THE Camellia REVIEW

A Publication of the Southern California Camellia Society

Non-reticulata hybrid 'Angel Wings'

Vol. 63 November-December, 2001 No. 2

Southern California Camellia Society, Inc.

An organization devoted to the advancement of the camellia for the benefit of mankind—physically, mentally and inspirationally..

THE CAMELLIA REVIEW

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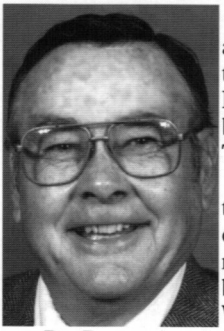
COVER PHOTO

Non-reticulata hybrid 'Angel Wings'. White washed and shaded Orchid Pink. Medium, semidouble with narrow, upright petals. Average, compact growth. (U.S. 1970—Kramer)
Photo by Mel Belcher

Have you checked our website lately—**socalcamellias.com**. Thanks to our webmasters, Jac and Kathy Fagundo. If you have any comments or suggestions for them, their e-mail address is fagundo@earthlink.net.

THOUGHTS FROM THE EDITOR



Based on some experience with fruit and nut production and knowing the impact that weather (particularly temperature) has on the quantity and quality of the product, I've concluded that the most important factor in camellia bloom creation is something we have limited control over—**TEMPERATURE.**

In the previous issue of The Camellia Review I promised that this issue would have an article about the climate/temperature effect on blooms. You will want to read very carefully the article by Dr. James Bonner beginning on page 5 if you want to know more about WEATHER—that uncontrollable variable.

Dr. Bonner's relevant article is a reprint from E. C. Tourje's book *Camellia Culture*. As I review the material published in the old issues of the Review and books such as E. C. Tourje, I'm amazed at the depth and scope of research that went into camellia culture some half century past. Article after article reflect the work of learned horticulturists and serious hobbyists. We have a real gold mine of published work.

Granted, we do have some serious research going on today (see Christine Taylor's report on page 3 of her research on petal blight) but I, as a camellia fancier, am humbled by the quantity and quality of work done by Southern California horticulturists during the 1940's and 50's. Hopefully, their diligence will encourage us to be enthusiastically engaged in this wonderful world of camellias. Expect to see more of this "gold" in the future.

I' m sure Dora Remotti's article on page 13 will impress you, as it did me, with the resillency of this favorite plant of ours.

As I have mentioned more than once, we are ALWAYS looking for articles that would be interesting to our readers. Perhaps you may just want to write a "Letter to the Editor"—and that would be appreciated, too.

Since 9/11 this year the world has changed for all of us. It was good hearing from our international camellia friends at that time when they sent notes of concern and love.

—Mel Belcher, Editor
melbelcher@adelphia.net

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CAMELLIA STATIONERY

Our beautiful camellia notecards (back cover) are still available in sets of eight for $6.00 including tax and shipping. Folks who use them and re-order tell us how truly lovely they are. They make wonderful gifts for your fellow camellia lovers or those you are trying to get interested in this great hobby! You can even order them for your own use. They also look beautiful in frames.

Cards can be ordered through Dorothy Grier, 13229 Pipeline Avenue, Chino, CA 91710 (909) 628-1380. Make your check payable to SCCS.

If any camellia society would like to use these cards as fund raisers, orders for 25 or more sets are priced at $5.00 each, including tax and shipping.

PETAL BLIGHT NEWS FROM NEW ZEALAND
Christine Taylor, North Palmerston, New Zealand

Gidday from New Zealand! At the beginning of 2001 I crossed the Pacific Ocean to live and work in Los Angeles again doing similar work to last year. I came from New Zealand to work on camellia flower blight during the Northern Hemisphere season with the financial assistance of Descanso Gardens, The Huntington and Massey University. I was fortunate that this visit coincided with the International Camellia Congress and this allowed me to meet and talk to leading camellia researchers.

This year I was in Los Angeles for 11 weeks (January-March) and lived in Boddy House at Descanso Gardens, and worked at Descanso and The Huntington. Mere students aren't used to accommodation in the style of the Descanso mansion, but I became accustomed to the huge spaces and having the run of the "house." Central heating was a novelty that was much appreciated in the frosty weather. It was a terrible shock to come back to my student flat in New Zealand and have to "slum it" once again.

On to the most important subject, which is reporting the research I carried out while in Los Angeles—the weather was much kinder to me this year, with frequent periods of rain bringing up many apothecia (spore-producing structures) over the entire three months. This meant experiments could be carried out most days, except for the week of hailstorms in February, which ruined the flowers.

This year I concentrated on inoculating petals using a spore suspension. Each day after inoculation, the disease lesions were measured (length and width) and the data recorded for later analysis. The first experiments centered on the many plants of the cultivar 'Alba Plena' at Descanso Gardens. First I used differing spore concentrations to assess the optimum concentration for obtaining disease without swamping any potential host resistance. I settled on one million spores per millilitre suspension. Second, the flowers from one plant were compared with those from other plants of the same cultivar. Petals from the same flower all developed lesions of a similar size, but there was considerable variation between flowers on the same plant, and the variation between flowers from different plants was even greater. This means that environmental differences between plants of the same cultivar can cause significant differences in the susceptibility of flowers. This is very important information for me, as I frequently collect flowers from different plants of the same cultivar for experiments, and the between-plant variation must be factored into future experiments that measure the relative susceptibility of different cultivars.

