

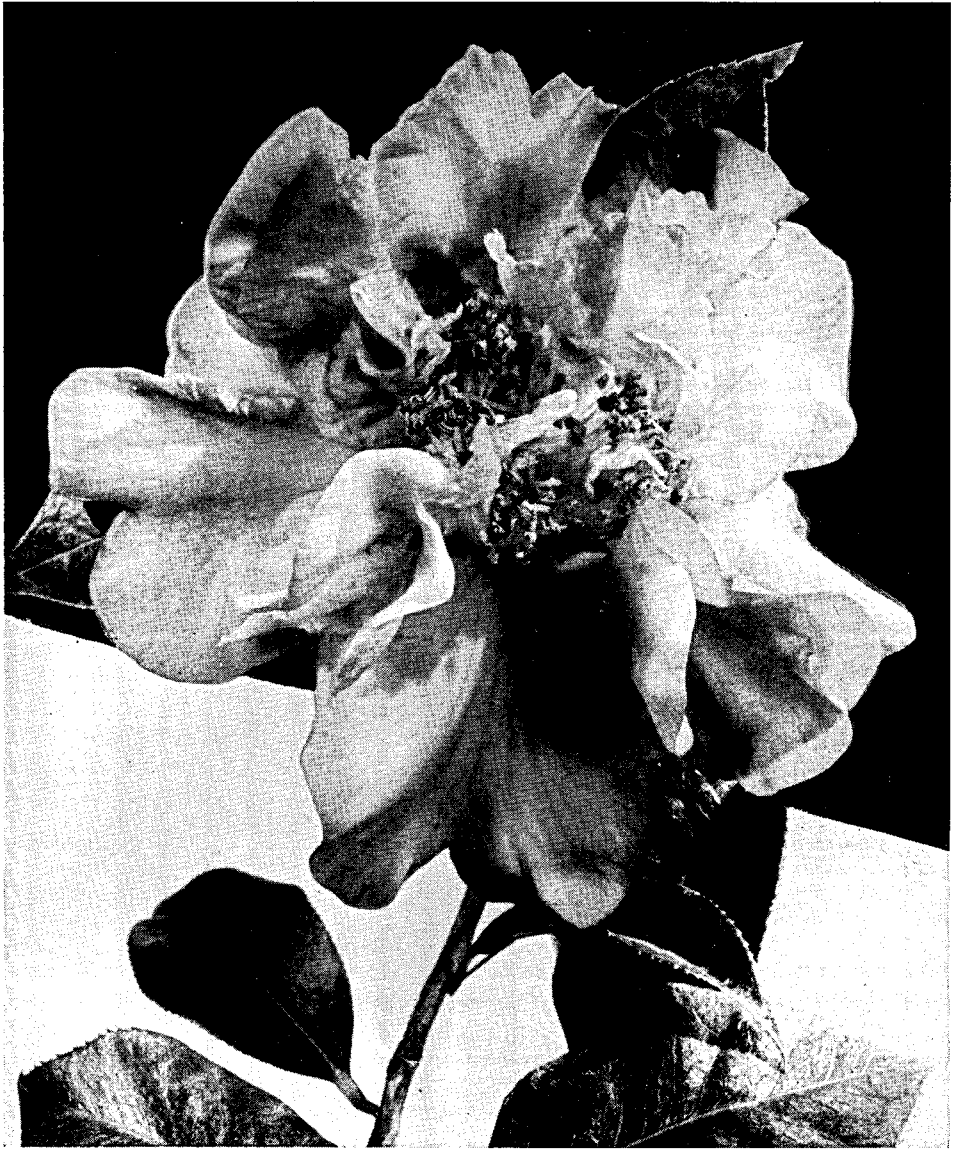
Northern California Camellia Society, Inc.

A Non-Profit Organization

Vol. 6, No. 1

OFFICIAL BULLETIN

September, 1952



Lion Head

Photo by L. O. Huggins, Santa Barbara, Calif.

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The Northern California Camellia Society, Inc. is a non-profit organization of camellia fanciers interested in the culture, propagation and development of camellias. Meetings are held on the first Monday in each month from November to May inclusive, at 8 p.m. at the Chabot School Auditorium, Oakland. Membership is open to all those with a serious interest in the subject. Annual dues \$5.00. Membership application blanks may be obtained from Barlow Hollingshead, Membership Chairman, 12 La Cintilla Ave., Orinda (Phone: Orinda 2054).

Published by the Northern California Camellia Society, Inc.

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COVER FLOWER

Camellia reticulata LION HEAD (SHIHTZETOU) Deep turkey red, striped and blotched white. Large to very large semi-double to incomplete-double, petals heavily crinkled near base. Vigorous growth. Midseason bloomer. This is one of the celebrated Camellia reticulatas imported from Kungming, China, by Descanso Distributors, Inc., La Canada, California.

