

The Camellia Bulletin

Volume 10, Number 1

October, 1956



SASANQUA SHOWA-NO-SAKAE

Published by
NORTHERN CALIFORNIA CAMELLIA SOCIETY, INC.

OFFICERS**PRESIDENT**

Jack Osegueda, (OLympic 2-4010)
 6819 Pinehaven Road, Oakland 11

SECRETARY

Walter H. Peterson, (BEacon 3-3148)
 707 Ocean Ave., Richmond

VICE-PRESIDENT

John H. Beers, (YYellowstone 4-9545)
 1588 Geary Road, Walnut Creek

TREASURER

R. N. Swope (ELgin 1- 4009)
 14929 Farnsworth St.
 San Lorenzo, California

DIRECTORS

Louis J. Giomi

Dr. Paul McChesney

Clement A. Roberts

PACIFIC CAMELLIA SOCIETY**OFFICERS****PRESIDENT**

Alton B. Parker
 6121 Rosemead Blvd., Temple City

SECRETARY

Gene Boyd
 819 E. Valencia Ave., Burbank

VICE-PRESIDENT

Dr. Wendell M. Redfern
 1343 Oak Circle Dr., Glendale 8

TREASURER

Robert G. Adcock
 2616 Hollister Terr., Glendale 6

CAMELLIA SOCIETY OF SACRAMENTO**PRESIDENT**

Sherrill Halbert
 4120 Los Coches Way
 Sacramento, California

SECRETARY

Mrs. Albert A. Anderson
 1930-7th Avenue
 Sacramento, California

CAMELLIA SOCIETY OF SANTA CLARA COUNTY**PRESIDENT**

Edwin L. Mitchell
 1555 Cherry Ave.
 San Jose, California

SECRETARY-TREASURER

George W. Strickler
 626 Phelan Ave.
 San Jose, California

BULLETIN EDITORIAL STAFF**EDITOR**

David L. Feathers
 1 Camellia Lane, Lafayette

ADVISORY BOARD

Woodford F. Harrison
 Harold L. Paige

ASSOCIATE EDITORS

Richard C. Brown
 1425-47th St., Sacramento
 Roy T. Thompson
 2723 Hermosita Drive, Glendale 8

The Camellia Bulletin, in keeping with the fundamental concept of the amateur organizations it serves, is a non-profit enterprise published quarterly (Jan., Apr., July and Oct.) by the Northern California Camellia Society, Inc. Its principal objects and purposes are furtherance of the enjoyment and benefits derived from the culture of camellias and the dissemination of knowledge related thereto. By special arrangement with, and through the co-operation of, the Pacific Camellia Society, The Camellia Society of Sacramento and The Camellia Society of Santa Clara County, this Bulletin is also available in conjunction with membership, which is open to the general public upon application to the Secretary of any of the societies mentioned, at the respective addresses shown above. For full membership in the Northern California Camellia Society, Inc., and with respect to all persons resident in the counties of Alameda, Contra Costa, Marin, San Francisco and San Mateo, the annual dues are \$5.00—outside that area, limited membership privileges, including the right to all Society publications, are \$3.00 per year. MEETINGS are held on the first Monday of each month November through May, at 8 p.m. in the Claremont Junior High School Auditorium, Oakland, and include an informal flower display and refreshments. All matter regarding the content of the Bulletin should be addressed to the Editor. CHANGE OF ADDRESS should be reported promptly to your Secretary, as the Post Office will not forward periodicals.

OCTOBER

Harbinger of Winter, yet it does remind
That Summer is but just behind—
A month whose days grow short and clear
While tangy air portends that Fall is here,
Bowling in the Season that we hold so dear!

In friendly climes Sasanqua buds now do
Awake and stretch forth graceful petal-arms
Of multi-colored hue, as early risers do,
Thus ending its deep summer's sleep.

Soon follows fair Japonica,
Near cousin that is 'twixt and 'tween
Sasanqua and the one of sheen,
Reticulata, Sleeping Beauty,
Last to come upon the scene.

Perhaps one may be excused waxing poetic, for soon will be with us what so many have been waiting for since "Blood of China" dropped its last bloom five months ago—Camellia Season is just about here again! And what a camellia year appears to be before us! We start with our first All-America selection, the delicately, almost fantastically formed "Cinderella," a magnificent name for what promises to be a very popular variety. The almost awesome, gigantic blossomed "Mrs. D. W. Davis" should for the first time be available in fair quantity and we are promised something on the order of a New Look in camellias from the hybrids, a few of which may prove completely different and fascinatingly beautiful, with a grace and delicacy heretofore unknown. We have, indeed, a year ahead full of interest and promise camellia-wise.

For one who greatly enjoys all of his garden, throughout the year, and appreciates the merits and the beauty of the many kinds of plants that can be grown successfully in a mild, congenial climate, it is difficult to play favorites. However, the feeling persists that there is no other

form of growth quite as noble as that of the tree, especially when it is done in miniature and adorned with foliage that is perpetually attractive. And when this superior body is clothed with flowers of many forms and hues, sent forth when most our flora has fled into winter hibernation or passed to dust, we need no longer wonder why the camellia holds its strange power over us!

So, full tribute to you, good garden friend that braves the rains, the winds, the wintry blasts that all too soon will be upon us! Because you brighten our dark days with your smiling reassurance that all is well, and tide us over 'til summer comes again, you are something very special! You are our staunch, foul-weather friend who holds steadfast while all else runs for shelter. Because of you no longer do we dread the Winter's coming. For all these things, we hold you in most high esteem—grateful that, by your good grace, our garden-year is now complete—our garden-lives enlarged, enriched. And so we enter upon another year—perhaps a landmark year in the world of The Camellia.

COVER ILLUSTRATIONS

FRONT COVER. "Showa-no-sakae" is a peonyform, rich-pink sasanqua-type camellia (now technically classified as *C. biemalis*) of unusual size and great beauty, having exceptionally large, fine foliage. Its strong, lateral growth habit makes it particularly desirable for espalier work. While the flower is short-lived even for its type, it is among the earliest to bloom.

BACK COVER. In these days of new things, we must never lose sight of the fact many of the best camellias we have are those which have survived the surest test of all—time. For the benefit particularly of those whose introduction to the camellia is more recent, we illustrate four japonicas of the highest quality, three being "old timers" and one comparatively new. All of these varieties appear among the Selected List of 100 shown in Vol. 8. No. 2, our January, 1955, issue. All meet the test of good growth habit, dependable blooming habit, exceptionally fine and distinctive flower and, in two instances, magnificent foliage. They do equally well from a mildly sunny to a fairly shady position—in containers or the ground. All have blooms above average size while two are among the largest. A brief description of each follows: *Nagasaki Special*: This camellia has everything—gorgeous marbling, superb color contrast, size of both flower and foliage; fairly early blooming and sturdy growth. Many varying patterns of deep pink to rose with large blotches of white or an occasional moired effect.

