

Northern California Camellia Society, Inc.

A Non-Profit Organization

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OFFICIAL BULLETIN

January, 1955



C. reticulata var. "PAGODA" (Pine Cone) growing in Kunming, China

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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 Judson K. Kirby, 7 Elliott Drive, Route 1, Concord, Calif. Address all matter regarding the Bulletin to the Editor. Report change of address to the Secretary.

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COVER ILLUSTRATION

(Courtesy of Royal Horticultural Society and Ralph S. Peer)

The tree depicted is several hundred years old, 30 ft. tall, with a 20" trunk, and grows in the garden of the Temple of Hsishan at Kunming, Yunnan Province, China.

THE NOVEMBER MEETING

In his opening remarks at this first meeting of the season, President Wallace H. Brown reported that the new Board of Directors had been working most diligently on various matters, having held 9 meetings since last May. Mr. Brown also announced the voluntary retirement of Mr. O. E. Hopfer as Chairman of the Lakeside Camellia Garden Committee, which had been regrettably accepted, and expressed the feeling of the meeting in thanking Mr. Hopfer as the originator of the project and for his many years of service in this regard. The Board had subsequently appointed Mr. A. E. Evers, of Lafayette, as Mr. Hopfer's successor, the new committee consisting of himself as Chairman, Mr. Woodford F. Harrison of Berke-

ley and Mr. Clifton W. Lattin of Oakland. Upon being introduced, Chairman Evers reported on the progress being made and urged the members to make a visit to the Garden and to support his committee in every way possible. The President then expressed pleasure at the excellent attendance for a first meeting, and introduced and welcomed the many guests and new members.

Through the thoughtfulness and courtesy of Mr. and Mrs. George J. Helms of San Leandro, several hundred camellia seeds were again given to all members present who desired them. This is becoming an annual and popular event and the Society wishes to again thank these good friends.

GUEST SPEAKER

It was our good fortune to open the 1954-55 season with an informative talk by Mr. William H. Hall of CAMELLIA HALL NURSERY, SACRAMENTO, whose subject bore the intentionally facetious title of "WHO PUT SALT ON MY RETIC?" Actually, this reference to the accumulation of harmful salt deposits from continued use of non-organic fertilizers was a minor part of Mr. Hall's most thorough coverage of many phases of camellia culture. Perhaps a more descriptive title might have been "Notes from my Little Black Book," inasmuch as the talk was devoted to gleanings from an accumulation of random notes compiled by the speaker over a period of years and delivered succinctly and clearly. The following is a condensation of Mr. Hall's excellent talk as transcribed and classified from notes taken at the meeting by Recorder Mrs. Irene Ashuckian and your Editor:

General Culture

Reticulatas as a group and **C. Maliflora** (Betty McCaskill) appear to be extra-sensitive to salts build-up in soil, to over-fertilizing and to inadequate drainage. Recommends **one-half** normal feeding of **strictly organic**

fertilizers and the use of one-half sand in soil potting mixtures for **Reticulatas**. Other camellias found to be supersensitive to poor drainage are **C. japonica** **DEBUTANTE** and **AREJISHI** and the hybrid **APPLE BLOSSOM**.

Environment: Morning sun will provide earlier bud set, consequently earlier blooming, than afternoon sun, while the heaviest-shaded plants will bloom latest. **Soil Amendments:** Leaf mold is regarded as a better mulch than peat moss. The use of Krilium, gypsum or soil sulphur is advisable when working with heavy soils. Soil sulphur is regarded as better than gypsum. In clay soils, Krilium is preferred to either peat or leaf mold, which seem to disappear. Soil sulphur is essential particularly where the plant is near mortar, brick or new concrete work. Use 2½ lbs. to 100 sq. ft., dug into the soil shovel depth.

Disbudding: Remember that downward-hanging buds are the least affected by weather—this is important at Show-time.

Plant Health and Foliage: A chalky deposit on the surface of the soil is an indication of salts build-up, particularly where this is accompanied by leaf-mottling. This is more critical

in the case of container-grown plants, and where inorganic fertilizers are used exclusively. To get these salts out, bare-root the camellia as quickly as possible, regardless of the time of year; hose off the roots, dunk the plant about 1½ hours in a tub containing TRANSPLANTONE solution (made by American Plant Chemical Co.). We have successfully bare-rooted camellias at any time of year this way. Iron Sulphate will green up the foliage when it is not desirable to use fertilizer (in mid-summer), showing results in 10 days to 3 weeks after application. We use Des-truxol IRONTONE, 2 heaping teaspoonfuls per 10 sq. ft. for plants in ground, ¼ teaspoon per gallon of **soil content** for plants in containers, distributed evenly and watered in well. Camellias should be checked about Sept. 1st regarding appearance of foliage.

Fertilizing

We prefer to use **organic** fertilizers — preferably liquid — because of the danger of an accumulation of excessive salts from the inorganic fertilizers. For sparse bud-set, use of an evenly-balanced fertilizer containing a heavier percentage of phosphates (less nitrogen) is recommended.

From ⅓ to ½ normal amount of fertilizer (preferably low-nitrogen) may be used after December 1st to improve blooms on underfed plants. **Reticulatas** should not be fed after middle of May and use only organic or liquid-type fertilizers. High-nitrogen-fed plants provide good understock but the poorest cuttings. An excess of nitrogen results in a reduced, not increased, starch concentration as well as plant sugar content. Do not feed camellias immediately prior to use as understock or for scion sources.

