International Camellia Journal

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1973

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International Camellia Society

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AN OFFICIAL PUBLICATION
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EDITED BY
CHARLES PUDDLE

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The Secretary's Page

I AM often asked how the Society was formed. After the war there was a great surge of interest in camellias, and amongst many enthusiasts a desire to correct the great confusion which existed in the nomenclature. In an effort to assist in Britain I became involved in much correspondence with experts throughout the world and particularly with Mr. Albert Fendig, Professor Waterhouse and, later, Dr. Ralph Philbrick. During 1961 I suggested in one of my letters that the International Camellia Society should be formed, and this idea was enthusiastically welcomed by my friends. It was decided to write to fifty camellia personalities in all parts of the world in order to obtain their views; with one exception they were all in favour of the project, and so in April 1962 the Society was formed.

The Society has been successful, but still has a long way to go in order to fulfil the motives on which it was founded. I have no doubt that these are capable of being accomplished with the support and enthusiasm of our members. What the Society really needs is more helpers—members who are willing to make a contribution to the advancement of camellias on a world-wide basis; members who will assist in administration, research, with articles for publication in our Journal, and who are willing to organise society activities in their areas, particularly in countries which do not have a national society.

One of the great successes of the Society has been the conferences which have been organised for many years. Perhaps the most successful was that held in association with the Societa Italiana della Camelia at Stresa in 1972, and several papers from this conference are published in this Journal. I would like to take this opportunity of thanking the President, Dr. Sevesi, and all other officials of the Italian Camellia Society who worked so hard to make this conference such a success and gave all the delegates such wonderful hospitality. It was through the encouragement of the Society that the Italian Camellia Society was formed, and now there is a special Camellia Section of the French Horticultural Society. A successful conference was held in the Channel Islands this Spring, and the Australian Congress is still to come.

There is a greater need for co-operation amongst camellia and horticultural societies. The Journal should be an annual publication, but for this to happen members must be prepared to contribute articles and notes for publication. The nomenclature list is still not completed but co-operation is being maintained with the Bailey Hortorium and it is

Registration Authority. There is a need for much more scientific and cultural research in connection with camellias and it is hoped that this will be encouraged by universities and research stations.

As Secretary I am well aware of the shortcomings of the Society, and I hope that members will put forward proposals for the improvement of all aspects of the Society. It is only through communication that we can make the necessary changes to ensure that the Society is fulfilling the needs of its members.

Most of all we need more members, and it is in this field that members can help us most to ensure that we have a successful society in the future.

I would like to thank all those who have helped in the publication of this Journal. I would also like to pay tribute to Mr. Albert Fendig and Professor Waterhouse for all the work they have done for the Society throughout its existence.

CHARLES PUDDLE.

International Camellia Society

The International Camellia Society has been inaugurated with the following motives:—

- To foster the love of camellias throughout the world and to maintain and to increase their popularity.
- To undertake historical, scientific and horticultural research in connection with camellias.
- To co-operate with all national and regional camellia societies and with other horticultural societies.
- To disseminate information concerning camellias by means of bulletins and other publications.
- To encourage a friendly exchange between camellia enthusiasts of all nationalities.

SUBSCRIPTIONS

THE subscription of the Society still remains at $3.00, £1.00 sterling or the equivalent in other currencies. Please encourage your friends to join and send their subscriptions to Charles Puddle, International Camellia Society, Bodnant Garden, Colwyn Bay, LL28 5RE, North Wales.

Camellias of the Future

LES JURY New Zealand

FROM a previous article in the *International Camellia Journal,* members will know I have been working on a 'back cross' programme, using plants selected from a first cross with extra size and substance in blooms. Many people will say we have so many beautiful camellias in present day cultivation, there cannot be much prospect for the hybridiser who endeavours to make improvement. Although I admit that is a point for the raiser to bear in mind, yet I feel it should be regarded only as a challenge and the raiser must plan accordingly. I therefore suggest ways and means of accomplishing the desired results.

Back Crossing

This is indeed one objective on which to work, particularly when selected breeder plants are used. My own results are not sufficiently advanced to give conclusive information. Since my plants were raised by a friend 145 miles away, I could not observe trends as closely as desired; but when he was taken ill, I had to bring all plants back home. After a few months they had to be again moved to another location in midsummer. With such disturbance I must wait another year or two before beginning a reliable evaluation on my back crossing.

Using *C. saluenensis* as a seed parent, first crosses were easily obtained but I found back crossing and other desirable crosses very difficult and in some cases impossible. This difficulty was because we have a high rainfall on the west coast of New Zealand and the climate is 'too equable,' keeping plants in a 'growing condition' for too long in the season, whereas on the east coast the climate is drier, camellias ripen wood with consequent heavy bud and seed set, even small plants set seed. I have to do a considerable amount of work to get a little hand crossed seed, the odds are so heavily against me, I am now distributing my selected breeder plants to agents in other countries in the hope enthusiasts may be able to accomplish what I am unable to do, I feel my breeder plants are too valuable to remain undistributed,

I am presently carrying out experimentation on standard camellia plants and the effect on seed set, results so far are most encouraging. For instance we seldom get any seed set on 'Donation,' but this year on a small standard plant there are about 20 seed capsules set. Standards can be obtained by grafting on top of a 3 or 4 foot stem, or by removing all bottom branches up to desired height, also tying the remaining branches downwards is advantageous. I have found that tying branches downwards of an unflowered

seedling will bring it to flower, but timing is important. It must be done as soon as possible after new growth is made and all growths must be so treated.

I should point out that back crossing (a well known method of improvement with plant breeders) simply means crossing back to one of the original parents of any hybrid.

Regarding *C.* x *williamsii,* one can use selected single flowered plants and cross them by using pollen from double flowered *C. japonica* varieties, also the reverse cross can be made by using *C. japonica* forms which will set seed, preferably semi-double forms, and using pollen from good double forms of *C.* x *williamsii.* I have been working on a New Zealand raised *C. japonica* 'Waiwhetu Beauty'—a semi-double salmon pink which sets seed fairly readily here, using pollen from 'Donation,' 'Elsie Jury,' and 'Elegant Beauty,' and have secured good bushy hybrids. 'Waiwhetu Beauty' is a dwarf grower and a most prolific flowerer. Four of these crosses have bloomed, all doubles, from 'Elsie Jury' a very good white, to formal rosy pinks from 'Anticipation,' one from 'Donation' appears to be a little bushier in growth, a little larger in bloom with more substance and a clearer pink than 'Donation.' All of them rate very good and two could be excellent next year. I am very pleased with results from 'Waiwhetu Beauty' and if bushy plants more suited to smaller garden is an objective, then it is certainly an excellent breeder.

This season I have crossed 'Waiwhetu Beauty' with 'Leonard Messel,' 'Howard Asper' and other *C. reticulata* hybrids. I have read that *C. japonica* 'Berenice Boddy' sets seeds well in U.S.A. Since this variety is rated as the hardiest of *C. japonica* cultivars and also has blooms shaded from pale to deep pink and the greenest of foliage plus a long flowering season, it should be an excellent parent for back crossing in England.

Another plant very worthy of working back crosses is 'Francis Hanger.' I have been told there are several seedlings by that name. The form I grow here is a pure white with golden pollen anthers which do not burn in sun as do all other *C.* x *williamsii,* I therefore regard this as a most outstanding form of *C.* x *williamsii.* If one wishes to try other crosses with such a desirable breeder, what about *C. reticulata*? The result might be a white seedling with the floral form of *C. reticulata.* Other crosses which might be attempted are with the hybrids of *C. reticulata* such as 'Leonard Messel', 'Salutation' and 'Howard Asper.' Thus it will be seen that there is a wide field of back crossing open to the enthusiastic raiser who will be able to think up his own varieties to work on, I am only endeavouring to give a lead.

Other Crosses

Perhaps some of the most beautiful hybrids will be raised from the large white flowered *C. granthamiana.* Judging from the hybrid raised by Mr. N. McMinn, Australia, in which he crossed 'Spencers Pink' with *C. granthamiana* resulting in 'Autumn Glory,' one can imagine the possibilities of the most remarkable of all camellia hybrids. 'Autumn Glory' is a single pale to deeper pink with a very large bunch of anthers with yellow filaments, which presents two important possibilities.

1. According to research carried out in the U.S.A. any colour pigment in the filaments would transfer into the petaloids if these were developed by crossing to a double form. As the filaments in 'Autumn Glory' are just yellow as in *C. granthamiana* it would be a reasonable deduction to say the genes which control the colour of filaments in *C. granthamiana* must be of a somewhat "dominant" nature, since crossing with 'Spencers Pink' (which has almost white filaments) has not lessened the yellow colour in filaments of 'Autumn Glory.'
2. The petals of 'Autumn Glory' have just as deep pink colouration as in 'Spencers Pink' which suggests the genes controlling the white colour of *C. granthamiana* are of a "recessive" nature and easily overcome by a stronger colour.

If these two assumptions are correct, it means that crossing 'Autumn Glory' and *C. granthamiana* with a double red *C. japonica,* should result in red petals with yellow petaloid centre. Again, crossing with a "blue" japonica such as 'Zambo' should result in blue petals with yellow petaloid centre. But because *C. granthamiana* is a single, some of the above crosses would be singles and the doubles would be sure to vary in intensity of colour, so that one should raise quite a number to obtain the most desirable result.

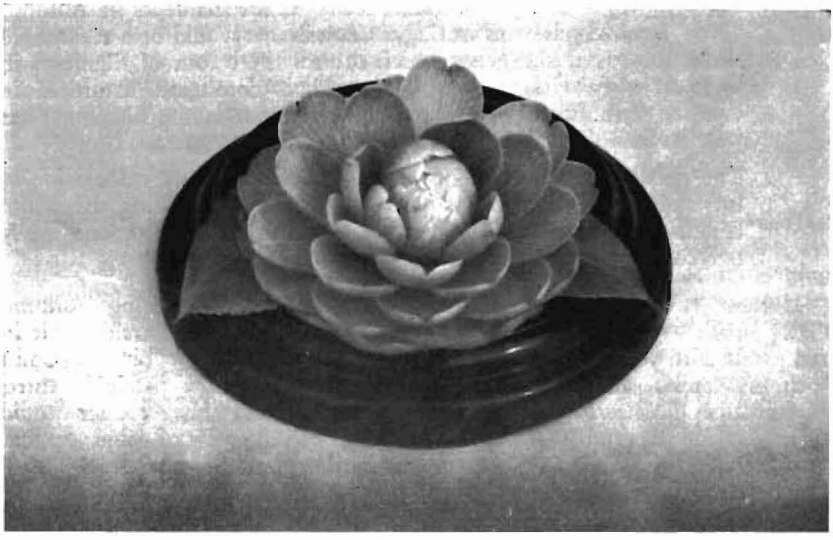
It appears there are some yellow colour genes of a very recessive nature in certain varieties of *C. japonica,* since a few do show a little yellow colour and two seedlings of 'Edith Linton' have resulted in yellow-cream blooms. ('Gwenneth Morey' and 'Brushfields Yellow'). With this in mind, I have crossed *C. granthamiana* with 'Edith Linton' but only obtained one plant which should bloom this year. In the 1969 *American Camellia Yearbook,* page 100, there is a noteworthy reference to "two more approaches to a true yellow camellia," one is described as a yellow hybrid of 'Lady Macon' x *C. granthamiana,* the other is yellow japonica seedling.

Surprises

One is sure to get some surprises in hybridising work. My greatest surprise came with a cross of 'Hassaku' (seed parent) x 'Barbara Hillier,' thought to be of *C. japonica* x *C. reticulata* parentage. As both parents are coloured, one red, the other deep rose, it was a surprise to get three pure whites from about 15 plants raised. Then there was an amazing variation of forms, two were somewhat upright, some very bushy and four sprawling over the ground with rather small pink bloom, which indicates 'Hassaku' may be a cross between a red single *C. japonica* and a sprawling small white species. One plant, No. 564, was extra branching, really too dense to be attractive, but if it could be crossed to *C. reticulata* it certainly should result in dwarfer *C. reticulata* hybrids. The blooms are large, heavy in substance and beautiful golden anthers.

Another plant of the same cross, No. 552, is of a more attractive form, flowers early and continues over a very long season, and could also possibly cross with *C. reticulata* or its hybrids. Both these numbers would make excellent dwarfer hybrids crossed with *C. japonica.*

A surprise came in a cross of 'Fuzajo' x 'Gauntletti,' the former came to New Zealand from Japan as "Purpurea," then Professor Waterhouse found



First bloom on three-year-old plant of hybrid between *C. japonica* 'Waiwhetu Beauty' and *C.* x *williamsii* 'Anticipation'. 'Anticipation' is *C. saluenensis* x *C. japonica* 'Leviathan.'

The same bloom as above in the centre of its parents 'Waiwhetu Beauty' on the left and 'Anticipation' on the right.

it was listed by a Japanese nurseryman as 'Fuzajo.' The objective in the above cross was simply that I did not consider the maroon crimson of 'Fuzajo' as a true colour and by crossing to a white, I might discover what the other colour could be, maybe it would lead to new tonings in camellia hybrids.

About 12-14 seedlings were raised, colours varied from pink to red, three double were the exact form of 'Kurotsubaki' but a little larger and not quite so dark in colour, indicating 'Kurotsubaki' is a derivative from 'Fuzajo.' The surprise came when lifting these plants to give to a friend for grafting stock. They were closely planted and we came to a plant with single purple-blue flowers, no sign of any pink colouration. Since some of my 'Fuzajo' hybrids have resulted in scarlet colour, the purple-blue would indicate that the colour of 'Fuzajo' is controlled by a mixture of scarlet and purple colour genes. Unfortunately the purple-blue plant died but I have again crossed 'Fuzajo' with a white, this time 'Francis Hanger' as both of these have good lasting golden pollen anthers. If another blue form is obtained, it will be crossed with 'Zambo'. I have heard there is more than one form of 'Zambo' and have recently seen some with three or four rows of petals of reddish purple and central pollen anthers, the form I have is a very full paeony with little or no pollen anthers, the colour a mauve blue, truly the bluest camellia I have seen. Crosses of *C. saluenensis* x 'Zambo' have resulted in lilac to deeper colours. I am now sure lilac-mauve-blue purple hybrids are a possibility.

Another surprise came in a *C. saluenensis* x 'Hikarugenji' (syn. 'Herme') cross, this plant producing varied types and coloured sports including three most beautiful picotee forms, one pink tipped red, one pink tipped purple and one pink tipped blue, truly a fabulous trio but grafts taken two years ago from these sports have just flowered, none were true. Although a great disappointment, this plant raises two important possibilities for the raiser:

1. As all plant characteristics are controlled by genes, that means 'Hikarugenji' must have purple, blue and red genes,
2. It also means 'Hikarugenji' holds the possibilities of raising picotees of various colour forms.

Another plant of *C. saluenensis* x 'Hikarugenji' produced fairly strongly scented blooms, so it seems 'Hikarugenji' could be crossed with other scented varieties.

Picotees

These forms are very scarce, indicating the genes controlling such forms are of a very recessive nature. A friend has raised a single picotee hybrid which may be a breakthrough to the raising of many beautiful colour forms by crossing it with 'Betty Sheffield Supreme,' 'Margaret Davis' and 'Hikarugenji.'

Two Toned Hybrids

Although these may occur in the natural course of events, some delightful forms may be obtained by using C. 'Bokuhan' (syn. 'Tinsie') as seed parent. Crossed with a double red *C. japonica* it should bring red blooms with pink

centre, and crossing with 'Betty Sheffield Supreme' should result in red outer petals with white centre. These hybrids would be of only medium size, nevertheless they should be delightful garden plants.

Hybrids of C. reticulata

I have done only a medium amount of work on these. One plant of *C. reticulata* var. *simplex* x 'Waiwhetu Beauty' came to bloom for the first time this spring. The plant was bushier than the usual hybrids of *C. reticulata,* the blooms very prolific and semi-double salmon pink. As it sets seed it should be valuable for back crossing with *C. japonica* or *C. reticulata* cultivars. The three "Howard Asper Girls" *C. sasanqua* x *C. reticulata* should also be crossed again to *C. reticulata* giving us earlier flowering *C. reticulata* forms.

Far from there being no prospect for the camellia hybridist, he indeed has exciting possibilities. It only remains for him to get on with the job with enthusiasm and dedication of purpose—the very worthy purpose of raising the camellias of the future.

Camellias in Rome a Century Ago

STELVIO COGGIATTI Rome

THE inhabitants of Rome in the course of its 2,735 years of history, reached its peak of two million during the Empire period and then sank to seventeen thousand in the darkest moments of the Middle Ages. In the most crowded periods the inhabited area overflowed into the neighbouring countryside but as the population diminished its bounds were reduced to a few scattered spots in the middle of the town.

The buildings relinquished by their occupants gradually fell down or were razed to the ground by the Barbarian invasions. What link exists between these happenings and camellias? I will try to illustrate the existing connections.

Originally the soil of Rome, being of volcanic nature, showed an acid reaction, but the continuous flow of calcareous buildings and rubbish gave rise in many places to a heavy alkaline soil considered detrimental for the culture of camellias. A number of the ancient edifices have now sunk so that their original ground level is now some five to ten yards below the present level of the town. The Forums, the Churches of St. Vitale in the northern district and St. Clement in the south, the ruins of the Republican Era, are just a few examples of the present higher level, and give support to my argument.

In addition to the unfavourable soil conditions we must remember that the summer climate in Rome is very difficult with its dry hot peak from the end of June to the middle of August. During this period it usually never rains and a temperature at mid-day of 95° F. is normal. Of course, these are not ideal conditions for growing camellias. We must not forget that the town could profit from the existence of its seven hills which a century ago were fresh and green even in the summer. Unhappily almost every vacant site has now disappeared because of invading urbanism. These circumstances are probably responsible for the decline of the camellia in Rome about the middle of the last century and its present extreme decadence.

A few years after 1850 a number of members of the Roman Horticultural Society, presided over by Prince Marcantonie Borghese, assisted by Count Lavinia Spada, formerly a War Minister of the Papal States, assembled to form an active group of camellia enthusiasts interested in breeding, selecting and exhibiting their plants. A catalogue of newly raised varieties was first published in 1857 followed by a supplement entitled *About New Roman Camellias grown from Seeds* listing 'Adele Palagi,' 'Alba Plena,' 'Bella Romana,' 'Ninfa del Tebro,' 'Roma Risorta,' and many other camellias which are still well known today.

That Rome was a relevant camellia centre in the middle of the last century was largely ignored until I came into possession—thanks to a lucky discovery —of the above-mentioned documents. In order to qualify my findings I must mention another successful search I had the fortune to perform recently in the Doria Pamphilj archives in Rome.

I was searching for evidence to support some statements expressed in an article I was preparing on the Villa Doria Pamphilj, the largest and finest Roman villa still in private hands. Much to my surprise I discovered a manuscript book consisting of thirty pages entitled *Catalogo ed Inventario delle piante vive esistenti nei giardini e serre di Villa Pamphilj il* 1o *Gennaie*, 1856.

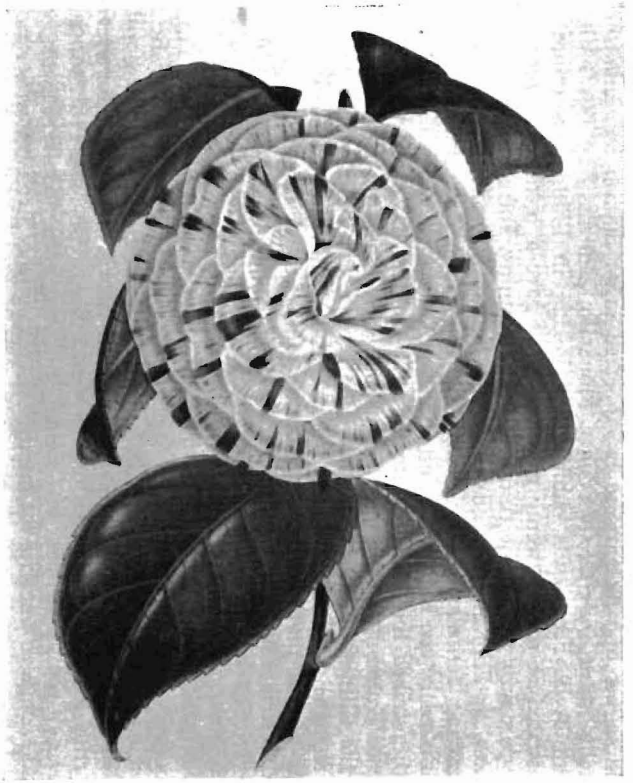
This document shows beside each plant listed the valuation in the currency of the time—scudi and bajocchi. Here is an extract concerning the fifty-seven different camellia varieties: —

		S.	B.
n.	306 'Flore Rubro'	·50	
„	30 'Flore Albo'	·50	
„	2 'Rubra Maxima'	3	
„	6 'Variegata'	4	
„	3 'Altheaiflora'	4	
„	2 'Coccinea'	1·50	
„	5 'Incarnata'	6	
„	3 'Alba Plena'	10	
„	1 'Chandlerii'	1·50	
„	1 'Coccinea Magna'	1·50	
„	1 'Colvilli'	2	
„	1 'Donckelarii'	2	
„	1 'Eximia'	2	
„	1 'Fimbriata'	3	
„	1 'Florida'	2	
„	3 'Imbricata Tricolor'	4	
„	1 'Imperialis'	2	
„	1 'Leeana Superba'	2	
„	1 'Myrtifolia'	1	
„	1 'Pictorum Coccinea'	1	
„	3 'Paeoniflora Rosea'	6	
„	1 'Picturata'	2	
„	6 'Pink'	2	
„	2 'Pulcherrima'	3	
„	10 *reticulata*	3	
„	1 *sasanqua* 'Roseo Pleno'	2	
„	1 'Simetrina'	3	
„	3 'Tricolor'	2	
„	1 'Warata Macrantha'	1	

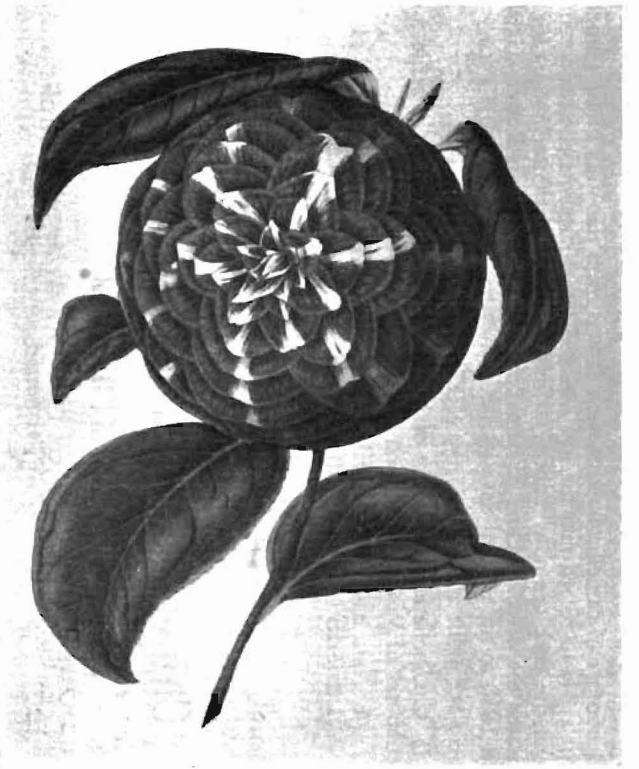
		S.	B.
n.	1 'Belle Irene'	10	
„	1 'Fulgens'	8	
„	1 'Queen Victoria'	2	
„	1 'Candidissima'	2	
„	1 'Aucubaefolia'	1·50	
„	1 'Pomponia Alba'	6	
„	1 'Pomponia Grandiflora'	5	
„	3 'Atrorubens'	3	
„	1 'Princesse Doria'	2	
„	1 'Prince Doria'	2	
„	1 'Trionfo di Villa Pamphilj'	3	
„	1 'Pamphiliana Rosea'	3	
„	1 'Striata Alba Semiplena'	2	
„	1 'Striata Alba Plena'	1·50	
„	1 'Triumphans Nova'	1·50	
„	1 'Principe di Valmontone'	1	
„	1 'Nassiniana'	2	
„	1 'Duchesse d'Orleans'	2	
„	1 'Francofurtensis'	2	
„	1 'Philippe I'	2	
„	1 'Villageoise Mauve'	2	
„	1 'Alba Grandiflora'	2	
„	4 'Alba Simplex'	·50	
„	2 'Alba Semiplena'	·50	
„	1 'Kermes'	1	
„	2 'Illicifolia'	1	
„	1 'Jenny'	1	
„	1 'Calderara'	1	

B = 1/100 S

Other documents tell us that in the magnificent court of Prince Doria Pamphilj's palace, a fine camellia show was held to celebrate the coming of spring in March, 1856. With similar desires and with the same thoughts in



Camelia Bella Romana



Camelia Ninfa del Tebro.

mind, the Garden Club of Rome, assisted by the Societa Italiana della Camelia, organised in 1969 the first camellia show in Rome for 113 years.