Spreading growth habit. *Eugene Lizé*: A relative of one of the all-time best camellias, "Donckelarii," this one bears little resemblance except in faithful performance and compactness. With an interesting, fairly large peonyform flower of distinctive rose-pink dotted and splashed with white, it is an excellent subject for container culture. Fairly light green foliage, blooms just beyond mid-season. *Yosemite*: A comparative newcomer, seedling of unknown parentage developed in Oakland, California. This is a mid-season to late-blooming red semi-double of unusual size, shade and substance, with central petals having exceptional height. Foliage and growth habit about normal, deserving of a trial anywhere. *Emperor of Russia*: In our judgment, it must rate as one of the great camellias of all time. A camellia without a flaw, this makes a simply magnificent garden specimen, growing vigorously in a round, handsome shape, with peerless glossy, leathery dark-green leaves borne on sturdy branches. The flower is of distinctive color and form with great individuality, it drops intact when spent, and is of a most desirable shade of scarlet-red. Blooms fairly early and for a long time, while the flowers have such substance and unity that even fallen blooms are often worth keeping! Growth much slower in a container, but performance again top notch. Would that all camellias were as completely satisfactory as this one!

NEW OFFICERS AND DIRECTORS

In addition to the list given in our July issue covering the Sacramento group, the following are the ensuing year's officers and directors of those neighbor societies who are subscriber-associates in **The Camellia Bulletin**:

	PACIFIC CAMELLIA SOCIETY	CAMELLIA SOCIETY OF SANTA CLARA COUNTY
PRESIDENT	Alton B. Parker	Edwin L. Mitchell
VICE-PRESIDENT	Dr. Wendell M. Redfern	Richard Roggia
SECRETARY	Gene Boyd	George W. Strickler
TREASURER	Robert G. Adcock	George W. Strickler
	Perry W. Clark	George Albers
	R. F. Dickson	Jess Rogers
DIRECTORS	Edward O. Morgan	Peter Talia
	Dan H. Roberts	Oscar E. Tomlinson
	John C. Robinson	
	William E. Wylam	

LET'S TALK ABOUT SEEDLINGS

Richard C. Brown, Sacramento, California

A newspaper man once told me that every news item should answer in the first paragraph the questions: what, where, when, why and how. However, I will not attempt to do so in an article on camellia seedling culture as there would be much left unanswered, so let's talk about the subject, not in newspaper style but leisurely and at length, like two neighbors over the backyard fence.

The method of propagation of camellia seeds herein advocated should apply everywhere, although my experience in this regard refers to the Sacramento area solely, as I haven't grown camellias anywhere else.

I am sure we all know why we grow seedlings—some people hope to find the yellow or truly-blue camellia, although most of us would be quite content to develop a "Pink Clouds" or a "Masterpiece"; some are after a really fragrant camellia, while others only desire rootstock for their grafts. Regardless of the objective, it is a very worthwhile effort and I recommend the experience to all.

The culture of camellias is as controversial as politics and the various methods of growing seedlings are as diverse as the views of the political candidates. The practice outlined herein is a simple, inexpensive way for the average person to successfully undertake this phase of camellia culture. It is not necessary for you to have a greenhouse to germinate seeds quickly, nor to have radiant heat in the floor upon which to set flats of seeds. Nor is it even necessary to have an electrically heated hotbed for bottom heat, to make them sprout or root in a few days. All of these methods of hurrying germination are wonderful—if you can afford the time and expense they involve. Neither is it necessary to have continuous light over the rooted seedling to get it to bloom in a short time. Such techniques have their place, but, I am more interested in working out, for those of us who do not have these facilities, a method of developing seedlings with a minimum of cost and effort and a maximum of success.

Here in Sacramento we do not wait for the seed pods to dry out and split open and then have the job of trying to find the seeds on the ground amongst the dead third-year leaves that have fallen during the summer. (Don't forget, camellia seeds bounce and roll until they are really hard to find.) Instead, we go through the plants about the 15th of September and pick off all the seed pods. These pods are then put on a table or bench and permitted to dry out until they split open, much the same as is done in harvesting some kinds of edible nuts. After this takes place, the seeds are immediately planted before becoming hard and dry. This method of harvest has its benefits — no scrounging around under the bushes for the hard-to-find seeds — almost none lost and seldom is a seed picked unripe. Neither is the seed dried out, so germination is rapid when planted immediately after the pod breaks open.

For planting the seeds, you should have one-gallon jars, such as used for a cloche on grafts. Fill them with peat moss saturated in water that has been squeezed out so that the peat is moist, not wet. Place about two inches of the moist peat in a gallon jar but do not pack it down. Then scatter the camellia seeds loosely over the area—add another two inches of peat (on top of the seeds) and then another layer of seeds and so on until the jar is filled, with two inches of peat covering the last layer of seeds.

The jar is then loosely covered with the metal top (not screwed down tight) or the jar top may be punched with half a dozen holes to permit some air to enter but still sufficiently tight to hold the humidity, which is essential.

The jar is then put in a sunny window to build up warmth and humidity. Soon the brown seeds begin to crack open and put out a tap root, such as an acorn will do—actually there is little difference between the germination of an acorn and a camellia seed. In about three weeks, it is a good idea to empty out the jar and examine the seeds to see if they have

sprouted the tap-root. If so, and the tap-root has grown an inch or more, set such seeds aside momentarily and return those ungerminated to the jar as they were originally planted, waiting an additional two weeks before repeating the process. The seeds seem to enjoy a little fresh air occasionally, which tends to prevent the forming of mildew or rot and assists in the process of germination.

Now we have seeds with tap roots and thus in a condition to plant out. First prepare potting soil composed of $\frac{3}{4}$ coarse, clean sand and $\frac{1}{4}$ peat moss, thoroughly mixed. Then place about $\frac{1}{2}$ inch of straight peat moss on the bottom of the seed flat and pour in the mix. Wet the potting mixture completely, then set the germinated seed in the flat. When we plant the seed, our practice is to first pinch or cut off the tap root to about one inch in length, which will hasten the development of the fibrous feeder roots so essential to the making of good top growth. I believe this also tends to speed up the flowering of the seedling.⁽¹⁾ When the germinated seed is planted in the flat, leave the seed capsule exposed slightly on the surface—the air and light seem to benefit the rooting and development of the seedling plant. (In fact, you will be surprised at how fast the top growth of the seedling develops when planted in this manner.) The flat is then placed in an exposure normal to the usual planting of a camellia—shaded but with some light. (Remember that in Nature the seed would have to grow under or nearby the plant which produced it.) When the top growth has reached 4 or 5 inches in height and 3 to 6 normal leaves have developed, we consider it time to transplant the seedling into a 3 or 4-inch pot containing a soil mixture such as is used for larger, established plants. Thereafter, the seedling is treated as you would handle any other camellia, for a period of three years.