Grafting

Do not use anything but healthy understock. Both scion and understock should be dormant, so do not feed the plants involved after July 15th. Scion wood should be semi-matured (brown), preferably without

flower buds. Do not use wood from the previous year's growth nor scions with heavily variegated (albino) leaves. They should be cut not over 3½ inches long, always avoiding use of weak growth. Clean the entire surface of the soil to stop mold, using 5% cider vinegar solution, quarter strength, for dry molds, Fermate for damp molds. Extra-large leaves should be halved, to avoid touching inside of the jar, otherwise leave uncut. Cleft graft is used except in summer, when bark graft is best. On large understock, use slow-growing scions — fast growers on the thinner understock. Young understock is best and try to match scion and understock as to growth habits (fast or slow). Rubber grafting bands are used universally and are best because they are flexible. In cleft grafting, a scion cut at a leaf node on both sides will give greater cambium area and thus more likelihood of success. It is best to have the understock on the dry side (thus more dormant) when it is used.

After grafting, cover with jar, shade when temperature exceeds 80°. Syringe daily in hot, dry weather, lifting jar in morning when there is least danger of drying out. Sponge rock is very helpful in absorbing sap "bleeding," which tends to cause mold and rot. Build up with sponge rock or sand in PLANT BANDS about understock. When it appears that scion is growing, raise jar by degrees, using small opening at first, until graft will stand exposure (jar completely removed) without wilting. If it wilts, syringe, re-cover and place in the shade. Early winter grafts need most light, late spring grafts most shade. After graft has completely knit and jar has been removed, apply TREESEAL over all cut surfaces, including the split portion of the understock, which should be filled. Inspect frequently and water only sufficiently to prevent drying out completely, until scion is definitely growing. Pink Perfection, Pope Pius IX and Magnoliaeflora will not variegate as the result of grafting.

Other Suggestions

We have found that NATRIPHENE is the best overall fungicide for garden use — rinsing bottles, dipping seed flats, as a wood preservative, etc. Use it at a 1 to 2,000 solution to reduce all fungus growth problems. Obtainable from the Natriphene Company, 424 Book Bldg., Detroit 26, Mich., price \$5.00 for 100 tablets, sufficient to make 250 gallons of solution.

To store camellia seed for later planting, dust with Du Pont ARASAN,

put in airtight container and store in refrigerator for planting in February.

Camellia Petal Blight

(Mr. Hall also gave excellent practical directions for control of this menace to every camellia garden. However, in view of our panel discussion at the December meeting wholly devoted to this problem, to avoid repetition, all of the ideas and recommendations brought forth at both meetings have been incorporated in the one article on this subject appearing herein.—Ed.)

NEW CAMELLIA PUBLICATION

Volume I of "CAMELLIAS IN THE HUNTINGTON GARDENS," by William Hertrich, Curator Emeritus, has just recently come off the press. It is a 380-page book, dealing with the culture, propagation and use of camellias generally, containing 249 illustrations, some in color. The volume is, however, largely devoted to illustrating and thoroughly describing botanically and historically a large number of camellia varieties now growing in these famous gardens, for the development of which the author is to a very great extent responsible.

As anyone who knows Dr. Hertrich would surmise, this work is absolutely thorough, authoritative and of the very highest caliber throughout — from the foreword by Ralph S. Peer to its extensive index. The illus-

trations, from photographs made under the author's immediate supervision, are of the highest quality and correlated in regard to size. The book's thoroughness is exemplified by the depicting, in a number of instances, of two or more variations of the same camellia, and its very careful use of nomenclature.

All in all, this must stand as one of the finest contributions to camellia literature and a great credit to all connected with its production. One can only wait impatiently for Volume II to appear. The price is \$10.00 plus tax, postage prepaid and the beautiful 7" x 10½" book may be obtained from the Huntington Library, Publications Office, San Marino 9, Calif., or through Mrs. Lenore Broze, Chairman of Book Sales of this Society.

PLANT DONORS AND WINNERS OF AWARDS

November 1 Meeting

There being insufficient blooms on display, in the opinion of the Chairman of Awards, to justify separate drawings, both fine plants contributed by SARATOGA CAMELLIA NURSERY, of Cupertino, Calif., were awarded as door prizes. The winners and the plants they selected were: J. H. MILLER, of Mountain View, won the MARTHA BETZ graft; MRS. WILL CROCKET of Piedmont won the hybrid camellia APPLE BLOSSOM.

December 6 Meeting

There were again too few blooms

on the tables to justify a separate Exhibitor's drawing, consequently all awards were given as door prizes. The two choice camellias donated by JAMES RARE PLANT NURSERY, of Campbell, Calif., were a VICTORY (RED) and MORNING GLOW. The winners: MR. and MRS. ENGLANDER, and L. P. BROOKS, of Concord, respectively. As an added door prize, our new Lakeside Park Garden Committee Chairman, AL EVERS, contributed a handsome, hand-made redwood container, the lucky winner being MR. ROY TESS.

CULTURAL EXPERIMENTATION COMMITTEE REPORT

Immediately following appointment of the new Chairman of this Committee, Harold L. Paige, and selection of its personnel last summer, it was decided that the first matter to be undertaken would be the compilation of a broad list of camellias judged to be most satisfactory in Northern California, classified according to their respective climatic preferences. This appeared to be a logical step in view of the preliminary work done heretofore by the previous Committee and others along the same broad lines, as reported upon in the October, 1953, issue of this Bulletin (Vol. 7, No. 1), which included a partial list of varieties classified in accordance with their performance in the warmer, or interior, regions as opposed to the cooler, or coastal, areas.

Taken as a whole, the entire undertaking constitutes a serious attempt to solve one of the most vexing problems confronting practically all amateur growers and even some of the professionals—that of selecting those camellias best suited to that particular environment with which each individual is personally concerned. An answer to this problem is vital not only to the members of this and other camellia societies in Northern California but to the general public as well, for it is a matter of the utmost

concern to all who are interested in camellias that dissatisfaction and failures be kept to the minimum. We all know that many varieties which are outstanding in the warm interior of this part of the state are practically worthless when grown along the cool and sometimes foggy coastal areas.