Most of my experiments compared the growth of lesions on susceptible and resistant camellias. Some species, such as *C. lutchuensis*, *C. transnokoensis* and *C. forestii* appear to be highly resistant, and my experiments consistently showed this. They also showed that *C. saluenensis* and *C. pitardii* species and their hybrids appear to be more susceptible than the *C. japonica* and *C. reticulata* cultivars. Of special interest were the susceptible x resistant hybrids. For example, 'Cornish Snow' has one susceptible parent (*C. saluenensis*) and one resistant parent (*C. cuspidata*) and it is less susceptible than the normal *C. saluenensis* but not as resistant as *C. cuspidata*. In contrast, 'Minato-no-haru' is a hybrid of *C. japonica* 'Kon-wabisuke' x *C. lutchuensis* and appears to be almost as resistant as its *C. lutchuensis* parent. This hybrid vigour is important, not just for the camellia

breeder and grower seeking disease-free camellias, but for understanding the whole resistant/susceptible system. Heritable characteristics can be studied at the genetic level, allowing a greater understanding of what causes resistance/susceptibility and a means of manipulating our desired outcome.

The remaining experiments were a collection of odds and ends, such as looking at colour changes in the petal in response to infection, and the susceptibility of stamens.

Overall the disease season in Los Angeles this year was very productive from my point of view. The number of apothecia, access to many species, hybrids and cultivars and the large working space provided by the new Botanical building at The Huntington allowed a large amount of work to be done. With this advanced information, the disease season in New Zealand can be more efficiently utilised, focusing on the areas that the Los Angeles results showed to be most significant.

Many thanks to all those who supported me—particularly Tim Thibault and Richard Schulhof at Descanso; Ann Richardson and Roy Ritchie at The Huntington; the Southern California Camellia Society members I met, especially Mel and Bobbie Belcher; and camellia lovers from all over the world who attended the International Camellia Congress. Finally, I would like to remember Yongchan Park of Descanso Gardens, who died in an accident in July. It seems incredible that he won't be at Descanso next time I visit.

MANY THANKS TO OUR GENEROUS MEMBERS

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Thank you for your contribution to our publication fund—

In memory of Dave Wood

Chuck and Rosemond Gerlach
Don and Marilee Gray
Tom and Elsie Hughes
Ralph Shafer and Penny Stanley

In memory of Lavinia Treischel

Tom and Elsie Hughes

FROM THE ARCHIVES: CLIMATE AND THE FLOWER OF THE CAMELLIA

Dr. James Bonner

INTRODUCTION:

The camellia growing in the garden or lath house under natural conditions regularly alternates periods of flower-bud formation with periods during which these flower buds open to produce mature flowers. We will ask in this chapter: What are the precise factors of the environment which cause this alternation of flower bud formation and flower production? It is of obvious importance to know what environmental factors are of impor-- tance in camellia flowering, since by their recognition we may be able to hasten or delay flowering at will and be further able to interpret disturbances in normal flowering and correct the causes which have led to it.

GROWTH OF THE PLANT

When a camellia seed germinates and produces a seedling, the young plant does not immediately proceed to produce flower buds. The bud at the apex of the growing shoot grows vegetatively for some time producing a series of leaves as it grows. At the base of each of these new leaves is a bud which, if it develops, will produce more leaves and grow out into a branch. Such buds are therefore also vegetative buds. The seedling camellia must produce a fairly considerable number of leaves and attain a fairly substantial size before it becomes capable of producing flower buds. We do not yet know what it is that determines that the infant plant must attain this considerable size before it becomes capable of producing flowers. We do know, however, from the work of Lammerts that the production of flowers by seedling camellias can be greatly hastened if the plants are kept under warm conditions and illuminated by artificial light at night to maintain them under conditions of long day. In these circumstances the seedling camellia grows continuously and rapidly and becomes capable of producing flowers within ten to eighteen months or so.

It is of interest to note that the growth of the camellia, the production of leaves, and the elongation of the stems is controlled by the length of day or daily exposure to light. Thus growth of most camellia varieties which have been investigated does not take place if the plants are maintained in sunlight for 8 hours a day and then transferred to darkness for the remaining 16 hours. Under these conditions of short days, and regardless of the temperature, the plant remains in the dormant or winterlike condition. On the other hand, camellias supplied with sunlight and illuminated with weak artificial light at night grow rapidly, producing long vegetative shoots and abundant leaves. This effect can often be noted with camellias grown out of doors and subjected to artificial light at night by accident, as by illumination by streetlights. This effect of length of day upon the growth of the camellia should be borne in mind by those who wish to grow camellia plants in the greenhouses, since to maintain rapid growth of the plant during the winter it is necessary to supply artificial light at night. This light may be supplied by ordinary incandescent lamps and need be only of low intensity. Much evidence indicates that 100 foot candles intensity, one hundredth that of full sunlight is quite sufficient.

The influence of day length upon the growth of the camellia appears to be mediated through the plant growth substance, gibberellic acid. This material, which is essential to plant growth and which is normally manufactured in the plant, is apparently deficient in plants grown

under short days. Thus dormant camellia plants in short day conditions can be caused to grow normally, just as though they were under long day conditions, merely by the application of minute amounts of gibberellic acid to their leaves (Lockhart and Bonner, 1957).

FLOWER INITIATION

Flower initiation, the production of flower buds, consists of a disturbance in the regular succession of production of leaves and buds characteristic of the vegetative plant. When the camellia becomes ready to produce flower buds, characteristic changes occur in the buds which are produced at the base of each new leaf. These buds increase in diameter, remain short rather than elongated and, with time, produce the characteristic flower parts. The buds thus produced many remain quiescent for some time before they embark upon the further course of development, the rapid swelling and unfolding which results in the production of the visible flower. We know that two features of the environment, both climatic, determine the time of year at which flower buds are produced and the time of year at which the further development occurs. These two factors of the environment, which are of paramount importance to the flowering of the camellia, are the night temperature and the length of day. Other environmental factors, such as the nutrition of the plant, the abundance of water supplied to it, and the light intensity during the day, all affect the vigor of the flowering of the camellia, and low light intensity in particular can serve to decrease greatly the number of flowers produced per plant. But these factors serve only to modify the response to temperature and day length, which are the all-important controlling factors in flower production.

