

SOUTHERN CALIFORNIA

Camellia

SOCIETY BULLETIN

VOL. 10:5

MARCH 1949

Southern California Camellia Society Inc.

ROSTER OF OFFICERS

PRESIDENT

DR. J. WALTER REEVES
893 S. Gainsborough Dr., Pasadena
RYan 1-6242

1ST VICE-PRESIDENT

MR. FRAZEE BURKE
809 Westchester Pl., Los Angeles
FEderal 5905

2ND VICE-PRESIDENT

MR. HAROLD C. HILL
705 No. Granada Ave., Alhambra
ATlantic 2-3829

SECRETARY-TREASURER

COL. CARROLL M. GALE
40 N. San Rafael Ave., Pasadena
SYcamore 6-3740

DIRECTORS

MR. W. L. RIFENBERICK
1715 Ben Lomond Dr., Glendale
MR. ALVIN J. FINK
1909 Buenos Aires Dr., Covina
MR. ALBERT WIRZ
2712 W. Grand Ave., Alhambra
MR. C. D. COTHRAN
584 Vinton St., Pomona
MR. T. H. SEAVEY
2912 Ross Ave., Alhambra

OFFICIAL BULLETIN:

EDITOR: MR. CLAUDE CHIDAMIAN
2203 W. 21st St., Los Angeles

ADVERTISING MGR.: MR. ALBERT WIRZ

2712 W. Grand Ave., Alhambra
CUmberland 3-1027

BUSINESS MGR.: MR. ALVIN J. FINK

1909 Buenos Aires Dr., Covina 1-1752
Bus. 315 W. 9th St., L. A.
TRinity 7405

COMMITTEE CHAIRMEN:

Program: Mr. J. Howard Asper
SYlvan 0-1998
Nomenclature: Mr. William Woodroof
STate 4-1352
Inter-Society Relations: Mr. Victor A.
Wagoner DOuglas 7-1386
Membership: Mr. John A. Hudlow
SYcamore 9-3504
Prizes: Mr. Harry M. Wammack
CItrus 2-0137
Exhibits: Mrs. A. H. Dekker
CItrus 1-2769
Test Garden and Registration: Dr.
David W. McLean DOuglas 7-2703
Research: Dr. Walter Lammerts
Librarian: Mrs. C. M. Gale
SYcamore 6-3740

HONORARY MEMBERS

DR. H. HAROLD HUME, Provost, Division of Agriculture, University of Florida
WILLIAM HERTRICH, Curator Emeritus, Huntington Gardens, San Marino, Calif.

PUBLISHED BY THE SOUTHERN CALIFORNIA CAMELLIA SOCIETY, INC.

A Non-Profit Organization

40 No. San Rafael Ave., Pasadena 2, Calif.

Copyright, 1949

CHANGE OF ADDRESS: One month's notice required. When requesting change of address, kindly send an address stencil impression from your most recent issue as well as your new address.

Not responsible for unsolicited articles or photographs. No material will be returned unless accompanied by postage in full.

All rights reserved . . . no part of this magazine may be reprinted in any form without permission in writing from the publishers.

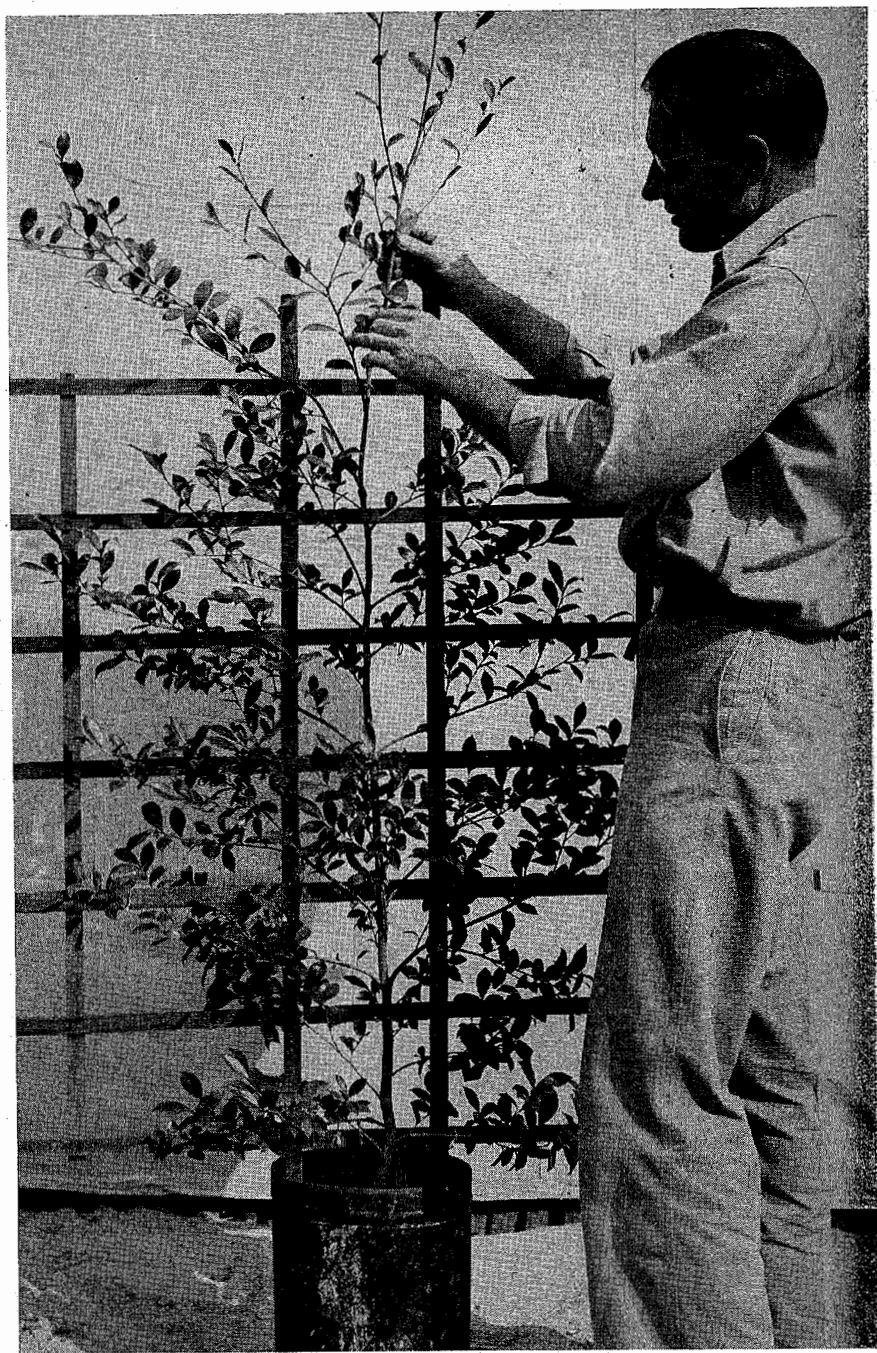
Editorial office: 2203 W. 21st Street . . . Los Angeles 7, Calif.

Published monthly from November to April, and in June and September.



Jack Campbell photo

A 12-INCH POT SPECIMEN OF THE VARIETY MISS LOUISIANA
SHOWS THE RESULTS OF INTELLIGENT CONTAINER CULTURE



Courtesy Valley Garden Supply Co.