A number of camellia flowers were shown from the Villa Doria Pamphilj, but it is sad to record that the five hundred camellia plants present a century ago in the park are now reduced to five. Alas! The same ratio (100 : 1) indicates the actual decline of camellia plants growing in Roman Gardens from 1850 to the present day.

NOTES

(1) Catalogue and Inventory of living plants existing in the gardens and greenhouses of Villa Pamphilj on January 1st, 1956.

(2) 1 scudo has a present value of £3·00 sterling.
1 bajocco is approximately 7 new pence.

Chinese Accounts of the Yunnan Reticulatas

E. G. WATERHOUSE Australia

THERE are two publications in Chinese, both extremely difficult to obtain and neither of which has so far appeared in an English translation. The first, *Yunnan Shan Cha* ('Yunnan Mountain Camellias') by Dr. T. T. Yu (with T. T. Feng), was published in Peking in 1958. It described and illustrated in colour twenty reticulatas and gave a picturesque account of the part they play in the cultural life of Kunming. Fortunately Dr. Yu also writes in English and had already given an illustrated account of the Kunming reticulatas in the Camellia and Magnolia Conference Report published by the R.H.S., London in 1950. Later in the *Camellian,* 1964, he also described the "Garden Camellias of Yunnan." We had thus come to regard Kunming as the main, if not the sole, centre for the investigation of the Chinese reticulatas. However, a second publication which appeared in Shanghai in 1959, just one year later than Yu's Peking publication, shows Tali (also in Yunnan) to be a centre of perhaps equal importance. It names and describes not only the reticulatas known in Kunming but also a number of varieties which originated in Tali and which are not yet known outside of China. We are thus presented with a fascinating field for future investigation and study. This book *Yunnan Shan Cha Hua* ('Yunnan Mountain Camellia Flowers') was published by the Shanghai Scientific and Technological Press and is edited by Chuang Mao Chang. I have so far failed to obtain a copy for myself, but Mr. George Newton of Fayetteville, North Carolina, kindly presented me with a Xerox copy, and Professor A. N. Davis, of the Department of Oriental Studies at Sydney University, has been kind enough to translate for me the selected extracts given below as *A, B, C* and *D.*

The work consists of:

1. Introduction
2. Historical material for the study of native regions of mountain camellias.
3. Special characteristics of botanical forms.
4. Special characteristics in agricultural biology.
5. Introduction to major strains.
6. Techniques of cultivation of young plants.
7. Methods of cultivation.

A. Here is an interesting extract from Chapter 2: "In 1954, members of the Horticultural Section of the Administrative Board of Parks of Shanghai, for the purpose of beautifying the city, with unprecedented effort overcame all difficulties and transplanted the beautiful camellia from Yunnan to Shanghai. It was placed in the Plant Garden in Lung-hua. It has been there more than five years now. Its growth has been satisfactory and new trees are bearing buds. They have been exhibited in the People's Park and won great admiration. Members of the Lung-hua Plant Garden, with the aim of extending the cultivation of this famous flower, have presented specimens to the Botanical Institutions in Nanking and Shen-Yang (Mukden). They are now trying to produce them in large quantities. In 1957, they sent some young plants to the General Botanical Garden in Moscow, Russia, as an experimental exercise. It is our wish that this famous flower, like China, will blossom in full in the peace-loving gardens of the world."

B. From INTRODUCTION: "Yunnan, in the south west part of our country, has warm and pleasant weather and an abundant rainfall. It is a beautiful and prosperous province and has been known as the Garden of China and the Botanical Garden of the World. The most admirable plants in this big garden are camellias . . . The Yunnan camellia differs from those grown in other provinces. It is a different species. The tree is big and tall and the flowers are mostly red. The big trees usually bear several thousand flowers. In early spring, camellias in full bloom can be seen everywhere in Kunming and Tali. Some have pink petals and golden stamens. Some have mixed colours of red and white like a large piece of agate. The beauty of this flower is unrivalled. Yang Shen, of the Ming Dynasty, described it in his poem:

"Spring arrives early in the first month of the
year in Yunnan,
Camellia trees are in full bloom.
It surpasses the beauty of apricot flowers and
peach flowers
And decorates the pretty garden and makes them all
look like red cloud islands."

C. Extract from Chapter 2. Liu Shen-O, in his Botanical Geography of Yunnan, says: "The plantation of camellias in Yunnan is the best in China. The centre is in Tali. In Tali alone there are more than 40 different varieties. As regards colour, there are red and white. As regards leaves, the narrow ones are known as 'Kuei Yeh' ('Osmanthus Leaved') and the colour

of the flower is spinel pink. Among the Osmanthus Leaved, there are 'Ta Kuei Yeh' ('Large Osmanthus Leaf') and 'Hsiao Kuei Yeh' ('Small Osmanthus Leaf') which is also known as 'Liu Yeh' ('Willow Leaf'). The leaf is still narrower. The small Osmanthus Leaf Camellias can again be divided into two kinds 'Chiu Hsin' ('Nine Hearts') and 'Tu Hsin' ('Single Heart'). Stamens of the nine heart camellia are divided into several fascicles. As regards the shape of the flower, the ones found in the wild are red with simple petals and are known as 'Pao Chu' ('Precious Pearl'). Those with large and multiple petals are known as 'Sung Tzu Lin' ('Pine Cone'). If the colour of the flower is light pink, it is known as 'Yin Hung Sung Tzu Lin' ('Spinel Pink Pine Cone'). The dark red ones are known as '[*] Hung Sung Tzu Lin' ('Dark Red Pine Cone'), red mixed with white petals are known as 'Ma Nao Sung Tzu Lin' ('Cornelian Pine Cone'), those with extremely large petals and fascicles of stamens are known as 'Shih Tzu Tou' ('Lion Head') or 'Hsiu Chiu Cha Hua' ('Embroidered Ball Camellia') or 'Chiu Hsin Shih Pa Pan' ('Nine Centres Eighteen Petals'). The Lion Head Camellia with both red and white colours is known as 'Ta Ma Nao' ('Large Cornelian') or 'Ma Nao Cha Hua' ('Cornelian Camellia'). There is also 'Tzu Pao' ('Purple Gown') which has a reddish purple colour It is of the highest quality and most difficult to grow. Purple Gown with white stamens is known as 'Tzu Pao Yu Tai' ('Purple Gown with Jade Belt').

'Chu Pan' ('Tsue Ban') ('Chrysanthemum Petal') is another variety of camellia. It has small petals and no stamens. The dark red ones are known as '[*] Hung Chu Pan' ('Dark Red Chrysanthemum Petal'), also known as 'Hen Tien Kao' ('Regret Sky High'). Those with both red and white petals are called 'Shih Yang Ching' ('Ten Views'). Among the Chrysanthemum Petal Group 'Hen Tien Kao' is the most valuable. Of all the camellias it grows most slowly and is also the most difficult to establish. It is said that it originated at the residence of Tu Wen-Shou, King of Tali. There were originally three trees, but one died afterwards. They were the origin of all 'Regret Sky High' camellias of to-day.

This colourful and beautiful flower has been loved by the people throughout the generations, it has its individual characteristics and offers permanent enjoyment to its viewers. Since the middle of the Ming Dynasty, camellias have been the theme of poets; Yang Shen, of Ming, wrote in his poem entitled 'Camellia':

"With green foliage and red flowers, its blossoms against
the snow;
The yellow bees and powdered butterflies did not come,
The pearl trees by the sea have lost their brightness,
They are ashamed to light the jade terrace
with their coral branches."

Pu Ho, at the end of Ming, also wrote:

"Fighting for the spring the cold beauty is so
splendid
According to the record camellia is best in Yunnan.
At the top of the tree ten thousand flowers are
spitting out fire,
Reflected against the lingering snow, they make
half the sky burning red."

* One character unread.

It is true that during the end of winter and the beginning of spring each year in Kunming and Tali, when all other plants are still dormant, more than a hundred different kinds of camellia bloom together. The scene lasts more than a month. It is one of the most splendid spectacles.

Feng Shih-Ko in his *Record of Camellias in Yunnan*, wrote: "The camellia is the best in China. It blooms at the end of winter and beginning of spring. The size of the flower is larger than the peony. It looks like a great fire or embroidered brocade shining under the sun and reflecting the clouds."

Teng Chih-chih composed a poem of two hundred lines in which he pointed out the ten excellences of camellias:

"It is beautiful, but not strange;
It will last three or four hundred years and still
look newly planted.
The trunks can be forty or fifty feet high with a
girth equal to a man's embrace.
The colour of its bark is dark green as an ancient
vase;
Its curved branches are in the shape of a deer's
tail and a dragon's form.
Its roots are twisted and in a strange shape which
could be used as a stand or as a pillow to sleep on;
Its thick foliage is like a tent, dark and abundant
It stands well against frost and snow and is always
green throughout the four seasons;
The flowers bloom in succession lasting two or three
months;
When picked and put in a vase with water, they can
last more than ten days without their
colour fading."

COMMENT: Before proceeding to Chapter 5 which discusses major varieties, a comment seems appropriate:

Chinese is a monosyllabic language. Hence, the names are here given as 'Ta Ma Nao,' 'Sung Tzu Lin,' etc., rather than as 'Tamanao' and 'Sungtzulin.' A literal translation of the name follows which is often more exact and evocative than the synonyms in use outside China. 'Hen Tien Kao' means 'Regret Sky High,' which is more vivid than 'Dwarf.' 'Sung Tzu Lin' means 'Pine Cone' and not 'Pagoda.' 'Chang Chia Cha' means 'Chang's Family Camellia,' not 'Chang's Temple' and 'Tali Cha' means 'Tali Camellia.'

With regard to 'Ta Ma Nao,' it is to be noted that the "R" usually added after the Ma in this name is a common error in Western listings. There is no "R" at all in Chinese.

D. CHAPTER 5. INTRODUCTION TO MAJOR VARIETIES:

"Different varieties of Yunnan camellias were named after their special characteristics. Some were named for their shape such as 'Shih Tzu Tou' ('Lion Head'), 'Tieh Chih' ('Butterfly Wings'), 'Sung Tzu Lin' ('Pine Cone'),

'Hen Tien Kao' ('Regret Sky High'), 'Chu Pan' ('Chrysanthemum Petal'), 'Ching Kou' ('Empty Mouth'), 'Chuan Pan' ('Curved Petal') and 'Pai Yu Pei' ('White Jade Cup'). Some were named after their colours such as 'Ma Nao' ('Cornelian'), 'Tzu Pao' ('Purple Gown'), 'Ho Ting Hung' ('Crane Head Red'), 'Hsing Chun' ('Ape's Lips'), 'Chin Pien Mu Tan' ('Golden Edge Peony'), 'San Se Hung' ('Tricolour Red'), 'I Nien Hung' ('Pinch Red') and 'Pin Lang Chien' ('Betelnut Paper').

Besides these there are also 'Tsui Fei' ('Drunken Lady'), 'Tung Tsao Pien' ('Akebia Petal'), 'Pao Chu' ('Precious Pearl'), 'Juan Chih' ('Soft Branch') and 'Shih Liu Cha' ('Pomegranate Camellia'). The most famous are 'Mu Tan Cha' ('Peony Camellia'), 'Hen Tien Kao' ('Regret Sky High') and 'Tzu Pao' ('Purple Gown').

Following are descriptions of some main varieties:

'Mu Tan Cha' (Peony Camellia)

Leaves long, oval shape about 9.8 x 3.8 cm. Length of petiole 1 cm, base wedge-shaped. Veins on leaves distinct and deep, about 50 prominent and regular serrations on each side. Colour of flower light pink, diameter 13 to 18 cm. Petals 5 to 6 rows rather complex like storied houses. Stamens numerous, flowering period March to April. It is one of the rare varieties. There are several different varieties such as 'Chia Mu Tan' ('False Peony') or 'Sai Mu Tan' ('Peony Rival') and 'Pao Chun Hua' ('Spring Announcing Flower').

'Hen Tien Kao' (Regret Sky High)

Leaves flat and elongated, size 9.9 x 5.7 cm. Length of petiole 1 cm, 49 serrations on each side of the leaf. Colour of flower, light pink, diameter 10 to 13 cm, Petals compound, edged pink. Flowering period middle of April. It grows extremely slowly, is a dwarf tree and a very rare variety.

There are also related varieties such as 'Sai Chu Pan' ('Rival Chrysanthemum Petal'). The colour of the flower is pink and it is also known in Kunming as 'Pai Chu Pan' ('White Chrysanthemum Petal'). 'Yin Hung Chu Pan' ('Spinel Pink Chrysanthemum Petal') or 'Tung Tzu Lien' ('Baby Face'). In Tali there are also 'Tien Hung Chu Pan' ('Spotted Red Chrysanthemum Petal'), 'Chu Hung Chu Pan' ('Scarlet Chrysanthemum Petal'), 'Ta Hung Chu Pan' ('Great Red Chrysanthemum Petal'), 'Hsueh Pai Chu Pan' ('Snow White Chrysanthemum Petal') and 'Tsui Yang Fei' ('Drunken Lady Yang').

'Tzu Pao' (Purple Gown)

Leaves flat and elongated, their surfaces broad. Oval in shape and slightly curved inwards, size 11.3 x 8 cm. Petiole coarse, length 0.9 cm. 64 serrations on each side of the leaf. Flower beautiful, with purple red colour. Size large, diameter 11.5 to 13 cm. Flowers open evenly. At first it is deep red and when in full bloom turns purple. Flowering period February to March. It is a rare variety. There are related varieties such as 'Chin Tai Chiu Hsin' ('Golden Belt Nine Hearts') originated in Tali and 'Yin Tai' ('Silver Belt'), originated in Kunming.

'Tali Cha' (Tali Camellia)

Leaves flat and elongated, long oval or oval in shape. Size 6.6 x 11 cm. Veins on leaves clear, length of petiole 1 cm. Tip of leaves rather blunt. The small serrations, 60 on each side, are clear and distinct. Flower beautiful, from red to dark pink, colour bright. At first it is dark then becomes gradually light. Large flowers, diameter 15 to 18 cm. Stamens numerous, united at the base surrounding the pistil. Sometimes they are separated. Flowering period March. This camellia has set seed twice in Shanghai and is a rare variety.

'Liu Yeh Yin Hung' (Willow Leaf Spinel Pink)

Leaves flat and elongated, size 10.8 x 4.2 cm. Length of petiole 0.7 cm, tip short and sharp. Veins on face of leaf rather shallow. There are fine hairs on the midrib at the back. This is more noticeable in young leaves. Serrations shallow with approximately 49 points on each side. Colour of flower light spinel pink, diameter 13 cm. When in bloom centre part open. Petals in three rows. Flowering period February to March.

'Sung Tzu Lin' (Pine Cone)

The leaves are nearly ovate, flat and elongated. Size 8.2 x 4.9 cm. Length of petiole 0.9 cm. Its small indented points turn downwards and curve back. There are 55 serrations on each side. Tip of leaf also turns down and backwards. Colour of the flower is dark pink, diameter 13.3 cm. The petals are arranged as a pine cone in a very regular form. Flowering period from March to early April. Different varieties originating in Kunming are known as 'Ta Hung Sung Tzu Lin' ('Great Red Pine Cone') and 'Tung Tsao Pan Sung Tzu Lin' ('Akebia Petal Pine Cone'). Among those originating in Tali are 'Ma Nao Sung Tzu Lin' ('Cornelian Pine Cone') and 'Hsing Hung Sung Tzu Lin' ('Apricot Red Pine Cone').

'Tung Tsao Pan' (Akebia Petal)*

also known as

'Chu Pan' (Chrysanthemum Petal)

Leaf oval in shape and gradually pointed. Size 8 x 4 cm. Back of leaf smooth, colour light green. Sides of leaf curve back towards midrib. The petiole is rather coarse, length 0.7 cm. Leaf has fine serration, 44 points on each side. Flower pink, diameter 8 to 15 cm. Its corolla resembles that of a rose. Petals flat, arranged regularly like roof tiles in 5 to 8 rows. Stamens very few and sometimes even absent. Flowering period February to March.

'Tsao Tao Hung' (Early Peach Red)

Leaves oval or ovate, flat and elongated. The base is in the shape of a broad wedge or slightly rounded shape. Size of leaf 10.5 x 5.7 cm. Length of petiole 1 cm. Veins on face of leaf rather shallow while the midrib is distinct. Serration 47 points on each side. Flower pink. diameter 10 cm. Petals in 3 to 4 rows. It has numerous stamens. In

* Dr. Yu in *Camellias and Magnolias, Conference Report, 1950,* calls this 'Pith Paper Petal,' which aptly describes their texture.

Kunming it is the earliest camellia to flower, flowering between December and January. When planted in Shanghai it does not flower till February or March.

'Pao Chu Cha' (Precious Pearl Camellia)

Leaves flat and elongated, broadly ovate or even obovate. Size 10.2 x 5.5 cm. Length of petiole 0.7 cm. It has large, deep serrations with 48 points on each side. The flower has a bright red colour, diameter 11 to 14 cm. It has numerous stamens intermingled with petals. Flowering period March to early April.

'Ta Kuei Yeh' (Large Osmanthus Leaf)

Leaves curve inwards and are ovate-lanceolate, very similar to osmanthus leaves. Size 8.6 x 3.6 cm. Colour of leaf dark green, length of petiole 1.1 cm. Each side of leaf has 50 serrations, leaves large and curving downwards. The flower has a deep spinel pink colour, diameter 8 to 10 cm. It has comparatively few stamens. Flowering period is March.

There are also different varieties such as 'Chiu Hsin' ('Nine Hearts'), 'Tu Hsin' ('Single Heart') and 'Mei Jen Hung' ('Beauty's Red').

'Hsiao Kuei Yeh' (Small Osmanthus Leaf)

Leaves narrow and small, lanceolate, size 7.6 x 2.4 cm. It is the smallest of Yunnan camellias. Length of petiole 0.9 cm. Each side of leaf has 47 serrations. The flower has a light spinel pink colour with a slight blue wash, diameter 6.8 cm. Its corolla is like that of a peony and its petals are irregular and uneven in height. They are in 3 to 6 rows, arranged irregularly. Flowering period March.

'Ta Yeh Tieh Chih' (Large Leaf Butterfly Wing)

Leaf flat and straight, oval in shape, size 10.1 x 4.5 cm. Veins on the leaves are distinct. Length of petiole 1.1 cm, serrations rather blunt, with 70 points on each side of leaf. The flower has a dark pink colour, diameter 10 to 12 cm. It has numerous stamens intermingled with the petals. Flowering period March.

'Ma Yeh Tieh Chih' (Reticulate Leaf Butterfly Wing)

The leaves have a long oval shape, with rounded or wedge shaped base, size 9.1 x 3.6 cm. They have an undulating surface with deep clear veins. Tip of leaf slightly curved. Length of petiole 1.3 cm. There are 59 serrations on each side of the leaf. The branches of the tree grow outwards, bending down gracefully. Colour of flower dark pink. Diameter 10 to 12 cm. Stamens few in number often petaloid. Flowering period March.

'Ta Yeh Yin Hung' (Large Leaf Spinel Pink)

Leaves flat and elongated, ovate or oval in shape. Size 10.7 x 4.9 cm. The tip is short and bends downwards. Veins on the leaf are rather shallow and along the midrib on the back there are dense hairs. Length of petiole 1.3 cm. Serrations sparse. Petals regularly arranged in three rows. Flowering period March.

'Ma Yeh Yin Hung' (Reticulate Leaf Spinel Pink)

Leaves long, oval or ovate-lanceolate, size 13.4 x 4.5 cm. The tip is long and pointed. The veins on the face of the leaf are distinct. The back of the leaf is smooth and hairless. Length of petiole 1.7 cm. Serrations prominent, with fine sharp points, 48 on each side. The flower is deep spinel pink colour, diameter 9 to 11 cm. The petals are loosely arranged. Flowering period March.

'Ta Tao Hung' (Large Pink)

The leaves are broadly ovate and the base is slightly rounded, size 9.8 x 5.5 cm. The veins on the face of the leaf are rather shallow. The leaf turns upwards, with a deep green colour. Length of petiole 1.2 cm., 62 serrations on each side of the leaf. The colour of the flower is deep pink, diameter 9 to 11 cm. Petals in 3 to 4 rows. Numerous stamens. Flowering period March to April.

'Shih Tzu Tou' (Lion Head)

The leaves turn inwards, long oval ovate, size 9.2 x 4.7 cm. Their colour is dark green and they are coarse and thick. Length of petiole 1.1 cm., 56 serrations on each side of the leaf. The flower has a bright red colour, diameter 11 to 14 cm. The petals are thick, large and irregularly shaped. Flowering period March to April. There are other varieties such as 'Yen Hung Chiu Hsin' ('Bright Red Nine Hearts'), 'Tan Se Chiu Hsin' ('Light Colour Nine Hearts'), 'Chu Hung Chiu Hsin' ('Scarlet Nine Hearts'), 'Chin Yeh Ta Hung Chiu Hsin' ('Gold Leaf Nine Hearts'), 'Ting Hung Chiu Hsin' ('Top Red Nine Hearts'), and 'Juan Chih Chiu Hsin' ('Soft Branch Nine Hearts').

'Ma Nao' (Cornelian)

The leaves are long oval and undulating, curved inwards. Colour light green, size 9.7 x 4.6 cm. Length of petiole 1.3 cm. 54 serrations on each side of the leaf. The flower has a bright red colour, occasionally mixed with white spots. Diameter 10 to 12 cm. and shaped like a peony. The mixture of red and white is most beautiful. Some are extensively spotted, some are all red. Flowering period from March to April. Among those originated in Tali are other varieties such as 'Chueh Chueh Hua' ('Speckled Flower'), 'Tien Tien Hua' ('Tiny Spots'), 'Chen Chu Hua' ('Pearl Flower'), 'Yin Pien Cha' ('Silver Edge Camellia').

'Tu Hsin Kuei' (Single Heart Osmanthus)

Leaves long oval, size 8.4 x 3.4 cm. Face of leaf smooth and the tip turns downwards. Length of petiole 1 cm. The serration is not pronounced, there are 48 points on each side. The flower has a light pink colour, diameter 11.5 to 12 cm. Some of the petals in the centre have white spots. Flowering period from March to April. It is a sport of the Osmanthus Leaf group.

'Tsao Mu Tan' (Early Peony)

Leaves long oval shape, gradually pointed. They are irregular and curve backwards, size 8.1 x 3.7 cm. The back of the leaf is smooth, light

green in colour and the face of the leaf is also very bright green. Length of petiole 1 cm. The serration is shallow and there are 47 points on each side. The flower has a pink colour. diameter 14 to 15 cm. Some of the petals near the centre have white spots. Flowering period from March to April.

'Chang Chia Cha' (The Chang Family Camellia)

Leaves long oval, flat, elongated and regular, size 10.6 x 4.4 cm. The face of the leaf is smooth and the colour bright green. Length of petiole 1.4 cm. Serration shallow and indistinct, with 47 points on each side. The flower has a light pink colour, diameter 9 to 12 cm. Flowering period from March to April.

C. reticulata cultivars illustrated in *Yunnan Shan Cha.*

On the cover is a camellia in relief. It is 'Sung Tzu Lin' ('Pine Cone'), known also under the synonyms 'Flore Pleno,' 'Pagoda,' 'Robert Fortune' and within are the following colour illustrations:

'Tsu Pao' ('Purple Gown').

'Ma Yeh Tieh Chih' ('Reticulate Leaf Butterfly Wing').

'Ta Yeh Yin Hung' ('Large Leaf Spinel Pink').

'Sung Tzu Lin' ('Pine Cone').

'Pa Yu Pei' ('White Jade Cup').

'Tsao Tao Hung' ('Early Peach Red').

'Tung Tsao Pan' ('Akebia Petal').

'Tali Cha' ('Tali Camellia').

'Pai Yang Cha' ('Aspen Camellia').

'Pa Yu Pei' is mentioned in the text, but not described. 'Pai Yang Cha' is neither mentioned nor described. It is interesting to note that both of them are white reticulatas.

Concurso Exposicion International de la Camelia, Vigo, Spain, 1972

LESLIE RIGGALL Portugal

THE third triennial camellia show in Vigo, which was the eighth annual show in Galicia, was by any standards very remarkable. I have never seen so much excitement generated at any camellia show, and I have seen most of them in the various camellia-growing countries. Coverage by the Spanish Press was continued for three days, with many photographs, and the show was televised and featured on the radio. The winner of this show gets the full treatment, flying his national flag, hot television lamps, flash-lights, champagne and oysters, hundreds of friendly handshakes, and even autograph hunters.

Public interest was very keen, and the huge building, the largest I have ever seen used for a camellia show, was packed even in the gangways, on the second day, when the prizes were presented. This keen interest extended to school children.

The show was held from the 26th to the 29th February, 1972, in a large, modern, covered sports stadium. Unlike most of such stadia, with their hideous girders and depressing functional appearance, this building is beautiful, and made an excellent setting for the show.