RHODODENDRONS AND CAMELIAS IN GOLDEN GATE PARK

By Roy L. Hudson, Golden Gate Park, San Francisco
Past President, California Horticulture Society

In Golden Gate Park rhododendrons and camellias are grown in separate areas, but in your own garden you may feel perfectly free to mix these plants, for they grow in a harmonious manner. Those of you who grow camellias will not have to unlearn old techniques of culture, or learn new ones, to grow rhododendrons. They like the same light, spongy soil with lots of organic material, perfect drainage, an acid soil reaction, ample moisture, and high overhead shade when possible. Some of the newer varieties can take more sunshine than the other types.

Blooming Season

The season of bloom for camellias has been extended somewhat by using early, midseason and late-blooming varieties; but an even greater extension of garden beauty is possible by using rhododendrons in the plantings. The newer hybrids will give a stunning mass of color in May and June after most of the camellias are past.

Moving Plants

While camellias may be moved even after reaching considerable size it is not good policy to transplant them frequently. Rhododendrons and azaleas, however, transplant with such ease that in a mixed planting they may be shifted to give the camellias more room as often as necessary, but preferably during or immediately following the blooming season. Varieties that make new growth before or with the bloom should be moved in advance of this period. Many growers report that rhododendrons are developing new growth

quite early this year, probably due to the well placed and ample rainfall.

Feeding

Rhododendrons will flower freely if given good general maintenance. They like even more humus than camellias but of the same general type. Pine needles are particularly good, both as a part of the soil mixture and as a mulch. Peat, oak-mold and sawdust may also be used. But if you use sawdust, **always** add more nitrogen than normal plant requirements. This is necessary to supply the bacteria that are engaged in breaking down the sawdust. Otherwise they will rob the soil of nitrogen and the rhododendrons as well as other plants will starve. For general feeding the commercial acid-fertilizers are good and well-rotted cow manure is excellent. Liquid materials are especially effective if properly handled; a feeding of Urea just as new growth is starting will result in a lush but healthy leaf growth. **Never** fertilize rhododendrons after the end of June or growth will be sustained at the expense of flower buds. Young plants are sometimes disappointingly shy of bloom because of too much care and feeding.

A proper acidity must be maintained and if a chlorotic (yellowing) condition of the leaves is evident remedial measures are in order. For a quick pick-up use iron sulphate. Dissolve a couple of ounces of the crystals in three or four gallons of water and saturate the soil around the plant, staying back from the stem. It will spot new leaves and flowers but will do no permanent harm. This should be followed in a couple of weeks with a liberal dusting (on the ground) of agricultural sulphur. This works more slowly than the iron sulphate but will be effective over a much longer period.

The above talk was given at the May 12, 1952 meeting of NCCS. Mr. Hudson brought with him scores of colorful Rhododendron and Azalea flower trusses from Golden Gate Park which brought many oh's and ah's from his flower-loving audience.

Pruning and Removal of Spent-Flower Trusses

One of the most important cultural practices in growing rhododendrons is the removal of spent-flower trusses as soon after blooming as possible. The formation of seed has a strong inhibiting effect on new growth and in some varieties causes very poor bloom on alternate years.

At this time any necessary pruning should be done. Old, leggy plants may be cut severely, removing as much as one-third of the old wood. This will insure ample bloom, wood renewal and convenient size in two years' time. (Three prunings.) Rhododendrons break very well from old wood if vigorous and healthy and no fears need be entertained about cutting as hard as need be. Much pruning may be accomplished by using the blooms freely as cut flowers and this is the most opportune time for the welfare of the plant. Never prune below the leaves on a growth section or the stub will die back to the next lower branching area. Cut above a leaf cluster or just above a joint.

Golden Gate Park

Golden Gate Park is the largest man-made park in the world. It was built on shifting sand dunes and every ounce of soil was hauled into the park. In Rhododendron Dell the land was graded and then hundreds of yards of Delta Peat and pine needles and cow manure were thoroughly mixed with the sand and meager soil. (A word of caution on Delta Peat. Insist, as we do, on the rough, fibrous type. The fine "peach-fuzz" type makes a soggy mess that prevents proper aeration and will result in loss of plants.)

The John McLaren Memorial Rhododendron Dell is a tribute to the famous "Uncle John," tamer of the dunes, and Superintendent of Parks for fifty-five years. He was particularly fond of rhododendrons and Pink Pearl was his favorite. His statue is flanked by a solid mass of this variety.

The rhododendron garden is on the main drive opposite Eighth Avenue and extends behind and then to the east of the entrance. One cannot drive into the area and unfortunately the paths are not yet paved, but a walk through the area will disclose several hundred plants of various sizes in some 325 species and hybrids.

New Hybrid Rhododendrons

Rhododendrons that were available some years back were mostly of vigorous habit and limited color range. Now, after laboring many years, English and Dutch hybridists have produced a wealth of varieties in practically every color, carrying characteristics and growth habits and greatly extended blooming season. The Grier-sonianum hybrids bring us well into June, a valuable group made possible when it was discovered that pollen of early flowering varieties could be kept under refrigeration until late varieties were in bloom.

With the new English hybrid rhododendrons have come the deciduous hybrid azaleas. (An azalea is a rhododendron, but a rhododendron is not necessarily an azalea.) At the extreme east end of the Dell in Golden Gate Park you will find these new hybrid azaleas. They are mostly the Exbury strain, are extremely hardy and can be grown any place in this area.