DAVE COOK SHAPES AN ESPALIER SASANQUA

ESPALIER TRAINING OF CAMELLIAS

By David Cook

In this year's miserable winter, the worst in sunny California's recorded history, most if not all the plantings of tender subtropicals were burned and blasted beyond all hope of revival. Our showy and beautiful vines seemed to be among those hardest hit, and Jack Frost dealt us all a painful and foul blow there. Our bougainvilleas, thunbergia, passion vine, copa de oro, hibbertia, bignonias, even sweet peas were done in most thoroughly. We left ourselves wide open for it. We planted knowing the material was borderline tender. We let our gardens grow up against and around a background of flowering vines, and what have we? Those vines we so carefully trained and nursed for several years are reposing on the trash pile, not even good compost material. The gaps left in our gardens are as painfully obvious as a lost front tooth.

We are now faced with a choice of courses to follow in repairing our damaged gardens. We may try those borderline subtropicals again hoping to take better precautions in the event of another such winter (provided, of course, that we are able to find such plant material this season), or we may decide on what seems to me the obvious course to follow. If you weren't camellia minded in the first place you wouldn't be reading this bulletin, so why not go whole-hog and use camellias in place of vines. Sure, you can grow them as vines! 'Nuf said?

Espalier training of camellias may be more readily accomplished with some varieties than with others, so let us first consider those camellias which we have hitherto overlooked because of their objectionable ranginess of growth. The variety Marchioness of Exeter, for example, is a beautiful flower, but as a shrub it has a rotten habit of growth. Te Deum, or Dr. Shepherd as the nomenclature birds have it, is another. Almost all the Sasanquas fit in here, too. Purity, General George Patton, Francine, Chandleri Elegans, Gigantea, and many others are more rangy in habit than compact. These are good strong growers, but it takes a stouter brand of hero than most to keep after them with the pruners to make them bushy. We have plenty of compact growers as it is; let's consider some of these rangy types for a moment—they may get us out of an unhappy situation.

Many gardens have a stout and serviceable fence familiarly known as "chain-link" which, while good and strong is not particularly attractive, all things considered. But it is a cinch for covering with camellias. Lots of circulation of air, little stored or reflected heat during summer, and millions of places to tie to. Would such a fence look better with camellias growing on it? Need that question be answered? Or how about the front of the lath house, or across that lattice work at the east side of the patio, or that full length window with the blank wall space on either side? Would it or would it not look better with some espaliered camellias? And, come to think of it, could you or could you not find some use for a few portable espaliers to set around as a color screen when you're resting from your labors in the spring garden? Ever think of growing espaliers in tubs, h'umm?

I'll admit espalier work looks like a job for an expert, but after all, you aren't shy about your prowess with rooting cuttings, or tying on grafts, or inarching, or propagating from seed, so why fear defeat in this fascinating aspect of camellia culture?

The first and most important thing to consider is the exposure to be covered. If we have a warm east wall, we might best stick to the brighter camellia colors as they are in many ways considerably more tolerant of heat than the delicate pinks and whites. Almost without exception we're perfectly safe in choosing

any of the Sasanquas for this exposure. Depending upon the size of the plant you start with, construct a light but strong trellis or lattice work that may be securely attached to the house or wall. One-by-one redwood strips are ideal. These should be nailed to blocks that are attached to the framework or to the house, allowing room between the house and the strips for good circulation of air. A three or four inch space should be sufficient. As the plant grows and requires further support, add to the lattice work to accomodate the new growth. You will find in a few years time, as the branch structure of the camellia becomes hardened, that the plant may become independent of the starting support and guidance will be needed only for the new growth.

A geometric pattern need not be followed, quite often the camellia is more attractive if growth is maintained in just the same flat manner as a clinging vine. The lateral branch growth is valuable here insofar as it may be bent or tied to fill in any gaps in the espalier; beyond that need, however, it should be pruned out so that greater development may occur in the "leader" branches. All ties should be made securely on the trellis but loosely on the plant, so that circulation in the branches is not restricted. Any radical bends should be induced gradually; care must be taken not to place too great a strain upon any branch. As the branch becomes adjusted a further strain may be placed upon it, but always by gentle degrees until it is as you want it.

Once a lateral branch has sprouted "spur" branches you may expect to reap a fuller measure of blooms. These spur branches will, if headed back a bit after blooming, produce still more spurs, and in turn still more flowers for the following season. It's most interesting to note that nearly all of the blooms will be turned right side out so that the espaliered crop may be enjoyed much more fully than camellias grown on the conventional shrub. Incidentally, pest control is greatly simplified by this manner of culture.

A heavily shaded area will be greatly beautified by an espalier of, for example, Alba Plena, Fimbriata, Debutante, or some of the other delicately colored varieties. The new camellias such as Mary Charlotte or Berenice Boddy should be especially suitable for this location, too. The variety Kingyo-Tsubaki, with its unusual and lovely foliage, should be given special consideration because it is interesting even without bloom, but so indeed are almost all the camellias.

I can think of no finer background for a bed of camellias than a living wall of espaliered Chandleris or Francines. And for a bed of late-flowering azaleas you might try an espaliered Purity, or for the early ones the Sasanqua Pink Briar. If you could go for that idea of tub grown espaliers for a portable screen effect, how about using the C. M. Hovey which is usually in bloom about the time of year the sun is beginning to cast a little warmth? Wouldn't you enjoy just sitting in the garden looking at that? No matter what idea appeals to your fancy, you are sure to derive a great deal of pleasure from this interesting and creative mode of camellia culture. It is really simple, and best of all, you can safely replace most of your vines with camellias, one of the very few ornamental plants that "came through" the long-to-be-remembered winter of '49 and presented a wonderful display of bloom within two or three days after the ice retreated!

IN THE NEXT ISSUE

The first installment of G. B. Tirocco's LA CAMELIA

CHROMOSOME NUMBERS IN CULTIVATED CAMELLIAS¹

By Earl B. Patterson, Mary Olga Longley, and Donald S. Robertson

In all higher plants and animals, determiners of inheritance (genes) are carried on certain characteristic structures, the chromosomes, which occur in all cells of the plant or animal body. In dividing cells which have been properly stained with suitable dyes, these chromosomes appear under high magnification as small, darkly-staining bodies whose number and individuality are highly characteristic of a species. A vast number of careful studies indicate that the genes are arranged along the chromosomes in a linear fashion, somewhat in the manner of beads on a string. In sexual inheritance it is the chromosomes (with their content of genes) which are transmitted from parents to offspring by means of sex cells, or gametes.

In each of the body cells of sexually reproducing organisms, there are typically two sets of chromosomes, one set a descendant of chromosomes contributed by the male parent, the other set a descendant of a group of chromosomes from the female parent. These paternal and maternal chromosomes represent pairs; that is, for each paternal chromosome there is a corresponding maternal chromosome, similar in structure, size, and the general nature of its genes. The body cells of such organisms are said to be diploid, or $2n$. Less frequently each chromosome may be represented three, four, five, or more times in each cell, in which case an organism is said to be, respectively, triploid, tetraploid, pentaploid, etc.