The oval stadium was divided lengthwise and the whole of one half of the spectator area was banked right up to the roof with a staggering quantity of sphagnum moss. I collected similar moss for the boxes in which my own flowers travelled to Vigo from Portugal, and knowing how long it took to collect this small quantity, I marvelled at the effort made by the organisers of the show. In the banked up moss were set various groups of camellias, conifers and agaves. This made a splendid background for the large stage erected in the centre at the back section on which was given a performance of traditional dances and music by the Ballet Gallego (Galician Ballet) on the second day when the prizes were presented.

The wings and surroundings of the stage were covered with conifer foliage, relieved here and there with branches of mimosa and red rhododendrons. The effect was much like an open-air theatre, and this greatly enhanced the performance of the dancers in their traditional costumes.

On the carpeted floor of the stadium were arranged long banked tables for the camellia blooms and floral arrangements, with camellia plants around the perimeter. The tables were covered with moss which concealed a wire grille above shallow water tanks, which were under the tables for the flower stems.

The arrangement of this show is as follows. There are seven classes (a) White, (b) Pink, (c) Red, (d) Variegated (e) Any class or colour distinct from the foregoing, (f) a floral arrangement, and (g) Plants in flower. Any number of varieties may be entered in one class, but in classes (a), (b), (c) and (d) a minimum of three blooms of each variety must be shown. In fact few exhibitors restricted themselves to three blooms of each variety in these four classes, but put in many blooms. Moreover they were not content merely to place them in the moss on the bench, but wove them with wire, moss and foliage into designs, baskets, wreaths, etc., using sometimes a hundred blooms or more.

This eagerness to create a design with camellias was given full opportunity in class (f) and some interesting objects were combined with camellias to create decorative effects. Many arrangements were not to my taste because of the unrestrained mixture of colours, but the winner of this class did not make this mistake. She arranged only one variety, 'Incarnata,' on a large and beautiful piece of smooth white coral.

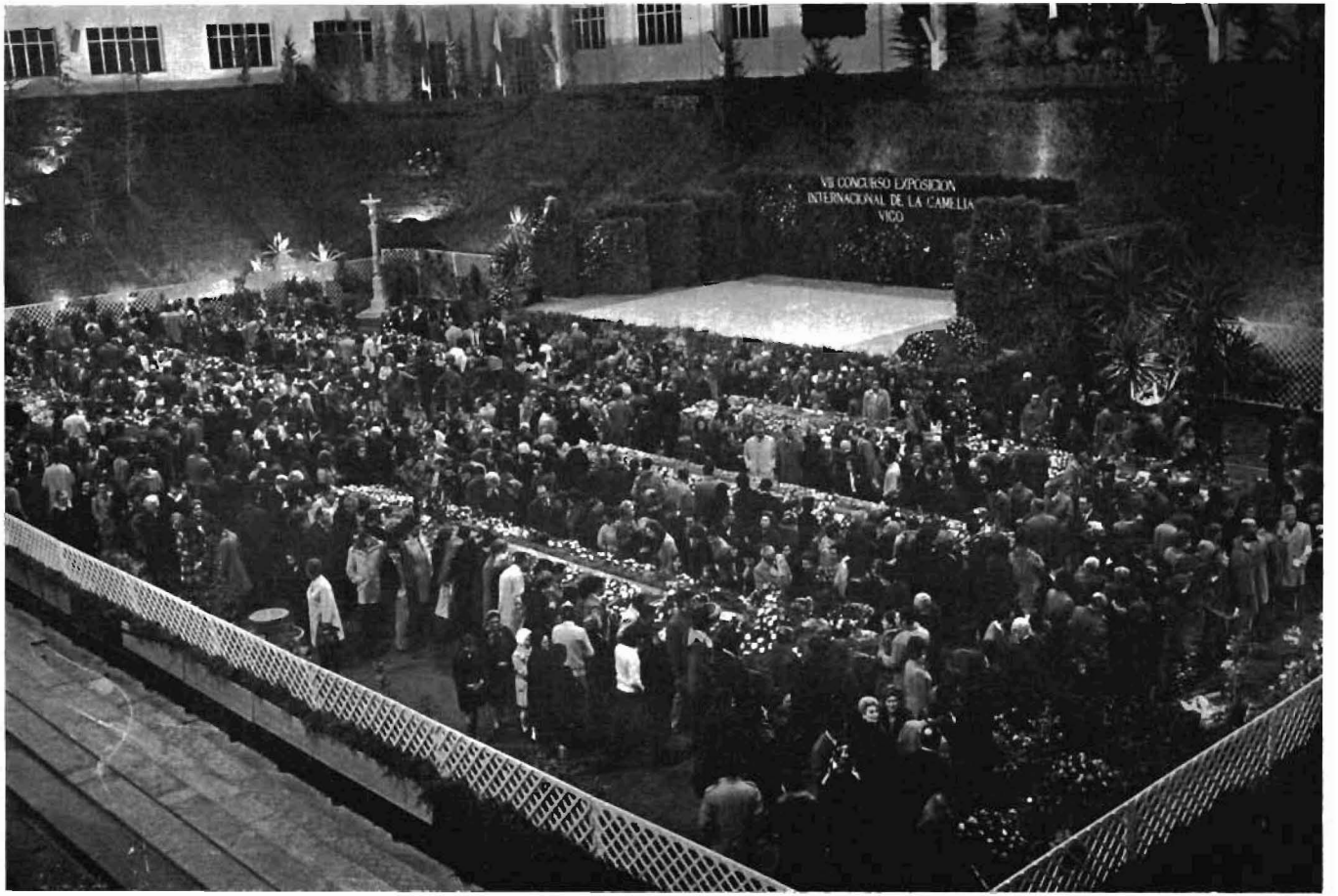
The favourite camellia in Spain is the white formal double 'Alba Plena,' which is very good in North Spain, better than in Portugal. This is because the temperature never falls below zero Centigrade in Vigo, and there is more rain in summer. Even so it was surprising to see so many perfect white blooms in any one exhibit (the winner in class (a) displayed hundreds), after the cyclone which did so much damage in Spain and Portugal on the 5th February. Presumably these perfect flowers are found in the sheltered centre of very large camellia trees in old gardens.

There were many prizes, to be retained permanently, and apart from the grand prix and a crystal vase, they were all beautifully fashioned pieces of silverware in many artistic designs, created by Spanish silversmiths specially for the show. They were presented by aristocrats, cabinet ministers, and so on, and the premier trophy, the Gold Camellia, was given by Her Excellency Carmen Polo de Franco (wife of Generalissimo Franco).

The manner of awarding the prizes was interesting and merits careful consideration by organisers of competitions everywhere. The system was to award the Gold Camellia to the most successful exhibitor, and the individual trophies which he would have won under the usual system were given to the runners-up in those classes, while the third received second prizes, and so on. This is an excellent idea, as it prevents any one exhibitor from walking away with too many prizes, and encourages more competitors to have a go even if they do not expect to win. In this exhibition, only the third held in Vigo, there were 70 competitors who displayed about 500 groups, and with so much publicity there are sure to be more next time.

Each competitor had as much space as he required and placed all his exhibits (except shrubs) together. This made it much easier for exhibitors, but difficult for the judges when they were judging individual classes. They must have done a lot of running backwards and forwards. On the other hand it made it easier for them to choose the most successful display overall.

The judges had food for thought with one exhibit in class (e), as the flowers were pale yellow, and labelled 'Sol Naciendo' (Rising Sun), a variety they had not encountered before. They pondered on the fact that the flowers bore a strong resemblance to 'Alba Plena' in form, and also the fact that the



The private view of the Vigo Show immediately after the judging.

exhibitor was the wife of a Doctor of Chemistry. Her name was Donna Paz de Madariaga y Oya, but I will call her "Bachi," a nickname used by her friends.

The judging panel included an authority on the genus, Don Antonio Odriozola, who has an extensive knowledge of camellias of all colours, and he was given the delicate task of clarifying this matter with the charming but temperamental exhibitor. The following conversation took place.

Odriozola: "These flowers are very beautiful".

Bachi: "I am glad you like them".

Odriozola: "But I would like to see the tree which produces these flowers."

Bachi: "So would I!"

Bachi told me that she had been experimenting for three years with the colouring of white camellias, and yellow was difficult because it usually came streaky, but she had often worn flowers tinted to other colours as a corsage.

The display as a whole of Alfredo Moreira da Silva Ltd., of Oporto, Portugal, was placed second, and a beautiful silver trophy was awarded. At the previous Vigo show in 1969 they were awarded the Gold Camellia, and as I write I have just received news that this trophy has been stolen. It is indeed dismaying to think of such a rare and lovely thing being melted down for the metal.

The Gold Camellia is a superb example of the jeweller's art which causes gasps of admiration wherever it is seen. It is a sprig of camellia slightly under life size, exquisitely wrought in gold and set on a base of dark green marble.

A wealthy American who was fascinated by it ordered a replica to be made by the jeweller, the price did not matter. The jeweller consulted the Committee, who told him to make a silver replica and to advise the client that the only way he could obtain the Gold Camellia was to bring his camellias to Vigo and win it. This of course is possible nowadays. In fact in a jet plane the flowers would have had a smoother ride than some others did, carried in lorries over roads some of which were of cobbled granite.

As the winning stand was my own I personally can offer no opinion as to its value or appeal, but a description will not be out of place. This exhibit covered the whole of one bench, and in each of section (a), (b), (c) and (d), the new cultivars of *C. japonica,* mainly from America and Australia, contrasted with old un-named varieties from trees in my garden in Portugal. Some of these old camellias did not suffer by comparison with the new varieties, and I wish some expert would come along and name them for me.

Section (e) was devoted to hybrids which involved a wide range of parentage, and this resulted in a wide variation of flowers, from the delicate 'Tiny Princess' (*C. fraterna x C. japonica*), to the rather gross 'Howard Asper' (*C. reticulata x C. japonica*). This section was extended by a separate group of *C. williamsii* hybrids (*C. saluenensis x C. japonica*) ranging from the original and first hybrid 'J. C. Williams', to eye-catching modern varieties such as 'Brigadoon', 'Galaxie' and 'Julia Hamiter'.

The Gold Camellia and some of the hybrids displayed.

In addition to a floral arrangement this display also included three non-competitive exhibits. One was a display of American camellias, and another was a group from Australia and New Zealand. Finally there was a group of natural camellia species, which aroused a surprising amount of interest, considering the lack of colourful flowers available in this group at the time. The general public seemed to be as interested as the "aficionados", and the exquisite miniature flowers of *C. rosæflora* were admired as much as the most flamboyant hybrids.

For exhibitors a very pleasant feature of the show was the very willing service rendered by charming uniformed hostesses, who not only carried in boxes of flowers, but helped exhibitors to arrange them decoratively. Also they were anxious to render any personal service during the four days of the show.

I had made an unhappy start because after picking the camellias all day my wife and I had gone on to Vigo the night before the show, after receiving assurances at the frontiers that my flowers would pass through without delay or hindrance, and my gardener Frank Saunders had brought the flowers in the truck early in the morning. The Portuguese officials then refused to let him through for three hours and he arrived very late for displaying the flowers. The girls had already assisted by telephoning a complaint to the frontier, and they all piled in with enthusiasm when the camellias finally arrived. But with so many named flowers of various categories we could not accept any help with arranging them, without confusion resulting, and I felt embarrassed and churlish in refusing the continually repeated offers of help which so clearly they wanted to give.

A beautiful English-speaking señorita named Christina was assigned to me and she took her task very seriously indeed. For instance, when during the ceremonies she had to hold the Gold Camellia for a long time and was obviously distressed by the weight of the marble, Christina would not allow me to relieve her of the strain even for one minute. And when the public were crowding round my stand, with a few individuals inevitably wanting to touch something, she assiduously guarded the flowers as though they were her own.

It is worth recording that after I had received so much service and friendly co-operation, the organisers asked me, with obvious concern, whether I was completely satisfied. I was sorry then that I did not have fluent Spanish, to be able to explain to them how much I appreciated their hospitable reception of a stranger, and their superb organisation of a splendid show.

The E. G. Waterhouse National Camellia Garden

ERIC UTICK New South Wales

16 MILES south of Sydney in the Sutherland Shire and on the foreshores of the picturesque Port Hacking has been constructed a Camellia Research Garden, named in honour of Professor Evan Gowrie Waterhouse, O.B.E., acknowledged throughout the world as the leader in the field of camellia horticulture.

Kurnell, within the Sutherland Shire, is the birthplace of Australia, recently visited by their Royal Highnesses, Her Majesty Queen Elizabeth and Prince Phillip, to commemorate the discovery of the east coast of Australia by Capt. J. Cook, R.N., in H.M. Ship "Endeavour".

The Camellia Garden, constructed and maintained by the Shire Council of Sutherland in co-operation with the Australian Camellia Research Society, stands as a permanent memorial to mark Australia's 200th Anniversary, and claims the unique distinction of being the first garden to carry a National Status, having been accepted as such by all branches of the Australian Camellia Research Society throughout Australia.

Already this garden has aroused a lot of interest and support from Camellia Societies in Japan, the United States of America and New Zealand, and an ever increasing flow of overseas visitors are making a tour of the garden as part of their itinerary. Cultivars have been planted ranging from 25 year old trees to first year cultivars, making it one of the world's outstanding collections. All camellias are planted in gardens representing a group of hybrids, species or countries of cultivation such as *C. reticulata,* E. G. Waterhouse cultivars, species and hybrids of *C. reticulata.*

The garden was recently officially opened by Lady Cutler, wife of the Governor of N.S.W., and a pleasing feature is to see the various groups who plant a tree on behalf of their organisations, such as Schools, Churches of all denominations, Scout and Guide Groups, Service Organisations and Government Instrumentalities.

Added to the general layout is a picnic and barbecue area—a fountain dedicated to Elizabeth Cook, wife of Capt. James Cook, and donated by the ladies' organisations of the Sutherland Shire, and a sandstone bird bath donated by a Sydney Garden Club.

Each Sunday afternoon members of the Australian Camellia Research Society supply cultural information to the general public on camellias and azaleas, and this is doing a lot to interest home owners in growing these particular plants.

The Royal Horticultural Society of N.S.W. have shown a keen interest in the project, publicising our activities wherever possible.

Although a specialised camellia garden, the natural rocks and trees which form a wonderful natural landscape have been planted out with a rare collection of Australian native orchids, and all camellia gardens are complimented with an outstanding display of seasonal annuals and approximately 2,000 azaleas.

A trip to this garden is strongly recommended for any horticulturally minded tourist from the United Kingdom, and information whilst in Sydney can be obtained by ringing Sutherland Shire Council 521-2511.

How and Why the "Societa Italiana della Camelia" was founded

ANTONIO SEVESI Milan

WHEN Charles Puddle asked me to write the story of the Societa Italiana della Camelia I did not immediately accept. It was a matter of speaking too much about myself—my personal points of view and what I have done. However, in the hope that my experience will encourage others to do the same—founding societies and associations of camellia hobbyists—I decided to write some notes.

I have been spending my weekends on Lake Maggiore for about ten years, visiting gardens belonging to friends and also the gardens of neglected villas. I immediately had the impression of great decay. In many gardens plants and shrubs that had been beautiful specimens and worthy of a place in the best botanical gardens in the world were in a state of complete decay. Among these plants were camellias.

Very often the camellia bushes were in a pitiful condition, badly shaped by the removal of large branches for foliage and flower and covered with sooty mould as the consequences of scale. Many dead branches spoilt the appearance of the bushes, besides the damage caused by the indiscriminate breaking of branches.

I had the chance of having the care of a garden, and here I also found camellias in very bad condition. In order to improve the garden I first searched out plants and shrubs suitable for the soil and climate of the western part of Lake Maggiore.

I soon found that camellias and rhododendrons found perfect life conditions in the zone, and I concluded that camellias had in Lake Maggiore their second

mother-country. Why, then, had they been so neglected and allowed to run wild? In my ignorance I sought help from nurserymen, with little success; so I turned to books and publications on the subject in order to study the problem from all aspects.

I got in touch with the International Camellia Society and Charles Puddle, and little by little I discovered and learned about camellias. I started also to import new camellias from England.

I discovered that about the middle of the last century camellias had been forsaken, for before that, in the first half of the century, Italy had been the most important supplier of camellia plants, not only to Europe but also to America, Australia, New Zealand, etc. I also heard of the many camellia shows held each year and that the camellia was also becoming as popular as previously in countries outside Italy.

It was very difficult for me to gain the co-operation of the nurserymen. They usually told me that "camellias do not interest gardeners any more", and that "in the winter season there are plenty of flowers from the Riviera." They also pointed out that it was possible to grow flowers in a greenhouse in a bad season, and it really is unbelievable how difficult it is to overcome old habits.

In 1964, with the help of Mr. Angelo Zanoni, a nurseryman living at Cannero Riviera, I decided to prepare the first camellia show. The Mayor of Cannero Riviera, Dr. Luigi Grancini, kindly put a place at our disposal. I tried to collect a committee from the nurserymen but there was little initiative on their part. However, from personal friendship and curiosity they decided to agree and we held our first show on April 9th, 1965.

Collecting wooden planks we made some tables and covered them with jute and used old plastic containers in which to put the camellia blooms, hiding them as much as possible with moss.

The rumour that a show was to be held reached Switzerland, which lies just a few miles north of Cannero, and on the morning of the show we saw some Swiss friends bearing beautiful flowers for the show. The worry that there would not be enough blooms was quite ridiculous, for the place was completely full of blooms and late-comers were obliged to show theirs in bunches—there was no more room. A great surprise was the huge number of people who visited the show and they showed the greatest interest in the blooms, each bearing a name where it was possible to identify the cultivar.

After the show we received a large number of enquiries for camellias and details of their cultivation. In spite of the great success, some nurserymen were still sceptical of the revival of camellia interest in Italy, and it was necessary to continue with the help of camellia hobbyists.

On August 29th 1965 the "Societa Italiana della Camelia" was officially founded, and in December of the same year the first Bulletin was produced. Since that date camellia shows have taken place each year at Cannero Riviera, and also we have had shows at Bogliasco (Genoa), Rome, Stresa, and recently on Lake Garda.

I must admit that it is difficult to form a society and to collect together people of goodwill towards camellias. There are many who do not care about their cultivation and propagation because they are unaware of camellias and their culture. The financial problems are also great for both societies and the shows, but if everyone gave their services gratis and worked hard on advertising, success could be assured. It is not necessary to do much to introduce members, for the shock of seeing the beautiful flowers is usually sufficient to get them interested and to remind them to support the society. That is why I say to my French, Spanish and Portuguese hobbyist friends, "Bring the beautiful camellia blooms to the attention of the people by putting them right under their noses". From my personal experience I can say that this is the only method to persuade people that camellias are really worth growing and caring for.

Ten Important Camellia Families

ALBERT FENDIG Georgia

'Betty Sheffield'

White striped and blotched pink
Semi-double to loose peony

Mutants

'Betty Sheffield Blush'	Light pink marked with deep pink. Synonym: 'Wonder Child.'
Mutant 'Betty Sheffield Silver'	Blush pink bordered white.
Mutant 'Betty Sheffield Pink Heart'	Blush pink with deep pink centre.
'Betty Sheffield Supreme'	White with deep pink to red border.
Mutant 'Betty Sheffield Blush Supreme'	Blush pink with wide edge of deep pink.
'Betty Sheffield Coral'	Coral pink.
'Betty Sheffield Dawn'	Dawn pink.
'Betty Sheffield Dream'	Pale pink.
'Betty Sheffield Pink'	Deep pink.
Mutant 'Betty Sheffield Variegated'	Deep pink spotted white.
'Betty Sheffield Pink Chiffon'	Light blush with orchid overcast. Synonym: 'Betty Pink Chiffon.'
'Blond Betty'	Peach pink.
'Funny Face Betty'	Pale pink changing to dark pink. Synonym: 'Charming Betty.'
'Lucky Seven'	Red.

'Daikagura'

Rose pink, splotched white, anemone form.
Synonyms: 'Idaten-Shibari,' 'Kiyosu,' 'Lions Dance.'

Mutant 'Daikagura-Red'

Rose pink to red, anemone form.
Synonyms: 'Beni-Daikagura'; 'Pink Kagura'; 'Daikagura Pink'; 'Aka-Daikagura'; 'Shangri La'; 'Kagura-Jishi.'

Mutant 'Kuma-Botan'

Mutant 'High Hat'

Light silver, pink, anemone form.
Synonym: 'Yokogawa-Shibori.'

Mutant 'Conrad Hilton'

White, anemone form.
Synonym: 'White High Hat.'

Seedling

'Joshua E. Youtz'
White peony form.
Synonym: 'White Daikagura.'

Seedling

'Margaret Hearn'
Red, peony form.

Seedling

'Mrs. Josephine M. Hearn'
Rose-pink, semi-double.
Synonym: 'Delight.'

Seedling

'Mrs. Marie Keating'
Light lavender pink, peony form.

Seedling

'Pink Dawn'
Pink, complete double.

Seedling

'Indian Summer'

Dark red, peony form.

Mutant 'Indian Summer Variegated.' Red variegated white.

'Donckelarii'

Deep red splotched white, semi-double.
Synonyms: 'Middleton No. 15,' 'Aileen,' 'Winnie Davis,' 'Camellia T.,' 'Cantelou,' 'Mary Robertson,' 'Tea Garden Donckelarii,' 'Tallahassee,' 'English Donckelarii,'

Mutants

'Eugene Bolen' — Red semi-double. Synonym: 'Donckelarii Red.'

'Ville de Nantes' — Red blotched white, semi-double.

Mutants

'Ville de Nantes Red' — Red, semi-double.

'Lady Kay' — Rose pink and white peony form.

Mutant

'Lady Kay Red'

Seedlings

'Morgan Whitney' — Peach pink, peony form.

'Lisa Adams' — Rose red, semi-double.

'Aroma' — Lavender variegated white, semi-double.

Seedlings

'Eugene Lize' — Cherry red splotched white, semi-double to peony form. Synonyms: 'Lady Jane Grey,' 'Annie McDonald,' 'Archie McDonald,' 'Donckelari Eugene Lize.'

'Mary McKinnon' — Pink, semi-double.

'Grace Hutchinson' — Dark pink, complete double.

'Alpine Glow' — Red, semi-double.

'Edmund B.' — Rose, semi-double.

'Ethel Rivers' — Dark red, semi-double.

'Mrs. G. G. McLaurin' — Rose pink to dark red, semi-double to peony.

'Eleanor Martin' — Red, semi-double.

'June Stewart' — Rose red, peony form.

'June Stewart Supreme' (*Mutant*)

'Richfield' — Rose, semi-double.

'Arthur Weisner' — Red, semi-double.

'Christian McSween' — Deep pink, semi-double.

'Satellite' — Red and white, peony form.

'Donation' (hybrid) — Orchid pink, semi-double.

'Donation Variegated' (hybrid *mutant*)

Seedlings

'Julia Hamiter' (hybrid) — Blush pink to white, complete double.

'Palm Sunday' (hybrid) — Orchid pink, semi-double.

'Black Lace' (hybrid) — Dark red, rose form to complete double.

'Charlean' (hybrid) — Pink, semi-double

'Duchess of Sutherland'

White with occasional pink stripe, semi-double.

Seedlings

Mutants

'Duchess of Sutherland Pink'	Solid pink.
'Duchess of Covington'	White flecked with pink.
Claudia Phelps'	Pink shading and splashed white. Synonyms: 'Coral Duchess,' 'Tillie Rice.'
'Ruth Royer'	Pink variegated white. Synonyms: 'Thelma Sanford,' 'Patricia Burks.'

'Diddy Mealing' — Creamy white with occasional pink stripe. Complete double.

Mutants

'Pink Diddy'	Pink with darker pink margin.
'Diddy's Pink Organdie'	Pink shading to white.

'Elizabeth Boardman'

White, semi-double.

Seedlings

'Sarah Dean'	White, semi-double.
'Evelyn Poe'	White with a few pink splashes.
Mutants	
'Evelyn Poe Blush'	Blush, darker at centre.
'Evelyn Poe Pink'	Pink.
'Mike Witman'	Coral pink, peony form.
'Michael Witman'	White, semi-double.
'Pearle Cooper'	Deep pink and white, semi-double.
'Christmas Daffodil'	White tinged blush, anemone form.
'Joanne Dibble'	Rose opal, semi-double.
'Louise Hairston'	Clear pink, semi-double. Synonym: 'Louise Hariston.'
Mutant	
'Louise Hairston Variegated'	Clear pink, blotched white. Synonym: 'Louise Hariston.' Variegated.'
'Igloo'	White, peony form.
'Lucile Davis'	White, anemone form.
'Lady Velma'	Deep rose pink, semi-double.
Mutant	
'Lady Velma Variegated'	Rose, blotched white.
'Louisa Wilson'	Blush white, semi-double.
'Blanch Truesdale'	White, semi-double to peony form.

'Elegans'

Pink, petaloids often spotted white, anemone form. Synonyms: 'Chanderleri Elegans Pink,' 'Francine,' 'Sophia Chanderleri,' 'Rosea Chanderleri,' 'Chanderleri Rubra,' 'Red Elegans.'