INFLUENCE OF TEMPERATURE ON FLOWER INITIATION

The initiation of flower buds by the camellia takes place, under otherwise favorable circumstances, only in relatively high temperatures. This has been shown by experiments in which camellia plants were grown in greenhouses under conditions of controlled temperature. Thus, it was found that at a continuous temperature of 80°F. day and night, plants produce abundant buds. If the night temperature was lowered to 65° fewer buds were produced, while night temperatures of 60° almost completely suppressed bud formation. Temperatures lower than 60° completely prevented the formation of flower buds by the camellia varieties studied. That high temperature should be necessary for bud formation is in accordance with general observations on camellia culture. Thus, we know that flower buds appear in the late spring and early summer months and grow steadily through the summer, attaining in Southern California, for example, a diameter of 1/4 inch in August or September for the early flowering varieties, or perhaps by as late as October for the later flowering varieties.

INFLUENCE OF LENGTH OF DAY ON FLOWER BUD PRODUCTION

When camellia plants are place under conditions otherwise favorable for flower-bud formation, including a suitably high temperature, they produce flower buds only when maintained under conditions of long day. In long days, but not in short days, the small buds at the base of the leaf begin to grow in length and to unfold the rudimentary leaves which are present in every bud. And on a certain proportion of such shoots, the new buds become flower buds. Now let us ask how long a day is needed to cause the flowering response. Plants supplied with 8 hours of natural light a day and darkened for the remaining 16 hours produce few or no flower

buds. Neither is 9 hours of light per 24 hours sufficient. McElwee has shown, however, that 13 1/2 hours of light per day causes abundant flowering. The day length optimal for flower-bud production by the camellia has not been determined, but we may guess that it is somewhere above 12 hours and perhaps as high as 16.

That both high night temperatures and long day lengths are necessary to assure rapid and abundant flower-bud formation by the camellia is again in accord with general experience, since we know flower-bud initiation in the camellia occurs normally during the summer when the days are long as well as warm.

EFFECT OF TEMPERATURE ON FLOWER OPENING

When camellia plants are maintained under conditions of long day and high temperature, such as 80°F. day and night, flower buds are formed in abundance. These buds do not, however, develop into normal flowers. On the contrary, they ultimately fall off, abscise, in general long before opening. When plants bearing flower buds are moved to lower temperature conditions, the buds open and produce flowers, the length of time required for flower production depending on the temperature. These relationships again have been established by growing plants in a greenhouse under conditions of controlled temperature. Plants were first grown under conditions of long days and 80° F. day and night for the production of flower buds. When the buds had grown to a diameter of 3/4 inch or more, some of the plants were removed to lower temperature conditions. It was found that nights of 65° permitted the production of flowers which were nearly normal, although somewhat smaller in size and paler in color than those opened at lower temperatures. Night temperatures of 50° caused the production of flowers normal in size and color. Both day temperature and night temperature are apparently of some importance in this response, since it has been found that day temperatures of 80° combined with 60° night temperatures cause the production of poor flowers, whereas a day temperature of 65° combined with a night temperature of 60° causes the production of normal flowers. The observations described above, made under controlled temperature conditions, help us to interpret the bad effects of untimely high temperatures during the fall or winter. We know of course that high temperatures at these times result in much bud drop and in the production of abnormally small and low quality flowers. These effects appear to be purely temperature ones and are attributable to high day as well as to high night temperatures.

The effects of temperature on flower opening in the camellia can be summarized as follow: At high temperatures, flower opening is hastened; at lower temperatures, it is delayed. At the higher temperatures the hastening effect is masked by a greatly increased bud drop. At the high temperatures, too, the flowers which are produced are small and little pigmented. At lower temperatures, the flowers are larger and of deeper color. In general, a temperature of 65° during the day combined with a night temperature of 60° or lower would appear to provide a satisfactory combination for camellia flowering, yielding flowers of good quality without undue delay in flower opening.

It is interesting to note that there may be some variation in the effect of temperature upon the flower of different varieties of camellia. The characteristically early bloom varieties, such as 'Daikagura' and 'Yohei Haku', form flowers of good quality at somewhat higher temperatures than do characteristically late bloomers, such as 'Donckelari'. Nevertheless, no variety that has thus far been

investigated carefully has produced normal flowers under continuous temperatures of 80° while every variety has flowered satisfactorily with the combination of 65° by day and 60° at night.

EFFECT OF LENGTH OF DAY ON FLOWER OPENING

It has been noted above that long days are required for the production of flower buds. The reverse is true, however, with regard to flower opening. When camellia plants are given artificially lengthened days under low temperature conditions, extensive bud drop is induced. The length of time needed for the development of flower buds into flowers is also lengthened. It would seem, therefore, that the normal day-length cycle reinforces the effect of temperature in determining the yearly alternation of flower-bud formation and flower opening in the camellia. Long days and high temperatures are necessary for abundant bud formation, short days and low temperatures for the production of normal flowers and the avoidance of bud drop.

INTERACTION OF FURTHER FACTORS IN FLOWER INITIATION

It has long been known to camellia growers that flower-bud formation is decreased under conditions of low light intensity. Less complete agreement has been reached on the importance of soil fertility and irrigation practices as factors influencing flower-bud set. The interaction of these factors has been investigated by means of so-called factorial experiments in which several levels of light intensity, several levels of soil fertility (determined by fertilizer application), and several levels of water stress (determined by frequency of irrigation) are combined in all possible ways in a multiplicity of treatments. The results of such experiments have indicated that under all conditions of fertility and water stress, light intensity is a major factor in influencing the number of buds set. A decrease of light intensity to one-tenth of full sunlight is ordinarily attended by decreases in the number of flower buds set perhaps to one-half or less of the number set in full greenhouse light, which is about one-half of full sunlight. The effect of high light intensity on the camellia is, however, a complex one. Water loss is increased in high light intensities and in many circumstances this deleterious effect may more than counterbalance the beneficial effect of high light intensity of flower-bud set. High soil fertility, brought about by the addition of fertilizer, has been found to be important in increasing the number of buds set per plant at high light intensity levels, but unimportant at low light intensity levels where this factor is apparently the limiting one. In any case, the higher soil fertility levels do not appear to result in any decrease of bud set under any conditions.