The presentation which follows is the result of many months of hard work by the Committee as a whole. It would not have been possible, however, without the co-operation of the many amateur and professional growers who contributed so generously of their time and information, which is most gratefully acknowledged on behalf of the Chairman and the Committee. Speaking now as one of the active members of this Committee, whose sentiments I am simply voicing, this introduction would be seriously remiss were mention not made of the invaluable contribution of time and assistance rendered the Committee and its work throughout by Mary Paige. Not only did she serve our Committee most capably and diligently as informal secretary, statistician and research worker, but, in addition, made our many meetings pleasant evenings in her dual capacity of delightful hostess.

—D. L. Feathers

A SELECTED LIST OF 100 VARIETIES OF CAMELLIA JAPONICA FOR NORTHERN CALIFORNIA GROWERS

Purpose of this List: To select from the 1500 or more named varieties of *Camellia japonica* a list that experience has shown will grow and bloom best under the wide range of environmental conditions prevalent in Northern California — a list from which a beginner can safely make his selections when starting a Camellia collection. This list is not necessarily final nor conclusive and is subject to enlargement and possible modification based on further experience with certain of the newer varieties.

Method of Selection: Members of this Society, including professional and amateur growers from 22 communities in 12 Northern California counties, submitted reports of their personal experience with over 500 varieties. From these reports, this list of 100 was chosen as having the largest number of favorable comments. Twenty (20) commercial growers and amateur collectors then gave their opinions on sun tolerance respecting these varieties, indicating which of them should do well in the Coastal Areas of Northern California.

CULTURAL EXPERIMENTATION COMMITTEE REPORT (Continued)

Coastal Areas: The figures given under this heading indicate the number of growers who thought a variety would or would not do well in the cool, foggy summers of the Bay and Coastal Areas. All totals do not equal 20, as some growers reported having no experience with certain of the varieties under coastal conditions.

Interior Valleys: All varieties on this list are approved for the higher summer temperatures of the interior valleys of Northern California.

Sun Tolerance: There was not always sufficient unanimity of opinion to justify a conclusive interpretation, so the opinions expressed are shown exactly as calculated from the reports. The totals do not always equal 20, as frequently the experts thought a given variety would thrive in a range of conditions and checked both "Sun Tolerant" and "Sun and Shade," etc. In general, it must be understood that where varieties are rated in **two** exposure columns, the shadier will **usually** take the preference for best flower quality in the Interior, and the sunnier will **usually** take the preference in the Coastal Areas. In other words, a "Sun Tolerant" rating in the average Coastal climate might be about equivalent to a "Sun and Shade" exposure in the Inland Areas. Also, "Shade Type" does not mean complete or dense shade, as few varieties aside from Mathotiana Alba and Lotus will set buds in complete shade.

In using the Sun Tolerance tables, some judgment and knowledge of individual growing conditions is still necessary. For example, plants in containers for patio use should receive more protection from sun exposure than plants in the ground. Newly planted camellias should be treated as though they were container specimens for **at least** one growing season. This would mean temporary

protection during periods of extreme heat.

FLOWER FORM

For the benefit of the general public, the classification of flower form has been simplified as follows:

Single: 5 to 9 petals. Stamens all central, united in a cylinder or cluster. Examples: Amabilis, Daitairin.

Semi-Double: 10 to 20 petals. Stamens all central, united in a cylinder or cluster. Examples: Lady Clare, Donckelari, Finlandia.

Incomplete Double: Numerous petals with single stamens or clusters of stamens intermixed, forming an irregular mass. Examples: Herme, Emperor of Russia.

Complete Double, Irregular: Stamens, if present, few in number and hidden by petals. Petals irregularly arranged in a convex mass, usually small, strap shape, with an outer row of guard petals. Examples: Debutante, Elegans (Chandler) Var.

Complete Double, Formal: Normally no stamens visible. Petals overlapping like shingles on a roof. Examples: Alba Plena, Glen 40, Pink Perfection, C. M. Hovey.

COMMITTEE ON CULTURAL EXPERIMENTATION

Harold L. Paige, Chairman

December 1, 1954.

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Herman V. Allington, M.D.
 David L. Feathers
 Woodford F. Harrison
 Thurston Skei
 Walker M. Wells, M.D.
 Wallace M. Brown, President 1954-55
 (ex-officio)
 Clifton W. Lattin, President 1953-54
 (ex-officio)

CULTURAL EXPERIMENTATION COMMITTEE REPORT (Continued)