Seedlings

Mutants

'Elegans (Chandler) Variegated'	Pink variegated white, anemone form. Synonyms: 'Chanderleri Elegans," 'Pride of the Emperor's Garden'; 'Chanderleri Elegans Pink Variegated'
'C. M. Wilson'	Light pink shaded white. Synonyms: 'Grace Burkhard,' 'Lucille Ferrell.'
Mutants	
'C. M. Wilson Variegated'	Light pink shaded white.
'C. M. Wilson Splendour'	Light pink edged white.
'Hawaii'	Pale pink peony with fimbriated petals.
Mutant	
'Kona'	White to greenish white peony.
'Shiro Shan'	White with a touch of pink.
'Elegans Miniata'	Pale lavender pink.
'Barbara Woodroof'	Light orchid pink, cream centre.
'Lilane Wells'	White with blush throat.
'Elegans Supreme'	Red anemone to peony form, fimbriated petals.
Mutant	
'Elegans Supreme Variegated'	
'Sunset Glory'	Coral pink, anemone form.
Mutant	
'Sunset Glory Variegated'	
'Pink Explorer'	Pink, anemone form.
'Special Tribute'	Salmon pink, anemone form.
'Florence Daniell'	Soft pink, anemone form.
'Chandu'	Red, anemone form.
'Red Lustre'	Crimson, anemone form.
'Madge Miller'	White, anemone form. Synonyms: 'Madge Burt Miller,' 'Chanderleri Alba,' 'White Chanderleri.'
'Louise Onetta'	White, anemone form.
'General Dwight Eisenhower'	Deep red, peony form. Synonym: 'Pink Purity.'
Mutant	
'Admiral Halsey'	Variegated form of 'General Dwight Eisenhower.'
'Dorothy Mac'	White, anemone form.
'Katherine Allan'	Delicate pink, anemone form.
'Lady Lucille'	White, anemone form.
'Judge Solomon'	Rose pink, peony form.
'Pink Clouds'	Cream pink, anemone form.
Mutants	
'Deep Pink Clouds'	Silver pink, anemone form. Synonym: 'Dark Pink Clouds.'
'Pale Pink Clouds'	Light pink, anemone form.
'Seventh Heaven'	Light pink, semi-double to anemone form.
'Spectacular'	Red, anemone form.
'Christine Smith'	Rose pink, semi-double to anemone form.
Mutant	
'Christine Smith Variegated'	

'Hikarugenji'
'Herme'

Pink margined with white, semi-double.
Synonyms: 'Souvenir de Henri Guichard,' 'Jordan's Pride,' 'Long View No. 56,' 'Genji,' 'Yae-Gengi.'

Mutants

'Herme Pink' — Deep rose pink, semi-double. Synonyms: 'Bastita,' 'Beni-Botan,' 'Harmonious,' 'Herme Red,' 'Herme Sport No. 1,' 'Hikaru-Genji-Aka,' 'Hikaru Pink,' 'Hikaru Rose,' 'Majestic,' 'Pink Herme,' 'Pink Hikaru-Gengi,' 'Pink Jordan's Pride,' 'Powell's Pink Radiant Glow,' 'Red Herme,' 'Red Jordan's Pride,' 'Rosy Dawn,' 'Wings.'

'Beauty of Holland' — Rose pink spotted white. Synonyms: 'C. P. Morgan,' 'Doris Madalia,' 'Herme Special,' 'Herme Sport No. 2,' 'Hikaru-Genji-Yokumuku,' 'Jenny Lind,' 'Princess Lucille.'

'Colonial Lady' — White with red stripes. Synonyms: 'Crystal Lake,' 'Fragrant Striped,' 'Herme Sport No. 3,' 'Herme Striped,' 'Herme White,' 'Jenny Lind,' 'White Herme,' 'White Jordan's Pride.'

Mutants

'Orchid Pink' — Light pink with darker pink margins, sometimes spotted white. Synonyms: 'Dolly Madison,' 'Orchid Pink Fragrant.'

'Spring Sonnett' — Pink fading to white in centre.

'The Mikado' — Rose pink with white border. Synonym: 'Herme Sport No. 4.'

'Look Away' — Deep pink throat with wide white border.

'Quaintance' — Soft pink with lines of deep pink.

'Mathotiana.'

'Grand Sultan.'

Red, rose form, double.
Synonyms: 'Julia Drayton,' 'Mathotiana Rubra,' 'Plena Superba,' 'Princess Louise,' 'Purple Dawn,' 'Purple Emperor,' 'Purple Prince,' 'Wm. S. Hastie.'

Mutants

'Mathotiana Variegated' — Red with white variegations. Synonyms: 'Julia Drayton Variegated,' 'Paulina,' 'Mathotiana Special.'

Mutants

'Eugenia Howell' — Deep pink splashed with white, anemone form.

'Helen Bower' — Rose red shading purple, rose form.

'Rose Superba' — Rose pink, rose form, double. Synonyms: 'Ada Wilson,' 'Laura Dasher.'

Mutant

'Rosea Superba Variegated' — Rose pink, spotted white. Synonyms: 'Margaret Sandusky,' 'Ada Wilson Variegated.'

Seedling

'Mary Anderson' — Red, semi-double.

'Mathotiana Supreme' — Red, peony form. Synonym: 'Mima Mae.'

Mutants

'Mathotiana Supreme Variegated' — Red splotched white. Synonyms: 'Avery Island,' 'Kate Smith.'

'Cherry Bounce' — Dark cherry red, rose form, double.

'Sue Ann Mouton' — Light red.

'Flower Wood' — Red, complete double, fimbriated. Synonym: 'Mathotiana Fimbriata.'

Mutant

'Flowerwood Variegated' — Crimson spotted white.

'Red Wonder' — Red, outer petals flat. Synonym: 'Frank Williams, Junior,' 'Island Echo.'

Mutant

'Red Wonder Variegated' — Synonym: 'Island Echo Vue.'

'Sultana' — Scarlet, semi-double.

'Tomorrow.'

Strawberry red, semi-double to full peony form.
Synonym: 'Ed Anderson.'

Mutants

'Tomorrow Crown Jewel'	Pinkish white brushed red in throat.
'Tomorrow Variegated'	Red blotched white. Synonym: 'Maverick,' 'Tomorrow Supreme.'
Mutants	
'Tomorrow Park Hill'	Light soft pink. Some white variegated.
'Tomorrow Peony Variegated'	Full peony form.
'Queen of Tomorrow'	Heavy textured thick foliage.
'Tomorrow's Dawn'	Deep pink shading to light pink and white.
Mutants	
'Tomorrow's Tropic Dawn'	White with occasional red line.
'Leanne's Tomorrow'	Coral rose.
'Tomorrow's Delight'	Soft creamy white with a few flecks of red.

Note: 'Tomorrow' is the male parent of two outstanding new cultivars —'Mike Witman' (coral pink) and 'Michael Witman' (white).

'Tricolor' ('Siebold')

White, streaked with carmine.
Synonyms: 'Wakanoura Variegated,' 'Tricolor Siebold,' 'Wakanoura.'

Mutants

- 'Leucantha' — Solid white, semi-double. Synonyms: 'Tricolor (Siebold White)' 'Shiro-Wakanoura,' 'Wakanoura White,' 'Wakanoura-Shiro.'
  - *Seedlings*
    - 'Charter' — White, anemone form.
    - 'Ella Wood' — White striped pink, semi-double.
      - *Mutant*
        - 'Ella Wood Pink'
- 'Fred Sander' — Crimson with fimbriated petals. Synonym: 'Fimbriata Superba.'
  - *Mutants*
    - 'Fred Sander Variegated' — Synonym: 'Fimbriata Superba Variegated.'
    - 'Cinderella' — White with streaks and blotches.
- 'Lady de Saumarez' — Bright red, spotted white. Synonyms: 'Eulalia Sally,' 'India Kruger,' 'Pride of Portland,' 'Pride of Rosebud Farm,' 'Tricolor (Siebold) Folki.'
- 'Tricolor (Siebold) Red' — Solid red, semi-double. Synonyms: 'Mr. Rufus,' 'Red Douglas,' 'Robin Hood,' 'Wakanoura Red,' 'Wakanoura-Aka.'

Seedlings

- 'Angela Cocci' — Light pink, striped red. Synonym: 'La Peppermint.'
  - *Mutant*
    - 'Angelo Cocchi Rouge' — Solid red.
- 'Dainty (California)' — Light blush pink, striped red.
- 'Blush Tricolor' — White to blush pink.
- 'Jewel Bowden' — White with pink throat.
- 'Chalk Pink' — Chalk pink.
- 'White Butterfly' — White, anemone form.

Growing Camellias from a Nurseryman's Point of View

WALTER HAZLEWOOD New South Wales

THE nurseryman has many things to consider in the growing of camellia plants for sale. Firstly, to produce a good plant at as reasonable a price as possible. There are several methods of propagation: by grafting, layering and by cuttings. By grafting you get a larger plant in a shorter time than by any other means. Also it is one way of using up unsold stock. It is more expensive than by cuttings and also has the disadvantage that the stock often shoots below the graft, and in many cases the original plant is smothered. In the 1880's, the only camellia for which there was any demand was the formal double japonica and, at that time, grafting was almost the only method of propagation. Yet in old Sydney gardens are many plants which were set out about this time, which are singles, semi-doubles or informal doubles, types which would not have been grown by the nurseries of that day as there would have been no demand for them. This is a sure sign of stock survival and the loss of the variety which was originally planted. One of the most popular varieties in Australia at the present time is 'The Czar,' a semi-double crimson. When this was first discovered in the early 1900's there was no demand for it. This was partly due to its not being a formal double but also at that time camellias had dropped out of favour. In the 1930's a new generation of gardeners who had not been brought up in the formal tradition, began to see what a wonderful garden subject the camellia was, and also they could see beauty in the other types which an earlier generation had no time for. Such was the demand for 'The Czar', particularly in Melbourne, that it was some years before the nurseries caught up with the demand.

A little later than this were the first glimmerings of appreciation of the species *C. sasanqua.* In the earlier days, because it was not a formal double, it was not considered a camellia and the people of that time could not see beyond the name, and what a beautiful garden shrub it was. Even then the demand was not very great and it was not until the formation of the Australian Camellia Research Society that *C. sasanqua* became really popular. The weak point was that the blooms did not keep more than a couple of days, but now we have varieties which will keep six days. In their favour is that they flower some months earlier than japonica, and will thrive in hotter and dryer areas, thus extending the flowering season and the districts they can be grown in. They will also grow in calcium lime soils where *C. japonica* will not. With their more pliable branches they make a wonderful

espalier subject and can be grown on a shady wall as well as a hot one. Another virtue is their use as a stock for grafting the weaker growing japonicas 'Alba plena,' 'Fimbriata,' 'Incarnata' and 'Ville de Nantes,' as well as many others. Also they have this advantage: that should the stock shoot, it is more easily detected and can be removed. Being quicker growers they make a wonderful background for the garden and are splendid for informal hedges.

Another form of propagation, not practised now, was by layering. This form was in its prime when people realised the faults of grafting and had not realised the value of cuttings. It was also too expensive. Cuttings are now the main method of propagation. Cuttings taken in early summer are ready for potting in three months and are well established by winter. They lack selling size but make excellent plants for the next season.

One exception to growing from cuttings is *Camellia reticulata* and this species must be grafted. They can be grafted by using scions but there are often a number of failures. The best method is by inarching, or grafting by approach. For doing this the plants are trained to grow along the ground and the stocks are put near them. A slice of bark and sap wood is removed from both stock and reticulata. These two cuts are placed together and tied up with rafia, and this is covered by a special glue. The scion is left on the parent plant until union is effected. The next treatment is to remove the *C. reticulata* scion from its parent and cut away the top of the stock just above the union.

This makes a more expensive plant but there is not the same demand for them as, although they have gorgeous blooms, the flowering season is short, the growth rather open and ungainly and the foliage a dull colour. Also they are not a picking flower, unless for a float bowl, as the year's growth only has two or three shoot buds at the top of each stem, and as they only make one growth a year, to cut a flower with a stem means the sacrifice of that year's growth.

The nurseryman has to keep in touch with the newer varieties, as older sorts often drop out of favour and there is very little demand for them. But with the most popular of the new sorts it is a case of working up all the plants you can. Sometimes a customer particularly wants a discarded variety and the only thing then is to offer to grow it for him. Another thing is that the nurseryman should know his climates and what sorts are best for each one. For a mild one like Sydney, the early flowering varieties are best as they give a longer blooming season. For climates with a cold winter and heavy frosts the late ones come into their own as the frosts spoil the blooms. Success can often be had by growing the plants under evergreen trees or in cool glasshouses.

Nomenclature is another important thing. Years ago, in California, it was found that 'Hikaru genji' had 24 different names and it got that way that people would not buy a plant unless it was in flower. Mostly this trouble arises from the original name being lost and old plants in different gardens being named by their owner. The one in Australia with the most names is 'Lady Loch'. This was first listed by Taylor & Sangster of Melbourne in 1889. It was named after the wife of Sir Henry Lock who was Governor

of Victoria from 1884 to 1889. With camellias going out of fashion about this time it was not much distributed and, being an informal double, not popular, and hardly anybody knew it. Later it received three names in New Zealand: 'Elizabeth Johnston' in Auckland, 'Duchess of York' in Wanganui in 1901 and 'Edward Billing' in New Plymouth in 1913. Under this name it came back to Australia and was listed for some years. Then the record of 'Duchess of York' was traced and for a few years it was 'Duchess of York'. Finally the earliest name of 'Lady Loch' was found and this is now the valid name.

Another thing for the nurseryman to consider is how the plant grows when set out in the customer's garden. To ensure this it must not have been too long in the one size container before being moved into a larger size; also it must not have been overfed or overwatered.

A plant that is always kept moist will grow but does not make a good root system and consequently when planted out it does not have sufficient roots to support the foliage.

Should you have a root-bound plant it is often recommended to wash all the soil off the roots and to untangle them before planting.

The species *C. saluenensis* comes from magnesium limestone country in Western China and needs a more alkaline soil than *C. japonica*. Many people report their plants of *Williamsii* hybrids dying out, particularly when grown in tubs, and when planting these I recommend using magnesium lime (dolomite) to keep the soil from getting too acid.

The First Camellia Show in Kobe

YOSHIAKI ANDOH Japan

OUR Camellia Show was on a modest scale and made no claim to be more than a minor success. However, the organisers were delighted with the results of a first attempt and good wishes were received from many enthusiasts.

Four hundred visitors packed the hall of the Prefectural Gallery in Kobe throughout the two days of the show on 27th and 28th March 1971. Professor T. Tuyama of Ochanomizu University, Professor K. Tomino of Mie University, Mr. E. Nagata, President of the Nagoya Camellia Society and many well known camellia experts were in attendance, also camellia fanciers from other areas. Also some foreigners put in an appearance as was naturally expected.

One of the most interesting exhibits seemed to be the display of some pots of *C. reticulata,* hybrids and species by the President. 'Buddha,' 'Osmanthus Leaf', 'El Dorado' and others in perfect condition were really fascinating and frequently were heard sighs of admiration during the show hours. It was because almost all the camellia fanciers in attendance had never seen such showy flowers as these.

C. reticulata and its hybrids are very rare and scarce in Japan, for the range of flower varieties of camellias has been so limited and introduction of new species and new favourites has taken place only in these last few years.

We hope our Camellia Show will lead hobbyists, inspired by these excellent overseas cultivars, to an appreciation of improved camellias.

"Opening hearts to everyone, natives and foreigners" is the motto of our Society.

We do look forward in the hope that our eventful Show will stimulate a friendly exchange between world camellia enthusiasts and so deepen our own extensive interest in camellias.

KOBE TSUBAKI KAI

The above is the name of a new Camellia Society which was formed in Kobe, Japan, last year and held its first meeting on November 15th, 1970.

Mr. Houn Ohara, the well-known flower master, who lives in Kobe, was elected its Patron and Dr. Yoshiaki Andoh, its President.

In December 1970, the Society issued its first publication KAMERIAN (meaning Camellian) with the President's greetings, a note on the Snow Camellia 'Yuki-tsubaki', an illustration of the Italian Camellia 'Vergine di Collebeato' and a description of the camellias grown at the Shihlin Experimental Station in Taipei, Taiwan.

This was followed by KAMERIAN No. 2 in March 1971, containing an illustration of *C. japonica* 'Masayoshi' and a discussion by Mr. Andoh of its relationship to Camellia 'Donckelarii' which was obtained from Japan in 1830 by Seibold and introduced to Belgium where it was given its present name.

New Specialty Camellia Garden in California

HELEN REINERS Sacramento

WHAT might you do if you wished to establish a valuable and memorable camellia arboretum? Certainly one choice would be a mass planting of camellias, for the great glory of beauty and the extravagance of a park effect. Another view might properly be that of a noted expert in the field of camellia study, and his solution, and in the long run more costly, would be a comprehensive collection of the elite among the camellia species.

The camellia world has among its experts in the field Mr. Kenneth Owen Hester, of Stockton, California. Mr. Hester has collected camellias in more than one instance, and for more than one reason. His two famous collections now known and observed publicly were once the nuclei of his own personal labour with camellias. When one is truly interested in camellias one cannot avoid being knowledgeable in all aspects from simple collecting to the most intricate work in the field of propagation and superb horticulture.

At Micke Grove, near Stockton, Mr. Hester installed on public land and for public use, the second of his botanically oriented camellia collections. (The first is the Lucy Hester Memorial Garden, in Descanso Gardens, La Canada, California).

In Northern California, the Micke Grove Garden was formally dedicated on March 4th, 1966, and is now a true source for camellia research. The plants have not attained full size, but most cultivars have bloomed for several years, and judgments can be made as to growth habits and adaptability to the climate of the area. The first planting of almost 300 cultivars has been augmented each year by additions of more *C. japonica,*

C. reticulata, C. sasanqua, and quite lately, a special section devoted to the more rare species seldom found in a collection.

Before reviewing facts concerning the camellias themselves, we feel it important to more fully describe the planting area.

Northern California has two distinct seasons. The wet, oftentimes mild, winter encloses the months of November through March. The dry, quite hot summer covers at least six months of the year, and peaks in August. The large inland valley (length 430 miles) lies parallel to the Pacific Coast though rather much inland, and is backed by the Sierra Nevada mountain range.

The soil is very rich and less than 100 years ago it was mantled by extensive groves of native valley oak trees. In the passing of years we have lost many of these groves to agricultural engorgement. Micke Grove, entrusted to San Joaquin County, is one of the last to remain. It is large enough to provide a micro-climate of its own, though still affected by general valley conditions. In season there is sufficient rainfall, and the spreading trees afford filtered sun and wind protection.

Within the confines of the Grove there are privately endowed buildings for public use, a zoological garden, and an authentic oriental landscape scene. The area set aside for the Camellia Gardens parallels these established plantings and occupies a shade area near the Japanese Garden. There are lawns and more trees east of the camellia beds; thus the camellias are surrounded by a protective atmosphere which helps them withstand daytime heat of 100 to 110 degrees, although heat periods at this extreme are rarely continuous at more than 3 to 4-day passages, and night temperatures drop by an average of 30 degrees. Relative humidity can dip to 3%.

The plan of the Garden was thoughtfully delineated by Mr. Mark Anthony, Superintendent of Descanso Gardens, La Canada, California. Provision for future growth of the plants, the optimum exposure to sun, and attention to individual plant characteristics have all been brought into consideration.

First to be planted were several hundred *C. japonica* specimens, none planted in duplicate for floral effect, but always singly, with attention to growth habit as known. Mr. Hester's intent has been to maintain successful camellia cultivars, and he supervises the removal of all others which do not prove their excellence. The Camellia Garden is not intended as a living record of named camellias, but is to be viewed as a selection of the good to excellent camellias as they are introduced through the nursery trade.

Groupings of camellia species are a practical solution for horticultural purposes as well as for adaptation to a particular area of the Garden. There is an area for *C. sasanqua* (29 cultivars at present). *C. reticulata* (16 names) are in a rather more sunny spot. The lesser known rare species (21 species) are quartered in their own distinctly marked section. A separate area of miniature and boutonniere camellias has recently been dedicated; in this portion of the Garden, species designation is undifferentiated in favour of identification by size as set forth in Southern California Camellia Society Nomenclature descriptions. Yet another section contains the successful hybrids and very newest *C. japonica* introductions (1969-70).

Only two alterations have been made in the continuity of planting: one is the introduction of 75 'George Taber' azaleas in the area left open by wind damage to one very large oak tree, this after the Garden was two years old. Another decision, for general park effect, has been the planting of evergreen azaleas in the transitional zone between the camellias and the Japanese Garden. The azaleas are 3 to 4 feet in diameter.

Mr. Hester has thoroughly assessed the plans of the Garden from varied points of view. He is deeply interested in the perpetuation of the effort and intention which first motivated him, and has reasonable assurance that the Gardens will be maintained at the present high level of horticultural practice. Because neighbouring counties have active camellia societies, his selection of Micke Grove is a practical one. It may be added that the northern counties have always been rich in the sense of horticultural interest and research.

As referred to above, the plan for the Garden also included practical ideas for the care and maintenance. There is provision for an easy water supply by hose and sprinkler. Moisture is applied not more than once a day in peak demand periods. Air currents through the grove suppress possible damage from cold. Shade is not dense; the oaks are lofty and spreading and do have some tendency toward breakage.

Walking areas between irregular beds of 20 to 40 plants are almost exclusively mowed lawn with self edges; no concrete, rock or brick curbs. Drinking fountains are convenient and inconspicuous. As you walk leisurely, you feel a distinct sense of great space, and looking around, you next look upward, 30 feet, to the branches of oaks far above. The total tree height is 80 to 100 feet.

Mechanical damage which may occur but which has not yet become a hazard is careless foot traffic, some of it in search for scions. The sturdy plant markers (each plant named) have been placed with forethought on replacement due to damage. Actual theft of whole plants is rare. To assist in rapid plant identification, permanent plaques have been erected, one to direct the visitor toward the section of miniatures, another defines the location of the Hybrid Camellias.

Hester Garden horticultural notes are of interest, if only for their subtle simplicity. The first plantings were grown in a mix of coarse peat and salt-free loam. Extreme care is still the watchword for new plants. The native soil is adequate when mixed with moss, and sometime later the Park gardeners apply a fortified redwood sawdust. Care is taken to keep this mulch from mounding against the graft union. The layer fends off some mechanical damage.

It has not yet been necessary to apply fungicides or pesticides in quantity. This does not indicate *no* damage, but further underlines the wise choice of the oak grove site. The shade is not a confining dense jungle to afford a haven for pests.

So, under the spreading oaks we have 425 camellias at present count. A review of the *C. japonica* planting list shows 'Alba Plena', 'Horkan', 'Captain Martin's Favorite', 'C. M. Hovey', 'Bella Romana', 'Grandiflora

Rosea', 'Kumasaka', 'Marion Mitchell', 'Finlandia', 'Joshua Youtz', 'Flame', 'Hanafuki', 'My Darling', 'Reg Ragland', 'Tiffany', 'Rose Parade' and 'Tomorrow Crown Jewel'. In May 1971, season's end for this climate, quality blooms were in fair profusion on 'Rosemary Kinser', 'Twilight', 'Coquetti', 'Kitty', 'Sultana', 'Yosemite' and 'Spring Sonnet'. 'Betty Sheffield' was sporting extravagantly.

The *C. sasanqua* number 37 in all; we feel this species literally prospers in this setting.

Hybrids include 'Anticipation', 'Charlean', 'Elsie Jury', 'Milo Rowell', 'Vallee Knudsen' and 'Waltz Time.' There is a total of 29, with more on order as is the case in other sections of the Garden. The date of planting is comparatively recent.

The selection of 16 *C. reticulata,* plus a few duplicates, is the problem child in this young park. The specimens do not thrive, nor do they suffer. In Mr. Hester's words, "They are not truly happy." Most persons agree that as a landscape plant the species needs great care and added grooming. We believe that undependable understock is the villain in several cases; intermittent sun and shade indicate difficulties of exposure. We watch and wait. In May, 1970, 'William Hertrich', 'Noble Pearl', 'Mouchang', 'Buddha' and 'Lionhead' were three year old plants with moderate to heavy seed set, due to the preceding mild, wet, winter.

Of interest to the plant breeder, and for botanical study, there is a superior collection of rare individual camellia species . . . 21 in all. The plants are small and the installation very recent. Reports are not possible, except for the seed set on *C. oleifera.* Hopes are great for their prospering growth; do not underestimate plant growth rates in California.

Mr. Hester reiterates the purpose of his new Garden; to make the study of camellias available to all persons, and to keep the display scientifically attractive for their pleasure. The mass of colourful *C. japonica* bloom occurs in March and April, with *C. sasanqua* preceding this period, and *C. reticulata* in the middle and late period. California winters soften to the suggestion of spring in early February, so variation in blooming times can be expected.

Everyone interested in any phase of Camellia culture is invited to study the Garden. It is situated on Armstrong Road, a tributary of Highway 99, the river of traffic between Stockton and Lodi in north central California. Detailed information on Park use may be secured from the San Joaquin County Offices in Stockton, California. Mr. K. O. Hester may be addressed at 5208 East Hildreth Lane, Stockton, California, 95205.