In camellias, as in other higher plants, when the plant reaches maturity certain of the diploid body cells may undergo a remarkable series of events which culminate in the production of sexual cells. During this process there is a regular reduction in the number of chromosomes such that only one number of each chromosome pair passes to a given daughter cell. In this way the chromosome number is reduced by one-half. In the anthers of the flowers, such diploid cells, known as pollen mother cells, undergo reduction and give rise to four cells, each with half the chromosome number of the mother cell: A tetrad of pollen grains represents an elaboration of these four immediate products. The male sexual gametes (sperm) are developed in the pollen grains. The production of female gametes (eggs) from egg mother cells in the ovules follows a similar path. In either case, the gametes produced have the haploid, or n , number of chromosomes. The union of male and female gametes at the time of fertilization restores the diploid number and marks the initiation of a new camellia plant.

In most cases, the reduction process is remarkably regular, considering the complexity of the events which it embraces. One of the necessary stages of orderly reduction, however, is that like chromosomes pair intimately two by two. This condition is, of course, ordinarily satisfied in diploid individuals, since each chromosome is represented twice, once by a maternal chromosome and once by a paternal chromosome. If chromosomes are represented an odd number of times (as, for example, in triploids) or if a pairing association involves more than two chromosomes, the assortment of chromosomes at reduction is likely to be irregular and gametes of varying degree of unbalance result. Slight degrees of unbalance often result in reduced efficiency of the gametes while more extreme unbalance results in inviability, which is exhibited as sterility. Thus, a knowledge of the chromosome numbers of various varieties affords some indication of which crosses may be expected to be successful.

¹This study was suggested by and carried out with the cooperation of the Horticultural Research Committee of the Southern California Camellia Society.

The *Chromosome Atlas of Cultivated Plants* by Darlington and Ammal, published in 1945, gives the diploid chromosome number of *Camellia japonica*, *C. assamica* (Assam Tea) and *C. sinensis* (Chinese Tea) as thirty. It lists also two determinations of *C. sinensis* v. *macrophylla*, one indicating a triploid and the other, a tetraploid chromosome number. These numbers were taken from the works of several Japanese investigators, whose reports go little beyond reporting the counts made.

In the present study, chromosome numbers were determined by one of two methods. Wherever possible, the number and behavior of chromosomes were determined by the examination of stages of the reduction divisions of pollen mother cells. For this purpose, buds were collected in the fall of 1947 and 1948. Some of the more double varieties, however, failed to give sufficient anther material, so root-tip material was collected from a small group of these in the summer of 1948. An aceto-carmin smear technique was used in the study of pollen mother cells. However, the smear technique, though frequently used for counting tissue chromosomes, proved unsatisfactory for camellia root tips, so the latter were embedded in paraffin, sectioned, and stained with iodine gentian violet stain.

The following table summarizes the results of pollen mother cell and root tip studies. Counts from the former are under the *n*, or haploid, column and those of the latter under the *2n*, or diploid, column.

LIST OF CHROMOSOME NUMBERS IN CAMELLIAS

SPECIES	VARIETY	CHROMOSOME NUMBER		POLLEN TETRAD Character
		<i>n</i>	<i>2n</i>	
<i>C. japonica</i>	Berenice Boddy	15		
<i>C. japonica</i>	Chandleri Elegans		30	
<i>C. japonica</i>	Daikagura	15		regular
<i>C. japonica</i>	E. C. Tourje	15		regular
<i>C. japonica</i>	Eureka		30	
<i>C. japonica</i>	Jenny Jones	15		
<i>C. japonica</i>	Mrs. John Laing	15		
<i>C. japonica</i>	Lauren Bacall	15		regular
<i>C. japonica</i>	Lotus	15		
<i>C. japonica</i>	Mermaid	15		regular
<i>C. japonica</i>	Mrs. Howard Asper	15		mostly regular
<i>C. japonica</i>	Pink Perfection		30	
<i>C. japonica</i>	Prof. Charles Sargent		30	
<i>C. japonica</i>	Rainy Sun		30	
<i>C. japonica</i>	Ville de Nantes	15		mostly regular
<i>C. japonica</i>	No. 45091/3		30	
<i>C. japonica</i>	Grandiflora	45/2		irregular
<i>C. japonica</i>	Julia Drayton	45/2		irregular
<i>C. japonica</i>	Nagasaki	45/2		irregular
<i>C. maliflora</i>	Betty McCaskill	15		regular
<i>C. saluenensis</i>		15		regular
<i>C. saluenensis</i> hybrid	Apple Blossom	15		irregular
<i>C. saluenensis</i> hybrid	Apple Blossom			
	X Berenice Boddy		30	
<i>C. cuspidata</i>		15		mostly regular
<i>C. japonica</i> X <i>C. cuspidata</i>			30	
<i>C. oleifera</i> (<i>sasanqua</i>)	McIlhenny strain	30		regular
<i>C. reticulata</i>		45/2		very irregular
<i>C. sasanqua</i>		45		regular
<i>C. sasanqua</i>	crinkly flowers	45		regular
<i>C. sasanqua</i>	White Doves	45		regular
<i>C. sasanqua</i>	small white	45		regular
<i>C. sasanqua</i>	Mine-no-yuki	45		regular
<i>C. sasanqua</i>	Shishigashira	30		regular

(Continued on page 15)

THE YELLOW CAMELLIA

"The ships of the old East India Company," writes E. H. Wilson, "not only brought back a rich variety of Camellias but also stories about other colored forms which persisted down to the time of Fortune's visits in the middle of the 19th century. Robert Fortune in his books makes frequent reference to his attempts to secure a yellow Camellia and a blue Peony. The blue peony escaped him, even as it has all subsequent searchers, but in April 1850, when visiting a nurseryman's garden east of Shanghai, he came across one yellow Camellia plant in bloom and bought it. He tells us that the flowers belong to the Anemone or Warratah class, the outer petals being a French white and the inner ones a primrose yellow. Subsequently he safely transported it to England where it was identified as a variety of *C. sasanqua*."

Strangely enough, no trace of Fortune's yellow seems to remain today. Here and there we pick up a few threads of the story in old botanical texts, but the plant itself seems to have disappeared completely.

Many collectors have set out to unravel the mystery of the missing yellow bloom and in future issues we hope to make their findings available to our readers. Mr. Fred Forgy, one of our members in Santa Ana, very kindly sent us the following excerpt from the *Journal of the Horticultural Society of London* (1846) which tells one of Fortune's early and unsuccessful attempts to find the yellow camellia.

"Fortune left England in the spring of 1843," writes Mr. Forgy. "This was not long after the end of the Opium War, and Hong Kong had recently been established as a British settlement as a result of the peace treaty. He spent two years exploring for new plants and it was a rugged trip. At times the thermometer stood at 140 degrees, although he was in an altitude of between 1,500 and 1,800 feet. He returned many specimens to the Horticultural Society but apparently his principal interest was in azaleas and camellias. The quotation is from Vol. I, page 214 of the *Journal*":

Here I had the same difficulties to encounter as I had at Shanghai, owing to the jealousy of the Chinese. Ultimately, however, I discovered several Mandarins' gardens and nurseries, from which I made additions to my collections. All these things were of course out of flower, and some of them leafless at this season of the year; but it will be seen afterwards that many of them proved most remarkable plants. Here, as at most other places, I made many inquiries after the supposed Yellow Camellia, and offered ten dollars to any Chinaman who would bring me one. Any thing can be had in China for dollars! and it was not long before two plants were brought to me, one of which was said to be light yellow, and the other as deep as the double yellow rose. Both had buds upon them, but neither were in flower. I felt quite certain that the Chinaman was deceiving me, and it seemed so foolish to pay such a sum for a plant which I would in all probability throw away afterwards, and yet I could not lose the chance, slight as it was, of possessing the yellow Camellia. Moreover, there was a written label stuck in each pot, both of which were old, and apparently the labels and writing had been there for some years. At last we compromised the matter; I agreeing to pay half of the money down, and the other half after the plants had flowered. On these conditions I got the Camellias, and took them with me to Hong Kong. It is almost needless to say that when they flowered nothing was yellow about them but the stamens, for they were both semi-double worthless kinds.