If you are desirous of bringing the plant into bloom early, or sooner than one may normally expect of a seedling, here are a few suggestions. Some seedling growers have facilities to provide constant light 24 hours a day which it is said

may bring the plant into bloom in as little as 18 months.⁽²⁾ Other growers claim that a fine wire, girdling the trunk or a branch of the seedling, develops a shock that induces flowering before the normal period required to produce the impatiently-awaited bloom. Our procedure has been to transplant the seedling from the 3 or 4-inch pot to a 6-inch size at the end of the third year, at that time endeavoring to shock the root system by striking the ball of roots with the heel of the hand. This blow also loosens the roots and enables them to readily spread out into fresh soil. Our experience has been that the seedling usually reaches the blooming period the 4th year with this treatment.

The seedling camellia will require fertilization the second year and thereafter and I recommend feeding at that time, lightly but often. Every 4 to 5 weeks is a good interval. Make it mild—about one-fourth the quantity for an established plant of similar age until the 4th year, when normal feeding may be given, as for any plant of this size.

I recently read of another somewhat similar method of propagating seeds which seems to make sense. This individual gathers the seeds and puts them in a jar or plastic bag which is then placed in the refrigerator for 48 to 72 hours. (The reason for so doing is evidently to simulate winter.) After this period of time, he transfers the seeds into damp sphagnum moss contained in a plastic bag, which is tied tightly. He then hangs the bag in a warm place, which would indicate "Spring" to the seed. One point in favor of using plastic bags is the ability to examine the seeds to check germination without removing them, but then I do believe it is very important during the germination period to permit air to enter, which reduces the possibility of mold and subsequent loss through rot.

When you see most of your seedlings growing vigorously, don't be unhappy about and throw out the occasional runt. It might well be the first to bloom, and the "reluctant growers" often yield a better flower than the most vigorous,

(Continued on Page 8)

SEEDLING VARIATION OF CAMELLIA SALUENENSIS

Charles Puddle, Bodnant Gardens, North Wales

One of the most fascinating features of raising Camellias from seed is that one never knows what the result will be, for there is such wide variation in the seedlings. Even in controlled crosses many of the offspring show little resemblance to their parents, and the variety of flower shape and colour is endless. This is to be expected in the case of *Camellia japonica* and *sasanqua* for these two groups had been cultivated in Japan and China for perhaps thousands of years before they were introduced to the Western World. One hundred and fifty years of cultivation in Europe and America has seen countless seedlings of both species raised, and it is interesting to note that but for a small percentage of named "sports" the huge number of varieties are the result of seedling variation within the species. We are frequently reminded of this by the appearance of offspring which bear a close resemblance to the original single red *japonica*.

Camellia saluenensis is a comparative newcomer to the camellia world, but it has already proved no less interesting in its seedlings variation. It was originally found by George Forrest in 1917, but it was his collections in 1924-25 from the Shweli-Salween divide, north-west of Tengyueh, Yunnan, that really established the species in cultivation. In his field notes he made it clear that in nature there was quite a variation in the colour of the flowers, which ranged from white to crimson. His original seed more than proved his comments for, at Caerhays Castle, Cornwall, and certain other gardens the seedlings showed not only flower variation, but vast differences in leaf. In a row of seedlings scarcely two appeared alike, deep pink flowers with small narrow leaves, pale pink with larger, broader leaves, vice-versa, and many other intermediate combinations. One form with large leaves which had no counterpart in the dried specimens sent by Forrest was designated "*forma macrophylla*" and described in the Botanical Magazine.

At Bodnant one of the original seed-

lings was planted against a sheltered wall, for at first it was not known whether the species would prove hardy. This has flowered consistently and set seed for several years, so that the resulting seedlings make an interesting study. The parent plant has leaves no more than two inches long and three quarters of an inch wide, very pale pink flowers with petals which are nearly flat when fully open. It is always the earliest *Camellia* to flower following *sasanqua*, and this applies to other plants in less sheltered areas which have been propagated vegetatively from this clone. The specimen is isolated from other camellias, the nearest *japonica* being at least three hundred yards away, but as it is almost through blooming before any *japonicas* are in flower there seems to be little chance of cross-pollination.

Average leaves of five seedlings show the following differences in size: $1\frac{1}{2}'' \times \frac{3}{4}''$, $2\frac{3}{4}'' \times 1''$, $3'' \times 1\frac{1}{2}''$, $3'' \times 2''$, $3\frac{1}{2}'' \times 2''$. Some leaves taper sharply to a point, others are almost rounded, some have a rough upper surface whilst others show prominent veins below. They are either dull or shiny, deep or pale green, a few showing an increased number of hairs on the leaf petiole. In habit the plants are either bushes of sturdy growth or with long arching, spindly shoots. In my experience the plants with the most hairy petioles and twigs are those which suffer slight damage by frost during severe winters.

Flowers vary a little in size and range from very deep rose-pink to almost white, with several nasty "bluey" pinks in each batch of seedlings. Many have a more cup-shaped flower which never fully opens, although the better flat flowers are usually composed of petals of thicker texture than the parent. I have not noticed any tendency towards petaloid formation, but the number of petals does occasionally show a slight increase. The period of flowering extends for about six weeks, some opening at the same time as the parent. The dying flowers of all seedlings drop off with ease—a most valuable garden feature.

This is just one example of the variation which exists within the species *saluenensis* in several British gardens. It could be said that this isolated parent plant has, despite the distance from japonicas, been fertilised with pollen of this species, but recently controlled seedlings from this and other original Forrest plants have shown the same variation in leaf, but as they have not yet flowered I cannot comment. In Cornwall where plants seed very freely, countless seeds germinate beneath the bushes producing a vast range of plants, but I would not like to say that some of these do not contain japonica blood owing to the close proximity of plants of this species.

In cultivation very few of the white forms noted by Forrest have appeared. At Bodnant, we have only one plant which has pure white flowers, with even the buds showing no sign of colour. It has the small *saluenensis* type of leaf and hairy twigs, but so far has not set seed. I have seen only one or two plants in other gardens which could be called white even when open.

Unlike japonica and sasanqua there does not appear to be any evidence that *saluenensis* has been extensively cultivated in Yunnan and certainly nothing has been done on the scale of the older species for it is not grown in Japan, or other parts of China. In view, however, of the recent discovery of the Yunnan forms of *reticulata* it would perhaps be unwise to assume that it is not cultivated, and who knows perhaps the riddle of the great variation in *saluenensis* may be partially solved by the introduction of garden varieties, from Yunnan Temple gardens.

One point that must be remembered when dealing with species is that they do vary in nature. The old adage that a species which does not produce almost iden-

tical offspring is of hybrid constitution is wrong. Most camellia species exhibit this character to a great degree and appear to be of rather an unstable nature, so much so that within the man-made botanical divisions it is often difficult to differentiate between allied species and plants of hybrid origin.

Amongst the *saluenensis* seedlings there are many which very closely resemble some of the named varieties of the Williamsii Group. Although there certainly are hybrids between *saluenensis* and japonica, I feel that many variable seedlings of *saluenensis* tend to be automatically classed as Williamsii, without sufficient investigation of their origin.