We are pleased that this description of Micke Grove Camellia Garden is being brought to the notice of larger public awareness. The Garden is an important factor in the growth of expert camellia knowledge and research, and we believe in its continuing success.

Can You Count Camellia Chromosomes?

JOHN PEARMAN Australia

THE most fashionable word currently heard in horticultural circles is "chromosomes." Breeders of garden plants are finding that a knowledge of chromosomes is some help in predicting the likely success or failure of certain crosses. It is by no means a complete or infallible guide, however. The current craze for chromosomes stems from the recent appearance of several new and extremely showy varieties of garden plants which contain an abnormally large number of chromosomes. These natural "freaks" tend to be bigger plants than ordinary hybrids and to have larger flowers. Tetraploid snapdragons (marketed as "tetra-snaps") are a typical example. These very attractive garden plants have twice as many chromosomes as normal snapdragon varieties. Will an increase in the chromosome number of camellia plants be the next direction for camellia breeding programmes?

This article is an attempt to write down the story of camellia chromosomes in simple terms. Such a story has already been told in many textbooks of biology but readers without a scientific background are bewildered, understandably, by the terms used (monoploids, diploids, meiosis, etc.), but seldom explained in such writings. It is not possible to record this story without using "big words," but this article tries to explain their meaning as it goes along.

In this age of "popular science" many people know that living bodies are made of *cells.* Cells are complex living "building blocks," microscopic in size. A camellia plant would be made up of millions of cells. Within each cell is a structure called the *nucleus.* In the early days of cell studies it was found that certain cells, when stained with dyes and examined under a microscope, had coloured bodies inside their nuclei. These were named *chromosomes,* a word which means literally "coloured bodies."

Chromosomes have since been investigated carefully by scientists studying cells (called cytologists) and by scientists studying the patterns of heredity (called geneticists).

Along the chromosomes are a number of *genes.* These are made of the chemical desoxyribonucleic acid, usually known by its initials *D.N.A.* The biology of genes is not completely understood. However, it is known that these genes determine the nature of each living thing: its characteristics, its susceptibilities, its potential. The genes found on camellia chromosomes determine the nature of each camellia plant: its growth habit, flowering pattern, flower colour, susceptibility to disease and so on.

Chromosomes can be seen as "coloured bodies" only in cells which are dividing, though they are present in the nucleus of every living cell. For this reason scientists setting out to count the number of chromosomes in a particular camellia variety usually use root tip cells. The root tips are one region of a plant where growth takes place. It is in such growth regions that the cells are dividing; hence, the chromosomes of such cells are readily seen.

Every living thing has a specific and basic number of chromosomes. This basic number is called the *monoploid* number and may be expressed as n = ? or x = ?. (In older texts the basic number of chromosomes is referred to as the *haploid* number.)

In humans the monoploid number is 23: that is, n = 23. This basic number of chromosomes is only found in the human sex cells—sperm cells in men and eggs in women. The ordinary body cells of humans contain 46 chromosomes or two basic sets of 23. The source of this double set of chromosomes lies in the sexual origin of each human who began life as one cell, a fertilised egg. The fertilised egg is the fusion of a sperm from the father (one set of chromosomes) with an egg from the mother (one set of chromosomes) and so it contains two sets of chromosomes. The fertilised egg by dividing and dividing eventually grows into the millions of cells which make up the human body as we commonly recognise it. Like the fertilised egg each of these body cells contains two sets of chromosomes, that is, 23 pairs of chromosomes. Cells containing two sets of chromosomes are called *diploid* cells. The diploid number may be written as 2n = ? or 2x = ? In humans 2n = 46 or 2 × 23.

The basic monoploid number of chromosomes in camellias is 15: that is, n = 15. This number of chromosomes would be found in the sex cells of many camellias, in the pollen produced by the anthers of the male sex organ (the stamens within the flower) and in the eggs produced in the ovary of the female organ (the pistil of the flower). The miniature plant seen in each camellia seed results from the sexual union of a pollen grain from the male parent and an egg from the female parent. The cells in the plant which grows from this seed will each contain two sets of chromosomes. The cells of most camellia plants are, therefore, diploid (two sets of chromosomes), and 2n = 30, or 2 × 15.

The story is complicated, however, by several natural "freaks" which are found among the many camellia varieties and hybrids.

Most varieties of *Camellia japonica* are diploid (2n = 30), but *Camellia japonica* 'Asashi-gata (syn. 'Lady Clare') has 45 chromosomes in each of its body cells. This represents 3 basic sets of chromosomes, making it a *triploid* where 3n = 45 or 3 × 15.

Some camellias contain 4 basic sets of chromosomes in each of their body cells, for example *C. tenuiflora.* These are called *tetraploids* (4n = 60 or 4 × 15).

Yet other camellias contain 6 basic sets of chromosomes in each of their body cells. These are called *hexaploids* (6n = 90 or 6 × 15) and examples include *C. oleifera, C. reticulata* and nearly all the varieties of *C. sasanqua.*

C. sasanqua 'Narumigata' is an exception, having 75 chromosomes in each of its body cells. With 5 basic sets of chromosomes it is a *pentaploid*: $5n = 75$ or 5×15.

Most camellias contain two sets of chromosomes ($2n = 30$) within their body cells. In order to produce the sex cells some body cells (in the male anthers and female ovary) must divide in such a way that the sex cells (male pollen and female eggs) end up containing only one set of chromosomes. This special kind of cell division which halves the chromosome number is called *meiosis*.

In diploids meiosis involves a pairing of the similar chromosomes followed by their separation into two equal groups so that each sex cell ends up containing only one set of chromosomes. In tetraploids (4 sets or 60 chromosomes) meiosis would result in sex cells containing 2 sets of chromosomes (30 chromosomes). Similarly hexaploids (6 sets or 90 chromosomes) would produce sex cells containing 3 sets of chromosomes (45 chromosomes). Triploids, with 45 chromosomes in their body cells, and pentaploids, with 75 chromosomes in theirs, are usually sterile, since the odd number of chromosomes cannot divide into two equal groups during meiosis. For the same reason crosses between camellias with different chromosome numbers often result in sterile hybrids. When *C. granthamiana* (60 chromosomes) is crossed with *C. japonica* (30 chromosomes) the hybrid offspring ends up with $30 + 15 = 45$ chromosomes.

Generally one would not expect success using triploids or pentaploids as parents since their chromosomes cannot divide by meiosis into two equal groups which are multiples of 15. However, there are, as is usual in Nature, some surprises. *C. sasanqua* 'Narumigata' ($5n = 75$) has been crossed successfully with *C. granthamiana* ($4n = 60$). The resulting hybrid has 60 chromosomes: 30 from *C. granthamiana*, as theoretically expected, and 30 from 'Narumigata. The "Girl" camellias ('Dream Girl,' 'Show Girl,' etc.) were bred by crossing 'Narumigata ($5n = 75$) with *C. reticulata* ($6n = 90$). The "Girls" contain 90 chromosomes: 45 from *C. reticulata*, as expected, and 45 from 'Narumigata.'

On the other hand one would expect in theory that camellias with the same chromosome number could be crossed to yield fertile hybrids. However, this is not always so. Crosses between *C. sinensis* ($2n = 30$) and *C. rusticana* ($2n = 30$), for instance, have not been successful.

The fertility of a cross depends on many factors besides the chromosome number of the parents. The degree of relationship between the parents is one such factor. No one would expect success in, for example, crossing a camellia with a daffodil. If crosses between distantly related parents are successful then the offspring are usually very weak.

Other factors influencing success are associated with the complex processes that follow on after pollination of the female. Will the pollen grow through the female? Will the pollen and egg unite sexually? Will the fertilised egg develop?

On the whole it is best for amateur breeders to stick to simple crosses between parents likely to be compatible and to leave the rest to professional plant breeders. The professionals may treat the seed of a "difficult" parent (such as a triploid or pentaploid) with the chemical colchicine. This upsets

the normal division of cells (called mitosis). Such a treatment may lead to a doubling of the chromosome number of the body cells of a plant developing from such a seed. These plants which now have an even, rather than odd, number of chromosomes are thus able to produce fertile sex cells by meiosis. Cuttings may be treated with colchicine to produce a similar result.

It has been found that an increase in the chromosome number of many plants by careful breeding leads to plants which are larger than the ordinary kinds, with larger leaves and flowers as well. Camellia breeders continue to search for a means of increasing the colour range of camellia flowers and of producing camellias with a pleasing scent. The use of colchicine may aid the making of hybrid crosses which formerly were almost impossible. Whether this kind of "scientific interference" is desirable is another issue.

The art of counting chromosomes in root tip cells is difficult to acquire. It takes much skill in driving a microscope and patience to do it effectively. The following procedure is used to prepare the root tip cells for examination. Young, actively growing root tips are obtained and chemically "frozen" by placing them in a solution of 1 part glacial acetic acid to 3 parts absolute ethyl alcohol for 15—30 minutes. They are then transferred to small tubes containing normal hydrochloric acid. These tubes are then placed in a small bath of water (for 10 minutes), the water temperature being kept at a constant 60°C. The acid is then poured from the tubes and water added to wash the root tips. The water is then poured off and a complex stain, known as Schiff's reagent, is poured into the tubes containing the tips. Schiff's reagent stains chromosomes a bright red colour. The tips are allowed to stain for 15—60 minutes. If staining is successful, the growing region just behind the root tip will turn deep red. The recipe for Schiff's reagent is given at the end of this article. Other chromosome stains, such as aceto-orcein, may be used in a similar way. Now the tips are ready for microscopic examination. The coloured tip is cut off and placed in a drop of 45% acetic acid on a microscope glass slide and squashed. Squashing is accomplished by placing a coverslip over the tip in the acid drop and pressing down gently through 2—3 thicknesses of paper towelling. Hopefully one is now ready to see camellia cells and begin counting the number of chromosomes each contains.

Good chromosome hunting!

The chromosome numbers and photographs given in this article are taken from two sources:

1. C. D. Darlington and A. P. Wylie (1961):
   Chromosome Atlas of Flowering Plants,
   George Allen and Unwin, London.
2. W. L. Ackerman (1971):
   Genetic and Cytological Studies with Camellia and Related Genera:
   Technical Bulletin No. 1427: United States Department of Agriculture, Agricultural Research Service, Washington.

Preparation of Schiff's Reagent.

1. Dissolve 1 gm. of basic fuchsin in 200 ml. hot distilled water.
2. Add 20 ml. normal hydrochloric acid (to make normal hydrochloric acid use 82·5 ml. reagent hydrochloric acid to 1 litre distilled water).

3. Filter into a brown bottle (probably this should be done before the addition of the hydrochloric acid).
4. Add 2 gm. of potassium or sodium metabisulphite.
5. Allow the solution to bleach for 6 hours or more. Usually it becomes colourless or pale yellow and is suitable for use in either condition.

Since light causes a slow decomposition of Schiff's Reagent it must be stored in a tightly stoppered dark bottle, preferably under refrigeration.

I would like to thank Dr. Peter G. Valder, B.Sc.Agr., Ph.D.(Cantab.), Senior Lecturer, School of Biological Sciences, University of Sydney, for the help he has generously given in order to keep this account of chromosomes relatively free from erroneous over-simplifications.

ILLUSTRATIONS.

Figure 1. This photograph highlights the camellia's sex organs which are found in the flowers. The male organ is seen as a ring of stamens. The male sex cells (pollen) are produced in the lobes at the top of each stamen. These lobes (called anthers) turn bright yellow when the pollen is fully formed. The female organ or pistil is centrally placed in the flower. The female sex cells (eggs) are produced in the ovary, the basal portion of the pistil.

Figure 2. In this cut-away camellia flower the entire female organ or pistil can be seen. The eggs form inside the ovary. If camellia pollen is placed on a sexually mature female it may grow through the pistil and fertilise the eggs. As a result the ovary grows into a camellia fruit containing seeds.

Figure 3. These photographs show camellia root tip cells as seen through a light microscope. Such pictures are called photomicrographs. Counting reveals that each of these cells contains 30 chromosomes (two basic sets or 15 pairs) making them diploid cells. Cell A comes from a hybrid of *C. japonica* x *C. hongkongensis* while cell B comes from a hybrid of *C. pitardii variegated pitardii* x *C. saluenensis*.

Figure 4. These photomicrographs are of root tip cells from hexaploid (6n=90) camellias. Ninety chromosomes can be counted in these cells. Cell A comes from a hybrid of *C. reticulata* x *C. fraterna* and cell B from a hybrid of *C. oleifera* x *C. miyagii*.

Figure 5. The chromosomes seen in cells can be drawn to scale and arranged in order from the largest to the smallest chromosomes. Such a diagram is called a karyotype. Here are shown karyotypes of the chromosomes found in a cell from a *C. japonica* plant (A) and from a *C. saluenensis* plant (B). Both these plants are diploids (2n=30): that is, there is one pair of each kind of basic chromosome. In hexaploids (6n=90) the karyotype would show 6 of each kind of chromosome.

Figure 6. These are karyotypes of the chromosomes found in the body cells of a man (A) and a woman (B). The chromosome pair number 23 is very interesting. Women have a pair of so-called X chromosomes, while men have only one X chromosome "paired" with a chromosome fragment called the Y chromosome. This strange "pair" of chromosomes are called the sex chromosomes. Each egg produced by a woman will contain one X chromosome. Half the sperm cells produced by a man will contain an X chromosome, the other half a Y chromosome. If an X sperm fertilises an X egg then a girl results; while a Y sperm fertilising an X egg produces a boy. Sexuality in nature is quite difficult to understand. In birds, for example, it is the hen birds which contain the XY "pair" of sex chromosomes, while cock birds contain the XX pair. Camellia plants are bisexual (two sexes on the one plant) and do not appear to contain distinctive sex chromosomes.

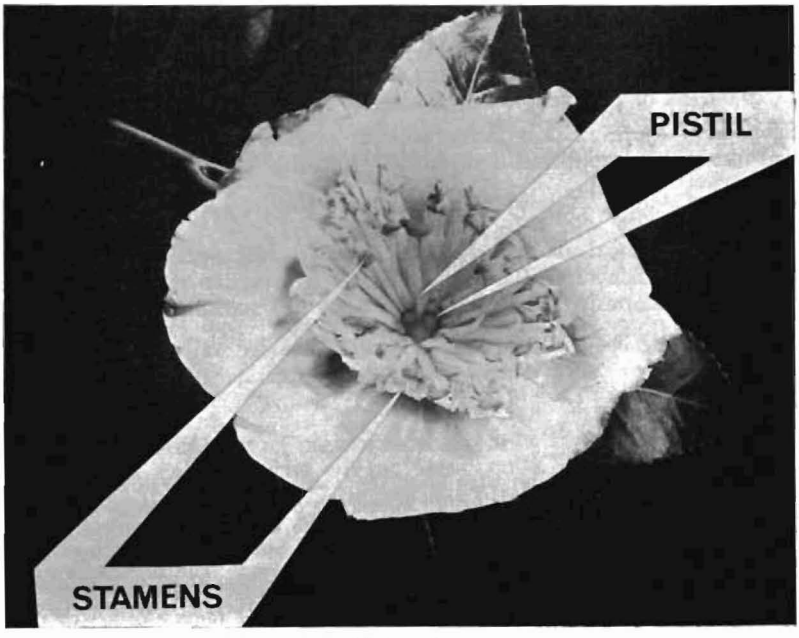


Figure 1.

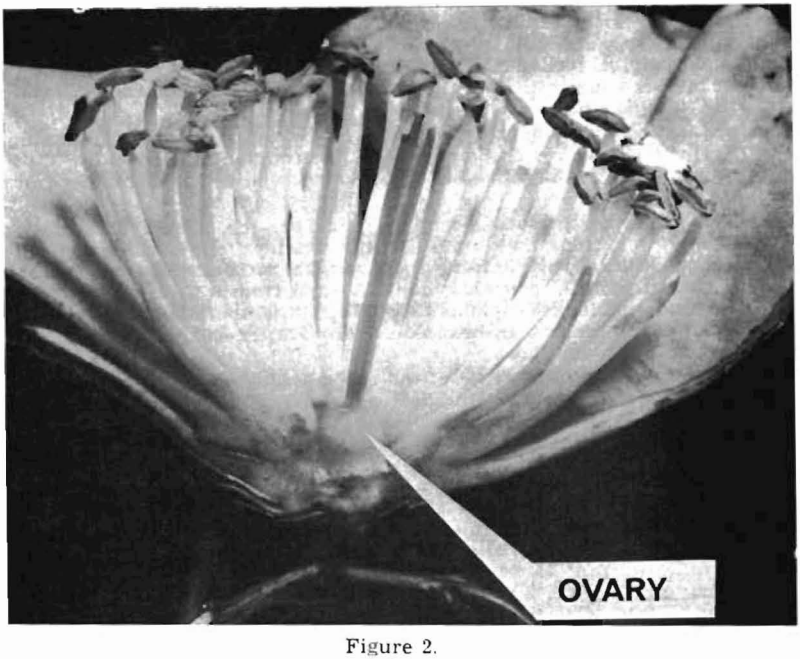


Figure 2.

Figure 3a.

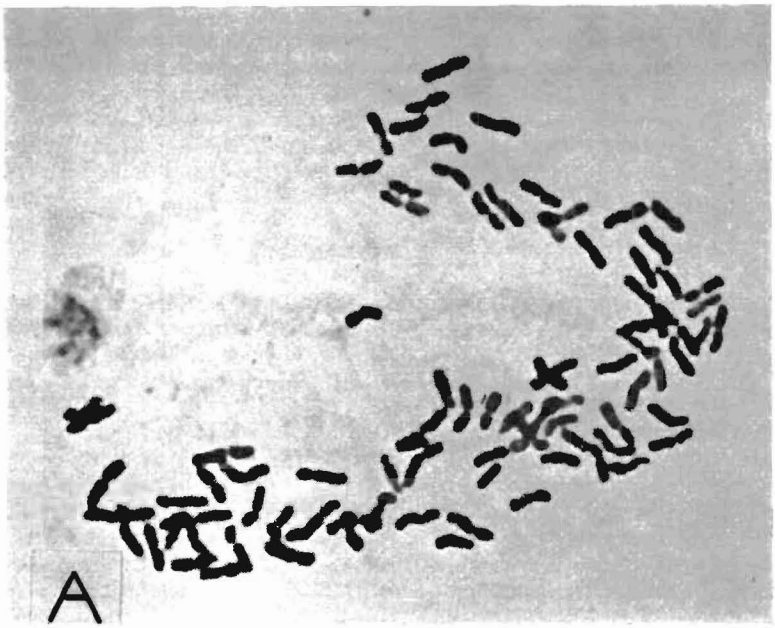


Figure 4a.

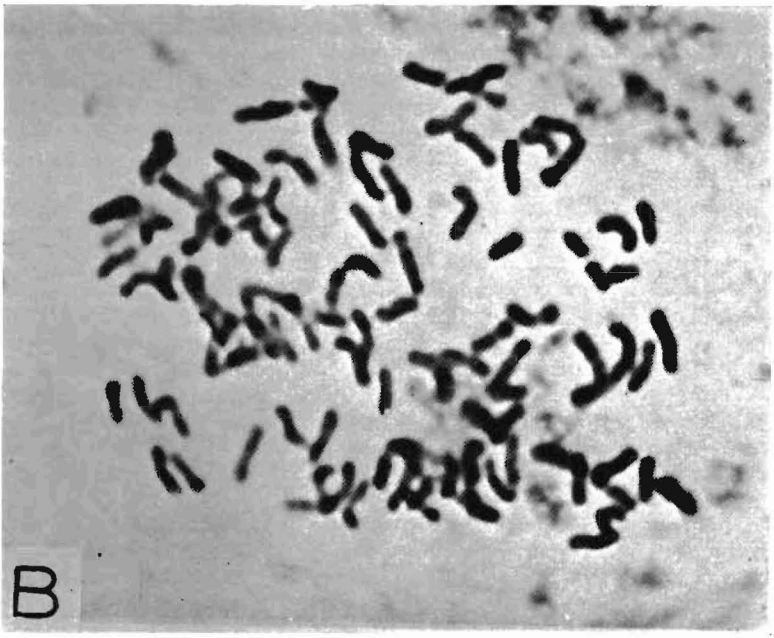
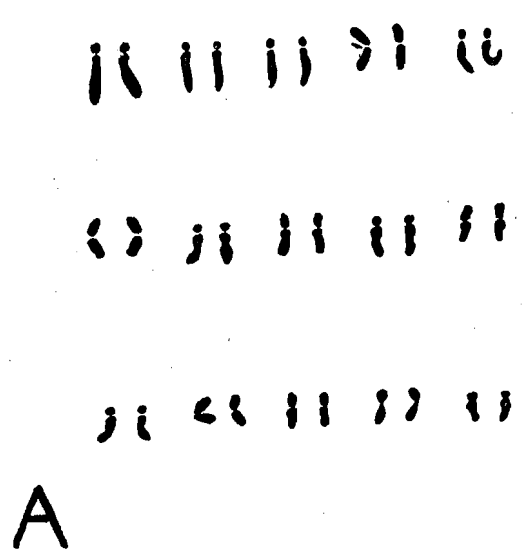


Figure 4b.



A

Figure 5a.

B

Figure 5b.

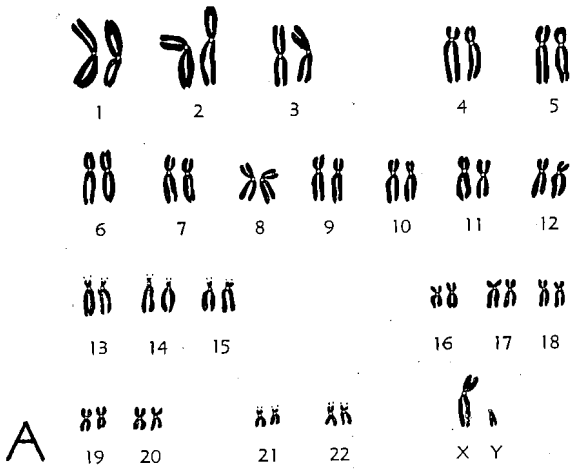


Figure 6a.

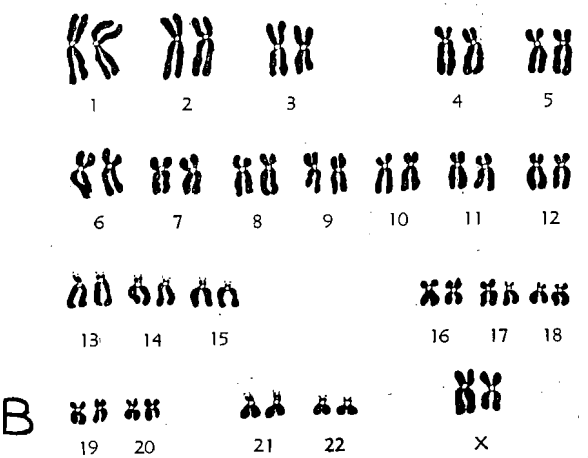


Figure 6b.

Consider Your Verdict

JOHN GALLAGHER United Kingdom

MASS production is an art at which our American friends excel. Evaluation of the end results is quite another matter and in the case of camellias—one that is giving many of us more than a headache.

Frantically grabbing the latest arrivals from the production line, I dread the mention of the words "Outstanding" and "Novelty" as my greenhouse is filling up with half hardy camellias up to the eaves. How I wish the camellia societies would take a tough attitude and adopt a system similar to the filing of a patent with an initial registration of claim and a final registration of name being granted after several years cultural experience.

Before American members rush to tell me all about Mr. Wendell Levi's excellent study of the *Cold Hardiness of Camellias in North Carolina,* I too have found this excellent reading and admire greatly the results of Mr. Levi's hard work and his careful documentation over many years. Only in the broadest terms are his results reproducible here in Dorset.

It is too early to comment on the trial of *C. williamsii* conducted by the Royal Horticultural Society at Wisley in Surrey, England, but I do wish that a better site had been chosen. A parallel border has for years been labelled "Camellia Walk" and was planted when the late Mr. Francis Hanger was curator. Admittedly it consisted mainly of *C. japonica* cultivars but it has always been characterised by an almost complete lack of flowers. On the other hand, our own secretary, Charles Puddle, errs on the side of extreme caution and many of us would have been more than willing to try at least one of the new Bodnant hybrids at home after seeing them in flower in North Wales!

Obviously the amount of work involved in proper trial evaluation is beyond the time available to most of us, but I feel sure that if members could be persuaded to write short notes for the Journal about their experiences with any of the newer plants which they are growing out of doors in their own location, it would be of great assistance to other members.

In the hope of starting the ball rolling, my own camellias are planted in a very well protected garden in good deep loam over sand. They are well mulched with peat and leaves and well rotted cow manure and many have a slight overhead shading of oak trees. Some are planted in full sun under advice from Mr. Puddle that this will lead to greater flowering once the plant is established.

My greatest surprise has been 'Felice Harris' which was sent to me some years ago by Mr. Feathers of California as a scion. Having nursed it into flower under glass in Hertfordshire, I quite frankly wondered why it had ever been named—especially by such an authority as Howard Asper. Planted in full sun in Dorset it is quite a different plant and is clearly going to fall into the 'Donation,' 'Inspiration' class for freedom of flower and garden show.