On the following pages we have reproduced Fortune's yellow camellia and its description as given in *Curtis' Botanical Magazine*, December 1, 1859. It was very kindly supplied by Mr. Ralph S. Peer, another of our members who has long been interested in solving the mystery of the missing camellia.



CAMELLIA SASANQUA; var. *anemoniflora*.

Sasanqua; *Anemone*-flowered var.

Nat. Ord. CAMELLIACEÆ.—MONADELPHIA POLYANDRIA.

Gen. Char. (*Vide supra*, TAB. 2745.)

CAMELLIA *Sasanqua*; fruticosa v. arborescens, ramulis petiolisque puberulis, foliis ellipticis v. ovato-lanceolatis acutis subtus subaveniis, floribus inodoris, petalis (albis) obcordato-emarginatis vel bilobis, staminibus glabris, ovario lanato, stylis connatis, capsula pubescente. *Seem.*

CAMELLIA *Sasanqua*. *Thunb. Fl. Jap. p. 273. t. 30. Seem. in Trans. of Linn. Soc. v. 23. p. 343 (where copious synonyms are given).*

β. var. flore semipleno. *Lind. Bot. Reg. 1815, t. 12; 1827, t. 1091. Seem. l.c. p. 344, not Sims in Bot. Mag. t. 2080, which according to Seemann is Thea maliflora, Seem. l.c. (Camellia rosæflora, Hook. Bot. Mag. t. 5044).*

γ. *anemoniflora*; foliis ovato-lanceolatis longe acuminatis, floribus plenis, petalis exterioribus (albis) obovato-oblongis bilobis, staminibus fere omnibus in petalos spathulatos (flavos) exterioribus multo brevioribus mutatis, stylis (rarissime abortu 4) liberis v. connatis. *Seem. l.c. p. 251. (TAB. NOSTR. 5152.)*

YELLOW Camellia. *Fortune, Journ. to Tea Country, p. 339. Gard. Chron. for 1859, p. 807.*

This is one of the many interesting plants which our Gardens owe to Mr. Fortune's successful voyages to China. That active traveller considered it to be a variety of the Waratah Camellia group; but Dr. Seemann, with more justice, considers it to be a variety of *Camellia Sasanqua*. "Hitherto," writes Dr. Seemann, in an Addendum to his elaborate synopsis of the genera and species of *Camellia* and *Thea*, "the Waratah form of *Camellia* was only known to occur in *C. Japonica*; and the yellow colour is certainly quite a new feature in this genus, deserving the greatest attention of Horticulturists. That *C. Sasanqua* has a tendency to assume a yellow tinge is evident even from the single-flowered state, as will be seen in the figure in the Bot. Reg. t. 942, where the outer series of stamens displays the primrose-colour peculiar to the *Yellow Camellia*."

THE EDITORIAL

He didn't know anything about camellia names, so someone pinned a show ribbon on him reading NOMENCLATURE COMMITTEE and before he could catch his breath that woman rushed up to him and held the little single no 'count red camellia under his nose.

"Can you tell me the name of this—it has been in our family for over fifty years and we've always called it Mother Finley's Red—but I'm sure it must have some other name." Just like that—in one breath.

He took the flower and examined it carefully. Yes, it was a camellia; he was quite sure of that. After all, this was a camellia show. He counted the petals and stamens, measured the leaves and calyx. He held the bloom off and squinted at it with one eye closed, and his thick glasses made him seem twice as wise as he really was. After mumbling professionally to himself for a long time, he looked up at the breathless lady and said, "Mam, this here camellia is a Biji Komo."

The lady was so delighted that she even forgot to thank him, but rushed off in three directions with her new-found treasure.

A few minutes later another lady came up with a miserable little variegated flower. It too had "been in the family" for generations, planted by an old Nigerian king (so the story goes) who was a yard man on her pappy's plantation.

Our nomenclature expert went into his act, and after a decent interval announced to the awe-struck lady that her camellia was without a doubt the variety known as Biji Komo.

Witnesses say that some time later the two ladies met. When the second lady proudly displayed her variegated Biji Komo, the first was somewhat surprised. Then she saw the light. "But why of course, my dear," she said, "yours is just a sport from my plant. I have the *original* Biji Komo."

Heaven only knows how many camellias were christened Biji Komo that day. Our Southern visitors tell me that all through the South now whenever they've got a no 'count camellia they can't identify, someone is bound to say—Why sure, I know what that is, it's a genuine Biji Komo.

We were talking about new camellias, K. Sawada and I, as we went through the Test Garden. And we both agreed that there were certainly enough Biji Komos on the market today. "The growers must realize," said Mr. Sawada, "that they are only hurting themselves when they continue to introduce and propagate camellias that are inferior to or duplicates of the best established varieties. In a survey made last year within a 40-mile radius of Mobile, it was found that 3½ million camellia cuttings had been started. Such overproduction, particularly of inferior material, is bound to catch up with us in a few years. Then it will be just as it was a hundred years ago. People will tire of camellias because they have become so common, so alike."

By the time we had passed through the Test Garden we both agreed that new blood must come into camellia breeding, that we had virtually exhausted the common possibilities of the Japonicas. The early bloom of the Sasanquas, the iridescent beauty and size of Reticulata, the fragrance of Saluenensis, and the unique qualities of all the other species must be fused and refined to make the camellia of tomorrow. Of course there are many difficulties; every beginning is difficult. But those who lead the way won't ask—Where to? What next?

CLAUDE CHIDAMIAN

GROWING CAMELLIAS IN CONTAINERS¹

By Claude Chidamian

The Chinese had been growing camellias in containers for many generations when, early in the eighteenth century, the first potted specimens were added to the cargo of a merchant ship bound for Europe. There is little actual knowledge of these first potted plants that made the long sea trip from the Orient, but we do know that they set the pattern for camellia culture in the West.

Camellia culture in Europe and northeastern United States was and still is almost wholly dependent on container-grown plants. Of course, climatic conditions necessitated the practice, but we must not forget that it was the remarkable adaptability of the camellia to this form of cultivation that permitted it to become one of the most popular greenhouse plants ever grown. Indeed, outdoor plantings in Europe and America were almost invariably begun experimentally with potted greenhouse plants that found the regions favorable and flourished.

To some, camellias in pots and tubs may seem out of place in those areas where they grow readily as garden shrubs. Yet, an increasing number of growers in the southern and western "camellia belts" are beginning to go back to where the whole thing started—back beyond the potted greenhouse plants, back to the old Chinese gardens where camellias have been grown in containers for centuries.

