about temperatures camellias will stand without being killed.

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Dr. Lammerts is America's outstanding geneticist and is actively engaged in the hybridization and introduction of new varieties of camellias. He is the originator of the exquisite rose, Charlotte Armstrong, as well as many other rose aristocrats.

Dr. Lammerts' "Quest for Reticulatas" was described in the October 1950 issue, Volume 4, No. 1, of the N.C.C.S. Bulletin.

The above talk was given at the May 1, 1950 meeting of the N.C.C.S.

### Shade Requirements

It is an old but mistaken idea that camellias grow well only in complete shade. Our best Daikaguras at Descanso Gardens grow in filtered sunlight under oak trees. These grow much better than those in complete shade.

Shade from deciduous trees is desirable, providing protection in summer and more sunlight in winter, particularly if you are interested in growing midseason and late varieties. Such varieties planted in complete shade come into bloom so late that the general temperature of the air causes rapid opening of blooms, resulting in small flowers and bud drop.

C. M. Hovey, for instance, should be planted in filtered sunlight.

### pH Requirements

pH designates the percentage of hydrogen ion concentration in a substance, or more simply is the measure of the acidity or alkalinity of that substance.

Dr. James Bonner, California Institute of Technology, recently concluded a very fine set of experiments showing that camellias grow just as well at pH 8 or slightly alkaline conditions as at the relatively acid level of pH 6. Dr. Bonner experimented with pH 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5. Camellias grown at pH 8 were just as beautiful in every way as those grown at pH 6. This may seem a startling thing to say: **So far as acidity is concerned, camellias grow just as well at pH 8;** but I hope to make clear in a minute what they do require.

If you want to be old-fashioned, mix

- 1 part citric acid
- 5 parts iron sulfate (ferrous)
- 5 parts magnesium sulfate

and use at the rate of 2 oz. per gallon of water. For a medium-sized camellia

bush (3 to 5 feet high), apply 3 to 5 gallons; and water thoroughly following treatment.

I guarantee you, after two or three weeks you will find an amazing greening up of foliage. With this treatment you do not build up a toxic accumulation.

### Salinity

Harold E. Pearson of Metropolitan Water District carried on extensive research indicating **camellias will stand salinity of 3500 to 4000 ppm.**

Salinity is a measure of the degree of soluble salts.

The Metropolitan Water has about 700 ppm. of total dissolved salts.

When watering plants in gallon or other containers **always water enough so that at least 20 per cent water added to container drains out at the bottom.** Obviously, if there is no drainage and 50 per cent evaporation occurs, the salt content will build up to 3500 ppm. after only five irrigations. **A salinity of 3500 to 4000 ppm. is toxic.**

In other words, **what camellias suffer from is not so much high pH as total accumulated soluble salts which lock up all available magnesium and iron.** Often we make the mistake of thinking the pH is too high when it is really the amount of total soluble salts that is too high. You really do not water copiously enough when you do irrigate.

The use of gypsum ( $\text{CaSO}_4$ ) at the rate of 5 pounds per 100 square feet is helpful; harmful sodium salts are made insoluble by slow replacement with calcium. And the sodium salts are leached out providing you water generously enough.

If you have poor drainage conditions in your garden, I shall suggest ways of correcting:

a) Make holes 5 to 6 feet deep and 3 to 4 feet in diameter with power post-hole digger; fill with gravel to a depth of about 3 feet. Plant camellia in good soil mix above the gravel, using 7 parts loam, 3 parts peat and 2 parts coarse sand.

Personally, I am opposed to leaf-mold because it is difficult to be sure it does not have oak-root fungus; instead, I prefer peat to mix with soil.

b) If your camellias are already planted in soil which suffers poor drainage and consequent over-burdening with salt, I recommend the use of Pearson's jet method of making drainage holes.

Use pipe  $\frac{1}{2}$  to  $\frac{3}{4}$  inch diameter and 3 feet in length. Attach pipe to end of hose and use water pressure to jet in small holes 6 feet deep. Fill with gravel. Make from 6 to 8 holes per camellia bush.

c) Gardens on thin soil 1 to 2 feet deep, over impermeable rock layers, may only be cured by growing in raised beds underlaid by tile drainage pipes sloping somewhat away from upper end of beds. Be sure to fill at least upper end of tile with gravel.

In creating raised beds, lovely rock work and resultant rock gardens may be made most effective. I, for one, hope that you who grow will learn to combine rock work with camellias, roses and other specimen plants, as well as the more humble and yet beautiful annuals and perennials.