The Jury hybrids are rather disappointing outside so far. The grafted plants are up 5 to 6 feet high and very healthy and bushy looking indeed, but have not flowered freely. They are all planted in a group with one other camellia 'Mildred Veitch' which is covered with flower buds each year. Rather than move the plants at this stage. I have bought another set of plants to move around the garden to try in different situations. There is no doubt at all that these hybrids—'Elsie Jury,' 'Grand Jury,' 'Elegant Beauty,' 'Debbie' and 'Anticipation'—are really superb under glass. 'Highlight' has proved bud tender outside for me, but under glass is a wonderful sight with the buds opening like dark red rose buds. With a parentage of *C. saluenensis* x *C. reticulata* 'Purple Gown' I really do not expect it to stand up well outside in my area.

Of Professor Waterhouse's hybrids it is quite a different story. The professor himself, 'E. G. Waterhouse,' is very well behaved and has flowered well with an excellent upright growth habit. Even more free flowering, 'Shocking Pink'—also a formal double flower—is doing very well against a west facing wall, with my only criticism being that the flower show is over so quickly. Perhaps as the plant grows bigger this fault will not be so pronounced. 'Bowen Bryant' with its semi-double flowers, very free flowering and a very good erect growth habit is the sort of plant to give as a gift to one's friends who have not yet developed green fingers! It takes a lot not to get at least some flowers from this excellent hybrid. Of the others 'Ellamine' favours its japonica parent but has yet to prove itself for me. 'Crinkles' although very small has flowered well and regularly.

Some cultivars of *C. japonica* deserve special mention at this stage. Admittedly they tend not to flower as well as their hybrids at an early age, but it does seem worth a mention when exceptions to this rule appear. It is important to remember that I do not mean pot grown plants which have been intensively cared for. All the plants I refer to now are grown in the open with a completely free root run.

'Silver Anniversary' budded very freely last year and again this season. 'Miss Universe' is also very uninhibited. 'R. L. Wheeler' gives exhibition blooms every year and seems to me to be the best introduction for garden use in recent years. 'Cecile Brunazzi' sneaked into England from Nuccio's Nurseries without any fanfare, but again has considerable merit as a garden plant. The flowers are light pink and very freely borne and the plant habit is good.

Without doubt booby-prize goes to one japonica cultivar—'Lady Macon'. Beautifully painted on one of the covers of the *American Camellia Journal* some years ago this plant has quite the ugliest growth form of any camellia I have ever seen.

My observations are not intended to be in any way categoric. Watching my plants day by day, the camellias I have mentioned are the ones which stick out in my mind. Other newer cultivars undoubtedly show considerable merit and of course there are vast numbers of older hybrids and cultivars which need no recommendation from me. 'Sylva,' 'Adolphe Audusson,' 'Apollo,' and 'Donation' will surely never be outclassed in British gardens. Nor are these ramblings intended to be in any way 'scientific.' Camellias are grown and bred by the vast majority of amateurs for pleasure. Freedom of flower coupled with good tempered growth habit must surely be paramount in satisfying popular demand.

Growing Camellias in Portugal

LESLIE RIGGALL Portugal

SOME years ago I attended a conference of the American Rhododendron Society, and at a lecture given by Dr. Bowers, he opened his talk by saying "Any fool can grow rhododendrons in Britain." My hosts were rather perturbed, until they saw me laughing, and Dr. Bowers went on to say that to grow rhododendrons in the U.S.A. is a challenge that requires considerable horticultural skill.

Similarly, I can confirm that any fool can grow camellias in Portugal, indeed, in many cases, they grow themselves. Underneath old trees seedlings are often found both of *C. japonica* and *C. sasanqua.* The only other species introduced at an early date was *C. reticulata* in the form of 'Captain Rawes' and 'Robert Fortune'. These two appear to be sterile and have produced no offspring of *C. reticulata* here.

There are thousands of Portuguese-bred camellias but as there is little interest few of them have been named. This is just as well, for the Portuguese tend to give names like 'Dona Herzilia de Freitaas Magalhaes' and many other names which could cause writer's cramp or a twisted tongue.

Camellias in Portugal survive an astonishing amount of ill-treatment. I know large plants growing in sun-baked south slopes which are never watered. According to the book water is necessary to develop flower buds, but these plants flower well without it. It is common to tear (nobody here would think of making a neat cut with a saw or secateurs) branches off each year and some very sorry-looking specimens in my own garden bear witness to many years of this savage treatment. Camellias are only cut with tools when a hedge is required and they are used frequently for high hedges in old gardens which are, of course, disappearing nowadays.

Perhaps I should explain that apart from a small area around Sintra camellias are grown only in North Portugal, as the soil in the south is not suitable.

I have referred earlier to the fact that 'Captain Rawes' appears to be sterile. However, there is one camellia which is claimed to be the only Portuguese hybrid 'Rosalia de Castro' and this is a cross between *C. japonica* 'Mathotiana' and *C. reticulata* 'Captain Rawes'.

The danger in hybridising camellias is that the flower is often self-pollinated before it opens, and considerable care is needed to emasculate the bud of the female parent before it opens. However, both in leaf and habit of growth, 'Rosalia de Castro' does bear resemblance to 'Captain Rawes' and it would be interesting to have scientific confirmation that this camellia is in fact a hybrid.

All kinds of camellias grow well in Portugal. They thrive as well here as in their native habitats in the Far East. On Christmas Day, 1972, I had the following species in flower: *C. granthamiana, C. hiemalis, C. japonica, C. miyagii, C. rusticana, C. saluenensis, C. sasanqua, C. sinensis, C. taliensis, C. vernalis* and *C. wabiske.* Some like *C. drupifera* had already finished flowering whilst others such as *C. fraterna* were impatiently waiting to unfurl their already tinted buds. From this it is clear that in a climate which suits them camellias are winter flowering plants. This, of course, gives their gorgeous blooms even more value. Similar results can be obtained under glass or plastic in North Europe and most of North America.

Although they are winter-flowering, camellias in Portugal flower later when given shade, and in full shade they bloom very late. We have a number of shaded cultivars of *C. japonica* which flower until the end of June. Thus we have a full nine month season from plants all grown in the open. New growth is made at any time of the year and when looking at flowers on Christmas Day I frequently noticed new growth on the plants. In such a climate, and with a favourable fiscal climate as well, there cannot be a better place in which to retire and grow camellias.

For really good blooms an important factor is heat during the summer. Although watering is needed under glass, never be afraid to let the greenhouse heat up in the summer. The finest blooms I have seen—absolutely outstanding —were in Sacramento, California. This town, unlike Los Angeles, is not tempered by the Pacific Coast and the temperature goes into three figures Fahrenheit. Further confirmation in California lies in San Francisco (cooler than Los Angeles) where camellia blooms and plants are poor by American standards. The only camellia I saw looking well in San Francisco was the British hybrid 'Donation' which prefers a cool rhododendron climate and is very disappointing in the true and warmer camellia areas of the U.S.A. Even in the particularly temperate and favourable climate of Portugal 'Donation' is a poor thing unless it is grafted on a vigorous stock, and propagation by cuttings is useless.

Camellia japonica and *C. reticulata* are superb in Portugal, growing fast in winter as well as in summer and producing fine and large flowers. For example, on Christmas Day *C. japonica* 'Berenice Beauty' carried three blooms which were of astonishing size, any one of which would have been champion bloom in an American show. I would not wish to infer that I am mesmerised by size alone. This is not so. I think 'Drama Girl' is ugly, and at the time 'Mrs. D. W. Davis' was awarded a First Class Certificate by the Royal Horticultural Society I was using plants of this cultivar for grafting stock.

The flowers of 'Berenice Beauty' were not only large, they were sculptured in a most attractive and perfect shape and were exquisitely tinted in a subtle harmony of delicate colours. This cultivar is a seedling of 'Berenice Boddy'. Together with 'Berenice Perfection' it was raised in California by Guilio Nuccio. We grow all three together and they make a lovely group. They should be tried in all cold gardens as they resist the bad weather well, especially when one considers their delicate colouring.

Changing the climate in which one lives necessitates some extraordinary contrasts in horticultural practice. In England I struggled unsuccessfully to grow acacias, and also watsonias, which I had admired in South Africa. Here in Portugal these plants are obstinate and almost ineradicable weeds. I have grubbed out thousands of acacias, then all the lateral roots, which cover every inch of the ground, sent up thousands of suckers, so they had to be dug up. Now we are battling with millions of seedlings. Such is life!

It is sad to record the passing of Alfredo Morerira da Silva, a friend who assisted me with the various problems encountered by an immigrant, as well as in horticultural matters. He died last year of lung cancer, one of the innumerable victims of that insidious killer plant *Nicotiana tabacum.* Alfredo was a director of the most important nursery in the Iberian Peninsular. He was best known for his roses and won a very large number of international trophies for floral exhibits in European capitals. His last success, before failing health dissipated his wonderful verve and energy, was winning the Gold Camellia at the International Exposition of the Camellia in Vigo, Spain, in 1969. He and his camellias were televised that day, which was his last public appearance.

Growing Camellias at "Camellias"

R. H. ELLIS United Kingdom

AFTER retiring from business my wife and I moved to Horsham in Sussex, where we had fortunately found a piece of land several years before. It was almost three acres of an old world garden, and there were numerous trees and shrubs already there and part which had been used as a kitchen garden, but it had been badly neglected.

When our bungalow was built in 1965 we named it "Camellias" as we were both very keen on them and the soil here is very suitable being on the edge of St. Leonards forest and only a few miles from the famous Leonardslee, where so many camellias are grown.

With the addition of some sphagnum moss peat, sharp sand and spent hops, a camellia border about 100 ft. x 10 ft., facing west, was prepared. *Chamaecyparis lawsoniana* was planted at the back to give some protection from the frost and east wind, and *Eucalyptus gunnii* was also included to give shade.

We started with the following camellia cultivars: 'Akebono,' 'Arejishi,' 'Akinoyama,' 'Daikagura,' 'Beni-otome,' 'Otome,' 'Shibori-Sharatama' and 'Hikarugenji.' These were purchased from Japan mostly as two year old plants, and there are several established and well budded plants of each of these cultivars.

Since these first plantings were made other cultivars have been purchased and the following have been added to the border, 'Blaze of Glory,' 'Brigadoon,' 'Carters Sunburst,' 'Elegans,' 'Elsie Jury,' 'Mathotiana,' 'Mathotiana Rosea,' 'Janet Waterhouse' and 'Paeoniflora.' In front of the border, evergreen azaleas have been planted; these were all raised from cuttings taken in August under the mist propagator.

Many cuttings of camellias have been rooted with the help of a small mist propagation unit; the first cuttings came from a friend who had been given some camellias as cut flowers and we asked if we could have the pieces after the flowers had finished. They came from a very old tree believed to be 'Mathotiana Rosea' which is in a garden in the oldest part of Horsham. From this attempt 36 cuttings were rooted, out of a possible 40, and some of the wood was very hard. The following year some more pieces were obtained and a further 46 were rooted. Most of the cuttings have made good plants now and many have been given to friends as gifts, and sometimes exchanged for a few cuttings of a camellia which was not already in our collection. We have fortunately found one or two nurseries which are willing to sell cuttings at prices varying from 2½p to 17½p each for some of the special varieties.

Rooting Cuttings.

We have found the following easy method of rooting cuttings satisfactory. Make a wooden frame about 14ins. x 9ins. x 3ins. deep, and cover the bottom with ½ inch mesh wire netting. Fill the tray with a mixture of five parts sphagnum moss peat, two parts sharp sand or ⅛ grit, and press down firmly. Insert the cuttings after preparation by first making the cutting three to five inches long, cut about one inch below the node straight across, and then scrape the bottom inch each side with the thumb nail and dip into a rooting hormone of your choice.

Seven to thirteen weeks later, the tray can be lifted to see if any roots have been formed, without disturbing them. When they are rooted we pot them on into the same mixture plus one part of John Innes No. 2 compost, and use three inch whalehide pots, placing these onto a bench with some bottom heat. We find that there is much less root damage this way. When they have made enough root they are plunged into the greenhouse border of a cold house. At about two years they should be ready for planting outside in this country.

We have recently planted another border on one side of a forty foot Dutch Light type house with two and three year old plants and are hoping to have a good show of bloom next year.

Our collection is now getting close to 200 varieties. I hope that this account of our success will encourage others to increase their camellia collections.

The Stresa Conference
A Greeting and a Message from Professor Waterhouse

Read by A. W. JESSEP Melbourne

I HAVE been entrusted to deliver two messages from Australia to this International Camellia Conference held in these beautiful surroundings. Firstly, I, as the first President Emeritus of the Australian Camellia Research Society, bring greetings from that Society to the members of the International Camellia Society and to inform them that should any of their members visit Australia the members of the Australian Camellia Research Society would be honoured and delighted to show them around our camellia areas and to give them every assistance to try and make their visit as interesting as possible.

The second and very important message is that my old and esteemed friend, Professor E. G. Waterhouse, President of our International Camellia Society, has privileged and honoured me with a message to this conference. The Professor and I have investigated the species of camellias for nearly 40 years, attended numerous conferences together, including the very important 1950 Royal Horticultural Society one in England. On his 90th birthday last April, 1971, I had the honour to be invited to give the oration and I am delighted to inform you that his health is very good, he is very active in mind and body and researching into camellias as energetically as ever. His message reads:

> "Please convey my personal greeings to all camellia friends and camellia lovers. It is with very much regret that circumstances do not allow me to be present in person, but I shall be with you in spirit and I know, with such a wonderful committee, the Conference will be a success in every respect".

These sincere greetings are from our 90 years old grand young man in outlook. When I visited him last year he had to reserve Thursday morning for his lesson in Japanese. What a wonderful man, and how fortunate we are to have him as our President. Thank you, Mr. Chairman, for allowing me to convey these messages to the conference members.

An Introduction to Camellias in Italy

STELVIO COGGIATTI Rome

IT is a great privilege for me to have been asked by the president of the Italian Camellia Society to welcome such highly qualified experts as you all.

Stresa and Lake Maggiore join in the glorious traditions of the past with their extraordinary present activity in hybridization and the growing of camellias. Therefore, this part of Italy seemed the most suitable for our meeting. Here you will see, during the visits on our programme, the painstaking work that is being done after a long period of neglect. I will now try to illustrate to you unpublished or little known aspects of the camellia's history in central and south Italy, particularly in Rome, my native town, where this flower had a period of outstanding splendour in the middle of the last century.

If love for the camellia has re-awakened in our country these last few years, the merit goes to a great extent to the Italian Camellia Society. In its seven years of activity, positive results were achieved, thanks to thorough propaganda. One of the results was to stir interest in technical research and in tracing chronicles and nineteenth century documents which would otherwise have been lost. Personally, I have had the satisfaction of discovering two documents which show the care and skill of Roman camellia growers—so far practically unknown.

The first of these, a manuscript found in the Doria Pamphilj archives, is entitled *Catalogue and inventory of living plants in the Villa Pamphilj on January the first,* 1856.

It is astonishing to discover that the botanical riches of the gardens consisted of nearly forty thousand ornamental plants, all accurately registered, down to their actual value. Just to give you an idea of the importance of this collection, I will mention a few details: two thousand Stone Pines, one thousand two hundred Scots Pines, one thousand Cypresses, more than one thousand citrus-fruit trees, seven hundred pineapples, six hundred rose trees and five hundred and fifty camellias of fifty-six different varieties, all carefully listed. The complete list of these camellias was published in the News Bulletin of the Italian Camellia Society in March, 1970.

The other document shows that in mid-nineteenth century Rome was on a par with Florence, Genoa, Brescia, and Milan, which are generally regarded as the most active Italian centres for the cross-fertilization of camellias.

At that time, the Roman Horticultural Society grouped amateurs of different social background, who had one thing in common—a love for camellias. Prince Marcantonio Borghese, the Society's President, originated some two dozen varieties, usually named after members of his family.

In the catalogue of Federico Brunier, a commercial grower, published in Florence in 1853, are listed all these varieties as well as others obtained by Count Lavinio de Medici Spada—the Society's Secretary—formerly the "President at Arms" (a kind of Minister for War) of Pope Pius the ninth, an office which implied the title of Cardinal, though a lay one. He, later, gave up the cardinalate and married a beautiful Polish countess—Natalia Komar. The Count spent the last twenty-five years of his life in Rome, though a frequent visitor to his villa "La quiete" at Treja, near Macerata in Central Italy. Here, more than one thousand camellias were grown, including varieties originated by himself, such as the 'Adele Palagi Medici,' 'Countess Natalia de Medici Spada,' 'Stella della quiete,' etc.

The head gardener at Villa Doria Pamphilj, where—as I said—five hundred and fifty camellias were grown—was one Moses Mauri, a profilic originator of new varieties all named after members of the Doria family.

Other Romans distinguished for their love of camellias were:

Alessandro Del Grande, the originator of 'Bella Romana,' 'Ninfa del Tebro,' 'Trionfo di Roma,' etc. (some of these were well-known not only in Italy but also abroad);
Antonio Belardi, who left us 'Belardi Vera' and 'Minerva Medica';
Emilio Richter, with 'Luduina Richter' and 'Marchesa Campana';
Albertini, with 'Count Alessandro Komar,' named after Count de Medici Spada's father-in-law, and 'Giardino Antonelli.'

The first Italian book on camellias is probably an anonymous booklet, entitled *The Teruggia Gardener,* published in 1796. These are the opening words—still valid today, despite the passing of the years: "There does not exist a good book in the Italian language that a gardener could use in our times. The English, the Dutch, the French have splendid books of the kind."

The author then goes on to describe the plant with which we are concerned, and says: "The common name of the *Camellia japonica* is China rose," and adds: "this very beautiful, evergreen shrub is beginning to embellish the gardens of amateurs in Italy. There is a single and a double variety. The double has a very large flower full of vivid red petals. The Chinese so love this flower, that they draw it in textiles and paper tapestries. It is a conservatory plant and is cultivated like the common oleander."

The suspicion arises at this point that the *Teruggia Gardener* has become somewhat confused, and that what he is actually describing is the *Hibiscus rosa sinensis* and labels it *Camellia japonica*!

Reliable sources, such as Berlese and many others, maintain that the first Italian grown camellia was one with single red flowers that was planted in 1760 in the "landscaped garden" of the Caserta royal residence, where it still survives. All the information sources agree on this; unfortunately the dates do not. Work in the Caserta park *did begin* in 1752, but work on the landscaped garden, where the camellia is, was not started till 1782, when the English Architect, Grefer, arrived, called there by the eccentric Queen of Naples. This makes the Caserta camellia at least twenty years younger than is generally believed.

In any case, after the happy result of open air growing in Southern Italy, this one was also applied in Rome, Tuscany and Lake Maggiore.

A very rare, much sought-for book, the *Antotrofia, or the growing of flowers,* by Antonio Piccioli, published in Florence in 1834, affords a good idea of the diffusion of camellias in Tuscany. The author describes nine camellias in detail, beginning each description—except the last—with the words: "This very beautiful plant which grows wild in China and Japan, was introduced in our gardens about *twenty years ago.*" Of the ninth, he says: "it was introduced in Italy thirty years ago or more." This shows that the single red camellia was already well-known in Italy at the end of the eighteenth century and that the double varieties followed a few decades later.

After a period of great popularity, the craze for camellias waned. Attempts at reviving it met with difficulties that could hardly be explained. It is possible that the decline may be due to the discouraging slowness of the camellias' growth.

When leisure was not a mass problem, the slow progress of the camellia toward mature, opulent beauty was an added attraction, but in our restless times her aristocratic detachment makes her unpopular. In the past, no one who planted a garden would allow visitors to see it for seven years. He planned for the future. Now, everything must be done immediately.

The result of this mentality? A standardized, ready-made garden where the camellia can hardly find a place.

Camellia Interest in Australia

F. S. TUCKFIELD Victoria

CAMELLIAS came to Australia in 1831. They were imported by members of the Macarthur family who lived at Camden Park, New South Wales. William Macarthur proceeded to raise seedlings and name varieties.

Interest in camellias developed with nurserymen offering fresh importations as well as those propagated by Macarthur. The height of this enthusiasm was reached about 1880, and then, as in other parts of the world, the camellia fashion faded, and to such an extent that they were virtually eliminated from plantsmen's catalogues. This stagnation was to continue except for the occasional new variety such as the Australian raised 'The Czar', catalogued in 1915.

The real stimulus for a revival was made with camellia shows held during 1939, 1940 and 1941. An immediate new demand for plants began, and by 1950 it was beyond the capacity of nurserymen to supply the demand. It was at this time that the Australian Camellia Research Society, headed by Professor E. G. Waterhouse, was formed.

This body, so ably led by the Professor, pursued the task of identifying the plants whose names had been lost and, I venture to say, can claim great credit for re-establishing the nomenclature of many of the world's most valuable cultivars whose identity had been lost.

The Australian Camellia Society's work, however, has not stopped there, but continues to be involved in investigation into the various fields of history, botany and taxonomy, as well as the task of combating the pests and diseases which affect the plants. This, naturally, results in a high degree of success in the final goal of vigorous plants which produce good flowers. Furthermore this work, through the avenues of numerous horticultural societies, has resulted in Australians, who are on the whole keen gardeners, having a good understanding of the requirements of camellias. In practically every garden the genus is well represented and, except in the far north and central areas, grows exceedingly well, bringing reward to growers, whether they are used for landscaping effects or grown for special use such as floral arrangements and the like. Camellias are well represented in public parks and botanic gardens and there are many fine trees still to be seen which were planted during the middle of the last century.

The most exciting development of planting in public places was the creation and opening, on 29th April 1970, of the "E.G. Waterhouse Bi-centenary Camellia Garden". The garden was so named, not only to commemorate the 200th anniversary of Captain Cook's discovery of the east coast of Australia but also to honour the man whose contributions to the arts are legion.

The setting up of this garden at Yowie Bay near Sydney was proposed by the Councillors of the Sutherland Shire and it was they who proposed the name, a fitting honour surely for the man who has done so much for camellia affairs. The garden is now well planted. It is a great gift to posterity.

Camellia lovers are well catered for by the specialist nurseries and credit is due to them for propagating not only the new local cultivars but for importing the cream of overseas productions. Some million plants must be propagated annually and these are available in almost any size which might be required.

Such is the interest of camellia enthusiasts that every known species and every cultivar of merit could be found in one collection or another. Cultivars raised in Australia are numerous and varied and interest is maintained by the annual addition of new names. Among these is one with which I hope you are all familiar and that is the superb hybrid named for the raiser, 'E. G. Waterhouse.' This formal double registered by Professor Waterhouse in 1958 has inspired many people to learn more about the wondrous camellia.

Australian registrations have a good balance inasmuch that whilst seedlings have contributed mainly to the total it has been the capture of mutations which has made the list so interesting. Here I refer particularly to the line derived from the original 'Aspasia Macarthur' and these include 'Otahu Beauty,' 'Camden Park,' 'Lady Loch,' 'Can Can,' 'Strawberry Blonde,' 'Margaret Davis,' etc. The propensity of 'Aspasia Macarthur' and its sports to throw still further mutations (although not so frequently as to make it appear unstable), has created a degree of mystique that has added to its popularity, particularly among the more serious growers. The genus camellia has received good support from Australian books and periodicals, the latter providing news of topical events, exhibitions and competitions and perhaps more importantly of the employment of camellias in floral arrangements.

I summarise by saying that camellias in Australia are so established as to be regarded as something of the highest importance and show every indication of remaining in vogue for many years to come.

Camellias in the Region of the Lago Verbano

PIERO HILLEBRAND Italy

IT is a pity that we do not have at our disposal documents giving precise dates of the origin of camellias in the Verbano region of Italy and we must therefore trust mere suppositions.

In private parks we can admire beautiful camellia plants more than one century old and probably older than one century and a half. That is why we think that the camellia appeared on the shores of the Verbano Lake in the first half of the 19th century. It is more difficult to establish which cultivars appeared first.

There is no doubt that the natural surroundings, the climate, the soil and the water are very apt to the cultivation of camellias; we even venture to affirm that the Piedmontese side of the Lake reproduces the conditions of their natural habitat in Japan. In spite of the same climate, the Lombard side of the lake is less favourable to the cultivation of camellias, as the soil is limestone and is, therefore, practically denied to any kind of acidophylous plant.

Returning to our historical news, if we may use the term, we could establish the dates of origin as between the years 1828 and 1830. It seems certain that about that time a very clever gardener abandoned his important position in the Borromeo Islands in order to start his activity of floriculture in Pallanza, thus beginning a firm which became famous in and beyond Europe—the firm of the Rovelli brothers.

Documents of the epoch do not exist, or are unknown to us, and we do not know, even superficially, the history of this important concern which undoubtedly had a great influence on the development and diffusion of camellias on the Verbano shores.

We find the name of the firm in the Burnier Catalogue (Florence 1846-47) where nine cultivars are attributed to the Rovellis; the most famous among them are 'Gloria del Verbano' and the tenth on the list 'Bolongara delle Isole Borromee.' The latter's attribution to the Rovellis is doubtful.