My observations on seedlings of *saluenensis* have been largely from a horticultural view. I was therefore very interested to see the revised notes on *Camellia* species in the recent supplement to the R.H.S. Dictionary of Gardening. It appears that botanists are equally confused, for the "forma *macrophylla*" which was so carefully described in the *Botanical Magazine* is now classified as a hybrid of the Williamsii Group!!!

There is little doubt that the *saluenensis* group present many problems, and that there is much interesting work to be done in raising seedlings from this species and from the true Williamsii hybrids. The later generations of these hybrids may open up quite new fields in *Camellias*. Certainly *saluenensis* has made its mark in the *Camellia World*, but I think it has a greater future. If its freedom of flower, lack of bud dropping, and the ease in which it sheds its dying blooms can be bred into a hybrid race with the japonica range of flower, what wonderful garden camellias we shall have in the future.

LET'S TALK ABOUT SEEDLINGS (Cont.)

large leaved plants. Just because a camellia seedling has a tremendous leaf doesn't mean it will be a "Masterpiece."

Let us suppose that the seedling has now bloomed and it proves to be one that will rival "Cinderella." You will naturally wait for the next year's bloom, and

if it is still as good as the previous year's flowers, you will graft it and may wish to enter the variety in the All-America *Camellia Selection* competition. But if it is only "so-so"—you still have fine root stock upon which to graft something worth-

(Continued on Page 16)

SEED GRAFTING AND ROOT CUTTINGS

John R. Sobeck, Los Angeles, California

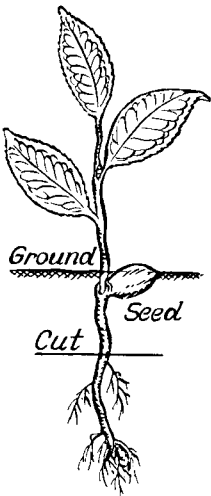
One of the greatest obstacles in the growing of camellia seedlings is the time element involved before the principal objective—a bloom—is obtained. Under normal conditions, this may involve anywhere from 3 to 10 or 15 years, the average being perhaps 5 or 6 years. Naturally, this places great limitation upon the extent of experimentation one may do in his span of life, unless he is fortunate enough to have started young.

In order to shorten this waiting period, for the past 5 years or so I have been practicing what might be called "seed grafting" and have found it to be highly successful, both from the standpoint of "takes" (about 97% are successful) and in speeding up the maturity process. I employ both the bud graft and cleft graft techniques, using the former in the summer and the latter in winter.

To begin with, I plant my seed (largely hybrid) just as soon as it has ripened and been harvested, which would not be later than December. By the next June most of the seedlings are large enough to bud graft. The slower, weaker growers will probably not attain the necessary two inches or more of growth above the seed

capsule, which is about the right stage for grafting, until winter and these are therefore cleft grafted. Most of the understock used is of 1-gallon can size that has completed its growth cycle for the season. I try to select healthy stock and, before cutting off the top of the plant, make the "T" bark-incision to determine whether it will slip readily, thus being at the right stage for budding. The top of the understock is then cut off about 3 or 4 inches above the base with pruning shears and the cut surface smoothed with a sharp knife. The incision should be about an inch long and the bark is opened with a budding knife. The little seedling is then removed from the seed flat, being careful not to disturb or break off the seed which is still attached, as this is to constitute a source of nourishment until the newly-made graft has callused over. This little seedling, having one or two sets of leaves, is then converted into a scion by cutting off the roots at a point an inch below the juncture with the plant stem, so that the top growth with seed capsule attached may be grafted onto the stock (see cut).

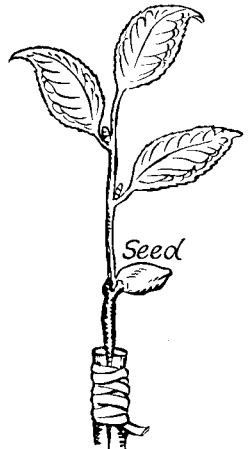
The remainder of the process is typical of all bark grafting or budding. The scion



Cutting Seedling



Seedlings Ready to Cut



After Grafting

is cut thin, so as not to break the bark when inserted, formed into a wedge shape so that it may be pressed into the incision until the cut area is concealed in the bark. After placing the scion carefully, it should be tied or held by a rubber band and covered with a glass jar in the usual way common to grafting camellias. Bark grafts can be made at any time the bark of the understock is at the proper stage—when it peels readily. The same general procedure is followed with cleft grafting of seedlings, only using that technique, of course (see sketch preceding of completed cleft graft). Due to the soft nature of the scion wood, however, the smaller size understock should be used, which will not have a tendency to crush the seedling, as would be the case with cleft grafting on heavy understock.

The root system of the seedling, which has been cut off to make the graft, is not a total loss as I have found that it can be made to grow successfully simply by planting the sheared feeder-root portion in a seed flat containing peat moss and sponge-rock, leaving the top projecting very slightly above the soil medium—about $\frac{1}{8}$ inch. Or they may be planted singly in $2\frac{1}{2}$ or 3 inch pots immersed in peat to keep them uniformly moist, using the regular camellia potting soil mix. In about two to three months, little adventitious growth buds will form at the top of the root-cutting.

As a matter of fact, it is amazing what can be done in the way of propagating

camellias from root cuttings. I have cut off excess heavy root growth, then made 4 to 5-inch cuttings out of it, planting them in regular potting soil. It is necessary that the natural position be maintained; that is, the top of the root must be planted up. I have made many root cuttings from seedlings, some of surprisingly large diameter, and have found they grow rather readily.

The illustrations show (page 9) the little seedlings ready for grafting, with seed capsule attached, (below) completed grafts, with seed still attached, and the grafts 3 months later, and (page 11) two groups of seed-grafts, one and two years old, respectively, reading left to right.

EDITOR'S NOTE

Growing a large number of seedlings under greenhouse conditions in 1-gal. cans, I have found that many of these 2 yrs. and older have this year, for the first time, developed shoots from the root system which unquestionably could be planted or otherwise used for propagation purposes. I have not noticed this tendency in cutting-grown camellias, however, although several established plants situated on a hillside, which underwent some root exposure through the abnormally heavy rains of last winter, developed root-shoots, which were first mistaken for volunteer seedlings. It would appear that such root-shoots develop only where the roots are very close to the surface or actually exposed. I might also add that the *saluenensis* hybrids, some of which are extremely vigorous, seem to have this tendency to a pronounced degree.

The foregoing is given by way of substantiation of Mr. Sobeck's suggested technique.