It is not from sentiment that they are reviving the ancient ways; there are a dozen practical reasons for this returning interest:

1. Camellias, unlike many large flowering shrubs, are exceptionally handsome, decorative, long lived, and well suited to pot culture.

2. They will thrive indefinitely in relatively small containers and do not mind being root-bound, provided they are fed and watered regularly.

3. The composition, fertility, acidity, moisture and drainage of camellia soils can be more easily controlled in containers.

4. Potted camellias can be enjoyed in gardens where natural conditions (soil, drainage, etc.) are unsuitable.

5. Container-grown plants have a tendency to bloom earlier in the season, at an earlier age, and more profusely than plants of the same variety in the ground.

6. Potted camellias take less space in the garden and are thus particularly desirable for collectors whose growing space is restricted to a single city lot.

7. Camellias in containers can be moved into the greenhouse, patio or sun porch during the blooming season to protect the blossoms from rain or frost. In summer, the plants can be moved to protected locations to avoid hot sun and drying winds.

8. Container-grown plants can be arranged and rearranged in the garden to create any desired effect. Varieties blooming simultaneously may be massed for special displays, the bloomed-out plants being constantly replaced by later blooming varieties.

9. Potted camellias may be used freely to accentuate the general landscape design: at steps and entrances, on walls and terraces, and in patios and porches.

¹In answer to many requests we are reprinting this article from the *American Camellia Yearbook*, 1947, pp. 90-99. The material was first presented in a talk given by the author at a meeting of the S.C.C.S. last season.—Ed.

10. The potted camellias may even be used as house plants if the room temperature can be kept between 35° and 50° during the blooming season and the humidity held reasonably high. Successful amateur collections housed in ordinary sun porches in Iowa and Illinois have fully demonstrated the adaptability of the camellia as a house plant.

11. Camellias in containers are as easily moved across the country as across the garden.² Wherever you go, your camellias can go with you.

12. A camellia collection is an important investment that increases in beauty and value with the years. Plants in the ground are an investment that can seldom be recovered, but potted camellias are always a valuable piece of portable property easily and profitably disposed of at any time.

Containers

Camellias can be grown in clay pots, metal cans, or wooden tubs and boxes. Of these the tin cans are the lightest, least expensive, and most easily managed. The soil has less tendency to pack in cans, and the non-porous sides of the tins retain soil moisture. When painted with a dark green enamel (the tar-dipped nursery tins are unattractive) these gallon and five-gallon cans will last about five years. It is important to have the paint extend inside the can just below the water line; otherwise, the unpainted metal will quickly rust through at this point. Sizable holes must be punched in the sides of the cans to allow for drainage and circulation of air. Holes in the sides are less likely to become plugged or to harbor pests than those made in the bottom. Three or four 1-inch holes in the sides of a gallon can will furnish ample drainage; twice as many will be needed for a 5-gallon tin. Large drums of galvanized metal, 15- to 50-gallon capacity) have been used for large specimens with good results.

Wooden tubs and boxes made of heavy cedar, cypress or redwood are somewhat more durable than cans, but very much more expensive. They provide better insulation from heat for the camellia root system and retain moisture even better than tins. This makes them particularly valuable for use in hot, dry areas. Eventually, of course, boxes must be used for the very largest specimens in every collection. It is advisable to paint these wooden containers in the same way as the cans, giving particular attention to the inside surfaces at the water line where the wood rots most quickly.

"Standard" red clay pots are perhaps the most attractive, durable, and suitable containers for camellias in amateur collections. They should be neither glazed nor painted, for the porosity of the pot promotes aeration of the soil and encourages root growth. Clay pots generally cost less than the best grade of wooden florist's tubs of the same size, and more important still, they may be used again and again without deterioration.

There is little doubt, however, that collections in clay pots require more attention than those in less porous containers; but excepting unusual climatic or cultural conditions, the additional care required is very slight indeed. Collectors should use tins for small plants, thus avoiding the many difficulties encountered in handling the smaller sizes of clay pots. It will be found that the larger pot sizes are as easily managed as any container, and the problems of controlling moisture, etc., decreases as the size of the pot increases. The best size for the amateur to begin with is the "standard" 12-inch pot. This size has

²If plant quarantine restrictions are complied with.—Ed.

NEWS NOTES

STANLEY W. MILLER, President of the San Diego Camellia Society, makes the following report on the Second Annual Show held February 19-20 at Balboa Park. Attendance figures topped 3,000, which is far above last year's mark. Awards in the three major classes went to Mrs. Ann Oatney for the best flower in show, Fimbriata; to Dr. R. W. Tellum for the most outstanding arrangement, a design featuring Alba Plena; and to Mrs. Mary Blottin for the best container grown plant, a well-shaped super-flowered Flame.

Mr. Leslie Marshall and Mr. E. P. Shepp judged blooms and plants; Mr. W. Allen Perry, Mrs. A. N. Rainford, and Mrs. George M. Riblet judged the flower arrangements. Harvey F. Short was General Chairman of the show.

"We are indeed fortunate," writes Mr. Miller, "that the weather changed during the week preceding our show, thus providing us with an ample supply of blooms which we were totally unable to foresee a week before the show date."

DURING CAMELLIA PLANTING WEEK, February 14-19, sponsored by the Sacramento Camellia Society, the group sold 13,048 camellias in various stores and nurseries throughout the "Camellia City."

WHILE UNPRECEDENTED AND CONTINUED COLD WEATHER postponed the Fourth Annual Camellia Show of the Northern California Camellia Society three weeks to March 19-20, a record warm spell in the Southern states made camellia history. Our correspondent in North Carolina, L. Dow Pender Jr., writes: "We have had the mildest season this winter that I can remember. Just after Christmas the mercury dropped to 14 degrees and hovered in that vicinity for three or four days, but that is about all the cold we have had. It has rewarded us with an unusual quantity of flowers and has upset many of our previous records."

"We are disproving many of the formerly accepted theories regarding the hardiness and adaptability of camellias anyway. Many of the varieties which were once regarded as worthless here have proven good, and we aren't basing our judgment on this mild winter alone. Even Reticulata, usually relegated to the greenhouse in the South, has bloomed outdoors with us this year. I've had four exquisite blooms on my small plants. The first created quite a sensation as I believe it to be the first Reticulata ever flowered in Raleigh or this vicinity."

TEMPLE CITY AND ITS NEW CAMELLIA SOCIETY join forces in a week-long Camellia Festival from March 5-12. Climax of the event is a unique camellia parade on March 12.

THE POMONA VALLEY CAMELLIA SOCIETY 1949 show committee consisted of Mr. Paul Hartman, *Exhibits Chairman*; Mr. C. D. Cothran and Mr. Ellsworth, *Nomenclature*; Mr. Johnson, *Judging and Awards*; Mr. Thomas, *Non-competitive Nursery Exhibits*; Mr. E. R. Bailey and Mr. A. L. Schmekel, *Publicity and Printing*; Mr. V. Aronovici and Mrs. G. Pugsley, *Finance and Gates*; Mrs. Emery, *Flower Arrangements*; Mr. P. Hartman and Mr. E. R. Bailey, *Housing*; Mr. Johnson and Board members, *Reception*; Mr. Greer and Mr. O'Conner, *Transportation*.