The first catalogue of the Rovelli firm, which is in our collection, only goes back to 1874 and does not include information on the origins.

We find older hints in the Berlese and Colla essays. In *Camelliografia* (Turin 1843) by Louis Colla, Lago Maggiore, Lago d'Orta and the Borromeo Islands are mentioned as excellent places for the cultivation of camellias where they were cultivated obviously before the publication of this book.

In addition to a floral arrangement this display also included three non-competitive exhibits. One was a display of American camellias, and another was a group from Australia and New Zealand. Finally there was a group of natural camellia species, which aroused a surprising amount of interest, considering the lack of colourful flowers available in this group at the time. The general public seemed to be as interested as the "aficionados", and the exquisite miniature flowers of *C. rosaeflora* were admired as much as the most flamboyant hybrids.

For exhibitors a very pleasant feature of the show was the very willing service rendered by charming uniformed hostesses, who not only carried in boxes of flowers, but helped exhibitors to arrange them decoratively. Also they were anxious to render any personal service during the four days of the show.

I had made an unhappy start because after picking the camellias all day my wife and I had gone on to Vigo the night before the show, after receiving assurances at the frontiers that my flowers would pass through without delay or hindrance, and my gardener Frank Saunders had brought the flowers in the truck early in the morning. The Portuguese officials then refused to let him through for three hours and he arrived very late for displaying the flowers. The girls had already assisted by telephoning a complaint to the frontier, and they all piled in with enthusiasm when the camellias finally arrived. But with so many named flowers of various categories we could not accept any help with arranging them, without confusion resulting, and I felt embarrassed and churlish in refusing the continually repeated offers of help which so clearly they wanted to give.

A beautiful English-speaking señorita named Christina was assigned to me and she took her task very seriously indeed. For instance, when during the ceremonies she had to hold the Gold Camellia for a long time and was obviously distressed by the weight of the marble, Christina would not allow me to relieve her of the strain even for one minute. And when the public were crowding round my stand, with a few individuals inevitably wanting to touch something, she assiduously guarded the flowers as though they were her own.

It is worth recording that after I had received so much service and friendly co-operation, the organisers asked me, with obvious concern, whether I was completely satisfied. I was sorry then that I did not have fluent Spanish, to be able to explain to them how much I appreciated their hospitable reception of a stranger, and their superb organisation of a splendid show.

There is little, and inexact, data. Actually we know nothing about possible exchanges between the Verbano and the Italian regions or the European States; we do not know when or where the camellia appeared on the coast of the lake nor which is the oldest camellia of the Verbano.

It is almost impossible to find the Rovelli's cultivars. Even if we are sure that some of them are still alive in what is the remnant of their garden, their identification is impossible. For the same reason it is impossible to recognise and classify even the most diffused of the other cultivars.

What we are actually able to do is to identify the few cultivars known all over the world as 'Contessa Lavinia Maggi,' 'Alba Plena' 'Donkelarii,' 'Bonomiana,' etc. It is not rewarding to realise that such a beauty as would make us the envy of the world is wasted and lost. We believe we have found, in what remains of the Rovelli Garden, 'Paolina Lucca' which is a cultivar with double, perfect, pure white flowers and big, dark green leaves. This in itself is not much, but the work of identification and nomenclature is a desperate enterprise.

Since the first days of its birth, the Società Italiana della Camelia has tried to rescue what it could, but with its modest forces it is unable to start a list of the old plants and especially of their location because of the silly prevention of many proprietors and, most of all, because public institutions deny any help instead of being proud to regain a natural and cultural wealth typifying the landscape and atmosphere of Lago Maggiore. However, our Society is to be merited: it has awoken on the shores of the Verbano, and all over Italy, an enthusiasm for camellias.

Referring to ourselves, the Verbanese, the interest in cultivation of camellias declined into platonic love after the fury of the 19th century. We were reproducing a few hundred plants by air-layering. The nomenclature was vague or non-existent. I, for instance, possess a small collection of 30-35 cultivars, bought from Guichard somewhere between 1935 and 1938, which I have identified with difficulty.

Some facts remain: after the slow but steady and sure work of the Società della Camelia, and most of all because of the contagious enthusiasm of our President, things are moving most promisingly. The reproduction by layers is reaching the number of 15,000 per year, even if the data is not too precise and the nomenclature far from accurate. On the contrary, the reproduction by cuttings, previously unknown and later accepted with diffidence, is now the most important reproducing process. We do not dispose of exact numbers but we evaluate as 50,000 the amount of cuttings in 1971.

In this case we must also point out the lack of nomenclature as some growers pay no attention to it; this is no help in qualifying the floriculture of the Verbano. Personally speaking, we have tried to give exact names to the old collection, to collect and recognize the old cultivars, and to improve the production by adding new English, American, Australian and Japanese cultivars. In our garden reproduction is by cuttings.

Within the limits of human possibilities it is our hobby to do our best in nomenclature: it is our deep conviction that, by persevering, Verbano will return to be one of the best zones for the production of camellias. The only condition for a happy success is persevering precision.

And now to conclude, one hint about hybridation.

It is not our intention to renew policies already proposed in our Bulletin, but we are firmly convinced that it is practically impossible to obtain some new, really valid cultivars by operating upon *Camellia japonica.* New hybrids of real value may appear only through hybridation between species.

If some Verbanese feels capable of renewing the great tradition of the Rovellis, the way is to follow the example of great contemporary Anglo-Saxon hybridisers who create real novelties according to these two rules: scientific discipline and hybridation between species. No laurels are attainable solely by trusting one's luck: the time for impromtu experiments is ended.

In the first years of this century the Rovelli firm, which was exporting plants all over Europe, had the honour of supplying the plants for the new park of the Royal Villa of Belguim in Lacken; we would like now to express the desire of seeing the Verbanese floriculture, under the auspices of the Società Italiana della Camelia and of the Floricola Coltivatori Diretti Section of Verbano, who have kindly invited me to write down these notes, returning to the past splendour and seeing the camellia del Verbano becoming again the camellia d'Europa.

New Camellia Introductions in California

MILO ROWELL California

AT the International Camellia Conference held at Stresa, Italy, I was privileged to show slides of some of the new camellias developed in California. During the showing of the slides, I made some extemporaneous comments relating to those I had known for several years or had the opportunity to observe for several years, and have been asked to prepare a memorandum from the notes used at the Conference.

'Elegans Splendor.' The principle differences between 'Elegans Splendor' and 'C. M. Wilson,' of which it is a sport, are that the pink petals are edged white and the flower appears fuller petalled and on most of the flowers the serrations of the petals is deeper, making it a very handsome specimen.

'Clark Hubbs.' This is a large vivid dark red seedling of 'Ville de Nantes Red.' It is full to loose peony form and under good growing conditions has excellent fimbriation of the petals. By good fortune, it is one of my seedlings.

'Kohinor.' A chance orchid pink seedling of 'Buddha' from Park Hill, the residence of Mrs. Monique Peer, which I have grown for three years and find the flowers very attractive. It is somewhat similar to several other introductions, but I personally rate it high as an excellent *C. reticulata* for our area of California.

'Nuccio's Gem.' A recent release of Nuccio's Nursery at Altadena, California, of a large fully doubled white with large petals. I know of no other white double that can come close to it in size and uniformity of bloom and consider it the most outstanding in its class that I have seen anywhere.

'Eleanor Martin Supreme' is a seedling of 'Donckelarii.' The flower is a semi-double with a few more petals than its parent. It stands up well and in the supreme form has an unusually regular variegation of white in nearly all of its petals and is quite striking on the show table.

'Betty Sheffield Supreme' is probably so well known that any descriptive material is unnecessary, but in the event that some do not know of it, it is so outstanding and unique it deserves comment. It has the standard 'Betty Sheffield' form of a high centred, fully petalled semi-double, with slightly smaller flowers than produced by the parent plant, but the outstanding feature is that the petals are white with a deep pink to light red uniform edging around each petal. The only other known flower having this margined colour effect is 'Margaret Davis,' a sport of 'Peoniflora,' but the two flowers in their form and petal size are so different that there is no similarity between them.

'Milo Rowell.' A *C. reticulata* x *C. japonica* hybrid produced by Mr. Howard Asper of Green Valley Nurseries at Escondido, California, of 'Crimson Robe' x 'Tiffany.' From the same seed pod came 'Valentine Day,' which will be described later. The flowers on this hybrid, for the first one or two years, should not be used in judging its qualities, as the better flowers are slow in developing. It is very large, deep rich pink and in its maturity has rabbit ears standing upright of three or more inches. I greatly admired this plant when it first bloomed, and was delighted to have such a fine flower carry my name.

'Pink Sparkle' is a very unusual chance seedling of *C. reticulata* that has an excellent light pink colour and each flower petal seems to be sprinkled all over with a minute irridescence. It is quite unique in colour and extremely attractive.

'Margaret Davis.' I have mentioned this under 'Betty Sheffield Supreme' and it is equally unique and equally beautiful. It is a sport as previously mentioned of 'Peoniflora,' having the same form, smaller petals than 'Betty Sheffield Supreme,' but carries the character of deep pink edging. The two are quite different in all respects, except marking.

'Grand Prix.' A very large, fully opened, semi-double of 6 to 8 petals of a brilliant red, with a slight orange tinge. It is quite dramatic and highly prized by camellia enthusiasts who enjoy exhibiting their flowers for trophies.

'Guilio Nuccio Variegated' has been in commerce so long and has been so well received and well grown throughout the world camellia area, that it seems repetitious to describe it here. However, I observed the A.C.S. Accredited Camellia Judges' reaction to a perfectly grown specimen that is worthy of comment. While judging an outstanding show at Birmingham, Alabama, of many thousands of excellently grown hot house flowers, I finally made my way to the table where those selected for judging for the Best of Show were on display. There could have been no less than 30 American Camellia Society accredited judges attending the show and there certainly were no less than 60 flowers from which they were to select the Best of

Show. Observing this situation it appeared to me that to gain a majority of all the judges as to the finest of these 60 plus perfect blossoms would be an impossible task and would take an hour or more. Included in the flowers on display was a specimen of 'Guilio Nuccio Variegated.' The markings on it were excellent. The white variegation was very large and evenly distributed. There were 4 rabbit ears equally spaced, standing up vertically, quite uniformly and after a thorough survey of the remaining flowers which included some outstanding specimens of much newer varieties, I decided it was my choice. Much to my amazement and surprise, well over 60% of the judges reached the same decision on the first ballot. I can think of no such occasion where a flower which, under such strong competition, was chosen so quickly.

'Bob Hope' is an extremely dark, but vivid red, fully semi-double and is going to be introduced by Nuccio's Nursery in 1973. I have seen no other dark red camellia with the brilliance of colour that 'Bob Hope' displays.

'Elegans Supreme.' This is a sport of 'Elegans' that has very deep serrations on its petals of a most unusual, vivid, sparkling pink that seems to have a reflective sheen and I do not know of another camellia that has this effect to such an extent. It has become the most popular of all the 'Elegans' sports in the United States, and it is most distinctive.

'Grand Slam' is another introduction from Nuccio's Nursery, of a fine deep red, fully semi-double of good form, good size, good growing habits and has received many awards, including the Margaret Hertrich and Illges medal.

'Angel Wings.' A medium sized semi-double hybrid between *C. japonica* 'Dr. Tinsley' and *C. saluenensis.* The colouring is white shaded orchid pink and most attractive.

'Easter Morn.' Delicate pinks and white shading to pink have become very popular in the United States recently. This is a very large, occasionally irregular semi-double to usually full peony form. The light and shadows cause it to appear to be from the lightest of pinks to a baby pink.

'Valentine Day' is the seed pod mate of 'Milo Rowell' from *C. reticulata* 'Crimson Robe' x *C. japonica* 'Tiffany.' It is a large to very large formal double with a rose bud centre of a lovely slightly salmon tinged pink. All of a sudden in 1969 and 1970 we have two outstanding formal doubles; this one a pink hybrid and 'Nuccio's Gem' a white *C. japonica.*

'Lila Naff.' This is the most delightful shade of silver pink that I have seen in a *C. reticulata.* It is the standard form of *C. reticulata,* semi-double with wide petals.

'Vallee Knudsen.' Another excellent hybrid, this time of *C. saluenensis* and *C. reticulata* 'Buddha.' It is large to very large of an excellent semi-double form. The deep orchid pink is a most attractive and unusual shade. The substance of the flower gives it good keeping qualities.

'China Lady.' One of five hybrids between *C. reticulata* 'Buddha' and *C. granthamiana* that I have grown, all of which are very similar. They give the appearance of a single but have 7, 8 or 9 overlapping very large petals, usually orchid pinks and very large. Of this group 'China Lady' was selected by Nuccio's Nursery for introduction primarily because it is much earlier to flower. The early blooming characteristic of *C. granthamiana*

seems seldom to show up in 1st generation hybrids. The earliest I have grown is McMinn's 'Autumn Glory,' a cross of 'Spencer's Pink' and *C. granthamiana* which is an attractive medium flower.

'John Taylor.' Again one of the many fine *C. reticulata* x *C. japonica* flowers recently introduced in California. A fine dark red, very large, irregular semi-double.

'Pink Pagoda.' A *C. japonica* pink, medium to large formal double. An excellent introduction and superior to most of this colour and form.

'Erin Farmer' is another chance seedling with a large white shaded orchid pink loose peony form flower that is most attractive.

'Howard Asper.' When this flower was first exhibited it created what was probably the greatest sensation among U.S. camellia fanciers that has occurred in 20 or more years, and rightly so. This medium salmon pink flower is very large, has a loose or open peony form with several high standing upright petals that gives it unusual grace for such a large bloom. The plant stands more full, hot sun than any camellia I grow. In the early days of its introduction some of the plants distributed were unknowingly grafted from scions of two sports, thus care must be taken to get the true form of this cross between *C. reticulata* 'Cornelian' and *C. japonica* 'Coronation.'

'Gay Time.' This hybrid by Les Jury is a most interesting and lovely thing. The cross is between his excellent clone of *S. saluenensis* and *C. japonica* 'Mathotiana.' The flower form varies tremendously from semi-double to formal double and this multiplicity of form of these delicately coloured white shading to both light and dark-orchid pink blooms on a strong handsome plant makes a most interesting and beautiful garden show.

'Francie L.' Here is an outstanding hybrid between *C. saluenensis* 'Apple Blossom' and *C. reticulata* 'Buddha.' The plant is very vigorous and better foliaged than most *C. reticulata* hybrids. The rose pink flowers are very large semi-double with upright wavy petals and most uniform all over the plant. In California shows many is the time that the top two flowers in this class are 'Francie L' and 'Howard Asper' and the choice between them is a burden on the judges.

'Charlie Bettes.' An outstanding pure white and the only white to win the A.C.S. Illges Medal. It is a large to very large semi-double of excellent form.

'Mark Alan.' Not a particularly new camellia but most distinctive. It is a gaudy wine red, large semi-double flower with strap shaped petals that make it most unusual. In its variegated clone, the contrast between the pure white and wine red calls it to the attention of all viewers. Thinking of 'Mark Alan' brings to mind another hybrid with a comparable striking contrast of colour. This is 'Fire Chief Variegated,' a hybrid of *C. japonica* 'Donckelarii' and *C. reticulata* 'Cornelian.' This also is an excellent camellia.

It seems that once a new colour break occurs it becomes repetitious. The first formal double white flower edged with pink to the best of my recollection was 'Sawada's Dream,' introduced in 1958. Since that date quite a few of similar colour forms have followed such as 'Commander Mullroy' (1961), 'Julia Hamiter' (1964), and 'Ella Ward Parsons' (1968).

One of this class which has had a very limited distribution (most probably due to not being advertised or otherwise promoted by nurserymen) is 'Alta Gavin' (1962). *Camellia Nomenclature,* published by Southern California Camellia Society, describes it as a semi-double but my three plants over several years have only produced rose form flowers with an excellent rose-bud centre until they pass their maturity when the rose bud opens showing stamens. The flower is uniform in size (medium to large) and colour (white edged deep pink). The flower petals are larger than the others, uniformly distributed and coloured. The plant is vigorous and excellently displays its flowers. For those who admire the formal double and rose-form doubles with rose-bud centres I highly recommend this clone.

Several years ago the California Camellia Research Committee in conjunction with the Los Angeles County Arboretum at Arcadia commenced an extensive programme of hybridisation under the direction of Dr. Clifford Parks. In the course of time, Dr. Parks left California for North Carolina and many of the seedling plants were given to the Northern California Camellia Research Committee for further testing. The results of this project are just now coming to fruition. Among the members of the Committee growing some of these plants is David L. Feathers, a longtime successful hybridiser in his own right. 'Arch of Triumph' and 'Ming Temple' are two of Mr. Feathers' recent introductions that are outstanding. 'Dr. Clifford Parks' hybridised by him and grown and evaluated by Mr. Feathers is equally outstanding. From this same source more are soon to come. Most of the *C. reticulata* x *C. japonica* crosses and the reverse crosses are first generation. Soon we will advance into 2nd generation hybrids producing even more attractive flowers.

It was my great misfortune to be unable to arrive at the Conference for the first two days. This, however, was fully compensated by the wonderful days that followed. The garden tours were outstanding. An additional week to spend in Stresa to slowly retrace our tours and make up the gardens we missed would be all too short. The lectures were equally impressive. Best of all was the opportunity to renew old friendships and make new ones.

My sincerest compliments to the many people participating in making the Stresa Conference such a great success.

Impressions of the Conference and Camellias of Lake Maggiore

R. E. GULLIVER United Kingdom

MORE than 175 members of the International Camellia Society, with their guests, gathered in Stresa for a week-long Conference at the beginning of April. The first day, scheduled for visits by steamer to the Borromean Islands, augured well for the remainder of the week's comprehensive programme of garden visits. The weather was delightfully warm with sunny blue skies and ideal for the enjoyment of the island gardens. Unfortunately, the weather did not live up to its promise and for the remainder of the week was decidedly changeable and inclement, so that raincoats and umbrellas were the order of the day. Bad weather, however, did not deter the camellia lovers who made their way round numerous gardens between Arona and Locarno admiring, discussing and photographing the glorious, wide variety of blooms as enthusiastically and knowledgeably as ever.

After dinner each evening in their comfortable, lakeside hotels delegates met in the Congress Palace to hear a series of lectures on various subjects related to camellias in different parts of the world given by distinguished speakers from the U.K., Australia, the U.S.A., Italy, Switzerland, Japan and Spain.

Members of the Italian Camellia Society were hosts to the visitors, and the Conference was arranged in conjunction with the 8th Annual Show of the Italian Society in the Congress Palace, where a fine show of blooms and flowering plants were admired. A feature of the Show was a beautiful exhibition of camellias in watercolours by the famous Swiss artist, Anna Maria Trechslin.

On the social side there were receptions by the Mayors of Stresa, Cannero Riviera and Locarno, and delightful refreshments provided so hospitably by the owners of the various private gardens visited. A highlight of the week was the banquet at the Italian Hotel School of Catering in Stresa where the gastronomic delights of top-class Italian cuisine and hotel service were enjoyed. All functions were, of course, profusely decorated with camellia blooms, branches, sprays and plants in pots.

The arrangements for the Conference, which was voted an outstanding success, were in the capable hands of the Society's indefatigable Secretary, Mr. Charles Puddle, of Bodnant, in close collaboration with Dr. Sevesi, the Italian Camellia Society and the Tourist Board of Stresa, to all of whom grateful thanks for a most rewarding and enjoyable experience must be given.

The hospitality and friendliness of our Italian hosts was superb and contributed enormously to the success of the visit. When final farewells were said many new friendships had been cemented among lovers of the camellia from all quarters of the world.

Lake Maggiore is the most westerly of the three principal lakes of North Italy, the northern extremities of which extend into Switzerland. The resorts on the lake were originally made popular by the British and were the haunt of the well-to-do, more elderly visitor, but today Stresa, Baveno, Cannobio and the other delightful places situated along the shores of the lake are visited by pleasure-seeking younger visitors and by the package tourists. The main Simplon-Lotschberg rail route to Milan from Switzerland passes through Stresa and Baveno so that even the traveller by train can enjoy glimpses of the picturesque beauty of the lake and the distant Alps through gaps in the trees or over the roofs of the villas lining the shores. In springtime this is a truly delightful region, set against the background of the snow-covered mountains.

Camellias have been cultivated extensively along the whole length of the western, or Piedmontese, side of the lake—from Arona in the south to Locarno and Ascona in Switzerland in the North—for something like 150 years, and perhaps longer, particularly in the area around Stresa (famous as the venue of the pre-World War II Peace Conference in the mid-1930's) and in the region of Pallanza (Verbano) a little to the north. There seems little doubt that conditions of climate, soil and water here are particularly suitable for the cultivation of the camellia.

Unfortunately, there exists an almost complete lack of records which would provide precise information regarding the introduction of camellias in the area, and, for that matter, of the varieties that were first introduced and cultivated here. During the second half of the last century, when camellias were enjoying considerable popularity in Europe, much hybridisation was carried out and camellias were extensively planted in private parks such as at the Villa Pallavicino near Stresa and at Monte Oro in the nearby commune of Ameno, and in villa gardens throughout the region where, today, they can in numerous cases be seen to have developed into large trees. In full flower at the beginning of April last, when I enjoyed the unforgettable experience of visiting camellia gardens on the shores of Lake Maggiore, there must have been, in some cases, thousands of blooms on a single specimen tree.

However. it does seem to be known that about 1830 an experienced gardener named Rovelli started a nursery in Pallanza with his brother, and this firm introduced and commercialised many new cultivars which now grace villa gardens on the lake. A few of the firm's old catalogues are still existent but no source or origin is mentioned against the list of varieties available, so that it is impossible to trace the history of the plants introduced and marketed.

Part of the old Rovelli nursery gardens still remain, sadly neglected, in the grounds of what is today the Hotel Eden at Pallanza. On my visit to this old garden I noticed a large, bushy specimen of *Camellia maliflora* flowering quite freely and, underneath in the lank grass, a few self-set seedlings. In fact, in this garden many camellia plants had dropped seed and young seedlings were growing profusely through the grass.

In the Verbano region today, Signor Hillibrand, at his nursery at Pallanza, is doing much to overcome problems of the past which have allowed camellia cultivation to fall into a state of neglect; and, with keen help from the Italian Camellia Society, the position is beginning to improve.

It has, of course, been possible to identify some of the more popular varieties, but it is a sad thought that so many beautiful plants bloom each year bringing pleasure and enjoyment to their beholders but in a state of almost complete anonymity. However, a name is but a name and the beauty remains for all to see.

These notes on the camellias of Lake Maggiore would not be complete without reference to the gardens of Isola Madre and Isola Bella, two of the larger islands in the lake which, together with Isola dei Pescatori (Fisherman's Island), are collectively known as the Borromean Islands. Best known is Isola Bella, a short steamer trip from Stresa, where the palace on the tiny island was built by Count Charles Borromeo in the 16th century. Isola Madre, largest of the three islands, lies nearer Pallanza on the north shore and it, too, has a palace built by the Borremeo family.

The palace gardens on Isola Bella and Isola Madre were first made about 300 years ago on what was virtually barren rock. They are, of course, typical italianate gardens of the formal style with terraces, steps and balustrades; with avenues always with an enchanting vista of the lake or the mountains beyond, and dotted here and there with stone or marble statues set off by a background of evergreen. The total effect is enhanced by small orange or lemon trees planted in tubs on the stone walls or placed beside ornamental gateways. Peacocks, strutting or displaying on the lawn, contribute to the grace and beauty of the scene.

These two beautiful gardens have a particular appeal to camellia lovers, as they contain in a small area one of the first collections of old specimen plants in Europe. It is believed that some of the older specimens of *Camellia japonica* cultivars growing here were among the first to have been introduced into Europe from China and Japan. They were planted *in situ* and at the present time are at the peak of their glorious maturity. They grow exceedingly well here and frequently attain the proportion of trees, whilst some are cultivated as hedges. In the gardens on Isola Bella I remarked on a clipped camellia hedge against a retaining wall some ten feet or more high and several yards in length. The camellias, some of which are cultivars no longer in general cultivation and some of which are seedlings, are mostly forms of *Camellia japonica,* but other fine specimens were also noted doing remarkably well, particularly *Camellia reticulata, C. sasanqua* and *C. maliflora.* The japonica varieties, notably the single-flowered ones, seed freely and young seedlings can be found under the skirts of the parent plants. "Sporting" was observed on some trees to an extent I have never seen before.

More recently the collections on the islands have been kept up-to-date by the addition of new varieties from different sources including some from New Zealand and, from England, a selection of modern *C. reticulata* cultivars

Both gardens are open to the general public and a good service of steamers transports visitors from Stresa or Pallanza on the mainland. In Spring, when the camellias are in full bloom, one of the most magnificent garden spectacles may be viewed, because here they are so well associated

with other magnificent specimens of magnolias, rhododendrons, azaleas and many other plants of great beauty and interest.