Completed Grafts



Grafts 3 months old

Seedling Grafts one year and two years old (left to right) 

AMERICAN CAMELLIA SOCIETY—1957 ANNUAL MEETING

Louise Anderson Blount, Macon, Georgia

Historic Macon, Georgia, in the heart of the "Deep South," is making elaborate plans to roll out the red carpet and welcome some 600 Camellia enthusiasts from throughout the United States who are expected to attend the 12th annual meeting of the American Camellia Society there on February 14, 15, 16 and 17. The mid-February meeting will be a real "HOME COMING" to Macon, for it was in this little southern city that the original "American Camellia and Azalea Society," fore-runner of the present organization, was formed. M. J. Witman of Lorraine Farms, Route 1, Macon, has been named general chairman for the event. "We hope to make this a meeting long to be remembered, for this is the first time Macon will play host to the society since its organization here many years ago," he stated. "Visits to private gardens and antebellum homes in the city and in adjoining towns, as well as an old fashioned barbecue in the quaint little Camellia City of Marshallville, Ga., are just some of the plans in store for our visitors," Mr. Witman added.

A gigantic Camellia show will be staged on February 16 and 17 in Macon's mu-

nicipal auditorium under the auspices of the Middle Georgia Camellia Society, which will be host to the group. "As a grand finale to our national meeting, we hope to exhibit thousands of blossoms from Georgia gardens and from other states at this show," said Robert A. Bowen who is to serve as general chairman for that event. Other Maconites named to serve as committee chairmen are A. E. Barnes and D. Leon Wilson, who are serving as co-chairmen with Mr. Witman; A. O. B. Sparks, entertainment; Dr. and Mrs. W. G. Lee, hospitality; Charles E. Newton, Jr., housing; Fred Leeds, publicity; C. M. Roberson and W. B. Simmons, tours through historical Macon to private gardens; Grover Meaders and John Dennis, transportation; Mr. and Mrs. James F. Brown, registration; and Marion Liles, finance. Dr. John Wade and Mrs. Howard Hurst, both of Marshallville, Ga., and Dave Strother of Fort Valley, Ga. are assisting with special plans for entertainment of the visitors. S. L. Marbury of Wilmington, N. C. will direct the forum.

Headquarters for the meeting will be at the Hotel Dempsey and the regular program of events follows:



Thursday, February 14, 1957

- 12:00 m to 8:00 p.m. Registration, Hotel Dempsey
 3:00 p.m. Visit to Indian Mounds, Camellia plantings at Baconsfield Park and to designated Macon gardens and old homes.
 5:30 p.m. to 6:30 p.m. Get-together; cocktails at Hotel Dempsey.
 8:00 p.m. Forum, Hotel Dempsey.

Friday, February 15, 1957

- 9:00 a.m. to 5 p.m. Registration, Hotel Dempsey.
 10:00 a.m. to 12:30 p.m. Visit to Dave Strother's Garden and Marshallville. (Round-trip busses leave Hotel Dempsey from 9:00 to 9:30 a.m.)
 12:30 p.m. Barbecue at Marshallville and visit to some of the gardens there.
 2:30 p.m. Busses leave Marshallville for Macon.
 3:30 p.m. to 5:30 p.m. Visit by private cars to designated Macon gardens and old homes.
 6:00 p.m. Cocktail party, Hotel Dempsey.
 7:00 p.m. Buffet supper, Hotel Dempsey.

Saturday, February 16, 1957

- 10:00 a.m. to 12:30 p.m. Visit by private cars to designated Macon gardens and old homes.
 1:00 p.m. Luncheon, Idle Hour Club.
 2:00 p.m. Camellia Show, Macon Municipal Auditorium.
 3:30 p.m. Visit by private cars to designated Macon gardens and old homes.
 6:00 p.m. Cocktail party, Hotel Dempsey.
 7:30 p.m. Dinner and annual meeting, American Camellia Society, Hotel Dempsey.

Sunday, February 17, 1957

- 1:00 p.m. Revisit to Camellia Show, Macon Municipal Auditorium.
 2:30 p.m. Visit to designated Macon gardens and old homes.

A registration fee of \$15.00 per person will cover all events outlined in the program, including cocktail parties, luncheon, buffet supper, dinner, trip to Massey Lane, Fort Valley and barbecue in Marshallville; also tours to private gardens and homes.

Camellia enthusiasts who are expecting to attend the meeting are urged to make early hotel reservations directly to any of the following:

In Macon, Georgia

Hotel Dempsey	Singles \$4.00 to \$12.00	Doubles \$7.00 to \$14.00
Hotel Georgian	Singles \$3.50 to \$4.50	Doubles \$5.00 to \$7.00
Hotel Grady	Singles \$3.35	Doubles \$4.50 to \$7.00
Hotel Lanier	Singles \$3.50 to \$4.50	Doubles \$5.15 to \$8.00
Magnolia Court		Doubles \$5.00 up
Saco Court	Singles \$5.00	Doubles \$6.00 up
Skyline Motel		Doubles \$5.00 to \$7.50
Ambassador Motel	Singles \$6.00	Doubles \$6.50 to \$7.50
Drill's Motor Court	Singles \$4.00	Doubles \$5.00 to \$8.00

Out of Town

(These hotels and motels are located within a radius of 20 miles of Macon)

New Perry Hotel, Perry, Ga.	Singles \$3.00 to \$4.00	Doubles \$6.00 to \$7.00
Moss Oaks Lodge, Perry, Ga.	Singles \$4.00 to \$5.00	Doubles \$5.00 to \$6.00
Gray Motel, Gray, Ga.	Singles \$5.00	Doubles \$6.00 to \$7.00
Modern Motor Court, Roberta, Ga.	Singles \$4.00	Doubles \$6.00 to \$7.00
Starnes Motor Court, Roberta, Ga.	Singles \$4.00	Doubles \$6.00 to \$7.00

THE SASANQUA GAINS FAVOR

Roy T. Thompson, Glendale, California

Because it is more subtle and delicate the sasanqua has taken longer to establish itself in the esteem of camellia enthusiasts, but of late years it has become known wherever japonica is known and has won a firm hold on the affections of a wide sector of the camellia public. It has won this recognition chiefly on two points—delicate beauty and earliness of bloom—but it has many others to recommend it.

Where the japonica tends to be formal and dignified, the sasanqua is graceful and delicate. Sasanqua's leaves are smaller, its branches more slender, its "personality" more casual and less demanding. Both types have plenty of aesthetic appeal; japonica flowers are, for the most part, larger and heavier, and each flower commands individual attention. Sasanqua's flowers are more ethereal, more delicate, their beauty more evanescent. Its blooms are especially effective in groups. Each type speaks a different aesthetic language and each has its individual uses.

To those who have come to know sasanqua best, perhaps the most outstanding and delightful attribute of the flower is its combination of grace, daintiness, and "movement." The lines, curves, and texture of sasanqua flowers create the illusion of movement and life. Artists know that, by the use of certain combinations of lines and curves, they can create in the eye of the observer the sensation of movement. Most sasanqua flowers do this, especially the singles—they have movement and flutter, happy, light-hearted movement, and thus they bring lightness and joy to the observer, even gaiety. In this particular power, sasanquas are in a class by themselves, and in the whole field of flowering shrubs (certainly not among their cousins the japonicas), they do not have any real rivals. This gift of bringing lightness and cheer through color and movement is their outstanding characteristic, their most individual trait.