An interesting hybrid between a deciduous azalea and an evergreen rhododendron is *Azaleodendron Broughtonii aureum*. It is a soft but warm creamy yellow, compact of habit and free-blooming.

The famous R. Royal Flush is an entirely new type in this country. The Royal Horticultural Society of England awarded it four stars, which is the highest rating that can be given.

R. *Burmanicum* is a species from Burma belonging to the *Maddenii* series. We have a bed of 60 or 80 plants which begin to show color in November. They are a solid mass of

(Continued on page 12)

TWO RARE CAMELLIA SPECIES

By Ralph S. Peer, Los Angeles

An English botanist, Mr. George Forrest, discovered in the interior of Yunnan, the southernmost province of China, *Camellia saluenensis*, and about the year 1913 brought back to England seeds of various varieties with white, red or pink blossoms. Seeds of the pink variety were the only ones to germinate. Fortunately, the plants grown from these seeds have multiplied rapidly and there are now available in England a great many specimens of *C. saluenensis*.

C. saluenensis hybridizes somewhat readily. In England, the hybrid varieties J. C. Williams, Mary Christian, and Cornish Snow are now well established. In California, we have the hybrid variety, Apple Blossom. This species has single pink blossoms of the same general form as the hybrid Apple Blossom. The color of the blossoms on the plants raised from seed in England varies from light-pink to rose-pink, but the color of each blossom is uniform. The largest blossoms are about three and one-half inches in diameter.

The importance of *C. saluenensis* lies in the fact that it is much **hardier** than either *C. japonica* or *C. sasanqua*. For a great many years, specimens of *saluenensis* have been raised in the gardens of the Royal Horticultural Society at Wisely, England. During September, 1948, the temperature dropped to 16 degrees Fahrenheit, which completely ruined all the japonicas, causing most of the buds to drop. Neither *saluenensis*, nor any of its hybrids planted at Wisely, were affected by this low temperature, and later all of these plants flowered nor-

mally. It is probable that within a few years enough hybrid varieties of *saluenensis* will have been created so that many different kinds of camellias will be available for parts of the country now considered too cold.

C. saluenensis Apple Blossom has a delightful aroma which is not found in the original species. The origin of this variety is a mystery difficult to solve. There is no doubt that the original specimen was imported from Japan by the Domoto Nursery, and one can only guess how the *saluenensis* half of the hybrid spanned the immense distance between Yunnan province, China, and Japan.

Another species, *C. taliensis*, is growing in England and is said to have considerable charm. These plants have also been grown from seeds brought back by Mr. George Forrest about 1913. The blossoms, which are white and about two inches in diameter, have many yellowish-brown tipped stamens which project about three-fourths of an inch from the center. Buds are formed in the axils of the leaves along the entire length of the current year's growth, and usually occur in two's and three's. The leaves of this species are outstanding, being about five inches in length, and olive-green in color.

Not too much is known about *C. taliensis* as the large specimen developed at Exbury in England died when it was moved in 1946. This ten-foot tree had gone through a bombing during World War II and had withstood a temperature of 12 degrees Fahrenheit without damage. The only available specimens are cuttings and grafts which are not yet very large. So far as is known, there has been no importation of seeds or plants of *taliensis* since 1913.

EXCERPTS FROM REPORT TO THE BOARD OF DIRECTORS ON LAKESIDE CAMELLIA GARDEN, OAKLAND

Board of Directors
Northern California Camellia
Society, Inc.
Oakland, California

Gentlemen:

At a recent conference with William Penn Mott, Jr., Superintendent of Parks, I was informed that the matter of laying watermains into the area of the Lakeside Camellia Garden preparatory to installing automatic sprinkler systems throughout the garden has now progressed to the point where they have the big pipe into the center of the garden and capped there. Mr. Mott says that while the weather is still good he wants to use his crews to finish up the work at Dimond Park and then when the rainy season starts he will put the crews to finishing up the sprinklers at Lake-

side Park. Mr. Mott says the money for this work is available.

That fits in well with our projected program of replanting some of the camellias in the large bed next to the roadway in which we purposely planted small plants close together with the thought of later removing every other one to a new location. Following the installation of all water piping they will be ready to pave the center section, lay out more beds, and I believe proceed to construct the lath superstructure to shade the more delicate varieties.

At the moment I have at my home in the lath house between 30 and 40 grafts on my own understock of scions which were a gift from Magnolia Gardens, St. Johns Island, South Carolina, and these I believe are about ready to set out. . . .

O. E. Hopfer, Chairman,
Lakeside Park Camellia Garden

ALL AMERICA CAMELLIA SELECTIONS

San Fernando, California
September 27, 1952

Mrs. Barlow Hollingshead, Editor
12 La Cintilla Avenue
Orinda, California

Dear Mrs. Hollingshead:

Your letter of inquiry has just been forwarded to me; I hope the delay has not inconvenienced you.