HAVE YOU PAID YOUR 1949 DUES? Members are requested to attend to this at their earliest convenience if they wish to continue receiving the Bulletin and other benefits of the Society. Dues for all classes of membership is now \$4.00 per year. Send your check or money order to Col. C. M. Gale, 40 N. San Rafael Ave., Pasadena 2, at once.

Camellias

ALL THE NEW AND RARE VARIETIES,
TRUE TO NAME AND REASONABLY PRICED.

McCaskill Gardens, 25 So. Michillinda Ave., East Pasadena

CAMELLIAS

From Gallon Containers to Specimen Plants

ALL CHOICE VARIETIES

BOORMAN'S CAMELLIA GARDENS

1956 E. Broadway, Temple City, California • Atlantic 6-3401

VISITORS WELCOME

Fine Camellias . . .

Hundreds of varieties, Choice and Rare Camellias

Ornamental Trees and Plants

Roses, Tree Peonies, Flowering Fruit Trees

Patio and Garden Furniture and Equipment

Imported and American Giftwares

Seeds, Bulbs, Tools, Garden Supplies

PAUL J. HOWARD'S California Flowerland

11700 National Boulevard

•

Los Angeles 34, California

AMONG THOSE PRESENT

EARL B. PATTERSON, MARY OLGA LONGLEY, AND DONALD S. ROBERTSON are associated with Dr. James Bonner in the Kerckhoff Laboratories at Cal-Tech. The chromosome number study presented here is typical of the basic problems which must be solved before free hybridization of camellia species can be realized.

DAVID COOK, genial manager of the Valley Garden Supply Co., is one of our regular and most popular contributors. His particular knack of discussing practical subjects in a practical way has given him a real following among camellia fans.

JACK CAMPBELL is the photographer who made the very excellent copies of the old plates describing *Sasanqua anemoniflora*. We are planning a series of reproductions of historical camellia illustrations, together with some of Mr. Campbell's studies of "live" blooms. Clear 8x10 black and white prints of the old plates reproduced in this issue, suitable for framing, are available from Mr. Campbell at \$1.00 each postpaid (\$2.00 for both flower and text). Address orders to Jack Campbell, 2302½ W. 21st St., Los Angeles 7, Calif.

CHROMOSOME NUMBERS . . .

(Continued from page 6)

The diploid varieties of *C. japonica* listed in the table have a mostly regular pairing of the chromosomes and the two cell divisions that produce four pollen grains (the pollen tetrad) from the pollen mother cell are likewise generally regular. It was possible, however, to find infrequently two or four unpaired chromosomes, and less frequently a pollen mother cell produced only two pollen grains (a dyad) or a pollen tetrad with one or two micro- in addition to the four macro-pollen grains.

Three triploid varieties were found in the *Japonica* group. In these chromosome pairing was irregular, and the mother cells generally produced more than the four pollen grains characteristic of a normal tetrad. These irregularities are the forerunners of pollen sterility since most of the pollen grains so produced have an unbalanced chromosome complement. The triploid chromosome number in these three varieties suggests that a diploid pollen grain from a pollen dyad may have functioned to produce plants with an extra set of chromosomes.

Three other species are diploid ($2n=30$), and the chromosome behavior during the divisions of the pollen mother cells to produce pollen is regular.

Two tetraploid plants were found, *C. oleifera* and a variety of *C. sasanqua*. The pollen mother cell study of both indicated balanced chromosome complements and regular pollen production.

The chromosome number of five distinct forms of *C. sasanqua* differed from the tetraploid variety Shishigashira in apparently being hexaploid ($2n=90$). The high chromosome number makes accurate counts difficult, but the clearest figures in each lead to the conclusion that all belong in this high chromosome class.

A variety that was thought to represent *C. reticulata* proved to be a triploid of the most sterile type. There is little or no pairing of the chromosomes, and instead of the two characteristic divisions of the pollen mother cells, it appears that the first is omitted. Pollen dyads are produced, but due to the loss of chromosomes into the cytoplasm these two macro-pollen grains may have from few to many micro-pollen grains associated with them.

GET YOUR NEW CAMELLIA BOOK

HOW TO GROW THEM

Sponsored by the Oregon Camellia Society

Paper Cover \$4.00 • Cloth Bound \$5.00

Better Gardens

2446 HUNTINGTON, SAN MARINO

SY. 2-7911 OR AT. 2-9104

Azaleas - Camellias - Gardenias Cymbidiums

MARSHALL'S CAMELLIA NURSERY

935 N. Rosemead Blvd.

San Gabriel

ATlantic 6-0452

CAMELLIAS . . .

and Shrubs of Distinction

CYMBIDIUMS

CLARENCE S. HEARN NURSERY

2021 Santa Anita Ave., Arcadia, Calif.

Phone DO 7-2349

Favorite Camellias . . .

GLEN 40 - ALBA PLENA - DEBUTANTE - PAX - RETICULATA - HIGH HAT

Whichever One is Yours—Remember—All Camellias Do Better on

LIKWID GRO

At All Good Garden Shops

PESTLESS PRODUCTS CO.

4124 Bandini Blvd., Los Angeles 23, California • AN. 7219

This study has shown that camellias occur in diploid, triploid, tetraploid, and hexaploid forms. The triploid plants in this sample are the only ones that have unbalanced chromosome complements, and the supposed form of *C. reticulata* has a chromosome behavior that suggests it is a hybrid between a diploid and a distantly related tetraploid species.

The authors wish to express particular appreciation to Dr. A. E. Longley, U. S. Dept. of Agriculture and California Institute of Technology for supervision during these studies. These investigations were also aided by the close cooperation of Prof. Bonner of this Institute and Dr. Lammerts of the camellia gardens at Rancho del Descanso. And finally, acknowledgment is due the directors of these gardens, whose generosity in making available material from their specimen collection made this study possible.

CAMELLIAS IN CONTAINERS . . .

(Continued from page 12)

a 5-gallon soil capacity and will easily accommodate a vigorous six- or seven-year-old camellia for the next five years. The next size pot to use is a 16-inch, which may hold the plant as long as ten years. The final pot should be a 20-inch, which will probably be good for another ten years of growth. After spending twenty-five years in pots, the plant will be ready for a 24-inch box.

Camellias will live indefinitely in containers as long as they are of sufficient size to take care of the roots. (The ratio of 6 square inches of root space for each foot in height has been advocated by some growers.) There is no other plant that stands being root-bound so well as the camellia, provided it is fed and watered regularly. European growers have kept camellias in containers for as long as fifty years, the plants being 8 to 10 feet high by 6 to 8 feet across. C. M. Hovey, describing his famous collection in *The Garden* (1884), wrote: "Some of the stems of our plants measure thirteen inches in circumference at the ground, and are growing in twenty-one and twenty-eight-inch tubs." My own collection of several hundred container-grown camellias includes a number of plants over twenty-five years in age and 8 feet in height, which are growing and blooming freely in 20-inch clay pots.³

The requirements for growing camellias in containers successfully are not many, but imperative. Shade, moisture, rich soil, drainage—these cover the essentials. But the many practical aspects of these basic factors must be discussed more fully.

The best time to pot or repot camellias is during the months of January and February. The loss of a few blooms at this time is outweighed by the advantage of giving the plants fresh soil while they are preparing to make their new growth.