REPORTS FROM 20 COMMERCIAL AND AMATEUR CAMELLIA GROWERS
ON A SELECTED LIST OF 100 VARIETIES OF CAMELLIA JAPONICA

NAME AND COLOR	COASTAL AREAS		BLOOMING SEASON		FLOWER FORM	SUN TOLERANCE*			
	Yes	No	E—Early	M—Midseason L—Late		Sun Tolerant	Sun and Shade	Shade Type	Total No. of Replies
WHITE									
Alba Plena	13	1	E	M	Complete Double, Formal		16	17	(19)
Amabilis	7		E	M	Single	2	10	7	(11)
Chastity	7	1	E	M	Incomplete Double	3	12	7	(13)
Fimbriata	12	2	E	M	Complete Double, Formal		16	16	(19)
Finlandia	13	1		M	Semi-Double	3	19	9	(20)
Frizzle White	9	1		M	Semi-double to Inc. Double	2	15	15	(19)
Joshua E. Youtz	13	1	E	M	Irregular Double	2	17	15	(19)
Lotus	9	1		M L	Semi-double		7	11	(13)
Margarete Hertrich	8	2		M	Complete Double, Formal	3	12	8	(15)
Mathotiana Alba	6	2		L	Complete Double, Formal		6	8	(9)
Morning Glow	2		E	M	Complete Double, Formal	2	7	5	(9)
Mrs. Bertha A. Harms	5			M L	Semi-double	2	10	4	(11)
Pax	11	1		M L	Complete Double, Formal	1	15	14	(18)
Purity	13			M L	Complete Double, Formal	6	16	11	(17)
Triphosa	6	2	E	M	Semi-double	1	11	8	(13)
White Empress	11	1	E	M	Semi-double	3	13	12	(18)
LIGHT PINK									
Berenice Boddy	9			M	Semi-double	5	13	4	(13)
C. M. Wilson	10	2	E	M	Complete Double, Irregular	6	17	11	(19)
Cho-Cho-San	10	1	E	M	Semi-double	1	12	12	(14)
Cho-No-Hanagata	10			M	Incomplete Double	2	14	9	(17)
Debutante	12	1	E	M	Complete Double, Irregular	4	18	13	(19)
Dr. Tinsley	11			M	Semi-double	6	14	8	(17)
Eleanor Hagood	12			L	Complete Double, Formal	3	16	13	(19)
Hana-Fuki	7	1		M	Semi-double	2	13	8	(15)
High Hat	13	1	E	M L	Complete Double, Irregular	4	17	11	(19)
Lady Hume's Blush	9	2		M	Complete Double, Formal		10	13	(17)
Magnoliaeflora	11	3		M	Semi-double	4	17	13	(19)
Martha Brice	10			M L	Complete Double, Irregular	2	11	6	(14)
Mme. Hahn	7			M	Incomplete Double	2	11	7	(13)
Mrs. K. Sawada	7	1		M L	Complete Double, Formal	2	11	9	(14)
Otome Pink	10			M L	Complete Double, Formal	1	14	7	(15)
Pink Ball	12	1		M L	Complete Double, Irregular	3	15	8	(17)
Shin-Akebono	12		E	M L	Semi-double	1	16	9	(18)
Shin-Shioko	7			M	Semi-double	4	8	5	(10)
Virgin's Blush	9	1		M	Semi-double to Double Irreg.	1	14	8	(16)
DEEP PINK OR ROSE									
Bessie McArthur	5			L	Incomplete Double	4	11	1	(11)
Daitairin	6	1	E	M	Single	5	14	5	(15)
Edith Linton	3			M	Semi-double		7	1	(7)
Gloire De Nantes (Rose Glory)	3	2	E	M	Incomplete Double	7	12	4	(13)
Gov. Earl Warren	13			M L	Incomplete Double	7	17	7	(18)
Grandiflora Rosea (Louise McClay)	9			M L	Semi-double	6	14	5	(15)
Kumasaka	13			M L	Incomplete Double	11	16	4	(17)
Lady Clare	14		E	M	Semi-double	12	18	3	(19)
Lady Mary Cromartie	8	1		M L	Incomplete Double	5	14	4	(16)
Mrs. Freeman Weiss	11			M	Incomplete Double	3	15	6	(15)
Mrs. Tingley	6			M L	Complete Double, Formal	3	11	6	(14)
Pink Star	11	1		M	Incomplete Double	6	16	5	(17)
Regina Dei Giganti	10			M L	Incomplete Double	4	14	5	(15)
Rosary	8	1		M	Semi-double	4	12	5	(14)
Rosea Plena	6			M	Complete Double, Formal	2	12	4	(12)
Rosea Superba	7	2		M L	Complete Double, Formal	2	13	4	(14)
Thelma Dale	5	1		M	Incomplete Double	3	12	9	(14)

CULTURAL EXPERIMENTATION COMMITTEE REPORT (Continued)

REPORTS FROM 20 COMMERCIAL AND AMATEUR CAMELLIA GROWERS
ON A SELECTED LIST OF 100 VARIETIES OF CAMELLIA JAPONICA

NAME AND COLOR	COASTAL AREAS		BLOOMING SEASON		FLOWER FORM	SUN TOLERANCE *			Total No. of Replies	
	Yes	No	E—Early	M—Midseason L—Late		Sun Tolerant	Sun and Shade	Shade Type		
RED										
Adolphe Audusson	12	1	E	M	Semi-double	10	19	4	(20)	
Blood of China	13			L	Incomplete Double	4	17		(18)	
C. M. Hovey	11		M	L	Complete Double, Formal	6	13	3	(15)	
Campbell Ashley	4	1		L	Semi-double	2	8	1	(9)	
Conflagration	4	1	M	L	Incomplete Double	5	8	2	(9)	
Edwin H. Folk	4		M	L	Incomplete Double	3	10	1	(11)	
Ella Drayton	9		M	L	Complete Double, Formal	4	14	5	(14)	
Emperor of Russia	10	3	M		Incomplete Double	10	16	4	(17)	
Flame	12	1	M		Semi-double	10	18	8	(20)	
Gen. Dwight Eisenhower	3	2	M	L	Complete Double, Irregular	5	14	4	(14)	
Glen 40	12	1	M	L	Complete Double, Formal	10	18	6	(20)	
Joseph Pflingstl	4	1	M		Incomplete Double	3	10	2	(12)	
Lawrence Walker	5		M		Incomplete Double	3	12	2	(13)	
Letitia Schrader	6		M		Incomplete Double	4	11	2	(12)	
Mathotiana	12	1	M	L	Complete Double, Formal	7	16	3	(17)	
Mrs. Charles Cobb	5	7	M		Incomplete Dbl. to Irreg. Dbl.	9	18	6	(19)	
Paulette Goddard	3		M	L	Incomplete Double	5	12	2	(13)	
Pope Pius IX	12		M		Complete Double, Formal	11	17	4	(18)	
Prof. Chas. S. Sargent	10	1	E	M	L	Complete Double, Irregular	13	15	3	(16)
Sen. Duncan U. Fletcher	6	1	M	L	Complete Double, Irregular	4	13	5	(14)	
St. Andre	4	2	M		Semi-double to Irreg. Dbl.	7	13	2	(13)	
Te Deum	9		M	L	Complete Double, Formal	10	16	3	(18)	
Vedrine	8	4	E	M	Complete Double, Irregular	10	15	5	(16)	
Yosemite	8		M	L	Semi-double	8	13	3	(14)	
VARIEGATED										
Adolphe Audusson, Var.	12	1	E	M	Semi-double	10	19	4	(20)	
Anita	9	1	M		Semi-double	6	13	4	(15)	
Big Beauty	3		M	L	Complete Double, Irregular	5	12	5	(13)	
Charlotte Bradford	5	1	M		Incomplete Double	2	13	4	(14)	
Colletti		11	E	M	Complete Double, Irregular	11	17	5	(17)	
Daikagura	14		E	M	L	Complete Double, Irregular	10	18	5	(19)
Dainty (Calif.)	4		M		Semi-double	3	10	4	(11)	
Donckelari	13	1	E	M	Semi-double	11	18	4	(20)	
Dr. John D. Bell	4		E	M	Complete Double, Irregular	7	17	7	(18)	
Elegans (Chandler), Var.	10	2	E	M	Complete Double, Irregular	10	18	7	(19)	
Eugene Lize	12		M	L	Incomplete Double	7	17	7	(18)	
Firebrand, Var.	7	1	E	M	Incomplete Double	5	15	4	(16)	
Gigantea	5	8	E	M	Complete Double, Irregular	7	18	4	(18)	
Herme	13	1	M		Incomplete Double	5	17	5	(17)	
Iwane (F.G. 2)	6	2	M		Semi-double	5	11	6	(13)	
Lady Kay	5	4	M		Semi-double to Double Irreg.	6	16	4	(16)	
Lady Vansittart	12	1	M		Semi-double	8	15	3	(15)	
Lallarook	12	2	M	L	Complete Double, Formal	3	18	9	(19)	
Mrs. Anne Marie Hovey	2		M	L	Complete Double, Formal	2	9	4	(10)	
Nagasaki	11	3	M		Semi-double	8	19	4	(19)	
Oniji	13		E	M	Semi-double	9	17	6	(18)	
Paeoniaeflora		11	E	M	Complete Double, Irregular	7	16	7	(17)	
Sierra Spring	7		M		Incomplete Double	3	13	3	(14)	
Ville de Nantes	6	6	M		Semi-double	8	16	6	(20)	