The Trustees and Directors of All America Camellia Selections, Inc., are working right now on a publicity release. I hope to have their permission to forward this material to all interested publications in the very near future. At that time, I will be more than happy to include your organization in the distribution.

At the moment, I am at liberty to inform you that the progress made to date is very encouraging. The first camellias to undergo official trial will arrive at the test gardens within the

next few weeks. Results of these trials will be made public sometime in 1955. Needless to say, this is a long time to wait, but the trials are to be as comprehensive as can be, and results should be quite conclusive.

I wish to take this opportunity to thank you for your interest. I can assure you that the Trustees of All America Camellia Selections, Inc., are sincerely appreciative of the cooperation of the camellia societies in connection with our program. Judges and garden directors participating in the A.A.C.S. trials have been drafted almost entirely from the ranks of the amateur camellia societies, and the gracious interest displayed by all of these camellia lovers has been most heart-warming.

Sincerely,
David Cook, Secretary-Treasurer
ALL AMERICA CAMELLIA
SELECTIONS, INC.

WATERING CAMELLIA CUTTINGS

Courtesy: SUNSET Magazine

To keep rooted camellia cuttings evenly moist, and to lengthen the periods between watering, Herbert V. Mitchell suggests this idea: Select a one-pound coffee can and punch several holes in the bottom for drainage. Put the pot with the cutting in the coffee can and fill the space between pot and can with peat moss. The peat moss holds the moisture and prevents evaporation from clay pots.

This trick can be applied to any small potted plant that needs regular watering. It's an especially good idea if you plan to be away from your home on vacation for any length of time.



Dues for the 1952-53 CAMELLIA YEAR are due and payable

Please forward them to Woodford Harrison, Treasurer,
910 Oxford Street, Berkeley.

Or pay at the November meeting and save the Treasurer
forwarding you a bill for dues.



One of the covered loggias at the home of Mr. and Mrs. David L. Feathers, 1 Camellia Lane, Lafayette, where container-grown camellias are sheltered from weather during blooming season.

WESTERN ARCHITECTURE AND THE CONTAINER-GROWN CAMELLIA

By David L. Feathers, Past President

The popularity of container-grown camellias has increased along with the development of a style of architecture distinctly different and peculiarly suitable to the West. The great stress we place on outdoor living has resulted in the greatest possible intimacy between house and garden in our home planning. Our typical rambling, ranch-type homes, with their large open patios or covered loggias, wide overhanging eaves all around and extensive paved areas, invite the use of potted plant material and afford many interesting opportunities for unusual floral effects in sheltered situations. The large expanse of glass which so often frames one or more sides of these "outdoor living rooms" brings the garden and living quarters into the closest possible association, thus facilitating the enjoyment of the plants at all hours and in all weather. Because of the widespread use of paving right up to the house and in roofed-over areas, potted or boxed plants are almost indispensable from a landscaping standpoint. For such a situation camellias and azaleas are ideal subjects because of their ready adaptability to container culture. Although not house plants, camellias do respond well to protection outdoors and are unsurpassed as container subjects because of their neatness and constant beauty of foliage and flower. Under these conditions it is possible to have miniature flowering trees so close to the living quarters as almost to appear to be large, living bouquets within the room itself. It is then not even necessary to pick the blooms to enjoy them from inside the home!

Besides the artistic value of camellias used in this way there is the practical benefit of protection of the flowers and one's person from the elements. Neither foul weather nor

the coming of night need interfere in the enjoyment of one's hobby. By systematic selection and replacement of plants, one may have a continuous succession of bloom over a long period of time—six months or so at least—and achieve ornamental effects that may be varied at will. Whether you grow camellias for your own personal pleasure or for exhibition purposes, or both, this is the ideal way to improve the quality of your blooms because, by keeping the plants under cover, the flowers develop uniformly perfect.

It is primarily the **movability** of container-grown camellias that permits their uses and enjoyment to be expanded and diversified—one of the strongest arguments in favor of growing some camellias in this way regardless of the extent of garden area. While we have ample space for extensive ground-planting at my home in the Contra Costa County hills beyond the eastern shore of San Francisco Bay, and grow a thousand or more camellias that natural way, nevertheless I would not be without the hundred or more plants in tubs, both in the lath-house and on paved areas contiguous to the living quarters. Some of the plants in larger tubs are espaliered against the walls under cover, in a more or less fixed situation. Others are grown normally and are moved into the loggias during the blooming season, then are returned to the lath-house when spring growth begins.

Thus we may sum up the principal advantages of growing camellias in containers: 1) freedom of movement, leading to greater enjoyment of the beauty of foliage and flower; 2) protection from the elements; 3) permitting their use as landscaping material in paved-over areas; 4) providing an alternate means of growing camellias

where soil or drainage conditions are unsuitable; 5) development of a more symmetrical shrub through confinement of the root system; 6) protection of the plants from rodent damage, and 7) other advantages of lesser importance or applicable only in special situations such as temporary residence.