A more obvious value, however, to the general public, is their early appearance in the fall. September sees their first

blooms and they are at their height of bloom in October and November. The great wave of japonica bloom reaches its height in February. It is hard to describe in words the delight which these early flowers bring in the fall when there are few other flowers in the garden. In September and October they receive a special welcome. Nature has kindly arranged that these delicate flowers appear at a time when the lordly japonicas are mostly quiescent. It would be unjust to the sasanquas, however, to merely say that they are the introduction to the big show which comes later; they are far more than an introduction—they are a show in themselves and have their own place of importance in the garden year. And it is their happy function to bring this gay, spring-like show into our autumn gardens.

Another outstanding value of the sasanqua, in some respects unique, is its easy adaptability to landscape uses. It has attractive green foliage the year 'round; its shape, with some exceptions, is that of a rounded shrub which grows flush with the ground. In the blooming season it is a mass of flowers which is equally attractive at close range or at a distance. In fact, the landscape value which comes closest to being unique in the sasanqua is its effectiveness at a distance. Since sasanquas are usually planted in semi-shade, their light-colored flowers (mostly whites and pinks and combinations of these two) lighten up the whole area in which they are planted. Artistically they fit in perfectly with almost any other type of planting. In large landscape plantings such as one sees at the Huntington Botanical Gardens, they form very effective backgrounds for all sorts of smaller plants and flowers. In smaller home gardens they can be placed, with surprisingly effective pictorial results, against the trunks of trees, in corners, against brick walls, or even singly as specimen plants in the lawn. They are especially attractive when planted in small groups where, in blooming season, they create masses of color. One wonders why they are not more

widely used in the landscaping of new homes where great numbers of non-blooming or "foliage" plants are being used, whereas if sasanquas were planted, there would be the additional dividend of flowers. They deserve to be better advertised. However, they have made surprising gains in Southern California as landscape features in the past dozen years.

Sasanquas have a slight "musty" fragrance which, in the final summing up of their value, is of little or no importance. In fact, some people object to it as "offensive," although it is actually a spicy odor. Sasanquas have so many other values that we shouldn't expect fragrance of them, an attribute which is also absent in most of the japonicas.

Single sasanqua varieties bear seeds freely. Seed planters run about the same chance of getting valuable new varieties as with japonicas. Sasanqua seedlings, however, tend to require a longer period of growth before producing their first flowers. These seedlings are used extensively in the South for understock but on the West Coast have not been so used widely; in fact, there have been several reports that sasanqua understock does not do well for reticulata scions.

Flower types are, in general, the same as with japonicas: single, semi-double, peony, and formal. The latter types, when compared to the corresponding japonicas, never quite reach up to the full perfection expected in such forms. "Shishigashira," for example, is described as a formal, but at best it is a very loose and irregular formal. (This doesn't mean, however, that it isn't a very beautiful flower.)

As for soil and culture, the sasanqua requires the same treatment as japonica. The reputation sasanquas have acquired for "taking full sun" isn't true in all climates; like japonicas they do best in filtered shade. They will grow and bloom in full sun but their production of both flowers and foliage will in some localities be sub-normal. The foliage will assume a dusty, discolored look and when compared with plants grown in semi-shade will seem run-down and even sickly. In other words, when grown in full sun sasanquas

fail to attain top performance. Also, when sasanquas are planted in full sun they produce far more buds than they can profitably bloom, and the result will be, if they are not disbudded, messy and unsatisfactory.

As for disbudding, sasanquas grown in semi-shade require very little for the simple reason that individual blue-ribbon flowers are not usually sought. They are grown for mass effect rather than for individual flowers. If masses of flowers are to be viewed at a distance, the more the better. Sometimes, however, as with "Narumigata," one takes to producing large flowers, and disbudding should be employed.

Eventually the sasanqua, like the japonica, will grow into a tree. Mr. Ralph Peer tells of some full-sized sasanqua trees in Japan, but this is something most of us do not have to worry about for these big trees are hundreds of years old. In general the sasanqua is, in its first six or eight years, a fast growing plant, then it slows down. When compared with japonica it is a little less "finicky" to grow. Perhaps the reason for this is that it is closer to its primitive state and has not been bred and re-bred until it has become what might be called "unstable." This doesn't mean that japonica has become unstable, but there are more and more signs that, with intensive breeding, certain varieties of it are less hardy than the average.

A sure indication that sasanquas are coming into their own lies in the fact the number of varieties on the market is rapidly increasing. Two or three new ones appear each season. It is extremely important, in view of the long life of camellias, to get only the best ones started in one's garden. Such old varieties as "Briar Rose" and "Rosea" can no longer compete with the newer ones. The following list of varieties does not include all the desirable kinds, no doubt, but it is offered as a list of sasanquas which exemplify the best in their respective classes. With the exception of the last two, the varieties named have been tested by many years of use in Southern California gardens.

(Continued on next Page)



The choice of "Cinderella" as the first All-America Camellia Selections winner is a tribute to that agency's fine work and we believe it to be a most worthy selection. Our heartiest congratulations to California Camellia Gardens of San Fernando, California, for their magnificent new contribution to our growing list of distinctive camellias.

Culturally, "Cinderella" promises to be a valuable addition because, in the official release, mention was made of its unusual hardness. Here in California we do not have too difficult climatic conditions but one of the outstanding qualities of this award-winning camellia in which we are particularly interested is the fact that the flower is reported to hold on the plant for days and not fall in a very short time, as is the case with its parent "Fred Sander." Another splendid quality of "Cinderella" is its reputation for an upright, compact growth habit—it is said to make an excellent specimen in ground or tub.

The grafting season will soon be with us and when you start this operation, don't forget:

1. The so-called "hard to graft" Yunnan Reticulatas are more successfully grafted if the wedge of the scion is left slightly outside the cleft of the root stock. The callus of the root stock will grow out to the scion but not inward.

2. If the leaves of your graft drop off, don't throw it away if the scion tip is still green—leave the jar or cloche on the graft and let it alone. It may still grow, especially if the graft has callused.

3. If you are told some varieties are difficult to graft successfully, don't give up without trying! Recognize the fact that grafts "take" more quickly if grafted when the root stock is most active (in spring and summer). Your main problem at such times is to have a dormant scion.

THE SASANQUA GAINS FAVOR (Cont.)

Recommended Varieties

Hana-jiman. Large white and pink single, much like Momozono-nishiki.

Jean May. Large shell-pink rose-form double.

Momozono-nishiki. White and deep pink single. Large.

Narumigata. Very large single white lightly touched with pink.

Papaver. Soft pink bell-shaped single.

Setsugekka. One of the best whites, single to semi-double, large, with beautifully waved petals.

Shin-no-nome. Very light pink single. Large. An exquisitely beautiful flower. (Same as Nuccio's Hichi-fukujin.)

Shishi-fukujin. Single to semi-double rich pink. A lush grower and exceptionally beautiful plant. Flowers average slightly smaller than those of Shin-no-nome.

Shishigashira. Deep pink to rose red double. Medium sized flowers. Sometimes called a formal, but is too irregular for that classification. Very slow grower.