I believe that properly enlightened camellia growers will find that their plants stand a great deal of cold, a good deal of sun, a wide range of pH, and considerable salinity, if they work for the removal of the above restrictions.

### Ease of Transplanting the Camellia

Many expert gardeners are of the opinion that camellias can only be transplanted by very careful balling. Our experience at Descanso Gardens has shown that even very large camellias may be removed any time except during active growth from April to October by semi-bare-root technique. Usually only  $1\frac{1}{2}$  to 2 cu. ft. of soil is sufficient to retain around central part of root system; longer roots suffer no harm if transplanted within an hour or two.

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## CUNNINGHAME'S COLLECTION OF DRAWINGS IN THE BRITISH MUSEUM

H. Harold Hume, Ph.D., President Emeritus, American Camellia Society

In the Official Bulletin of the Northern California Camellia Society, April, 1949 there is an article entitled "Cunninghame's Camellias in the Sloane Herbarium," in which this question is asked, "Where did Petiver obtain the information on camellias contained in his paper in the Philosophical Transactions of the Royal Society?" This question is answered in part.

It is quite clear that although Petiver drew the illustration published in his "Gasophylacii Naturae & Artis," 1702, from Cunninghame's specimens now in the Sloane Herbarium (British Museum, Natural History) his description of "Thea Chinensis, Pimentae Jamaicensis folio, flore Rosaceo simplicis" as he named it, and which was later classified as **Camellia japonica**, by Carl Linnaeus, could not have

been drawn from the herbarium specimens alone that James Cunninghame collected on the island of Chusan, probably in the winter of 1699-1700. As Petiver had not seen camellias growing or in flower and fruit it is quite apparent that he secured additional information, either by correspondence or in conversation with some person who had seen camellias growing. His description is quite complete, but Linnaeus probably had not seen it for he made no mention of James Petiver and credited Englebert Kaempfer as the source of his information about camellias when he named the genus in 1735.

In an effort to secure additional information this question had been investigated further. It was stated in the

(Continued on page 10)

## CAMELLIA SOCIETY OF SANTA CLARA COUNTY

The Camellia Society of Santa Clara County, Inc. is a non-profit organization of men interested in the culture of camellias. Its main objectives are to stimulate public interest in camellias and to encourage planting of more camellias in Santa Clara Valley. Membership is open to men with a serious interest in the subject.

For eight years, the first Sunday in March, this Society has held a Camellia Show in San Jose.

It is a unique type of show where no award ribbons are given, but exhibitors strive to bring blooms of highest quality in form, color, size and texture, in the hope that their finest will be selected for the Review Table. Here, the best specimen of each variety is exhibited according to color, ranging from white through deepest red. Amateurs and commercial growers alike covet a place in this array of camellia perfection. Camellia

fanciers experience thrill after thrill as they gaze upon these exquisite beauties.

Officers and Directors of the Camellia Society of Santa Clara County, Inc. are as follows:

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## BLACK MAGIC

By Gordon W. Richmond, M.D., President

My job at the Standard Oil Company in Richmond is to take care of people who get hurt in the plant. I mosey around and see various places in the refinery and see how the people work.

The cracking plant uses a process that requires a catalyst for reducing tar residue into smaller molecules that pass off in the form of gas, thus producing greater amounts of gasoline from a given amount of petroleum. There are two methods: A thermal cracker subjects tar to tremendous heat; the other subjects tar to tremendous heat by means of a catalyst. A catalyst is a material that is used in a chemical process that is not a part of the process. This material is a surface catalyst. The charge, I believe, is 600 tons. That amount of material has a surface area larger than the State of California. It goes through the cracker and is carried by elevator through furnace. The sand becomes smaller and smaller in structure, breaks up and chips, gathers iron dust as well as a lot of other substances from the furnace.

I happened to notice the waste catalyst the refinery throws away; it looked like black sand and made me wonder if it might be of any value as a rooting medium for camellias. I took a sample to the chemical laboratory and it tested pH 5, which is an ideal acidity for camellias. The acidity is due to sulfur which is not completely burned out. There was nothing in this waste product that I would consider detrimental to camellias. Moreover, it is absolutely sterile since it has passed through a high temperature furnace of 1200 degrees F, so there is no danger of fungus.

I potted up some camellias, using this black sand in mix in place of sand. They were given no protection from wind or sun; were left outside

from December until May. Eleven plants showed no sunburn or damage; other plants showed sunburn and yellowing of leaves.