* For explanation of Sun Tolerance see paragraph in Foreword.

INTRODUCTION TO THE CAMELLIA (Part II)

David L. Feathers, Lafayette, California

(This is the concluding installment of an article, Part I of which appeared in Vol. 7, No. 4, July, 1954, issue.)

Errata:

On Page 14 of Chapter I reference was made to the botanical subdivision of the family Theaceae into some 16 genera, and to Camellia

The amount of height and spread a camellia will ultimately attain will differ materially between different varieties as well as between the species. We have already noted that *sanquas* grow to about 20 feet, *japonicas* 30 feet and *reticulatas* as much as 50 feet in height. However, the time element involved in reaching the ultimate height is so great as to be beyond the human life span and, consequently, the interest of the average person. Roughly speaking, it is estimated that a camellia (*japonica*) will show average growth of about one foot per year for the first 3 years, for the next 10 years about half that rate of growth, or six inches per year; thereafter, the rate would again reduce on the average about one half, or to something like three inches per year. On this basis the average camellia, growing under favorable conditions, might be expected to attain vertical growth about as follows:

At age 3 years: 3 feet

At age 6 years: 4½ feet

At age 13 years: 8 feet

At age 25 years: 11 feet

At age 45 years: 16 feet

At age 61 years: 20 feet

At age 81 years: 25 feet

In the majority of cases the spread might be expected to gradually approximate the height after the vertical growth has slowed down to the minimum. This means that a well-grown camellia should reach a height and spread of a little less than 10 feet in 20 years if unhindered through artificial means, such as by pruning.

The foregoing cannot be anything but an approximation, of course, for, in addition to the natural variation in

sinensis as the most important genus ornamentally. Inasmuch as "Camellia" is the ornamental genus and "sinensis" is one of its species (the commercial tea-plant) of practically no ornamental value, this statement was in error. The word "sinensis" should therefore be deleted wherever used in the second paragraph of page 14, to correct the matter.

the growth habits of different varieties, one must take into account the following variables having a strong bearing on the rate of growth: environment, general care, amount and kind of fertilizer used, if any, and type of root system. With respect to the latter factor, it must be borne in mind that camellias are propagated in at least three different ways: by rooted cuttings (by far the most common method in this country), by grafting and from seed. The above table has reference to a plant grown on its own roots as, obviously, a grafted plant on a large understock will, until roots and top are again in balance, grow much faster than a camellia on its own root system.

Like most plants, the camellia reproduces itself naturally by the formation of seed in the varieties capable of seed production—those bearing flowers which have the essential parts, stamens and pistil. The camellia has the capacity of self-pollination, therefore the presence of another plant or plants is not needed for seed-formation. The pollen from the stamens, when introduced into the pistil by birds, insects or carried in the air, causes the formation of a seed-pod bearing from one to about eight hard-shelled seed. When the seed ripens in early Fall, the pod dries and breaks open, causing the seed to drop to the ground where it takes root. This is the typical method of natural reproduction of most plants, of course, and the only "covering" the seed has is from the leaves which fall upon it, or by chance it may enter a crevice and thus become imbedded to some extent. This routine of repro-

INTRODUCTION TO THE CAMELLIA (Part II)

duction would indicate that the natural method of planting a camellia with the roots comparatively close to the surface — on the shallow side. Seed ordinarily does not produce a flower true to the parent, although some varieties or strains appear to be more stabilized than others in this respect.