Provided, then, that favorable temperatures and long days have been produced for the camellia plant, light intensity is an important further factor in regulating the number of flower buds set per plant. Flower-bud set is also favorably influenced by high soil fertility.

CLIMATE UNDER GARDEN CONDITIONS

Although warm, long days characterize the summer in regions where camellias are grown and hence insure that bud set will take place normally, there is much more variation in the winter conditions in the different camellia-growing areas. In the Pacific Coast region, for example, the night temperatures drop below 60° for the entire period between October and the following late spring. The temperatures are therefore sufficiently low to insure the production of normal camellia flowers (with the exceptions constituted by occasional periods of unseasonably warm winter weather) and are in fact

so low as to very greatly slow down the development of camellia flowers. That low temperatures do slow down flower opening may be shown by experiments conducted with the variety 'Pink Perfection'. Plants of this variety containing fully set flower buds were maintained under different temperature conditions and the time to produce half of the total number of flowers noted. With a night temperature of 65°, 90 days were required to produce half of the total flowers. A night temperature of 60° lengthened this time to 145 days, and a night temperature of 50° lengthened it to 170 days. It is clear, then, that temperatures during the winter in the Pacific Coast camellia-growing region are sufficient low to delay flower opening. An investigation of this matter has shown that in Southern California flowering is definitely earlier in warmer areas than in colder areas. It would appear, therefore, that temperatures in Southern California during the winter are low enough so that flower opening is primarily limited by the rate at which this process takes place is low temperatures.

CONCLUSION

The environmental factors primarily effective in bringing about the normal cycle of flower-bud formation and flower opening would appear to be temperature and day length. High temperatures, such as obtain in summer, are essential to flower-bud formation and the effect of high temperature is reinforced by long days which are also essential to flower-bud production. Lower temperatures, such as obtain in fall and winter, are essential to normal flower opening. This temperature-controlled cycle is reinforced by the length of day during the winter also since short days, which occur in winter, promote flower opening. High temperatures and long days, although necessary for flower initiation and flower-bud production, promote the dropping of flower buds if continued for an unduly long period or occurs unseasonably during the winter.

SUMMARY

Flower-bud formation in the camellia takes place abundantly when plants are maintained at temperatures of 80° or above during the day and 65° or above during the night, but is suppressed at lower temperatures.

The response of camellias to temperature is further affected by the length of day. Long days, such as those with 13.5 to 16 hours of light per 24 hours, are essential to flower-bud initiation. Flower-bud formation is delayed, or absent under short day (8 to 9 hours of light per 24 hours) conditions.

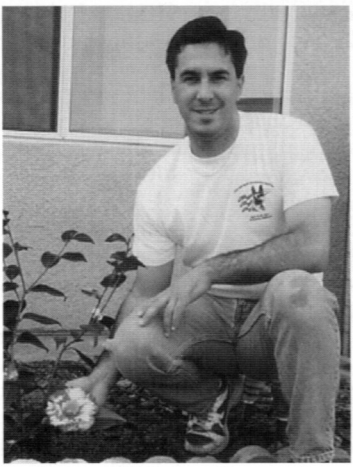
Normal flower opening does not take place in camellia plants maintained at high temperatures, such as 80° day and night, in part owing to the dropping of the flower buds and in part owing to the production of small and abnormal flowers. Favorable temperatures for flower opening lie in the region 65° day and 60° or lower night temperatures.

Short days (8 to 9 hours of light per 24 hours) favor the flower opening process, while long days (13.5 to 16 or more hours of light per 24 hours) induce extensive bud drop.

THE DEVELOPMENT OF A CAMELLIA ADDICTION

Jac Fagundo, Corona, California

It all started with a trip to Home Depot. But, then again, doesn't everything start with a trip to Home Depot? Who would have thought that buying one beautiful plant would lead to building a covered shade garden, expanding the shade garden – twice – and building a greenhouse? In five years my camellia experience has gone from "what a pretty plant" to a full-blown addiction.



Jac and 'Guilio Nuccio's'

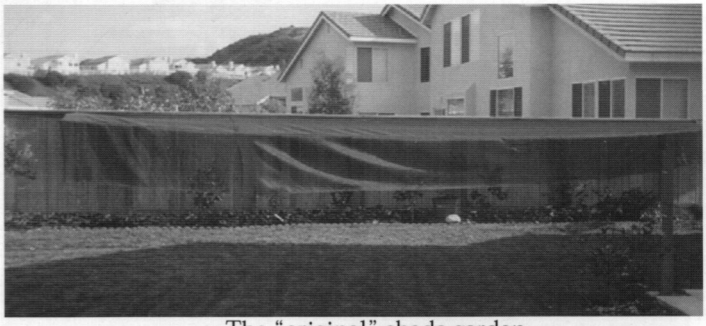
Like most new homeowners, my wife and I spent lots of time visiting our favorite home improvement warehouse. One fall day in 1995 I spotted a plant full of vibrant color at a time when everything else was losing color. I brought this plant home and planted it right outside the kitchen window. My wife asked what it was and I said, "It's a camellia called 'Kanjiro'."

'Kanjiro', the beginning of an addiction

Sometime later my mother-in-law took note of this 'Kanjiro', its beautiful color and my obvious attraction to it. She came to visit one day with a copy of Sunset Magazine in her bag. She wanted me to read an article about the top 10 nurseries in the West – one of which specialized in camellias. The next week I went to visit Nuccio's and bought my first Japonica.