I also placed cuttings of a number of varieties of camellias in the black sand, using bottom heat of about 72 to 74 degrees F. It is not necessary to pack this waste sand around the stems because as soon as it is watered, it packs itself. Roots are formed much faster than with any other rooting medium I have tried, including sand, sand and peat, and vermiculite. The root system is vigorous, abundant and compact. Such a large root ball is formed that you cannot get it into a 2-inch pot; I use quart oil cans and gallons.

In August, I put in cuttings of Alba Plena and by early December there was a substantial root ball. However, Alba Plena cuttings put in early in June rooted much better.

Mrs. Roe's Favorite took three months to root.

C. M. Hovey and Debutante are 18 inches tall in 1½ years since cuttings were started.

Cuttings of Flame were rooted in vermiculite and also in this black sand at the same time. The former is small and half-starved, while the latter is husky and vigorous with deep-green, glossy foliage.

Besides camellias, I have rooted a number of things in this material which are supposedly hard to root, such as azaleas, tuberous begonias; they root by the hundreds without lath house or cover. Epiphyllum, holly, daphne start to push out roots in two weeks. Nurserymen tell me that is unheard of. Of course, chrysanthemums root almost in air, but they root well in this material, too.

I had the black sand tested after it had been in the cutting bed for a year, and it dropped from pH 5 to pH 4.5; in other words, it holds its pH for some time.

## WINTER CARE OF CAMELLIAS

By William L. Stoeckle, Concord

In the winter care of camellias, the first thing that comes to my mind is that it is a good idea to fertilize. We feel that feeding helps produce good bloom, and to get plant off to a good start in the spring.

Our feeding program starts in March. We give a fertilization in March, May, July and November. In the November feeding, or winter feeding, we apply about half the amount of fertilizer used at any other time of year. Usually, we wait until we have had one or two good frosts; then we start our feeding program, consisting of cottonseed meal and sulphate of potash. We have never used a liquid fertilizer in the winter time; whether or not that would make any difference would depend on what kind of fertilizer you use. If it is really powerful, it might produce new growth that you don't want. A mild fertilizer would be much better.

One thing that has disturbed us is giving too much fertilizer and producing new growth. This is the first winter in fifteen years that we have felt it was too mild to apply any fertilizer. Most of my plants look as though they are likely to take off. I think we are going to have a lot of new growth rather than scion wood if this mild weather keeps up.

This time of year many of us are out looking over our plants, appraising our disbudding. You have probably missed a lot of buds that should have come off. If we find any that would not be desirable, we remove them. Probably all of us could do a bit of disbudding at this time.

Now that the blooming season is here, this is a good time to start the

framework for a beautiful bushy plant. When you pick your blooms, if you cut the stem, leaving one or two eyes of this year's growth, then you will find you will get bushy plants. When I first started growing camellias, this advice was given me, but I didn't follow it. For years now I have been apologizing for my straggly-looking plants. You have to go in and really do a pruning job. It is quite a shock to the plant the following year, but it surely pays dividends in the long run.

In camellia gardening, good house-keeping really pays off. If you have many camellias, it is difficult to keep them off the ground. In November and December we try to cover our entire lathhouse with a new mulch of pine needles. They make a satisfactory mulch since they produce an acid condition as they break down. Blooms that fall do not come in contact with the soil. If you have flower blight in your soil, you break that cycle of flower blight by keeping blooms and petals off the ground.

If camellia flowers are left on the bush several days, the flowers are larger; but if there is flower blight, the blooms will turn a rusty brown.

I think we have imported plants from almost every place where they have flower blight and up to now we have never had a serious case of it. If you have flower blight pick up the petals and every part of the camellia bloom that falls on the ground, see that they are burned, that they are not taken off the premises. You will not only rid your garden of this blight, but you will prevent its spread.

During the flooding of the past weeks, a neighbor called from his raft in an adjacent yard, "Remember, a camellia needs a good deal of water."

Oftentimes in winter, we feel that the plants are well watered during the rainy season, but if you examine

Mr. and Mrs. Stoeckle are well known as sweepstakes winners throughout California, having made a clean sweep of sweepstakes at Berkeley, Pasadena, and Sacramento in 1948 and having won this honor at many shows in prior years. They are noted for growing quality blooms, distinguished for size, form, color and substance.

The above talk was given at the December 11, 1950 meeting of the N.C.C.S.

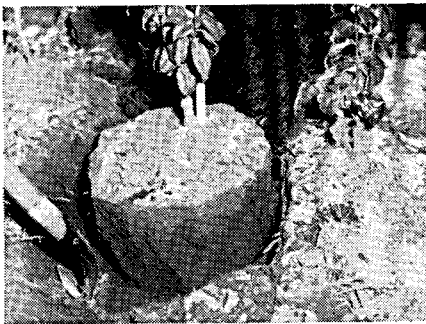
## HOW TO BALL AND BURLAP A CAMELLIA

Courtesy SUNSET Magazine.  
Photos by Herbert V. Mitchell.