Some of the disadvantages are fairly obvious. In the first place, a camellia grown in a container is in an unnatural situation. There is a distinct limitation upon the amount of soil area with all that implies in the way of restricted food supply, impaired uniformity in the important matters upon confinement generally. There is also the necessity of the plant's periodically adjusting itself to the new location each time it is moved, which results in some interruption of its normal processes. In short, the container-grown camellia is subjected to a certain amount of unnatural treatment and environment. The plant, therefore, requires more care—more frequent and faithful watering and fertilizing. Good drainage must also be maintained or the plant will die. As the plants grow—up to a certain point at least—there is the necessity of occasional repotting into larger containers.

From the foregoing summation, it will be seen that the culture of camellias in containers definitely has its pros and cons. My feeling is that it is distinctly worth while to grow at least a few plants this way, particularly where the situation is such that they can be used to advantage. Certainly, anyone with a small garden or an extensive amount of paving around the house, a covered porch or similar protected spot, will find good use for a few potted camellias and will marvel at the uniform quality and immaculateness of the blooms—the whites in particular.

For the person who may not be in permanent residence, this method is the perfect solution to the eventual moving problem; in the case of rent-

ed property there is then no question as to legal ownership of the plants. The writer thoroughly appreciates the former advantage, having moved more than a thousand camellias some 25 miles about four years ago. Had it not been that most of these plants were in containers, the job would have been well nigh insuperable.

Container Culture

On the premise that it is desirable to grow some camellias in containers, at least until they get too large to handle readily, I will explain in detail my particular technique, which is not necessarily the best way and certainly not the only way to do it, but has been found entirely satisfactory.

To start with, one should have a sturdy plant, preferably a variety that does not make rank growth. The slower-growing and formal sorts make the handsomest potted camellias, with the least need for repotting. The type container which I prefer is of redwood, preferably at least one-half inch thick, either a tub or a box. The shape is immaterial except that it be larger in top area than at the bottom, so that the container may be tapped off easily when transplanting becomes necessary. To avoid excessive repotting, I prefer to start with a tub at least 10 inches in diameter—the 12-inch size is even better. Since one should not over-pot a camellia, the plant for a container that size should be about three feet in height, which is an economical and standard nursery size plant. For a slow growing camellia, the 10-inch size tub may be used; but for medium and fast growers the 12-inch size is better.

The tub should be painted a dull green of a shade that will not compete with nor detract from the beauty of the foliage. A bright green is definitely conflicting and unsuitable.

Assuming the tub has a flanged or raised base, five or six drainage holes will be required in the bottom. If a flush-bottomed tub, the drain holes should be bored into the sides, not

the bottom, about one-half inch above the ground level or slightly higher, according to the thickness of the base. This is a necessary precaution to insure that the all-important drainage will not become clogged from contact with the soil or whatever the tub is to rest on. The drain holes should not be less than $\frac{3}{8}$ -inch diameter— $\frac{1}{2}$ -inch is better. If the holes are too small it will be difficult to prevent clogging; if too large, the soil may escape. In any case, the drainage material—rock, gravel, broken clay pots, charcoal, clinkers—should be non-rotting, permanent and of an average size slightly larger than the drainage holes. It should fill the bottom of the tub to a point about $\frac{1}{2}$ inch above the drain holes, so that the soil will not clog them.

I grow camellias in many different kinds of containers, but have found the metal ones conducive to excessive temperature fluctuation, while clay pots permit too much evaporation and the soil dries out too quickly. On the other hand, wooden boxes of reasonable thickness insulate the root system against sun and frost while retaining moisture even to the extent of self-absorption. Their one drawback is rotting, but this can be largely overcome by the use of a wood preservative of which there are many types available—copper-base, asphalt, creosote—even ordinary paint will help.

The next thing to consider is the potting soil. If this is of a loose consistency the drainage will be improved. I find the following formula highly satisfactory for potted camellias:

- 1 part good loam
- 1 part leaf mold
- 1 part peat
- $\frac{1}{2}$ part sand
- $\frac{1}{2}$ part cow manure

With two inches of drainage material beneath it, this will provide a planting medium containing adequate nutrition that will drain freely yet hold

moisture well and be slightly on the acid side.

This matter of acidity is an important consideration in localities having a water supply that is at all alkaline. Some municipalities add lime to the water system in order to minimize corrosion. If your water supply has a higher pH rating than seven, you should periodically introduce a counteracting acidifier of some kind, otherwise the tendency in the restricted area of a container is too alkaline toxicity from the lime deposited by the water as it reaches through the container. A mulch of pine needles annually may suffice; or one may use one of the prepared fertilizers which contain an acidifying agent. If the problem is severe, aluminum sulphate, sulphur, or one of the liquid chemical acidifiers should be used periodically, according to directions. This is an extremely important matter in some localities.

The soil level should be left two or three inches below the top of the container when planting, to allow for some slight build-up but particularly to catch sufficient water so as to insure that the soil below will be completely saturated each time—also to hold any mulch. Some growers annually remove the old top soil and replace it with fresh. However, I have found that a light coating of cow manure twice a year seems to provide sufficient nutriment, especially if supplemented with the liquid from soaked manure once or twice during the blooming season. This does not build up the soil level excessively because the manure soon decomposes into less bulk.