Analysis and Conclusions

What has the study of the camellia's natural environment taught us that can be translated into improved garden culture? In the first place, it is quite obvious that the plant we are dealing with is primarily a slow-growing tree, with all of the characteristics of that superior form of growth. In fact, there are many points of similarity between the camellia and our own native evergreen, the California live-oak, both of which take the tree and shrub forms. Their seed loses vitality rapidly if not planted when fresh and germinates very similarly, sending out a very vigorous tap-root. When the live-oak is small, it grows almost as symmetrically as the camellia, although the rate of growth is a bit more rapid. Both camellia and live-oak are very long-lived and they thrive in close proximity, indicating many of their cultural requirements are similar although the live-oak will prosper with less water in the summer as its roots go deeper. Poor drainage and a soggy root-system is fatal to either. Here, however, the similarity ends, but the camellia enthusiast who has live-oaks on his grounds is indeed fortunate for that is the perfect combination—the means of providing filtered sunlight for the camellia, which is ideal, and a never-ending source of supply for the most difficult to obtain of all the planting-soil components—oak leaf-mold.

In view of the fact the camellia is actually a tree, it must be regarded as having a certain amount of rugged-

ness. That does not mean hardness, however, as its practical limit from the standpoint of cold resistance is about 8° F., but is rather intended to dispel the somewhat prevalent notion that a camellia is something that must be "babied." In the United States, the camellia thrives along the seaboard areas of a region running approximately from southern Virginia down the Atlantic and Gulf coasts and up the Pacific Coast to Vancouver Island. This area corresponds in many respects to the Asiatic home of the camellia, particularly in the important elements of temperature and humidity. Camellias are not grown in all of this region nor would they grow wild in the greater part of it if unattended. Nevertheless, they are so satisfactory as cultivated plants as to have made this part of the United States by far the most important camellia-growing area in the world today. This development has come about within a comparatively few recent years.

The camellia, then, is a slow-growing tree which flourishes in a temperate climate having relatively high humidity and abundant rainfall. Growing in the shelter of taller trees it is obvious that it likes some protection from both sun and wind. A study of its environment reveals that the soil in which it thrives is light and loose in structure and, to a reasonable depth at least, is composed largely of decayed vegetation (humus). The bottom soil would be slightly heavier in texture but well drained through the inclusion of eroded rock particles (small stones and sand). There would be little or no clay present, thus no mud following a rain (or watering). The amount of sun it receives would vary according to differences in exposure, but there would also be a considerable factor of shading through the functioning of the natural elements—frequent rains and cloud cover. Many

wild camellias, by the process of evolution, would be found to have developed greater resistance to the sun's heat than others. Generally speaking, some would be expected to have a leaf of a thicker, tougher texture and of a darker-green shade than others in order to better resist the bleaching effects of the sun. Perhaps, also, some would have glossier leaves which would tend to reflect rather than absorb the sun's rays, for it is an accepted fact in botany that a plant's leaves, through evolution, become modified in such way as to best equip them to withstand their surrounding conditions. Thus the leaves of an evergreen are generally more leathery than those of a deciduous plant, for they must meet the test of winter as well as summer.

It is said that most plants do best in a soil that is slightly acid. (This is partly due to the fact that most acid soils have the facility of readily releasing plant nutrients and thus tend

to make them more available.) That statement is particularly true of the camellia as decomposed humus (leaf mold), which constitutes the top-soil where camellias grow wild, is slightly acid in reaction. This humus is also the sole source of food supply for the camellia, except for the minute quantities of natural chemicals that may be present in the eroded rock particles and the nitrogen the plant obtains from rain and the air, where it grows wild.

Thus a study of the camellia in its natural surroundings establishes the fact that its **basic** cultural requirements, stated in the simplest terms, are these:

- (1) PERFECT DRAINAGE
- (2) CONSTANT MOISTNESS
- (3) SOIL THAT IS LOOSE AND ACID-TYPE
- (4) SHALLOW PLANTING
- (5) PROTECTION (SOME SHADE AND SHELTER).

(The End)

REPORT ON NEW MEMBERS

The Society wishes to extend the hand of welcome to the following new members who have joined during the past year:

Mr. L. P. Brooks, Concord
 Mr. and Mrs. Hugh Paterson,
 San Rafael
 Mr. and Mrs. George Roche, Orinda
 Mr. Dwight C. Birch, Lafayette
 Mr. Irving C. Irelan, San Francisco
 Mr. Jack A. Wilson, Lafayette
 Mr. Walter H. Peterson, Richmond
 Dr. Charles D. Anderson, Berkeley
 Mr. Calder W. Seibels, Columbia, S.C.
 Mr. Wm. E. Colby, Big Sur
 Mr. Jack L. Mandarich, Menlo Park
 Mr. James W. Kent, El Cerrito
 Mrs. Dorothy J. McCormack, Berkeley
 Mr. Kai Freitag, Woodside
 Mr. Frank D'Antonio, Redwood City
 Mrs. Marion Creighton, Berkeley
 Mr. Louis Fogliani, So. San Francisco

Mr. Lloyd F. Smith, Martinez
 Mr. George H. Peterson Jr.,
 Redwood City
 Mr. Hans J. Jacobsen, Redwood City
 Mr. Elwin Stone, Oakland
 Mr. Frank M. McMillan, Orinda
 Mr. Edward B. Wist, Orinda
 Mr. Roy E. Thorpe, San Francisco
 Mr. John Niles Sewell,
 Jacksonville, Fla.

May we also take this occasion to welcome back into the fold the following members who rejoined during the year:

Mr. and Mrs. Will Crocket, Piedmont
 Mr. Charles W. Ehlers, Oakland
 Mr. Maurice R. Kane, Oakland
 Mr. Nap Tooker, San Lorenzo

It is particularly gratifying to have you back among us and we hope you get as much enjoyment out of seeing us again as we do you.