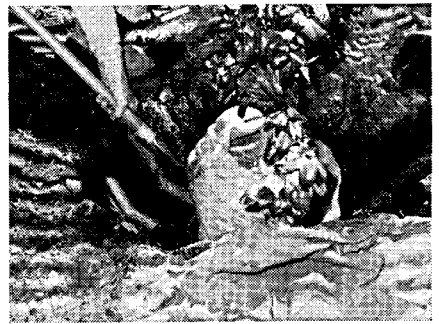
**CAMELLIAS** are never really dormant, but they come closer to it during their blooming period than at any other time. Consequently, this is the best time to transplant them. The plant shown in this operation had a 12-year-old root system and a one-year-old top — it had been grafted the previous year.



1. Decide on size of root ball which will sever the fewest roots, cut straight down with back of spade. In heavy soils, a larger ball can be made than in light soils.



2. Cut down sides of hole to allow room for undercutting and wrapping. Cut half way under root ball on one side, being very careful not to crumble the root ball.

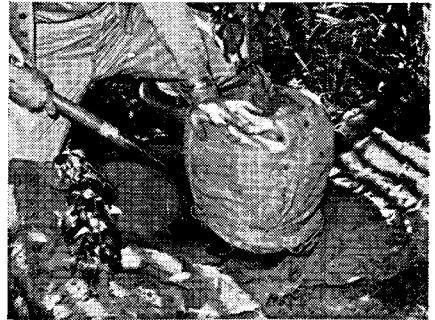


3. Wrap burlap sacking around the ball as tightly as possible. Pin burlap with large nails, pushing nails into the soil and out again. Roll burlap under cut half.

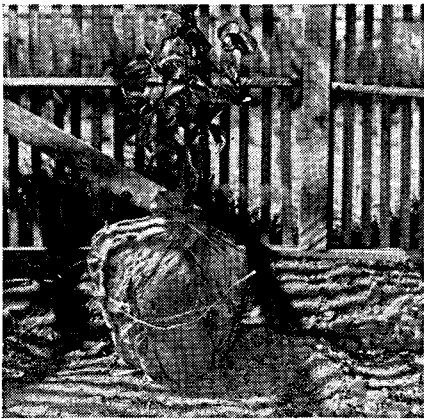




4. Undercut other side. Care must be taken not to break ball at this stage. Lift plant with one hand, using shovel as a lever, with the other hand on root ball.



5. Place plant on an open sack beside hole. Tip ball slightly, remove shovel. Plant is now ready for final wrapping. Fold the sack up to trunk of the plant.



6. Wrap with No. 10 twine. Starting at base of plant, carefully wrap the twine upward to secure the entire ball. Tie the twine frequently so that it will not slip when transported. Secure wrapping and firm tying are important so root ball will not crumble. The photograph at right shows balled and burlapped plant ready for travel to garden of camellia fancier.

## 1951 ANNUAL CAMELLIA SHOW

The Sixth Annual Camellia Show of the Northern California Camellia Society, Inc. will be held on Saturday and Sunday, March 3 and 4, 1951, in the Veterans Memorial Building, Civic Center, Berkeley, Calif.

Members — both husbands and wives — are urged to volunteer their services. Many have talents and abilities which can contribute much toward the success of the show. Full participation will be a source of deep satisfaction. Your society needs your cooperation if it is to fulfill its obligation to you and to the public in fostering an interest in the culture, propagation and development of camellias.

New members can become better acquainted with other camellia enthusiasts and make their memberships more worthwhile by participating fully in show activities.

Men are needed in connection with staging, wiring, and setting-up of the

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**WINTER CARE —**

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the soil, you may find that is not so. Don't neglect watering your plants if they need it.

Everyone who grows camellias, I think, should provide shelter for them when the weather is bad. Camellias in tubs need some kind of shelter. It is disheartening, when one works all year with a new variety and then when it is about to come into bloom, the elements spoil the blossoms.

When we have frost in November, we usually start our repotting program. It is a good idea to do that in the winter time, because that gives the plant two or three months before it starts to grow. I don't think repotting injures the blooms in any way.

I prefer wooden containers.

Probably every person has his own pet potting mix. The type of potting soil we use comes from the Sierras, from under pine trees, a mixture of leaf mold and sandy loam. We add peat moss to that.