Exhibition of Container-Grown Plants

In my opinion as an active exhibitor and past show chairman, no camellia show is complete without some display of specimen plants grown in containers. They add immeasurably to the beauty of the show and permit the visitor to see many characteristics of a particular camellia—foliage, growth habit, flower form. At our

Northern California Camellia Society's annual shows we have a special class for competitive exhibits of container-grown camellias, which always receive much attention and enthusiastic praise from visitors.

Summary

Primarily growing camellias in containers is a method of deriving greater enjoyment during the flowering season and of achieving new and distinctive decorative effects about the home. I have endeavored to give both sides of the story so that each of you may decide whether you agree that the many advantages constitute sufficient reward for the slight extra care involved.

RHODODENDRONS—

(Continued from page 4)

bloom in February and March, tapering off in April and May. Truly an unusual performance in this genus. The plants are fully exposed to wind and sun and do not burn. They are compact and branch without pruning and bloom at every tip. The exquisite greenish-yellow buds gradually fade to a creamy-white as they open. *R. Burmanicum* is a species so will come true from seed. Seedlings will begin to bloom the third season.

We must not speak only of the good things about rhododendrons. Sometimes we must mention varieties that are not so satisfactory. *R. Fabia* is a cross between two wild species, one of which is *R. Griersonianum*, and the leaves tend to tip-burn. Go slow in buying plants that are obviously of *Griersonianum* parentage. Be sure that you can provide sheltered conditions that will minimize this fault. They also have a tendency to carry the flowers in a weak truss, beloved by the English, but not too popular here as yet. Again, there is a marked difference of color in the various *Fabias* on the market. See them in bloom before you buy.

Another *Griersonianum* cross is *R. May Day*, originated on the Exbury

estate in England. This variety is so lovely that we cannot do without it even if the leaves do tip-burn and it has a loose truss. This is another four-star variety.

R. Borde Hill has very fine red flowers and was given a three-star rating. The average frost will not bother it.

R. Scandinavia has a tremendous truss of very dark red flowers and dark leathery leaves. It is a late bloomer and one of the larger sorts that are not suitable for small gardens. It cannot be satisfactorily controlled by pruning.

R. Mrs. Philip Martineau, a rose-pink fading lighter, with a pale-yellow blotch, is one of the finest. It received a first-class certificate in England for outstanding merit although it only rated three stars. It might have some fault in the English cold. The British rate not only on bloom but on habit and dependability.

R. Loderi is perhaps the finest white hybrid in existence, but it is too large for a small garden.

R. Loder's White ranks very high among white rhododendrons and is more compact in habit. It was produced by the same plant breeder as *R. Loderi* mentioned above.

R. Corona is a bright rose-pink with a two-toned effect and is a very sprightly variety. It is definitely a small type and will take several years to reach five feet.

R. Mrs. Wm. Watson is blush fading to white, with violet spots. It is one of the hardiest types for the colder areas. The truss and flowers are large but the plant is of medium habit.

R. Hyperion is a showy variety, white with a chocolate blotch.

R. Mrs. J. G. Millais is white with a yellow eye, a pastel effect.

Rhododendron Species

There are over 600 species of rhododendrons, a hundred of which are well worth growing in the garden,

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QUEST FOR NEW CAMELLIAS BY GROWING SEEDLINGS

By Barlow W. S. Hollingshead, Past President

Growing seedlings is one of the most interesting and exciting methods of propagating camellias, since it is the more important of the two basic means of bringing new varieties into being: by creation of new seedlings, or through chance sports or mutations of existing varieties. Sports result from changes in the genes and chromosome patterns of a twig or a branch on an existing variety, often resulting in change of color, flower form, and even leaf structure. Mutations are freaks of nature, are uncontrollable, and are relatively rare. Seedling camellias, on the other hand, vary in color, form, size, texture, blooming season, and growth habit, carrying characteristics of both parents, dominant or recessive, and usually look quite different from the flower on either parent plant.

Seed Bearing Varieties

A prime requisite in growing camellia seed is some knowledge of the varieties that will bear seed. This is

essential if a program of hand-pollenizing is undertaken. Some years ago the author wasted much valuable time with no results by trying to hand-pollinate Lady Clare, Nagasaki, Hikaru Gengi (Herme), Gigantea, and California. To my knowledge Lady Clare will not bear seed, and the other varieties listed rarely bear seed. Should seed pods form through chance pollination on any of these camellias the seed should be propagated.

A number of old varieties of *Camellia japonica*, as well as many of the newer introductions, bear seed freely. Most of these are hardy, have excellent growing habits and produce quality flowers, characteristics which are desirable to be transmitted to their progeny.

Some of the old varieties of *Camellia japonica* which bear seed freely are Tricolor Sieboldi (Wakanoura), Donckelari, Lady Van Sittart, Pink Star, Ethlington White, and Princess

RHODODENDRONS—

(Continued from page 12)

large or small. These have been tried and selected until only the best ones are propagated. They range from true dwarfs a few inches high to small trees with immense leaves. There is a size and type for every sort of garden. Camellia plantings could be enhanced by the addition of some of the smaller, compact types in the foreground. They would provide a contrast of foliage and a wider color range without extra preparation or special care. As an example, *R. Ledoides* is a species with small heads of pink flowers which remind us of *Daphne Cneorum* and is much easier to grow. The plants have small leaves and a height usually under two feet.