I bought a' Guilio Nuccio Variegated' that day and planted it in one of the few shady places around our house. I quickly decided I needed to have more of these plants, but to do that I would need more shade. I bought a couple more camellias and some green shade cloth. I anchored the shade cloth to the fence, hooked it over a long wire that I had suspended the length of the garden and used wire to anchor the shade cloth to stakes in the ground.

When the plants became too tall for the shade on a wire, off to Home Depot I went for materials to build something more sophisticated. I figured out I could build a simple shade structure of PVC piping, but I didn't know how I would anchor the PVC to the ground. That's when I stumbled upon some large, and very heavy, concrete umbrella bases. The PVC fit into them perfectly and I knew it would save me from pouring concrete in the garden. I came back with the pieces I needed and built the structure quite quickly. I left the shade cloth anchored to the wooden fence, pulled it up and over the PVC structure, and used wire and heavy stakes to pull the shade cloth down to the ground.



The "original" shade garden

Now I had room for more camellias than I could ever want — except I kept going back to Nuccio's to get "just one more plant." Then one day my wife spotted a flyer on the wall at Nuccio's that said there were camellia shows coming up. We started going to shows and the list of camellia varieties I wanted to plant started getting longer and longer. Soon I had filled up all the space in my shade garden and it became apparent that I was going to need to expand.

There was one problem with expansion. My wife was not at all happy about "the big green tarp" in the backyard and did not want me to dig up any lawn to make room for a larger shade garden. I knew I had to wait for the optimal moment to do the expansion when she would be otherwise occupied. I waited and waited until the perfect opportunity presented itself. My wife was away from the house for a few days in August of 1998. Okay, so she was in the hospital giving birth to our first daughter, but she only needed me for the actual delivery part. I had some time off work and an empty house so I started the expansion. I tore out the grass and expanded the structure. The PVC had done a fine job, but had begun to sag a bit so I used metal, concrete-anchored, 1 5/8 inch poles for the expansion. I used a large needle and fishing wire to sew additional shade cloth onto that which was already there. When I finished I had 200% more room for camellias.

Surely now I had enough room for all the camellias I could ever want to own!

Well, I did until I entered my first show in 1999 and joined the Camellia Society. When I won that first piece of crystal I really caught the fever and more added more plants to my wish list. At the camellia society meetings I learned about grafting and propagating seeds. I built shelves in my garden to hold the small pots of seedlings and grafts and squeezed larger pots in between the plants in the ground, but I still ran out of room. I had promised I would not expand any further onto the grass. My wife had somebody keep an eye on me while she was in the hospital having our second daughter, so I had to find another option. Our dog didn't really use his dog run, so I moved his house out, took down the fence and expanded onto the concrete. I inherited all the poles I needed from a very kind camellia friend, added some shade cloth, and Phase 3 was in business.

I built more shelves for small pots, and moved all the potted plants onto the concrete. This was the first large mistake I have made in my camellia adventure. Apparently the concrete generated too much heat for many of the fragile plants and I lost a lot of

The "finished" p[roduct*

grafts that I attribute to the heat of the concrete. Most of the plants have now been squeezed back into the dirt part of the garden. But then I had all this covered concrete that I needed to do something with and I realized that I have always wanted a greenhouse.

By now I have had lots of experience building structures out of metal pipe. I figured I would build one more and cover it with plastic. I did and then added a fan, humidity control and a heater. Now I am looking forward to grafting time to see what kind of success I can have in a greenhouse environment.

I keep telling my wife that the great thing about this camellia hobby is that it is practically free. I can grow rootstock from seed, get scions from friends and grow great camellias that win crystal. That way I am actually coming out ahead. Unfortunately, she keeps reminding me that what started out as one plant from Home Depot has now turned into 50+ plants, many, many seedlings, a shade garden with two expansions and a greenhouse. We both agree that, in reality, this is an addiction to a plant that provides awesome flowers in the middle of winter and opportunities to fellowship with some of the nicest people you could ever meet. I can't think of anything better to which I could be addicted.

Want to attract visitors to your camellia show?

Ed Atkins of Shalimar, Florida, submitted this novel idea.

ANCIENT CULTIVARS OF CAMELLIA JAPONICA—AN IMPORTANT GENETIC RESOURCE IN THE LAKE MAGGIORE AREA IN NORTHERN ITALY

Dora Remotti, Italy

The camellia, introduced in Italy in1760, assumed a remarkable position in Italian floriculture during the nineteenth century, especially in some particular geographical areas where the hybridization activity reached high levels of perfection. In the outskirts of Milan, Genoa, Florence and in the area of Lake Maggiore the cultivation of the camellia became widespread and was introduced into a great number of gardens. With the end of the nineteenth century the interest in this flower decreased which lead to a reduction in its market value. In spite of camellias being replaced in gardens with new ornamental species, several historical parks and gardens presently host old camellia specimens dating back to their ancient introduction. Their safeguard and protection from exploitation are becoming important goals because of their historical, cultural and scientific meaning. The investigation carried out in the historical gardens along the shores of Lake Maggiore identified 100 cultivars which had been produced in the nineteenth century.

Materials and methods

This research was articulated in two phases which consisted of 1) a bibliographical investigation by means of which it was possible to locate the gardens containing a considerable presence of *C japonica* and 2) field work, during which the identified specimens were examined and characterized. The parameters that were analysed concerned the ancient period of their introduction (estimated on the grounds of bibliographic information or, when missing, through the observation of the size of the specimen) and the typicalness of the cultivar.

Since the determination of the cultivar was made using descriptions included in the eighteenth century catalogues and by the comparison with ancient prints published in magazines of horticulture of that time or in specific picture catalogues, it was necessary that the cultivar show the peculiar features in order to consider its identification correct.