If you plan to set out camallias, I think you should pay attention to two things. Location is important. Some camellias are more susceptible to wind than others. That is something you should check with your nurseryman. He generally has some variety that will do well in almost any location that you have available.

Make sure that your camellias are not planted too deep. I think more camellias die from being planted too deep than from any other one factor. When air circulation stops that outside layer starts to rot; you have lost the cambium layer and soon you have lost your plant. If planted too deep, the foliage is likely to turn yellowish. When someone tells me he has a camellia that looks weak, I generally find it is planted too deep. Perhaps one or two branches are underground.

Loading your camellia with fertilizer takes its toll, too.

**CUNNINGHAME'S COLLECTION —**

(Continued from page 5)

article that the person from whom Petiver obtained information probably was James Cunninghame. Opportunity has not been afforded to go over the correspondence that Cunninghame carried on with Petiver, Sloane and Plukenet, but after a brief stay in China Cunninghame returned to England and then went back to China again. In that short time in England there is no question but that he contacted Petiver.

Cunninghame's large interest in plants is evidenced not only by the herbarium specimens he collected, to the number of about 600, mostly of oriental species, now in the Sloane Herbarium at the British Museum (Natural History) but also by a large number of colored drawings of Chinese plants now in the British Museum (Bloomsbury) that were made for him. These drawings are in three volumes, *Miscellaneous Manuscripts*, Numbers 5292-5293-5294 with the general title "Flowers, Plants and Fruits in Colours" by a Native Artist at Emuy; with the names in Chinese; also some drawings of costumes stated to have been sent by Mr. Cunninghame to Mr. Petiver.

In the first volume there are 793 drawings, in the second 422 and in the third 249, making a total of 1464. In the last volume there is a note stating that the plant drawings were made by Dr. Bun-Ko and brought from Emuy (Amoy), China to England by Mr. Charles Brewster in 1701. These passed through Petiver's hands and undoubtedly from them he secured additional information about camellias from the illustrations in them. It is also very likely that Charles Brewster was able to supply information on camellias.

When blooming season rolls around and you pick six-inch flowers, that backache leaves you immediately.

## PERTINENT OBSERVATIONS ON CAMELLIA CULTURE

By David L. Feathers, Past President, Lafayette

Bill Stoeckle told about fertilizing camellias in winter time. It has been my experience that feeding during blooming season induces larger blooms.

Take some cow manure, put it in a bucket and cover it with water; then put that liquid on container-grown plants and on plants in ground at three-week intervals. This type of liquid fertilizer gave me satisfactory results. Bill Stoeckle uses solids. But whatever fertilizer is used, it should be mild in character, like cotton-seed meal.

I started reflecting on the natural environment of camellias. They grow in a hilly region of China, sheltered by trees and fed by trees; that is, by the dropping of limbs and falling of leaves. But how is food made available to the plants? The only way in which the plant could benefit would be from precipitation which carries nutrients from the humus to the roots of the plant. The camellias would receive more food in winter than in summer, so I carried on from there and used winter feeding.

Another thing to emphasize is soil mix. I have had better results from the use of a coarse mixture. I put the mix through a 1/2-inch-mesh screen. If you have homemade compost or if you use manures, when you screen it, don't get mixture too fine for it will cut down aeration and drainage.

Getting back to their natural environment, we know that in nature camellias grow where there is loose mulch. It couldn't be finely packed or screened. So that is a thought to keep in mind.

Another factor is the matter of pruning. Is it harmful to cut off camellias with a stem and a few leaves? I shall give two examples.

Gigantea has a habit of growing all over the place. My plant was in a corner of the lath house and was forced to make a straggly growth. As I looked at it, my reaction was that there was only one thing that would do that plant any good and that was a pair of pruning shears. I pruned it severely and now it is coming around making a bushy looking plant. In another year or so I expect to show a Gigantea that will be a well-shaped plant.

I had a Daikagura that shot right up. It seemed to be the one that wanted to go to town. I put it in full sun, took the pruning shears (they are really fruit-tree shears) and cut off all the shoots except the one upright shoot. Now I have the best Daikagura I have ever grown.

My advice would be: **Don't hesitate to prune.** If your plant has a tendency to straggle, cut it back to where you want it; but **don't cut out the leader,** for if you do, it won't resume that upright growth.

Another point that occurred to me while Bill was talking: There are certain advantages to growing camellias in the ground and growing them in containers.

When you move a container-grown plant, don't move it to a less sheltered position. Don't take it from a sheltered spot and move it to an open spot. It takes time for a camellia to adjust itself to a new environment. You would be surprised at the difference in wind currents, even in moving a plant 10 or 12 feet. If you do move it, try to move it to an equally-sheltered or more-sheltered position.