Judgment must be used in selecting the plants to be repotted. A pot-bound plant must be placed in a larger container or normal growth and bloom will cease, but an immature plant will resent any unnecessary handling.

³Perhaps one of the finest container-grown collections in the West is that belonging to Dr. J. Walter Reeves, president of our society. For sheer size and perfection of form his plants represent the ultimate in this method of culture. Anyone interested in the subject should particularly observe these plants when they are exhibited at the local camellia shows.—Ed.

Growers of Fine Camellias

GRAFTED RARE VARIETIES



Wholesale Only

RANCHO DEL DESCANSO

LA CANADA, CALIF.

The place to go for FINE CAMELLIAS!!

including the recent introductions and the best of
standard varieties.

— ALL SENSIBLY PRICED —

Don't forget to raise a **HI-HAT**, to salute your **DEAREST**.

COOLIDGE GARDENS

889 N. FOOTHILL BLVD. • EAST PASADENA • PH: SY 4-1121

Open Sundays 10 a. m. to 5:20 p. m. — Ample Parking Space

Camellias

WE INVITE YOU

Orchids

to visit our lath house and inspect our large selection of fine
Specimen Camellias and also smaller sizes. We also have a
number of Orchids in bloom in our green house.

DON and BLANCHE MILLER

in rear, 614 North San Gabriel Blvd., San Gabriel, Calif.

Drive in To Green Lath House in Rear; Mailing Address 620½ No. S. Gabriel

Since shifting involves considerable labor, the practice of moving plants up to containers several sizes larger than the old one is common among amateurs. The nursery custom of shifting plants to a pot only one size larger is prompted by a need for economy in space and materials that does not concern the collector. The danger of over-watering small plants in large pots is also greater in the nursery where unskilled labor usually performs such tasks. For the amateur the best practice is to shift from a gallon tin (or 6- or 8-inch pot) to a 5-gallon tin or 12-inch pot, and then to continue shifting four sizes larger each time, as previously described.

Soil

A good potting soil for camellias is made by composting equal parts of rich topsoil, coarse oak leaf mold, and well rotted cow manure. These ingredients should be piled in alternate layers in a long, narrow mound, with a generous sprinkling of cottonseed meal between each two layers. Lime or other composting chemicals must never be used in preparing camellia soils because they destroy the essential acidity of the mixture. The heap should be turned and stirred with a pitchfork every two or three months to aid the mellowing process. Stack the pile compactly after mixing and water thoroughly to aid fermentation and decomposition. From six months to a year are required to mellow this compost; then it will be rich and dark in color, light and friable in texture, sweet-smelling, and soft and moist to the touch.

Just before potting add an equal amount of thoroughly dampened peat moss to the compost and about 10 per cent granulated charcoal (poultry charcoal is excellent) to the whole mixture, and mix well. The charcoal is used in preference to sand or pea gravel because it is lighter and aerates the soil. Sand and gravel loosen the soil but do not aerate it. Lacking air channels in their particles, they are like tiny billiard balls in the mixture, unable to assist directly in soil aeration.

For ease and convenience in working, the moisture content of the soil should be checked before potting. Too wet a soil will pack too tightly, and too dry a soil will be difficult to wet again. Squeeze the soil in the palm of your hand and if it forms a ball that will just hold together, it is satisfactory.

Potting

Before potting, gather all materials together and see that the plants to be shifted are moist. The pots to be used, whether new or old, should be thoroughly soaked in water and cleaned with a stiff brush to remove any dirt or impurities. Taking a clean 12-inch pot, let us follow the necessary steps in potting a camellia from a gallon can:

1. Place a large piece of broken pot in an arching position over the drainage hole.
2. Add a layer of smaller pieces an inch or two deep in the bottom of the pot.
3. Press an inch-thick layer of damp sphagnum moss down over the drainage to prevent the soil from mixing with it.
4. Add enough potting soil over the moss to insure proper elevation for the plant ball, the top of which must remain at soil level.

EVERYTHING FOR THE GARDEN

in

Hardware, Fertilizers, Sprays, Bug Bait, Bulbs, Flower Seeds,
Vegetable Seeds, Grass Seeds, Orchids, Bedding Plants
Peat, Leaf Mold, Bean Straw Ground, Cottonseed Meal, Camellia Food,
Garden Books

CAMPBELL SEED STORE

137 West Colorado, Pasadena, California

WE DELIVER

SY 6-4356

WE MAIL

CARTER'S CAMELLIA GARDENS

525 EAST GARVEY AVENUE, MONTEREY PARK, CALIF.

Standard and Rarest Varieties,

Including Strawberry Blonde, Virgins Blush and Light Pink Sport
of Chandleri Elegans

N UCCIO'S URSERIES

Growers of Rare Camellias & Azaleas

OVER 650 VARIETIES

3555 Chaney Trail, Altadena, Calif.

SY 4-3383

Available Now — Shin Akebono, Mrs. Howard Asper — Ville de Nantes

Camellias Our Specialty

VALLEY GARDEN SUPPLY CO.

11239 Ventura Blvd.—North Hollywood—Phone SUNset 2-2165

5. Cut the can down on two sides and carefully lift out the plant ball and set it on the soil in the pot adjusting the elevation of the plant to leave about 2 inches vacant at the top of the pot for watering when finished.

6. Center the plant in the pot and pack additional soil about it firmly, using a piece of lath to eliminate air holes and to insure contact between the new soil and roots.

Repotting in large wooden or metal containers should follow exactly the same steps; but since these containers have many drainage holes, some growers eliminate the first three steps above. Of course, the amount of drainage material used in clay pots must be proportionately increased with the size of the pot.

By this method of over-potting, vigorous plants are given ample soil in which to develop freely. Weak or sickly plants, however, should never be moved up in this way. Young plants that have made little growth the previous year and failed to mature their flower buds or those that have a yellow unhealthy appearance must be treated differently. Using a 9-inch pot, repeat steps 1, 2 and 3 of the potting directions. Then remove the plant from its container and loosen all the unused, sour soil from the plant ball until good sound roots are uncovered. Prune away any weak or diseased growth from the top of the plant to bring it in balance with the roots. Then, using dampened peat moss instead of soil, proceed to pot the plant firmly in pure peat moss. Plants handled in this way quickly recover by forming a vigorous new root system in the moist peat and are usually ready for a normal shift in two seasons.

When the potting is finished, the plants should be placed in their permanent location with a tile or some bricks or gravel between the bottom of the container and the soil. This keeps the drainage holes from becoming clogged with soil and greatly reduces rotting of box and tub bottoms. This precaution is not necessary for tins, however, because their drainage holes are in the lower sides of the can and not in the bottom.

Watering

The practice of watering pot plants depends upon the nature of the plant's root system, its age, location, and the season of the year. A thorough soaking is necessary after potting or repotting to establish contact between roots and soil. The fresh soil at this time will absorb a great deal of water without injury to the plant. For the first few weeks after shifting, the original soil ball will dry out more rapidly than the new soil around it because it is full of roots. To prevent wilting it may be necessary to supply additional water, since there are not enough roots in the new soil to keep the plant adequately supplied with moisture. Further applications of water will increase in frequency as the plants become more and more pot-bound.