The morpho-botanical characterization consisted in filling in specific identification cards in which the following features were considered:

° Flower (shape, diametre, depth, size)

°Petals (number, shape, surface, edge, colour)

°Stamens and petaloids (number, arrangement, colour)

°Leaf (length, width, leaf index, shape, colour) and

°Characteristics of the specimen observed (size, growth form, blooming period and density)

A photograph was attached to each card to illustrate the flower of the individual cultivar. Historical and bibliographical information was also included: origin, year of production, name of the raiser, synonyms, original description (the very first one), further quotations, bibliographic references of the original picture and the subsequent ones and, when found, the ancient print.

The characterization and identification work were carried out in the gardens of the province of Verbania: Villa Taranto (Verbania-Pallanza), Villa Anelli (Oggebbio), Villa Ruscono-Clerici (Verbania.Pallanza), Villa San Remigio (Verbania-Pallanza), the botanical garden Isola Madre, Villa Ada Troubetzkoy (Ghiffa), the nursery la Margotta (Cannero Riviera), and

concerned the following cultivars: 'Alba Plena', 'Albino Botti', 'Althaeiflora', 'Anemonaeflora Alba', 'Anemonaeflora', 'Angelo Cocchi', 'Arciduca Carlo', 'Arciduchessa Augusta', 'Baron de Vriere', 'Bella di Firenze', 'Bella Lamberti', 'Bella Romana', 'Bonomiana', 'C. M. Hovey', 'Calipso Vera', 'Camilla Hebert', 'Carlotta Papudoff', 'Carolina Franzini', 'Caryophylliflora Major', 'Caryophylloides', 'Commensa', 'Compte de Gomer', 'Conte di Cavour', 'Contessa Woronzoff', 'Corallina', 'Covina Cruciata', 'Daviesi', 'Conckelaeri', 'Duchesse d'Orleans', 'Elegans', 'Eleonora Franchetti', 'Elisabetta Hebert', 'Emperor', 'Fimbriata', 'Formosa de Young', 'Francesco Ferruccio', 'Francofurtensis', 'Frèdèric Alba', 'General Colletti', 'Gigantea', 'Gloria del Verbano', 'Gloria delle Isole Borromeo', 'Gran Sultano', 'Grandiflora Alba', 'Humilis', 'Il Gioiello', 'Il Tramonto', 'L'Avvenire', 'Lavinia Maggi Rubra', 'Lavinia Maggi Alba', 'Lavinia Maggi', 'Madame de Strekaloff', 'Madoni', 'Magnoliaeflora', 'Marchesa Marghereita Serra', 'Margherita Colleoni', 'Margherite Gouillon', 'Maria Antonietta', 'Maria Bagnasco', 'Marmorata', 'Mathotiana Alba', 'Mathotiana Rosea', 'Mathotiana', 'Montironi', 'Nebulosa', 'Nobilissima', 'Oki-no-nami', 'Oscar Borrini', 'Otome', 'Paolina Maggi', 'Parvula', 'Pelagii', 'Preston Rose', 'Prince Troubetzkoy', 'Prof. Filippo Parlatore', 'Rawesiana', 'Reine de Beautes', 'Ridolfi Striata', 'Roi de Belges', 'Roma Risorta', 'Rubescens Major', 'Sacco di Lainate', 'Sacco Vera', 'Sacco', 'Saccoi', 'Sarah Frost', 'Sericea', 'Souvenir de Bahaud-Litou', 'Stella Polare', 'Teutonia', 'Tricolor', 'Triomphe de Mayence', 'Triphosa', 'Valtevareda', 'Variegata Plena', 'Vergine di Collebeato', 'Ville de Nantes', 'Virginia Franco', 'Vittorio Emanuele II'.

Conclusions

The identification and morpho-botanical characterization of *C. japonica* cultivars, besides helping to safeguard them and to protect their exploitation, permitted the rediscovery of an interesting genetic heritage; this discovered information can be used advantageously in the restoration of historical gardens. In modern floriculture these ancient cultivars are surely adaptable to local ecopedological conditions. The survival of these cultivars even when the gardens were abandoned during wartime or property successions and also during exceptionally bad weather conditions has proven their outstanding resistance and therefore guarantee the success of their use in gardens today.

Editor's note: Dr. Remotti presented this paper at the 2001 International Camellia Congress and we reprint it with her kind permission.

SASANQUAS—VERSATILE BUT NEGLECTED

Submitted by E. C. Snooks, La Jolla, California

Of all the species of camellias currently in cultivation perhaps the most useful and yet neglected is *c.sasanqua.* The name as applied in this discussion shall include the species *c. vernalis* and *c. heimalis,* which are so similar in characteristics as to be indistinguishable to all but the experts. Even they are uncertain!

C. sasanqua comes to us in a variety of growth forms much more extensive than our beloved *C. japonica.* There are very prostrate forms, narrow columnar types and just about everything in between. Blooms are small to medium in size and most are single or semi-double in form, though all flower forms are available. With a blooming season of fall to early winter when the garden is usually quite void of color, it seems impossible that they are so little planted.

Not everything is ideal though. The blooms tend to last only a short while and shatter when they fall. The quantity of blooms more than balances their short life, but it is the latter quality that contributes greatly to their fall from grace with the ever-present problems associated with petal blight. Picking up after a sasanqua can be quite a task. On the other hand, they bloom so early that most of them are completed before the "blight season" starts. One can also accomplish petal pick up by covering the area around the plants with shade cloth or something similar and then disposing of the spent blooms much like shaking a rug. The small leaf and pliable twig characteristics of the species give an airy feeling in contrast to the more "blocky" *C. japonica.* As a group, they are hardy, sun-tolerant and drought resistant. They are quite resistant to root rot and hence are more adaptable to less well-drained areas.