If you want good blooms, there must be adequate moisture at all

The above talk was given extemporaneously at the December 11, 1950 meeting of the N.C.C.S. As Dave expressed it, "Anything I say will be unprepared, impromptu and ill-advised."

times for good flower development. Why do camellias bloom well after a heavy rainfall? Because they get enough water to send out those blooms. Remember that a high percentage of a flower is water. When it rains, I go out and put sprinkling can under the drain and get rainwater.

There are two seasons in the year when watering is most essential:

- 1) Spring growing-season;
- 2) Blooming season.

Bill also mentioned the danger of planting a camellia too deeply. I whole-heartedly endorse that point. Many times I have had a camellia in

a container where the root system was exposed. It has been my experience that it is better for a camellia to show a few roots than for the roots to be buried completely.

QUESTION: Is November the latest month for fertilizing camellias?

ANSWER: November would be the earliest month. I stop fertilizing about June 1 and then apply again in early part of November when the buds start to show color.

QUESTION: Do you favor grafting?

ANSWER: I think some varieties are better grafted than on their own roots; for instance, White Empress.

## PRIZE WINNERS AND DONORS

Again this season the nurserymen are supplying camellia plants as Door Prizes and Exhibitors' Prizes, with their usual generosity. The names of donors, varieties, and prize winners are as follows:

### October 2, 1950

CHO CHO SAN, donated by DOMOTO NURSERY, 26591 Western Road, Hayward, won by C. T. LeHew, Alameda.

NELLIE EASTMAN, donated by DOMOTO NURSERY, Hayward, won by A. W. Anderson, San Rafael.

C. Sasanqua NARUMAGATA, donated by DOMOTO NURSERY, Hayward, won by J. D. Merritt, Berkeley.

### November 6, 1950

FIMBRIATA SUPERBA (FRED SANDERS), donated by QUATMAN'S NURSERY, 2969 MacArthur Blvd., Oakland, won by H. A. Bogh, Oakland.

STARDUST (DUC d'ORLEANS PINK), donated by BERKELEY HORTI-

CULTURAL NURSERY, 1310 McGee Ave., Berkeley, won by J. D. Merritt, Berkeley.

MRS. TINGLEY, donated by JOHN EDWARDS WHOLESALE CAMELLIA NURSERY, 1585 Bay Road, Palo Alto, won by Ed Carlson, Berkeley.

### December 11, 1950

BARBARA MORGAN, donated by JOHN E. EDWARDS Wholesale Camellia Nursery, 1585 Bay Road, East Palo Alto, won by Judson K. Kirby, Concord, a new member.

GOVERNOR EARL WARREN, donated by JOHN E. EDWARDS, East Palo Alto, won by Dr. Philip N. Baxter, Piedmont.

DEBUTANTE, donated by PRESIDENT GORDON W. RICHMOND, M.D., won by James R. Spratley Jr., Alameda, another new member.

C. M. HOVEY, donated by PRESIDENT GORDON W. RICHMOND, M.D., won by M. K. Vaughan, a guest.

**PRACTICAL SUGGESTIONS—**

(Continued from page 4)

**Effects of Continuous Light, High Minimum Temperature, and High Nutrient Level on Growth of Seedlings and Grafts**

The application of techniques developed by recent research makes possible rapid increase in stock of rare varieties.

Because of the previously-demonstrated stimulative effect of continuous light on growth and flowering of peach seedlings, I believed it would be worthwhile to test the effect of continuous light on growth and flowering of camellia seedlings.

Normal day length was supplemented by light at night from 100-watt Mazda lamps placed in standard reflectors about 5 feet apart and hung 3 feet above the young seedlings in the greenhouse.

Seedlings germinated in the spring of 1946 were not placed under this continuous light for about nine months after germination. Hybrids germinated in October, 1946, were placed under continuous light about six weeks after germination.

Both groups of seedlings were given weekly feedings with a nutrient solution made from a salt mixture packaged under the name of Rancho del Descanso plant food; two level teaspoonfuls of salt mixture to 1 gallon of water.

For small pots up to 5 inches, enough of the nutrient solution was added each week to fill the pots. **The plants were always thoroughly watered at least once between feedings in order to avoid any possibility of burning by accumulation of salts to a toxic level. High moisture level was always maintained.**

Plants in gallon cans were given ½ pint of nutrient solution per week; more might have been harmful.

Minimum temperature of 65 degrees F. was maintained at night; daytime temperatures varied from 75 to

85 degrees F. in winter and as high as 105 degrees F. in summer.