CAMELLIA PETAL BLIGHT

The article which follows is extremely important to all growers of camellias in California and the Southern States. Camellia Petal Blight has become, within a comparatively few years, one of the greatest problems with which we have ever had to deal. Particularly is this true in areas subject to extended periods of high humidity and moderate temperatures in winter or early spring—the blooming period of camellias. A great deal of publicity is currently being given this matter — undoubtedly more than in any previous year. While it would be foolish to allow ourselves to become discouraged or panicky about petal blight, it would be even more foolish to ignore its existence. Believing that the first requisite to meeting any problem is to understand it, so that we may deal with it calmly and intelligently, we present this composite article. It is a symposium of (1) the practical suggestions made by Mr. William H. Hall in his talk at our November meeting, (2) the thorough panel discussion devoted to the subject at our December meeting, involving Dr. Robert Raabe of the College of Agriculture, University of California at Davis, nurserymen Toichi Domoto and Vernon James, with Clifton W. Lattin as moderator, and (3) supplementary information obtained from a number of sources by the writer over a period of time. An attempt has been made to simplify and condense the matter as much as possible.

Camellia Petal Blight, known technically as **Sclerotinia Camelliae**, is a disease of the blossoms caused by the growth of an internal fungus arising from the deposit of spores (pollen-like substance) from a small toadstool conveyed to the surface of the flower petals. There this spore germinates, and the visual evidence of this is the beginning of a minute dark-brown or black spotting, which soon enlarges and spreads to the extent that, under favorable conditions,

it will eventually convert the entire blossom into an ugly, rotting mass. This process is, in effect, actually the germinating of the "seed" of this parasite in the petal tissues, which soon becomes a spreading organism called a **mycelium**, that eventually moves down to the base of the petals. There it will form, if undisturbed, a hard, black, bulb-like mass called a **sclerotium**, which has the capacity to sustain itself a year or two, if necessary, or until it can gravitate into the soil or surface mulch. When thus successfully established, it forms a mushroom-like fungus, light-tan in color and cup-shaped (**not** convex), $\frac{1}{4}$ " to $\frac{3}{4}$ " in diameter, borne on a $1\frac{1}{2}$ " to 2" stalk. These toadstool cups (**apothecia**) contain the pollen-like spores which, when ripe, are forcibly discharged into the air to drift to an open camellia bloom or blooms, where they begin again the cycle of infestation and reproduction. These spores may travel a thousand feet or more but they appear to have but a brief period of fertility—furthermore, it seems essential that moisture be on the petals for them to germinate. Infestation is therefore most likely under conditions of warmth and humidity—thus following a warm rain, particularly. Consequently, the period of greatest danger in this area would be from February to April.

Plant pathologists are in general agreement that the foregoing is the one and only way in which the cycle of infestation operates; therefore, one flower cannot directly infect another. However, inasmuch as the sclerotium is a durable living organism, transporting this "bulb" or its seed, or the fungus itself in an infected petal or flower, will communicate the disease from one spot to another provided the conditions necessary for growth, as heretofore mentioned, are present. Therefore, to the person who does not have camellia petal blight, prevention is largely a matter of guarding against its introduction through bring-

ing in the "bulb" in soil (usually in containers) from an infected area, or by means of air-borne spores. It would not appear very likely that infection would come through diseased blossoms or petals, unless carried in something else such as a container, as a person is not likely to throw blooms from another place on his own ground. Thus the problem of avoiding the infestation is not too difficult, provided one understands what precautions must be taken.

Where infection is already present, the matter of eradication becomes more difficult in proportion to the size of the camellia planting. In a relatively small area, or one in which camellias are grown entirely in containers, it is not a major problem. However, there is one **MUST** that is common to all: **KEEP FALLEN BLOOMS PICKED UP REGULARLY!** Dr. Raabe tells us there is a fairly safe margin of time between the falling of the infected bloom and growth of the fruiting body—certainly not less than a week and probably not more than a month—but **constant sanitation** makes for certainty as well as a neat garden. Watch for any indications of these small toadstools under or near your camellias, remove and destroy any discovered by burning or deep burying. If you maintain mulch about your plants, this should be removed and similarly destroyed by burning, replacing with fresh mulch the following summer. Sun is the enemy of fungus and will aid greatly in its elimination.

The nurseryman, collector and other large growers are confronted with a far more difficult problem. Vernon James says that all new plants coming into his nursery are now bare-rooted, while Toichi Domoto and Bill Hall reiterate that the strictest sanitation is the most certain control. All spray extensively, using Fermate and/or Destruxol A (a sulphur compound) and scrape off the top dressing from plants in containers prior to February 1st. Dr. Raabe adds that tests have indicated the use of dusting sulphur

at the rate of 225 lbs. to the acre will prevent the production of the apothecia (the mushroom which bears spores). However, Mr. Domoto points out that sulphur in the dry form is ineffective under temperatures of less than about 70°. This would indicate the necessity of applying powdered sulphur in the Fall, if used, while there is still sufficient warmth to cause it to burn up the fungus and still not release enough fumes to cause damage to the camellias. Several authorities advise cultivating to a depth of three inches, turning the soil over carefully so as to bury the mushroom-forming body, if possible. However, care must be taken to avoid excessive injury to the camellia's root system, particularly in the case of small plants. Another good practice for the larger grower is to disbud heavily, thus materially reducing the flower-crop that must be picked up. The writer has just been informed by Mr. Howard Asper, Superintendent of the famous Huntington Gardens at San Marino, California, that they are now spreading pine shavings to a depth of about 2 inches over the entire planting area as a preventive measure in controlling (breaking the growth cycle of) camellia petal blight. Mr. Asper states this method has been found to be effective by one of the larger commercial growers in his area, and he is quite hopeful it will solve their difficult problem. The principle involved is certainly sound—insulating the ground from possible infestation.

Dr. D. G. Milbrath, pathologist of the State Dept. of Agriculture, Los Angeles, says that Fermate, sprayed at the rate of 1 lb. per 100 gallons of water, will give effective control if sprayed every 14 days (about the limit of its effectiveness) over every bit of the soil area affected. (In the Deep South, they recommend using it at strength of 1 lb. per 25 gallons water.) Like sulphur, Fermate is beneficial to the soil as well, as it acidifies.