It can be trimmed into a low informal hedge and is a plant of great charm.

Many other species may be used in a similar manner. The specimens have only been a slight indication of the tremendous array in the great race of rhododendrons, the king of shrubs.

Question: Do you recommend growing hybrid rhododendrons from seed?

Answer: It would be a waste of time to grow hybrid rhododendrons from seed hit-or-miss. They do not come true and most of them are far inferior to their parents. In England, and now in this country, hybridizing is done scientifically with definite ends in view. Careless hybridizing rarely produces anything very good. They seem to revert much more than camellias do when grown from seed.

Baciocchi. These are widely distributed in commerce and may be purchased at reasonable prices if they are not already in your collection.

Some of the varieties introduced in recent years that bear seed freely are: Ville de Nantes, Imura, Duchess of Sutherland, Jenny Jones, Campbell Ashley, Rosary F.N., Hibiscus, Favorita, Kreena, Letitia Schrader, Tiara, and Gigantea Alba. Most of the latter are readily obtainable in commercial nurseries that specialize in camellias.

Some of the varieties that occasionally bear seed are Finlandia, Hikaru Gengi (Herme), Cho Cho San, Arrabella, Tinsie, Thelma Dale, and Anita. Since these bear seed only sparsely much time can be spent with disappointing results in the number of seeds produced. Should any seed pods develop due to chance pollination, the seed should be propagated as something interesting may develop from such fine varieties.

It will be noted that the camellias listed as prolific seed bearers are single, semi-double or incomplete-double in form. Single and semi-double forms (simple form) have all the sexual parts present, hence are biologically complete in structure to carry out the reproductive processes, providing conditions are ideal. In the incomplete double forms such as Hikaru Gengi (Herme), the sexual parts are usually deformed or have been transformed into petals. If the pistil is deformed, the union of the male pollen and female ovules may be prevented. Occasionally the sexual parts of the incomplete double form, and even the double irregular form such as Peoniaflora, are complete and may result in the bearing of seed. The double imbricated flower form, such as Alba Plena, never bears seed, since all the sexual parts have been transformed into petals.

Hand Pollination

In carrying out a program of hand-pollination consider what characteristics are desirable to be carried forward in the progeny: fragrance, color,

size, form, texture, substance, blooming period, growth habit, tolerance to sun, hardiness, size, texture of foliage.

Having in mind such desirable qualities, we may set forth the following specifications for the improvement of two existing varieties: Color, white; flower size, very large; flower form, semi-double; petals, wavy and crepe-like; substance, firm and long-lasting, flowers to open easily, free from tendency to bullhead; growth habit, upright and compact; foliage, dark green with large elongated leaves.

With the above specifications in mind, we select two japonicas that have some of these characteristics. Jenny Jones is chosen as seed bearer or mother plant. It is an upright, compact grower with dark green foliage. The branches are strong and erect and capable of bearing very large flowers. The blooms are unusually large, white, cup-shaped, with considerable substance. The blossoms open freely; never bullhead. Lotus is chosen to furnish the pollen. It bears very large semi-double cup-shaped flowers with wavy, crepe-like petals, but has the undesirable characteristics of poor flower substance, tendency to bullhead, loose, open, droopy growth habit, light green foliage. In such a cross there are possibilities of obtaining the desired characteristics of the two japonicas selected. Dominant characteristics carried by both parents are very large semi-double white cup-shaped flowers. One parent, Jenny Jones, carries all of the desirable qualities set forth except wavy, crepe-like petal structure and elongated leaves. In crossing with Lotus it is possible to capture in the progeny the desired characteristic of wavy, crepe-like petal structure and eliminate the undesirable characteristics of bullheading, lack of flower substance, and the tendency for weak, drooping growth habit and light-green foliage.

Similarly one may readily think of other possible crosses that might pro-

duce interesting and desirable results. If fragrance is the desired characteristic to be developed one may select pollen from fragrant *Camellia japonica* varieties such as Caprice, Sweet Delight, Hikaru Gengi (Herme) and its sports. Most single and semi-double seed-bearing varieties are slightly fragrant, so by selecting pollen from the incomplete-double flowers that are fragrant, it is possible to develop new varieties with more fragrance, interesting flower forms and color combinations. *Camellia saluenensis* Apple Blossom is one of the most fragrant camellias and may be crossed with fragrant japonicas. (When two different species are crossed by hand-pollination, the process is spoken of as hybridizing.)

Care of Plants During Seed-Bearing Period

Prior to pollinating it is necessary to remove the pollen-bearing anthers from the flowers on the mother plant which is to bear seed. This is done with a small pair of scissors by cutting the stamen as soon as the flower opens, in order to avoid the possibility of self-pollination. Care must be taken not to injure the pistil in the process of removing the anthers. About two days after the flower on the mother plant opens, pollen should be placed on the pistil with a soft camel hair brush or by holding two or three stamens between the fingers and touching the pistil with the pollen-bearing anthers. A warm sunny afternoon is the most desirable time for pollination.