Potted camellias seem to grow best when uniform amounts of water are always present in the soil. This condition can best be achieved by watering the plants heavily at infrequent intervals. The soil should be allowed to dry to a medium point, then the heavy application of water pushes out the carbon dioxide accumulated in the soil, and as the water drains away, new air circulates into the soil from above. By this means also, roots grow throughout the entire soil mass and an occasional drying of the upper crust causes no damage. Frequent shallow waterings have the reverse effect on root growth and do not favor proper aeration of the soil.

The critical period in watering camellias occurs during the months of March, April, and May. The plants are in lush growth at this time and will need much more water than at any other time of the year. The practice of watering camellias, however, is not a matter of formulas or schedules but one which calls for much common sense and careful observation. There is only one reliable rule of thumb that I would recommend: If you think the soil in the pot will go one more day, the chances are that it should be watered at once.

Syringing

During the summer and other special seasons, potted camellias need a high degree of atmospheric humidity to mature their growth and buds properly. Increasing the amount of moisture in the air by means of a fine spray (syringing) reduces the amount of water lost by the plants through their leaves. With this increase in humidity comes a reduction in temperature, too, for as the water evaporates it cools. Frequent syringing also keeps the foliage free of dust, controls red spider, and improves the appearance of the whole plant.

The foliage is best sprayed early in the morning or at evening to avoid the full sun of the day. Leaf temperatures during the day are generally higher than the surrounding atmosphere and only by free transpiration can the leaves keep cool. When a film of water is sprayed over the leaves in midday, it interferes with this normal transpiration and the leaf temperature may increase to a point of scalding or burning. Humidity may be maintained more safely in the hottest part of the day by frequently wetting the walks and ground area around the pots.

Syringing is not watering. It is intended only for the foliage and not for the roots of the plants. All that is needed is to wet the leaves and branches with a mist of water, not to fill the pots with drippings that will give plants in need of water the appearance of being wet. Once this is understood, syringing becomes one of the most valuable practices in camellia culture.

Fertilizing

Potted camellias must be given adequate fertilizers to replace the nutrients leached out by frequent watering or by absorption into the plant. Needless to say, plants recently shifted into a rich potting soil will not need food for some time. The limited root area in containers increases the harmful effects of over-fertilizing; consequently, food must be added sparingly and only when needed.

Feeding schedules will vary according to the locality and experience of the grower. It is a good idea, however, to give the plants a light feeding in December to insure a supply of food for the first flush of growth. This first and most important growth cycle depends largely on stored plant food for its nourishment, and the first feeding should anticipate this need. The second application is made in February to stimulate the new growth that is just beginning. The third and last feeding is given in April to meet the needs of the new growth and subsequent bud development. Later feedings are usually undesirable in pot culture, because they encourage excessive growths that disturb the balance and blooming of the plant.

Liquid fertilizers are excellent for container-grown plants because they penetrate the soil thoroughly and are immediately available to the roots. They are particularly effective in the spring feedings, since the nourishment is readily absorbed by the new growth. A powdered form of fertilizer low in nitrogen is most desirable in winter feeding, however, for its slower action does not set off premature growth or interrupt blooming. Mixing a handful of leaf mold or peat moss with each application of dry food will help rot the fertilizer and build up a light surface mulch. But whether dry or liquid, the fertilizer should be of a reliable make, acid in reaction, complete, and well balanced. There are only two things to remember in feeding potted camellias: Never feed a dry or sickly plant; and better feed too little than too much.

Acidification

Since most water is alkaline, continued watering in containers may neutralize the acidity of the camellia potting soil. The distinct yellowing or chlorosis of the foliage that results is generally unmistakable. But since somewhat similar yellowing may result from insufficient or improper feeding, root action or drainage, it is advisable to test the soil reaction with an inexpensive soil-testing kit.

If the reaction is above pH 6.0, the plants must either be repotted in fresh soil or treated with a soil acidifier. Iron sulphate is generally the best material for the quick acidification of soils. For pot plants it should be used in liquid form by dissolving one ounce in two gallons of water. Thoroughly soak the soil in the pots with this solution once every two months, or until the leaf color becomes normal. Sulphur or aluminum sulphate may be substituted for iron sulphate, but sulphur is very slow acting and aluminum sulphate may cause burning.

Pruning

Potted camellias may be pruned freely to reduce their size and improve their shape. Some varieties are naturally compact and shapely, but most kinds will need considerable pruning to attain their best form. In January and February large plants should be cleared of all twiggy shoots, dead and diseased wood, and straggling growth. In extreme cases the plant may be pruned so hard that virtually all the foliage is removed. This causes no harm at all, but will retard blooming a season or two while the plant makes new growth. Turn the containers occasionally to encourage symmetrical development on all sides.

Container-grown plants should be disbudded every year, leaving only a single flower bud to a terminal. The resulting blooms will be noticeably larger and finer in color and form. Picking camellias is an excellent way of keeping the plants trim, if one is careful to take only an inch of two of stem cut back to a prominent growth bud. Potted camellias should be grown and pruned in such a way that they can support their own growth without the aid of stakes and ties, and the flower buds so thinned that the quality of the blooms and vigor of the plants is retained.

Pests and Diseases

Potted camellias are subject to the same pests and diseases as plants in the ground, but unlike the latter, they are more easily treated. Sickly plants can be isolated or moved to a new location favorable to the prevention or

cure of a specific ill, or to where they may be most easily treated by chemical sprays and dusts.

The ground area in the containers and around them should be kept clean of old leaves and blooms that may carry infection, and controlling ants in the area by poison baits materially reduces scale and aphid infestation. As with human disorders, cleanliness, light, and air are powerful remedies for most camellia ills. It is far easier to keep plants healthy by sound cultural practices than to cure them after they have become susceptible to pests and diseases because of neglect or mistreatment.

NOMINATION OF DIRECTORS

The nominating committee appointed by President Reeves, after considerable investigation, has decided upon the following stated candidates being in nomination for the offices of Directors of the Southern California Camellia Society for the year 1949-50:

MR. T. H. SEAVEY

MR. W. L. RIFENBERICK

MR. ALVIN J. FINK

COL. C. M. GALE

MR. C. D. COTHRAN

MR. HAROLD C. HILL

MR. CLIFTON JOHNSON

MR. IVAN T. PARKER

MR. JULIUS NUCCIO

The latter nominee is, of course, to represent the professional growers.

According to the By-laws of our Society (Article VIII, Section 3), however, "Other nominations to the directorate may be made in writing by any twenty (20) or more members, who may nominate one or more persons to the directorate as they shall see fit. Such additional nominations shall be made and filed with the Secretary not less than fifteen (15) days prior to the annual meeting of the members [second Thursday in April], and the Secretary shall thereupon give notice to the members of such additional nominations not less than ten (10) days prior to the next annual meeting of members.

"All additional nominations shall specify whether the person or persons nominated are nominated as director or directors at large, or as director or directors for the County of Los Angeles."

FRAZEE BURKE, *Chairman*
Nominating Committee

IMPORTANT NOTICE

The April meeting of the Southern California Camellia Society will be held on Thursday, April 14, at the McKinley Junior High School, Del Mar at Oak Knoll Avenues, Pasadena. Program begins at 8 p.m.

COME AND BRING YOUR FRIENDS.