With these qualities they are a "natural" for landscape purposes. They are generally chosen for planting as individual specimens, hedges, espalier, ground cover or to sprawl over rocks or walls. With this variety of uses, first consideration must be given to growth habit and ultimate size. Secondly, color and flower form need to be considered. This will be dictated by the background colors and neighboring plants.

For specimen planting, the more brilliant colors should be considered if the plants will be viewed from a distance. If they will be seen against a dark background, the strong pinks and reds such as 'Yuletide" might be chosen.

Hedge planting must also take those factors into consideration but, in addition, one must decide if one or more colors should be used. Usually one color will prove best but, if you must have variety, choose varieties that will blend into each other rather than contrast boldly. Also, make sure that growth habit and leaf size are similar. Planting sports of one variety will accomplish this perfectly.

Espaliers are popular and *C. sasanqua* is the choice. One could grow a formal espalier, but a more graceful fan arrangement is usually best. The *C. heimalis* varieties 'Shishi-gashira' and 'Showa-no-sakae' are two of the tops and the *C. sasanqua* 'Jean May' with its formal double bloom is charming in a soft pink. A frame or trellis support will be required for starters. Pruning will do the rest. Others may be placed against a wire net or tied from nails driven into the wall or fence.

The *C. heimalis* listed above are also useful as ground covers or sprawling over rocks or retaining walls.

With all these desired qualities and with few faults, how about planting sasanquas? Spare them a further thought—they are capable of giving you a lot of pleasure.

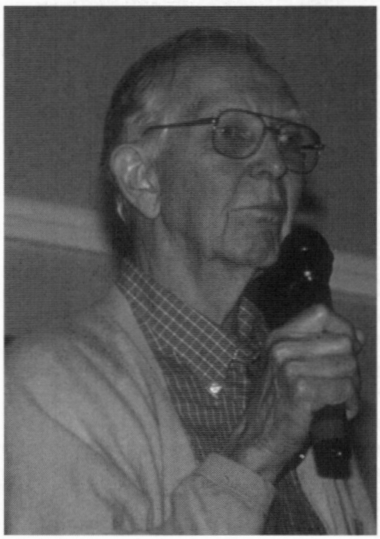
MEMORIES OF CAMELLIA-RAMA 2001

Fresno, California

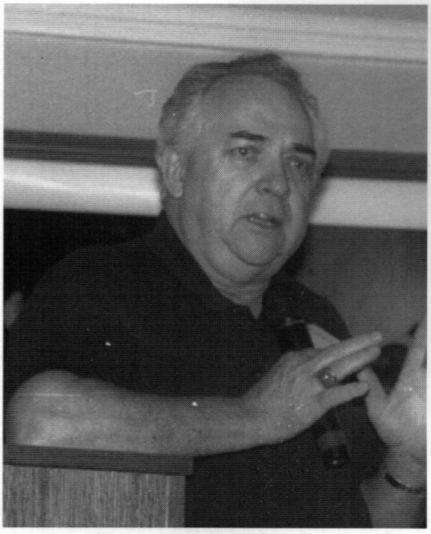
Art Gonos, Congenial M. C.

Barbara Tuffli, President Peninsula Society, shares about building Society membership

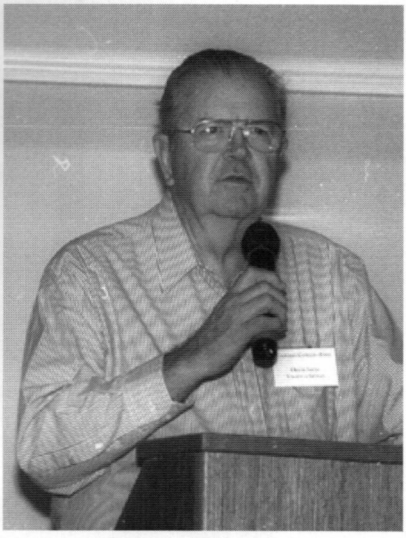
Richard Schulhof, Director of Descanso Gardens reported on his trip to China



Gordon Goff, Lafayette, California told the group about the camellia research being done by the Northern California Camellia Society



Bob Stroud, Slidell, LA
talked about membership in
southern camellia societies



Hulyn Smith, Valdosta, GA, in
addition to telling funny stories,
shared about new camellia research

And then the costume parade—"Around the World"

Bagpiper Edith Mazzei
and
Jackie Randall, Statue of Liberty

Barbara Tuffli took the "Around the World" theme seriously. Do you think she'll make it in 90 days?

After the delicious champagne brunch, everyone went home filled with wonderful memories of great fellowship, fun, food and festivities.

Thanks to Bob Marcy, San Jose, California, our on-the-spot photographer, for these photos. Bob sent them as an e-mail attachment. Isn't this new technology amazing!

SHOW SCHEDULE 2002

January 5 and 6 — Judges' Symposium
Descanso Gardens, La Canada
Hosted by Southern California Camellia Council

January 12 and 13 — Descanso Gardens, La Canada
Hosted by Pacific Camellia Society

January 19 and 20 — Rogers Gardens, Corona del Mar
Hosted by Orange County Camellia Society

January 26 and 27 — Descanso Gardens, La Canada
Hosted by Southern California Camellia Society

February 2 and 3 — The Prado, Balboa Park, San Diego
Hosted by San Diego Camellia Society

February 9 and 10 — Huntington Gardens, San Marino
Hosted by Southern California Camellia Society

February 16 and 17 — Community Center "D" Street, La Verne
Hosted by Pomona Valley Camellia Society

February 23 and 24 — Descanso Gardens, La Canada
Hosted by Southern California Camellia Council

March 2 and 3 — Church, 17th and S Streets, Bakersfield
Hosted by Kern County Camellia Society