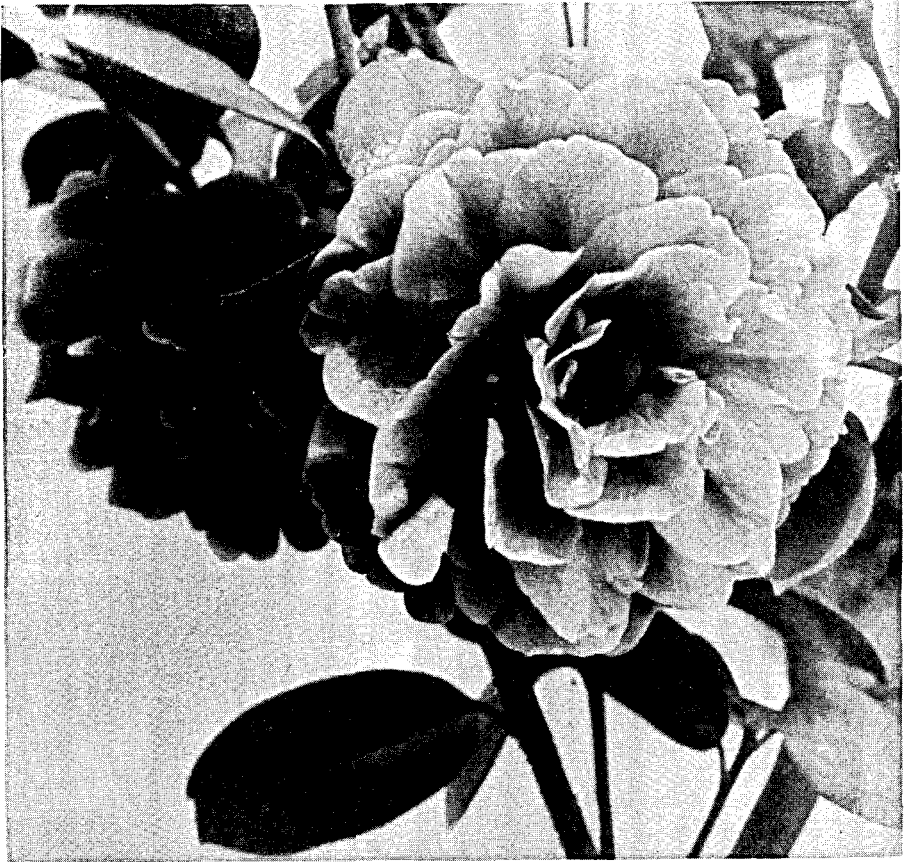
Arthur C. Brown, in an article in the 1954 American Camellia Society

YEARBOOK, states that petal blight has now reached serious proportions in the states of California, Oregon, Virginia, Georgia, Louisiana and North Carolina. Some camellia shows in the South have been cancelled in recent years due to the ravages of this disease, while other shows have introduced very strict rules appertaining to the disposition of display blooms to guard against further spread of the infection.

In conclusion, two important points should again be emphasized: (1) keep all fallen camellia blooms, petals and sepals, picked up regularly, and (2)

remove at least 2 inches of topsoil from all plants brought in to your garden—this will also eliminate the danger of introducing new weeds, as well. If you already have **Sclerotinia Camelliae**, observe these two essential rules and be extremely careful in regard to camellia blooms and plants **which leave your place**. In addition, all of the control and eradication measures mentioned herein should be carefully considered and the most practical applied.

—The Editor, with the assistance
of Recorder Irene Ashuckian



C. reticulata "HENTIENKO" (The Dwarf)

(Courtesy Royal Horticultural Society)

Announcing the 1955 Camellia Shows

The Tenth Annual Camellia Show

of the

NORTHERN CALIFORNIA CAMELLIA SOCIETY, INC.

will be held this year in the

CIVIC AUDITORIUM, 12th & FALLON STREETS, OAKLAND

Saturday, February 26 — 2:30 p.m. to 10 p.m.

Sunday, February 27 — 10 a.m. to 6 p.m.

featuring **"AN AVENUE OF CAMELLIAS"**

Admission is free to all members of this Society and all interested persons are cordially invited to exhibit. For further information and show schedules, contact Mrs. G. Myron Grismore, Registration Chairman, 3618 Victor Ave., Oakland. (Phone KEllog 2-3449.)

This is the first Camellia Show of the season in this area. Plan now to attend and bring your friends. Children admitted free.

CAMELLIA SOCIETY OF SACRAMENTO SHOW

This, the pioneer Camellia Society of the State, will hold its **31st Annual Show** at the Municipal Auditorium, 15th and J Streets, in Sacramento, the weekend of March 6-7, 1955, between the hours of 3 p.m. and 10 p.m. on Saturday and from 10 a.m. to 9 p.m. on Sunday. Admission is free and the public is cordially invited. Exhibitors are welcome to enter competition and those interested should contact E. A. Combatalade (President), Chairman of the Show, 1530 Park Lane, Sacramento, regarding show schedules and other information. Our friends at Sacramento always put on a tremendous Show and it is well worth the trip for anyone.



THE SANTA CLARA COUNTY SOCIETY CAMELLIA SHOW

will be held on Sunday, March 6th, 1955 from 10 a.m. to 5 p.m., at the Civic Auditorium, in San Jose. Admission is free and the public is cordially invited to attend. This Show is unique in that it is put on entirely by the men members of the Society. Instead of having exhibitors' awards, the Society has adopted an excellent method of high-lighting the best blooms in the various classes by prominently displaying them on a Review Table, after selection by the judges. All who are able to attend will find this Show very much worthwhile and it draws thousands each year.