Recent experiments of Dr. Bonner indicate that higher minimum temperatures may be more effective in inducing rapid vegetative growth and early flowering. Seedlings 4 inches high and 4 months old were brought into bud 10 months after being subjected to continuous light at 80 degrees F.

Under the above conditions, growth was rapid and almost continuous; the time interval between growth-cycles was reduced to such an extent that wood of the previous growth-cycle did not really harden up before a new cycle of growth started. In spite of this rapid vegetative growth, buds were observed in December 1947 on some of the seedlings germinated in the spring of 1946. Some seedlings germinated in October 1946 showed flower buds in January 1948, one year and four months after germination. At the end of a year and five months, roughly one-fourth of the seedlings had begun to bloom; and at the end of two years, practically two-thirds of them were in bloom.

The extremely vigorous seedlings would often go three years before they finally bloomed. The weaker-growing seedlings also are slow in flowering.

In other words, through the use of this technique it is possible to shorten the breeding-cycle of the camellia from a period of four to eight years to a period of from one year four months to at most three years.

As hybrids come into flower they are indexed for color, petal number, and size. Some very interesting hybrids have flowered and are being tested thoroughly under garden conditions.

The above technique may also be used to speed up the growth of rooted cuttings or grafted scions, to bring into flower rare varieties years sooner than would otherwise be possible.

Moreover, the camellia fancier may combine this treatment with artificial

winter conditions to bring camellias into flower at any time of the year he chooses. Experiments of Dr. Bonner indicate that camellias which have abundant bud formation as a result of continuous light treatment will flower normally in 2½ to 3 months following the lowering of minimum temperature to 55 degrees F. and resumption of normal day length, which is done when flower buds are about ½ to ¾ inches in diameter and before they show color. Flowers may be even more perfect than those produced under usual outdoor garden conditions, due to elimination of rain and wind damage and insect injury.

By use of the above technique, such varieties as Chandleri Elegans, Gigantea, and Mathotiana Alba which normally flower from January to March, may be brought into bloom before Christmas. For such results continuous light treatment should begin in May or June.

When we have an outstanding new variety, we are interested in the rapidity with which we can propagate. By growing these grafts under continuous light, maintaining a minimum temperature of 65 degrees F., and feeding them once a week with plant food as soon as growth begins to push, we find they are greatly stimulated. Between January and October 1949, we have been able to stimulate grafts to a growth up to 8 feet; that is, in the greenhouse under glass, minimum temperature 65 degrees F., feeding once a week, under continuous light from 100 watt Mazda lamps.

### Varietal Confusion

There is need for agreement among distributors as to a standard line of good varieties; the camellia business suffers from too much varietal confusion.

1) There are too many names for the same variety;

2) Too many varieties are offered.

If three-fourths of the camellia varieties could be made to disappear and growers could concentrate on a few varieties of high quality, possibly All-

American Camellia Selections similar to All-American Rose Selections, a person buying a camellia plant would be assured an outstanding variety.

Following is a list of twelve varieties that are favorites of mine:

Berenice Boddy  
 C. M. Hovey  
 F. G. No. 2  
 Fred Sanders  
 High Hat  
 Margrete Hertrich  
 Mrs. Freeman Weiss  
 Mrs. Howard Asper  
 Mrs. Tingley (Rosea Plena)  
 Pride of Descanso  
 Ville de Nantes  
 Joshua E. Youtz (White Daik)

The latter is a seedling obtained by crossing Daikagura with some unknown variety; I suspect Purity. The shape is much more formal at certain stages than Daikagura. It has mistakenly been called a Daikagura Sport; its registered name is Joshua E. Youtz.

### Creation of Interesting New Varieties

We have been interested in developing new varieties of Japonica. In Southern California, the early blooming varieties are by far the most satisfactory. We are desperately in need of a fragrant camellia, at least as fragrant as Herme and some more so. We also need varieties that are adaptable for espalier work.

Cuspidata has been crossed with Japonica. A few of the objectives of our breeding program are in shape. With the help of Mrs. Lammerts, who does all the pollinations, we are handling 1500 pollinations a year. We are now in the process of back-crossing. The rapid technique described above gives us a generation every two years.

### Use of Cut Flowers with the Camellia

Dr. Bonner did considerable work on lengthening the life of cut flowers. His experiments indicate that the length of life of cut camellia blossoms is greatly lengthened by complete

100 per cent humidity, which can be maintained in a completely enclosed jar. Some of the florist-supply companies of California are now making well rounded containers with a lower section containing a small amount of water, so constructed that the camellias do not touch the water at all. Dr. Bonner's experience has been that camellias can be kept fresh from ten days to two weeks.