(over)

Taimei-nishiki. Single pale pink mottled white. One of the earliest bloomers.

Totenko. Pale pink spidery type flower of medium size. Very graceful.

Yae Arare. Large single white and rose with curled petals.

Cherie. A delightful clear light pink double flower of medium size.

Fukuzutsumi. A distinctive red and white single. Large.

EDITOR'S NOTE:

Mr. Thompson's list of recommended sasanquas refers specifically to Southern California growing conditions. In response to our inquiry as to inclusion of the varieties MINE-NO-YUKI (Snow-on-the-Mountain), its sport PINK SNOW, SHOWA-NO-SAKAE and HIRYO, all of which perform satisfactorily and are considered outstanding in Northern California, it seems appropriate to quote from Mr. Thompson's letter verbatim:

"SHOWA-NO-SAKAE has a good showy flower but since it shatters almost at once (from one to three days) I do not think it deserves a place in the highest group. The plant is average in appearance and a little slow in growth habit but it is because of the shattering propensities of the variety that I am leaving it out. I would put it in the next highest group, however. As for MINE-NO-YUKI, it is a chronic "baller" down here; I

have had this one for over twenty years and have had good blooms on it perhaps five years out of the twenty. In poor years, it either blooms small and puny and with bad form of petals, or balls. I wouldn't give this one a place in my second group, let alone the first. When the plant does bloom well, however, the blooms are exquisite and hang on five or six days.

As for HIRYO (listed under VERNALIS group and spelled "HIRYU" in the Nomenclature Book) I'd rather not include it among the "top" varieties, altho it is a good variety. It is a good plant and showy in its season, but most of its blooming season overlaps and forces it to compete with the japonicas. I've seen a good many big plants of this and do not think it has the compactness nor beauty of most sasanquas, as a plant. But its profusion of red blooms does make it attractive at times.

You will observe that I left out PINK SNOW. As for bloom, this one and both JEAN MAY and CHERIE are very similar, but PINK SNOW is a chronic shatterer and this disqualifies it for top rating."

Here is just another illustration of the futility of endeavoring to rate the performance of a particular camellia over wide geographical areas without its first having been tested and in your own locality, especially. In Northern California, all four of the "sasanqua" varieties (SHOWA-NO-SAKAE, synonym "Usubeni," is now classified as *C. hiemalis* and HIRYO, or "Hiryo," as *C. Vernalis*) mentioned herein have a long-standing reputation for doing well and being worthwhile.

LET'S TALK ABOUT SEEDLINGS (Cont.)

while. So you can't lose. One often hears of the small percentage of seedlings that develop worthwhile flowers, and while it is true, from all accounts it will not necessarily be the person who plants thousands of seeds who develops an outstanding variety — it might easily be you!

Editor's Notes:

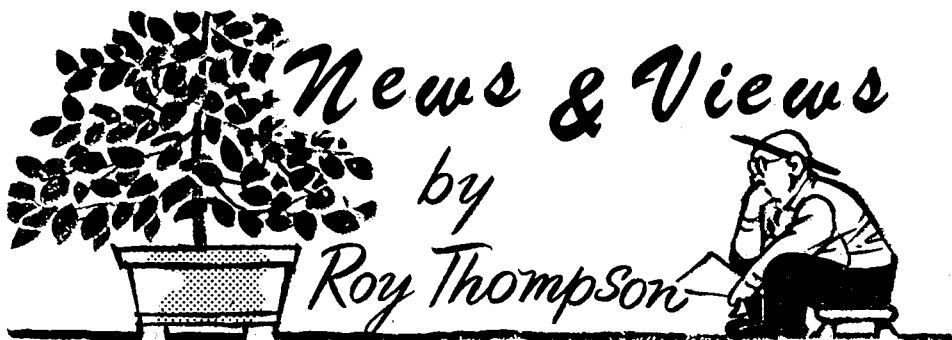
(1) For another viewpoint as to this technique, see Page 18 herein.

Type Seedlings:	<i>Japonica</i>	<i>Saluenensis</i>	<i>Japonica</i> × <i>Saluenensis</i>
Date Seed Planted	Jan. 7, '54	Aug. 14, '54	Jan. 18, '54
Age in Years	2.72	2.13	2.69
Maximum Height	74 in.	57 in.	84 in.
No. of Branches	16	7	13
No. of Twigs	13	51	none
Longest Branch	26 in.	17 in.	23 in.
Total Linear Growth	274 in.	349 in.	168 in.
Fully Developed Buds	none	4	12
Discernable Buds Set	numerous	numerous	numerous

The three seedlings have an average total linear growth overall of 264 inches, or exactly 22 feet, while the average height is 72 inches, or 6 feet. As their average age is 2½ years, the rate of growth per year averages 28.8

(2) Numerous instances are known of this, although the blooming maturity of seedlings will vary materially, under any conditions. It is estimated that the average time interval from planted seed to opened bloom would be about 2½ years (the third blooming season) under continuous-light culture. The following statistical data on three different types of camellia seedling, grown under approximate continuous-light conditions in a greenhouse having minimum temperature of 60° F, was personally recorded on September 30, 1956:

inches in height, and 105 inches, or about 9 feet, overall. These seedlings are exceptionally strong growers, but, if maximum performance had been sought, it is believed this would not constitute anything unusual.



The largest party of Californians ever to visit the South in a group is now forming to attend the Annual Meeting of the American Camellia Society at Macon in February. Airplane and hotel reservations have already been made by a sizable group, and others are planning to go by automobile.

The four camellia societies of the Greater Los Angeles area—Temple City, Los Angeles, Southern California, and Pacific—have, for the first time in history, jointly agreed so to arrange their respective programs as to avoid any duplication within the period of one month. In the past there has been considerable inter-society visiting, but the joy thereof has frequently been curtailed because the visitors found themselves listening to the same speaker and same speech which they had heard a week before. This will now be overcome.

Mr. Al Parker, Pacific Camellia Society's new president, is enthusiastic about summer grafting. He grafted two plants August 22 under a tree, and was able to remove the jars on September 18.

Through the investigation of Mr. Austin Griffiths, the mystery of Nuccio's fine camellia Hichi-fukujen has at last been solved. This variety was bought by Nuccio from Domoto years ago under the name of Shishi-fukujen, but it was ob-

viously not truly labeled. Domoto then suggested that it was Hichi-fukujen, and Nuccio has been propagating it under that name. But the identification had never been satisfactory until Mr. Griffith discovered that its real name is Shin-nomome. As a light pink single it is second to none.

Southern Californians may well be proud that the first All-America Camellia selection is from their area. It is Cinderella, a production of the California Camellia Gardens of San Fernando, usually referred to locally as the nursery of Ed Arnesen and Dave Cook. A long article on the garden page of the *New York Times*, September 2, 1956, gave a description, not only of the award-winning camellia, but of the operation of the All America Camellia Selections. This is an undertaking well worth watching; if successful it will perform for camellias the same function that the All-America Rose selections performs for roses.