Prior to and after pollinating the seed-bearing flower may be covered with a transparent bag which should be removed about three days after pollinating. If the bag is left on too long sweating will take place and may cause fungus growth and loss of the embryo seed pod. The corolla should be left on the plant until it drops naturally or becomes dried, at which time it may be gently removed from the newly formed seed pod. To protect seed pods from dropping

when growth starts the terminal growth bud may be pinched out so that the strength of the twig on which the seed pod is located will be transmitted to it. Seed-bearing plants grown in containers may be placed in a semi-shaded area during early summer in order to assist the seed pods in their development. Hot direct sun during midday will often cause seed pods to drop. The plants must also be kept moist as a dry root system will cause seed pods to drop.

Harvesting the Seed

Some japonicas start throwing their seeds about the middle of September, while the seed of other varieties ripen through October and even in November. Evidence of ripe seed is noticeable when the seed pods start splitting in the end revealing their seed. If the seeds are plump, dark-brown or black, they are mature. All seed pods on that plant may be removed and placed in a can to cure until all pods have opened naturally. As soon as the seed pod opens, remove the seed and eliminate the pods as damp open pods left in the can may start fungus growth. Don't start removing seed pods from a plant until there is definite evidence that the seeds are mature. Pods removed prematurely may result in undeveloped seed which will prove sterile. Keep seeds from each plant separate and labeled by variety of mother plant or showing parentage on both sides where such information is known.

Planting Camellia Seed

The sooner the camellia seeds are planted after harvesting the better are the chances of obtaining a high percentage of germination.

The seeds may be planted in individual pots or in flats. If a large number of seeds are available, one may use regular nursery flats 14" wide by 23" long by 3" deep. A flat will accommodate 60 seeds in 2" x 2" cells as indicated below. Place a double thickness of newspaper in the bottom of the flat and cover with one inch

mixture of half sand, half peat. Then place 2" x 2" x 3" plant bands in the crate and fill to within one inch of the top with the half-and-half mixture of sand and peat. Place one camellia seed in each cell and cover to the top of the cell with the same mixture. Identify each seed or group of seeds of the same variety or cross by inserting a six-inch pot label in the proper cell. The label should bear the proper identifying nomenclature and the date of planting.

Place the flats in a warm, partially shaded place if you do not have a greenhouse. The author uses a shelf near a south window in the basement where indirect light is available. Water well with a sprinkling can until water runs out. Afterwards water about every two weeks or whenever the top layer of soil starts to dry. Place one-half inch mesh wire over the flats during germination to keep rodents from taking the seed.

The little seedlings will start coming through the ground in from two to three months. The flats should be left in the greenhouse or a warm place until early May, then they may be placed in the lathhouse or under trees until October when they are ready for potting in quart cans, No. 5 juice cans, or gallon cans, depending upon the size of the plant and its root structure.

The potting mix for seedlings may consist of 30% loam, 20% sand, 20% peat, 20% pine mould, and 10% cow manure.

The potted seedlings should be placed in a semi-shaded area during the first year. After the first year they may be placed in full sun if it is desired to force early blooming. The author has seedlings that will bloom for the first time this year, at the end of the fourth year. In general it takes from five to ten years to bring seedlings to blooming size under natural conditions. Under controlled conditions, using heat and artificial light, it has been possible to bring seedlings to bloom in from eighteen months to

three years; this has been accomplished by Dr. Walter Lammerts at Descanso Gardens in La Canada.

As the young seedling camellias come into bloom, one should not discard all the singles and semi-doubles that are not worthy of propagating. For example, if a single or a semi-double is an early bloomer, it could be saved as a seed-bearer to cross with some early-blooming variety such as September Morn, Daikagura, Rose Glory, Joshua E. Youtz that seldom bear seed. Thus interesting new early-blooming varieties may be created.

Seedlings not worthy of propagation may be used as understock for grafting desirable varieties.

1953 CAMELLIA SHOWS

Fortunately the dates for the major 1953 Northern California camellia shows do not coincide, and our members will be able to visit all three:

San Jose—March 1, 1953.

Sacramento—March 7-8, 1953.

Berkeley—March 14-15, 1953.

FLOWER ARRANGEMENTS CHAIRMAN

Mrs. Herbert Teachout of Orinda has consented to take on the chairmanship of Flower Arrangements, for which she is eminently suited.

In 1951 and 1952 Mrs. Carl B. Bowen and in 1949 and 1951 Mrs. H. G. Sanders handled this difficult and time-consuming chairmanship with distinctive achievement.

QUESTION AND ANSWER PERIOD

Dr. H. V. Allington has been appointed chairman of the Question and Answer Committee. Please bring your cultural questions to the regular meetings and hand them to Mr. John J. Kampschroer, Sergeant-at-Arms, when entering the auditorium.