## NEW MEMBERS

We are pleased to announce the following new memberships during the period January to December 1950:

Martin O'Brien, San Francisco  
 Leonard C. Caflisch, Oakland  
 Douglas L. Barry, Alameda  
 Haig S. Ashuchian, Lafayette  
 Palomar Park Garden Club, Redwood City  
 H. R. Bryan, Oakland  
 John K. Ballantine, Berkeley  
 Mrs. Paul L. May, Lafayette  
 Wm. R. Dorsey, Oakland  
 Mrs. Bright B. Lasater, Santa Rosa  
 Miss Florence Hughes, Berkeley  
 T. C. Russell, Oakland  
 Anita C. Abernathy, Martinez  
 Angelo Caizza, Oakland  
 Dr. A. Lawrence Gleason, M.D., Oakland  
 Thos. D. Beebe, Berkeley  
 R. Casaleggio, Oakland  
 Lloyd G. Cullen, Santa Rosa  
 Mrs. W. Sayer Snook, Orinda  
 Emil J. Esola, Richmond  
 Albert Fendig, Brunswick, Ga.  
 Dr. David W. McLean, Arcadia  
 P. R. Angell Jr., Berkeley  
 C. F. Jensen, Richmond  
 Clement Adair Roberts, Alameda  
 Alfred R. Scarsi, San Mateo  
 Fred Schorken, Alameda  
 Byard L. Tully, San Leandro

## 1951 SHOW —

(Continued from page 9)

show on Thursday evening, March 1, 1951; Friday morning, afternoon and evening, March 2; and for dismantling the show on Sunday evening, March 4.

A small crew is needed on Friday evening, March 2, to place the aluminum display cups on tables and fill with water.

Typists and typewriters are needed for registration on Saturday morning, March 3.

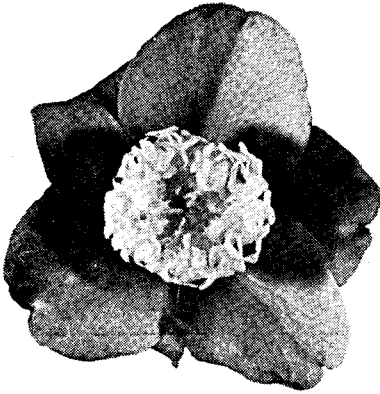
Ladies are needed as hostesses and men to give information pertaining to camellia culture.

Members with sales ability are needed for advance ticket sales, book sales, and explaining advantages of membership.

The assistance of a number of ladies is required for Flower Arrangements.

A mimeographed form for checking the type of assistance you can give will be enclosed with the announcement of program for January meeting. Please check questionnaire and bring it to meeting on January 8. If you are not able to attend, please mail the filled-out form to Gordon W. Richmond, M.D., Chairman, Executive Show Committee, 475 Mount Street, Richmond, California. (Husbands and wives are requested to submit separate forms, showing what services each may be counted upon to contribute for the show.)

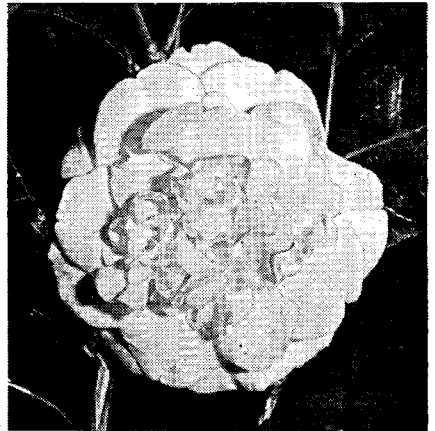
James R. Spratley Jr., Alameda  
 Judson K. Kirby, Concord  
 Louis Walker, Oakland  
 O. I. Schmaelzle, San Francisco  
 Dr. Thomas Schnoor, Piedmont



—Photo by Mitchell.

### TINSIE

A miniature suitable for boutonniere, wine-red outer guard petals, short red stamens tipped with tiny white petals.



### JOSHUA E. YOUTZ (White Daik)

Very large white seedling of good substance, varying from complete double irregular to incomplete imbricated. Valuable for its earliness of bloom and for corsage purposes. Mistakenly called a sport of Daikagura.



—Photo by Mitchell.

### MENA LADNIER (Duncan Bell)

Large, turkey-red complete double irregular with large outer guard petals and a mass of inner petaloids, spatulate and often folded. Originated by Mrs. Wilhelmina Ladnier, Pescagoula, Mississippi.