March 9 and 10 — Church 5673 N. First Street, Fresno
Hosted by Central California Camellia Society

WELCOME NEW MEMBERS

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KOREA

Camellia bonsai developed and photographed by Shigeo Matsumoto

In Issue No. 4, Volume 62 of *The Camellia Review* you read an article about bonsai camellias by Shigeo Matsumoto from Japan. He shared how he collected old root stock and grafted them to develop bonsai camellias with the appearance of age. He made it sound exciting and rewarding. One thing he perhaps did not mention was the time required to maintain the bonsai plant in peak condition. Here's an excerpt from an article by Clark W. Thomas and Ralph S. Peer (E. J. Tourje, *Camellia Culture,1958)* which you may want to consider before embarking on an exciting bonsai adventure:

"Creating bonsai—or even possessing one—is an art which, for complete success, must become an obsession. *One should not attempt to grow bonsai unless daily observation is possible.* The personal absorption required for bonsai has been compared with that required in raising a family The final result gives great artistic pleasure both to the grower and those privileged to view his handiwork. In Japan, persons growing bonsai commercially have the status of art connoisseurs. Their establishments are of civic importance and are visisted in the same manner as are art galleries in Europe.

At a recent meeting of the Pomona Valley Camellia Society, Tom Nuccio spoke about some of the new introductions Nuccio's Nurseries is and will be making. Several of the varieties he discussed would be well-suited for bonsai. A visit to the nusery is always an enjoyable experience, but you can also order plants by phone. The number for Nuccio's is (626)794-3383. Tom Nuccio will probably have some good suggestions for you if you ask for him.

DIRECTORY OF CALIFORNIA CAMELLIA SOCIETIES

CENTRAL CALIFORNIA CAMELLIA SOCIETY: President—Jeane Shoemaker; Secretary—Joan Hill, 37341 Ave 17 1/2, Madera, 93638. Meetings: 3rd Wednesday, November-February, 7:30 p.m. Sheraton Smuggler's Inn, 3737 N. Blackstone, Fresno.

KERN COUNTY, CAMELLIA SOCIETY OF: President—Helen Maas; Secretary—Jane Brady, 7401-21 Hilton Head Way, Bakersfield 93309. For meeting dates and times, call Helen Maas (805)872-2188.

MODESTO, CAMELLIA SOCIETY OF: President—Don Kendall; Secretary—Sue Kendall, 1505 Gary Lane. Modesto, 95355. Meetings: 1st Sunday, October-April, 1:00 p.m., 220-A Standiford Avenue, Modesto.

NORTHERN CALIFORNIA CAMELLIA SOCIETY: President—Don Bergamini; Secretary—Eric Hansen. Meetings: 1st Monday, November-April, 7:30 p.m., Oak Grove School, 2050 Minert Road, Concord. Final meeting in May is a dinner meeting.

ORANGE COUNTY CAMELLIA SOCIETY: President—Linda Rodriguez; Secretary—Peggy Sheldon, 20151 Crown Reef Lane, Huntington Beach 92646. Meetings: lst Monday, October-April, 7:00 p.m. Dept. of Education Building, 200 Kalmus, Costa Mesa

PACIFIC CAMELLIA SOCIETY: President—Elsie Bracci. Meetings: lst Thursday, November-April, 7:30 p.m., Descanso Gardens, 1418 Descanso Drive, La Canada.

PENINSULA CAMELLIA SOCIETY: President—Barbara Coates Tuffli; Secretary—Nicky Farmer, 360 Santa Margarita Avenue, Menlo Park 94025. Meetings: 4th Monday, October-March, Veterans' Building Annex, 711 Nevada St., Rm. 20 (elevator available), Redwood City

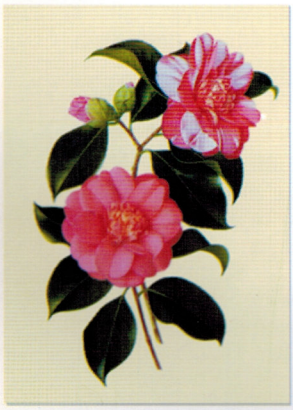
POMONA VALLEY CAMELLIA SOCIETY: President—David Trujillo; Secretary—Dorothy Christinson, 3751 Hoover St., Riverside 95204. Meetings: 2nd Tuesday, November-April, 7:30 p.m., Lutheran Church, Corner Baseline and Wheeler, La Verne.

SACRAMENTO, CAMELLIA SOCIETY OF: President—Jackie Randall; Secretary—Gary Schanz, 1177 Cavanaugh Way, Sacramento 95822. Meetings: 4th Tuesday, October-April, 7:30 p.m., Studio Theater, 1028 "R" Street, Sacramento

SAN DIEGO CAMELLIA SOCIETY: President—Dean Turney; Secretary—Lew Gary, 11419 Cabela Place, San Diego 92127. Meetings: 3rd Wednesday, November-April, 7:30 p.m, Room 101 Casa del Prado, Balboa Park, San Diego.

SANTA CLARA COUNTY, INC., CAMELLIA SOCIETY OF: President—Walt Dabel. Meetings: 3rd Wednesday, October-April, 7:30 p.m., Lick Mill Park, 4750 Lick Mill Boulevard, Santa Clara.

SOUTHERN CALIFORNIA CAMELLIA SOCIETY: President—Brad King; Secretary—Sandra Ragusa, 10720 E. Freer St., Temple City, CA 91780. Meetings: 7:30 p.m., Ayres Hall, Los Angeles County Arboretum, 301 Baldwin Avenue, Arcadia. Call Marilee Gray for meeting dates (909) 624-4107.



Your friends will enjoy receiving your greetings on these new camellia note cards. They also make great gifts for your fellow camellia lovers or for those you are trying to get involved in this wonderful hobby! Cards and matching envelopes are packaged in sets of 8.

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