For the first time in a dozen years camellia seeds ripened quite late this season in southern California. One usually finds a few ripe seeds during the first ten days of August, but this year they did not appear until a month later. Late seeding and much new growth on the plants may have an effect on bloom production later on, but, as any experienced camellia person knows, predictions about camellias are almost a waste of breath.

ABOUT TAP-ROOTS OF CAMELLIA SEEDLINGS

There are very definitely two schools of thought on whether the primary, or central root of a seedling formed by elongation of the radicle, or rudimentary root in the embryo, should be pinched off or left intact. Elsewhere in this issue appears an article on seedling culture advocating this practice (see page 6). While there is no doubt camellia seedlings can be successfully grown both ways, the first attempt at scientific determination of the relative merits of the two methods seems to have been made by Dr. C. R. Merrillees, of St. Kilda, Australia, and is reported by him in an interesting article appearing in the *Camellia Annual* of the Australian and New Zealand Research Society, Number 2, December 1955, which article, it is understood, will be reproduced in full in the 1956 Yearbook of the American Camellia Society.

As a first step Dr. Merrillees measured the root systems of 15 different varieties of camellia seedling, for the purpose of establishing whether, in fact, they actually possessed what is commonly known as a "tap-root." Out of a total of 515 seedlings measured about three months after the first external sign that the seed had germinated, 10.5% showed roots up to 1 inch in length, 14.6% had roots to 2½ inches, 13.2% had roots 2½ to 3¼ inches long, 32.2% were 3¼ to 4¼ inches, 22.1% were 4¼ to 5½ inches and only 7.4% were over 5½ inches in length. At the age of six months, about 2% (12 plants) threatened to grow a tap root and when one year old not a single plant had continued to do so (make downward growth) although all apparently were growing subsidiary roots in a normal way.

On a smaller test of 100 seedlings whose tap roots were pruned when 2 inches long, no difference in the top growth, compared with those not pruned, could be discovered except in 2 of the 15 varieties. At the end of one year, 10 out of 25 pruned seedlings were smaller than their opposite (unpruned) numbers, although no appreciable difference was visible after two years. It is Dr. Merrillees' conclusion, based on his admittedly limited

tests, that there is no advantage from a growth standpoint in pruning the so-called tap-root of camellia seedlings. He expresses the belief that this technique has arisen largely because of the importance to commercial growers of limiting the size of pots thus economizing in space and materials to the minimum. Dr. Merrillees points out that, in his tests, 75% of the plants had root systems longer than 2½ inches, which is about the maximum limit for a 3-inch pot, consequently the grower naturally would want to trim them down so as to fit. The point was made that the average amateur does not ordinarily have these considerations, although root-pruning does tend to delay, but not prevent, penetration of the roots through the hole of the pot into the ground.

Dr. Merrillees makes the interesting observation that, where the camellia grows wild in the forest, the fiercest competition for water is in the sub-soil rather than near the surface, which latter area is subject to frequent drying out, consequently the camellia's roots have a tendency to grow shallow, thus avoiding this competition with other roots. We are not so certain that this principle applies to the camellia in cultivation because, among other things, it is often the case that such root-competition does not exist. In the Sacramento, California, area, situated on the river of that name, where the soil is largely alluvial or silt, it is a major undertaking to transplant old camellias because of the depth of their roots, which usually must be heavily sheared. It has been our own experience, in transplanting a fairly large collection, that plants established in an entirely different type of soil and elevation (the Oakland, Calif., foothills) also were so deeply rooted as to require extensive pruning in order to remove them. Furthermore, we should consider that all these plants were unquestionably cutting-grown, without any possible benefit from tap-root tendencies such as would be the case with seedlings.

Dr. Merrillees' article did not deal with the comparative effect, if any, on florescence, undoubtedly due to the fact his test

plants had not yet reached the blooming stage. It is to be hoped and urged that this fine bit of research be continued to that end for, after all, the principal consideration of the amateur in growing seedlings is to bring them into flower as quickly as possible. On this point, there may be some merit in any procedure which tends to interfere with or restrain vegetative growth. It is a well known fact that, when there is serious trouble at the roots of a camellia, it will often attempt to bloom, even unseasonally, which is its instinctive effort at perpetuation—a sort of dying gasp, as it were. Thus it would follow that any non-fatal simulation of this, such as constricting a branch with wire or severely confining the roots, would have a tendency to excite the same impulse in the seedling. Pinching off the tap-root probably would come under this heading.

SELECTION OF SEED FOR PLANTING

Nothing truer has been said than the remark that "you can learn from personal experience, but that is the hard way." It was my misfortune to learn about the importance of selectivity in planting camellia seed through personal experience, for the first hundred seed I planted were absolutely worthless, except for understock. They were obtained from an environment where there was nothing but singles and semi-doubles. Fifteen years and many thousands of seeds later, I am getting very choosy about the source of any seed planted. I have to, for we are running out of space!

For the benefit particularly of those who, through necessity or choice, will plant but a few seeds, I should like to offer a few suggestions:

(1) Do not bother with camellia seed from simple singles or semi-doubles where there is little opportunity for crossing with superior forms unless the seed has been hand-pollinated or the variety is an early bloomer. The chances against your getting something worthwhile are simply too great.

(2) Although the possible combinations within even fifty or a hundred va-

rieties are almost boundless mathematically, the variety which sets seed rarely or only occasionally offers the best chances for something entirely new.

However, it is our personal belief, based on handling thousands of camellia seedlings germinated in 6-inch flats and grown in 1-gallon containers until they bloom, that under these particular circumstances it is actually more advantageous to let the roots grow as naturally and vigorously as possible, because they will soon bring about their own restraint if left in the gallon container. If possible, we avoid transplanting into 2-gallon tins until the first buds have definitely formed, at which time the seedlings are removed from the greenhouse into the open and allowed to develop naturally thereafter.

However, here again we do not have any absolute proof as to the merits of one technique versus another. Furthermore, because it is practically impossible to be sure that any two seedlings are exactly alike, any scientific test designed to prove which is the better method would also be subject to question.—D.L.F.

(3) The size of the seed is not necessarily any criterion as to its merit. In hand pollinations, pods containing multiple seeds may yield one interesting seedling out of eight, or one out of four, with the chances materially less if only one or two seeds develop. While there is some evidence that large seeds give strong, vigorous plants, the most vigorous seedlings are often singles.

(4) Plant all seeds available from hybrids or unusual species, particularly if there is opportunity for crossing with other species.

(5) Plant all seeds from the following japonicas among others: ELEGANS, EMPEROR OF RUSSIA, PINK STAR, DAISY BANKS, AUDUSSON, MAGNOLIAEFLORE, DAIKAGURA, JOSHUA YOUTZ, DEBUTANTE, FRED SANDER, LETITIA SCHRADER, WHITE EMPRESS, VEDRINE, and all seed obtained from *any early* variety or one seldom known to set seed.—D.L.F.



Nagasaki Special



Eugene Lize



Yosemite



Emperor of Russia