A note on climatic conditions is relevant here. The amount of rainfall throughout the year is generally adequate. The proximity to the Alps brings snow in winter, especially on the mainland, but the lake water does not freeze. Severe winters bring a certain amount of frost but the camellias do not appear to suffer, which fact once again testifies to the hardiness of these plants. The summer is usually long, hot and dry so that great care has to be taken to ensure that the plants are well top-dressed with moisture retentive materials and adequately watered, as the soil is shallow and, as is well-known, camellias are endowed with surface-rooting habits.

Incidentally, the camellias in the park at Monte Oro (mentioned earlier) are planted in a rather open situation on the slope of a hill some 1,500 feet up, and do appear to suffer to some extent from over-exposure to the sun.

For those fortunate enough to be able to make a leisurely excursion in the region of Lake Maggiore, a visit to the gardens of the Villa Taranto should on no account be overlooked. The gardens are quite easily accessible, being situated on a promontory of the lake between Pallanza and Intra, and formerly consisted of a rough wooded area on a hilly site rising to 100 metres above the level of the lake and which afford in many places very fine views of the lake and the mountains as far as the summits of the Swiss Canton of Ticino.

These gardens are of quite recent cultivation and date back only to 1931. Their origin is most interesting and was due solely to a Scottish gentleman, Capt. Neil McEacharn, whose passion for botany and love of Italy prompted him, in 1931, to purchase the estate known as "La Crocetta" with a view to transforming it into a landscaped, botanic garden in the style of the English landscape gardens of the 18th century. Some might describe the gardens as an arboretum, but whatever description is preferred suffice it to say that during no more than forty years of existence the most comprehensive collection of trees and shrubs in Southern Europe has been gathered together. Due to a combination of heat and humidity in summer the rate of growth is rapid, so that already there are large specimen trees to be seen. The gardens contain many trees and shrubs from temperate as well as from colder climates, and some are quite rare. Magnolias are particularly well represented of which family there are more than twenty species and many garden forms. The Villa Taranto gardens contain an interesting collection of camellias emanating from various sources.

The gardens were given to the Italian State in 1938 by Capt. McEacharn who retained a life interest. Later, after the last war, the gardens were opened to the public and facilities made available for the reception of thousands of visitors by the provision of an imposing entrance, a large car park and a landing-quay for lake steamers. Capt. McEacharn died in 1964 and was buried, according to his wishes, in a chapel specially erected among his beloved plants in the beautiful gardens of his own creation.

Villa Taranto Gardens

DANIEL BARMES Italy

IT is a great pleasure for me to tell you about the gardens of Villa Taranto. First of all some explanation of the type of garden we have, for as you know under the heading "Botanic Garden" quite a diversity of institutions are gathered.

Villa Taranto belongs to the category of landscape gardens which arose in England in the eighteenth century; there is no taxonomical order in the planting schemes, but trees and shrubs are in the location which best suits them from an aesthetical and ecological viewpoint. Further it could be defined as an arboretum, because its importance derives from the collection of trees and shrubs. In America our garden would probably be called "a pleasure garden with botanical scope." Practically, we follow the trend realising that stronger ties should exist between those who grow plants, those who love plants, those who study plants and those who are responsible for the maintenance and development of our resources related to plants.

As for the history of our gardens, they date back to 1931 when Capt. Neil McEacharn, a Scottish gentleman, bought the property to convert it into a botanic garden. The untidy wooded area on the little promontory of the Castagnola was landscaped in a spacious garden of 17 ha. The original terrain bears no resemblance to the gardens as they are now laid out; what appear to be natural slopes with a transverse deeply cut valley, are really the result of a transformation of the physical contours of the site by Capt. McEacharn, so that no one now would suspect that the various elevations and declivities were other than the established formations of nature. Retaining walls were essential for the torrential rains might easily carry away whole banks in a couple of hours.

There is a reservoir at the highest point of the garden to provide an adequate water supply which is necessary due to the long droughts in summer; the water, of course, comes from the lake.

Not much was left of the original vegetation, with the exception of a number of fine chestnut trees, beeches — beautiful specimens of weeping, copper and cutleaf types — a few conifers, several *Magnolia grandiflora, Chimonanthus fragrans,* the winter sweet, of which there are enormous plants, and a very few old camellias.

So the majority of the trees and shrubs in the garden have been planted not more than 40 years, and many big specimens are much under that age. As a matter of fact the rate of growth is high in our climate, due to the combination in summer of heat and humidity. What makes these gardens

important is the presence of many trees and shrubs from temperate as well as from colder climates, often rare and of imposing dimensions, representing the most comprehensive collection of this type in southern Europe.

A few words on the climate may be interesting in this connection. The garden is favoured by a high rainfall, up to 2,000 mm. a year. A limiting factor for the cultivation of plants from subtropical regions where little or no frost occurs (as for example the Cape province, the North Island of New Zealand, the Canary Islands, etc.) is the low temperatures which are registered in some winters, sometimes more than 10 degrees for quite a number of nights. Below zero temperatures are the rule during our numerous nights with a clear sky in absence of wind, in December and January.

The climate is definitely not mediterranean, but has a continental component tempered by the oreographical physiognomy and by the presence of the lake. The rain falls mainly in spring, summer and autumn. The dry period is winter and not summer as in the true mediterranean climate. Rain in summer is usually falling in heavy showers, separated by long periods of drought and hot sunshine.

I would like to say something of the plants themselves, and first of all, not unappropriately, about the camellias. The camellias at Villa Taranto come from various sources. There are old plants, some of them certainly not far from a century old. Part of this collection very probably came from the one time famous Rovelli nurseries at Pallanza. Among these we find 'Anemoniflora,' 'Kelvingtonia,' 'Alba Plena,' 'Adolphe Audusson,' 'Contessa Calini,' 'Alfredo Odero' and others. Only some of them have been identified. Then there are the cultivars imported from Australia as, for example, 'Aspasia,' 'Great Eastern,' 'Isabella,' 'Mrs. Swan,' 'Redgrove' and 'Venus de Medicis.'

Others came from the English relations of Capt. McEacharn such as 'Lady Vansittart' and 'Lady Ardilaun.' Of the sasanquas—the Cinderellas of the camellia family, as Mr. Hazlewood once called them — there is a good collection of mature plants, partially unidentified but amongst those named are 'Hiryu,' 'Alba,' 'Pigmy' and 'Shishigashire.' The last cultivar which forms a low spreading, slow-growing bush is in continuous flower from November to March at Villa Taranto, and is hardly marred by snow or damaged by frost.

Of the species we have *C. sinensis,* the teaplant which forms a large bush $3\frac{1}{2}$ metres high, *C. oleifera,* some fine plants of *C. maliflora* (5 metres), *C. cuspidata* and *C. granthamiana.* The culture of the last species in the open is one of the many examples of our trials of acclimatisation. In this field we are specially interested in several regions of the globe with a climate which has affinities to ours, as is the case in parts of Australia, South Africa, New Zealand, the Andes region, the Gulf states, Japan.

In horticulture many trees and shrubs known to specialists and connoisseurs, although having great merits, are surprisingly neglected by the majority of garden lovers. Other plants are newly introduced, and among them there may be some agreeable surprises.

Another target is the enlargement of the genetic pool from which to draw for breeding purposes. This could apply in the case of *Camellia*

granthamiana which, by the way, has not yet flowered with us. To return to *Camellia sasanqua* (one of my personal preferences), this presents several advantages as compared with the *Camellia japonica* varieties, not the least being the autumn/winter flowering habit, and the much faster growth (not a small advantage in an era when we are all very much in a hurry—even in gardening). Of the camellia cultivars, I like particularly 'Magnoliiflora,' 'Iride' (as a cut flower), and the Japanese single and semi-double forms. Also the williamsii hybrids and the species, *C. maliflora.*

At Villa Taranto, *Camellia japonica* and *C. sasanqua* take a lot of punishment growing in full sun and on sharply drained slopes, and not flinching at more than 10 degrees of frost. The first camellias to flower with us are 'Anemoniflora,' 'Iride,' 'Gloire de Nantes,' 'Great Eastern' and 'Fred Sander.'

Now to some near relatives of the camellia which we grow. There are the stewartias, represented by very big plants of the species *S. pseudocamellia* and *S. sinensis* (12 metres). *S. malacodendron* behaves in a rather capricious way and we have difficulties with the propagation. Another very beautiful shrub is *S. ovata.*

The stewartias are not seen as much as they deserve. Not only are they beautiful in flower, but also their habit of late summer flowering is interesting, and several of them have very fine autumn colours. They are, however, not among the most robust of plants, especially the American species.

Other members of Theaceae here are *Cleyera fortunei* and the slow growing *Ternstroemia japonica.*

Before speaking briefly of some other items of the collection, a few words about the lawns, not altogether a very easy problem to resolve in a climate where the rigours of a consistently hot sun combined with stretches of sustained drought, make a healthy green lawn almost unobtainable. We are rather successful with a strain of *Agrostis stolonifera* which is resistant to heat and drought and knits itself so uniformly and closely by means of stolons, that weeds have little chance to establish.

The collection of rhododendrons is composed of species as well as cultivars with the accent on the first category. Among the species there are several which are considered rather frost tender, but which do very well here at Pallanza. Of course rhododendrons in Italy do not thrive as they do in Cornwall or on the west coast of Scotland, where the rain is more equally distributed and temperatures are more constant, but there are instances of species which succeed with us better than in the maritime climates of Western Europe, as for instance *R. griffithianum, R. griersonianum, R. bullatum* and *R. elliottii.* One of the causes of this phenomenon, of which there are many other examples, is certainly the prolonged summer ripening, building up a greater resistance to below zero temperatures. There are good plants of *R. arboreum* in its various forms. This is about the only species you will find in the villa gardens here and, astonishingly, they prosper also exposed to full sun. The first species to flower in early spring is *R. dauricum,* followed by *R. rirei* and *R. arboreum.* The early flowering species are rarely damaged by late frosts, for the simple reason that there are no late frosts, or rather there are no very mild spells suddenly followed

by sharp frosts; the transit from winter to spring is slow but uninterrupted. The hybrids which make a great show here are, among others, 'Earl of Athlone,' 'Cornish Cross' and 'Sesterianum.'

We lose rhododendrons every year by armillaria root rot and phytophthora, and we find these diseases very difficudt to control. Probably their outbreak is favoured by the hot weather in summer, which is of the humid type.

Another notable feature is the magnolias, of which genus there are over 20 species and many garden forms. *Magnolia campbellii* reached flowering age a few years ago and is a glorious sight in early spring. Although it flowers before the beginning of March in some seasons, its flowers rarely suffer from frost. *M. delavayi* is a fine foliage plant, but our plant is of modest dimensions. There is a mature plant at Villa Taranto, but it suffers severely from dieback.

M. macrophylla does not suffer from frost, and usually carries its gigantic leaves (here up to 90 cm or 3ft.) without damage by wind through spring and summer. Some fine specimens of *M. sieboldii* attract the attention by their semi-pendant flowers with beautiful crimson stamens. Unlike other magnolias, the flowering period of this species extends over a long time. A very successful hybrid in our garden is *M. x veitchii,* and these plants make one of the best shows, together with *M. stellata,* planted in bold groups, and *M. kobus,* especially the variety *borealis,* which as a mature tree surpasses all other magnolias in the abundance of its flowering.

The genus Prunus, of course, in early spring provides a number of trees and shrubs which could not be missed in any garden. In this bird's eye view of the garden I will only mention one of the uncommon if not rare species that draw the attention by a quite exceptional display of colour: *Prunus campanulata,* the bell flowered cherry. The colour stands quite apart in the genus, and is of a deep claret red shade. Earlier, referring to the effect of prolonged summer ripening, while speaking of the resistance of some rhododendron species to frost, I said that there are many other examples, and the case of *Prunus campanulata* is one of them. This plant is perfectly hardy here, but this is not so in parts of England and Scotland where winters are milder than at Pallanza.

By the way, this happy circumstance permits me to face the satisfied assertion of some English visitors who state elegantly and with mild astonishment that, for instance, the Australian tree fern, *Dicksonia,* does not survive the winter at Pallanza, while it will do so in some parts of Scotland or Ireland. Promptly, I point out some plant which stubbornly refuses to live or to flower in the British Isles, although it ought to do so—for instance, *Prunus campanulata!* Most of our many trees were planted in 1936 and all are setting seed freely.

Also worthy of special consideration are the maples, with several interesting species and many garden forms, especially *Acer palmatum.* Of this species there is a spectacular variety with amazing red leaves in spring, which produce a flowerlike effect. Even outstanding specialists have not been able to identify this (probably Japanese) selection, which seems to be near to the form named 'Chisho.'

There are some other very beautiful species such as *Acer griseum, A. nikoense* and *A. davidii.* Bean defines the first as "one of the most beautiful of all small trees." *A. griseum* is a tree with an ornamental bark, and this is a chapter usually neglected in gardening. It is rather scarce, possibly on account of the low germinating rate of its seed. *A. nikoense* is related and has gorgeous autumn colour.

The genus Cornus is well represented. *Cornus florida rubra,* the American flowering dogwood, is one of the greatest attractions in spring. Seeing it in flower here, one does not understand why it is not more generally cultivated. It is true that it prefers a continental type of climate, as it seems not to thrive and flower well in the maritime regions of Western Europe. *Cornus kousa* is at least as beautiful, and this asiatic cornel should be a foremost shrub for any garden. Here in June the branches are literally hidden under a sheet of pure white flowers (bracts) and moreover it assumes a very fine autumn colour. Another very fine species, *Cornus nuttallii,* is not a success at Villa Taranto.

Of conifers, which find mostly a congenial climate in the Lago Maggiore region, I draw attention only to fine specimens of *Cupressus cashmiriana, Pseudolarix amabilis, Picea spinulosa,* and *Cedrus deodara,* the Himalayan Cedar.

We have, of course, our failures. Among plants which do not thrive well in the gardens are roses; others suffer severely from disease or the humid climate as, for instance, some of the pines. Often plants coming from regions with low rainfall will not do. This is the case with a number of North American plants, especially from California, for example ceanothus. A trial of cape heaths proved successful.

To conclude this short survey a few words about some interesting items. The paulownias are most satisfying trees because of their beauty in form, foliage and flower. The rare *P. fortunei* is one of the treasures of the garden. There are big specimens of *Davidia involucrata,* the handkerchief tree, distinguished by the conspicuous white bracts with which it drapes itself in April. Another very rare tree, *Emmenopteris henryi,* flowered for the first time in cultivation here at Villa Taranto, in 1971. The "show" which this tree member of the Rubiaceae puts up in July consists mainly of extraordinary enlarged calyx lobes in proportion to the flowers. They develop into a large white stalked leaf. We have seen no seeds. Very impressive are also the Himalayan horse-chestnuts, *Aesculus indica,* which Bean calls "one of the most magnificent of all temperate trees." In my opinion rightly so. It is by the way, flowering more than a month after the common chestnut—another point in its favour.

Mine has been a more or less random tour of the gardens, and of course much has been passed over in silence. For instance, our acclimatisation trials with eucalypts, of which more than 30 species are cultivated.

Notable Plants Other Than Camellias Seen During the Stresa Conference

JOHN SCOTT MARSHALL United Kingdom

IT WAS a friendly, gregarious party of camellia-lovers that travelled to Stresa in northern Italy early in April 1972 for an eight-day conference jointly organised by the International and Italian Camellia Societies. Delegates came from eleven countries including the U.S.A., Australia, New Zealand, Japan, Switzerland, France, Holland and Spain—in fact from almost every country in which the camellia is extensively grown. Total attendance exceeded 175 and reservations had to be made in three hotels.

Stresa nestles at the foot of mountains, snow-covered at this time of year, and is situated on the shores of Lake Maggiore which is 65km long and on average 4km wide. It is well known as a fashionable holiday resort but more recently has become a congress centre because of the elegant and well equipped building that is now available for this purpose. The Congress Palace proved to be an ideal centre for the Camellia Conference and especially for the show that was staged concurrently with it.

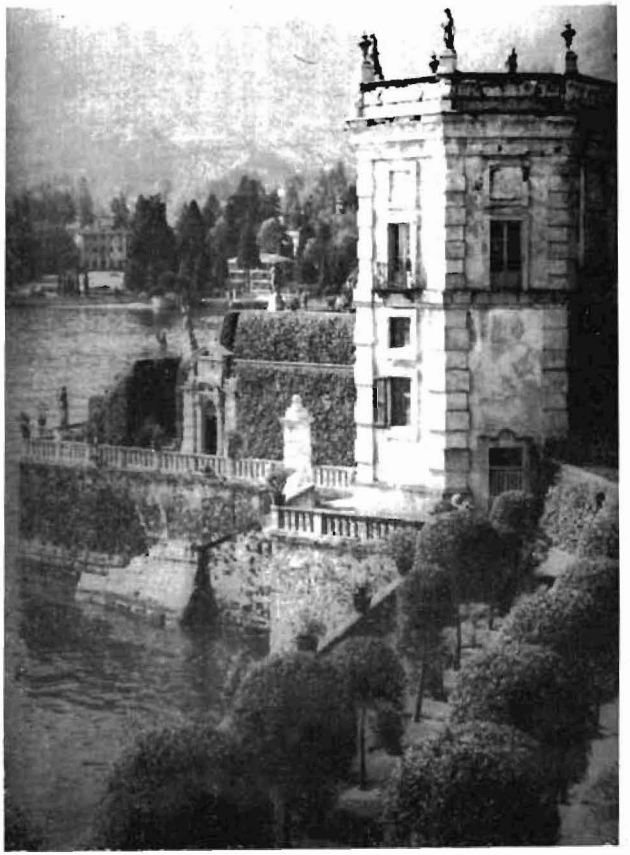
The three Borromean Islands of Madre, Bella and Pescatoris face Stresa and are about 200m above sea level. The climate for the area as a whole is such that plants from the tropics as well as those from the Mediterranean and northern temperate regions flourish. The influence of the lake, however, on temperature and growing conditions is especially noticeable up to a height of 200 feet. The guide book for Lake Maggiore makes the point that winter temperatures can be six degrees warmer and in summer 22 degrees cooler than the temperature of surrounding or higher districts. The movement of air currents and wind also exert an influence. Up to about mid-day the warmed wind from the plain, known locally as the *inverna,* blows up the valleys, to be followed later by the *tramontana* blowing in the opposite direction to bring cool, fresh air down from the mountains. Meteorological records preserved locally indicate that frost and snow were virtually unknown in the area a century or more ago, but this no longer applies, although even now at lake level snow rarely persists for long. Today oranges, lemons, the tree ferns (*Dicksonia*), aloes and numerous semi-tropical plants which formerly survived through the year on open sites now need winter protection. The *Catalogue of the Plants in the Gardens of the Villa Taranto,* however, records interesting instances of hardiness among plants commonly regarded as tender, for example the Chilean bell-flower (*Lapageria rosea*), *Cestrum* 'Newellii,' *Araucaria bidwillii, Podocarpus macrophylla,* the Crape Myrtle (*Lagerstroemia indica*),

Billardiera longiflora, Sollya heteraphylla and *Jasminum polyanthum.* On Isola Madre the most striking example is the magnificent specimen tree of the Kashmir cypress (*Cupressus cashmeriana*) 'Glauca.'

Assuming that the Villa Taranto is typical for the area, the rainfall is very high ranging from 90 to 100 inches annually. While it may be true that there are few days in which it rains incessantly, delegates to the conference found to their discomfort that proximity to the mountains can produce sudden torrential downpours in which as much as 4 inches of rain will fall in a few hours. Fortunately for the local tourist industry the rainy seasons occur mainly in the spring and late autumn separated in the summer months by long periods of drought with consistently high temperatures. Plant growth in general, and that of the camellia in particular, is remarkably good under the circumstances. Growth, even by bushes planted in full sun, is rapid, and the prolific production of flowers—which have to be seen to be fully appeciated—is a sure indication that the plants are happy in their environment. Of course in such gardens as at the Villa Taranto where a system of irrigation was installed in the early stages of construction by the late Captain Neil McEacharn, good growth can be expected, but it is by no means restricted to the gardens of this calibre. It would seem that once established the roots can delve deeply in their search for water and so endure periods of drought in high summer, possibly even benefiting by the ripening of new wood by the strong, clear autumn sunshine.

The weather was most kind for the opening days of the conference and especially for the visits made to the islands of Bella and Madre which were separated by a packed lunch taken on board one of Lake Maggiore's well appointed boats. This leisurely approach was typical of all the arrangements made throughout the conference. There was ample time in which to see these and all the other gardens visited. The photographers and plantsmen were especially grateful to the organisers for not attempting to fit in too many visits, a temptation that must have been hard to resist in such a horticulturally rich district. On only one occasion was there much travelling to do, and that was the day in which a packed lunch was taken in Locarno. The formalities of the conference and the programme of lectures were restricted to the evenings, an arrangement that seemed surprisingly popular, possibly because it solved the problem for delegates of what to do after dinner.

Of the plants, other than the camellia, to be seen in flower so early in the season, the most spectacular are the magnolias. In private gardens, those of hotels and in the parks *Magnolia* x *soulangiana,* which flowers before it comes into leaf, is to be seen flowering so freely that it is hard to see the branches of the tree. Raised at Fromont near Paris early in the ninteenth century this magnolia has also won acclaim in Britain where the Royal Horticultural Society gave it its highest award, that of Garden Merit, in 1932. More recently several named clones have been introduced which tend to flower while young. 'Norbertii' and 'Alexandrina' are two that produce white flowers flushed purple on the outside. The latter planted next to *M.* 'Rustica Rubra' on Isola Bella makes a wonderful contrast. 'Rustica Rubra' is a sport of *Magnolia* x *soulangiana* 'Lennei' and received the Award of Garden Merit from the R.H.S., in 1969. The cup-shaped



Clipped bay trees on Isola Bella.

Dicksonia antarctica, the tree ferns at Villa Taranto that are grown in containers to facilitate lifting for winter protection.

rosy-red flowers are carried against the background of dark green oval leaves. *Magnolia kobus borealis* has acquired the reputation of being the largest tree form of the species; fortunately for the Villa Taranto conditions there would seem to induce it to flower more freely than is the case in Britain.

The silver wattle (*Acacia dealbata*)—the florists' mimosa—is a spectacular sight with the sun on it. Planted in many gardens, big and small, it must be a most welcome shade tree during the heat of the summer. The trees on Isola Bella are the size of a standard apple with trunks 9 to 12 inches in diameter. A native of Australia, out-door speciments are by no means unknown in Britain, but without protection they will not survive winters that even approach the severity of 1962-63. Many other species of wattle are grown; the Villa Taranto *Catalogue* lists 46 including *A. melanoxylon,* the blackwood acacia from Tasmania, which in Cornwall will grow to 60 feet to produce timber of good value.

A shrub still widely known as *Aegle sepiaria,* or even descriptively as *Citrus trifoliata,* now *Poncirus trifoliata,* is to be seen in the public gardens of Stresa, grown as a small tree. The stout spines no doubt act as a strong deterrent to small boys who may be attracted to the small orange-like fruits that develop from the white, sweetly-scented flowers borne on leafless branches early in the spring. A native of China, it came to Britain in 1850 and has been used as a parent for both citranges and the kumquat. Easy to grow, it is tolerant of widely differing soil types.

Of the plants grown mainly for their ornamental foliage, probably the most eye-catching is the evergreen *Chamaerops humilis,* a native of S.W. Europe, which is subject to considerable variation in leaf-size and stature, but does not usually exceed 1.5m in height. Its close relation *Trachycarpus fortunei,* the hardy Chusan palm, will grow to 13m in areas where the climate is conducive. A native of China, it was introduced to Europe in the 1840s and has been extensively planted in this part of Italy where it is especially conspicuous when grown in gardens that border the lake. The fan-shaped leaves are very distinctive, growing to 1 and 1½m and persisting for many years, especially if given protection from wind. The tall single trunk that is produced with age is thickly clothed with the fibrous remains of old leaf bases, up which many Italian gardeners promptly proceed to train climbing and rambling roses. While visiting the old Rovelli Nursery, neglected since 1918, a form was seen in which the trunk was devoid of fibre and polished red-brown like *Prunus serrula.* On the site of this old nursery seedling camellias were about in number, and could have been easily lifted in the leafy top soil.

Bamboos can be used to good effect in both big and small gardens. For the larger planting scheme, *Phyllostachys mitis* should not be overlooked. It is not likely to reach the great height of 4 to 5m and more, as in Isola Madre, with canes 3½ inches across, but it will form an effective and exotic barrier against wind. A native of China, the canes are at first bright green, yellowing with age; the habit is clump forming, and the young shoots are edible and much prized for this purpose in countries warmer than Britain. This bamboo, incidentally often listed as *Bambusa mitis,* and the black bamboo (*P. nigra*), are both hardy. In favourable conditions growth can be extremely

rapid, 6 inches over night in Cornwall, 20 inches in 24 hours in Algeria. The black bamboo is much less vigorous but has the same clump forming habit with graceful, arching canes. This is believed to be the first *Phyllostachys* bamboo to be introduced into Britain in 1827 from China/ Japan. Only the best clones produce canes that, with age, change into a rich deep black colour; but in colder gardens even these are liable to remain a mottled brownish-green. The average height is about 2 to 3m, but under good growing conditions 6m can be reached with canes $1\frac{1}{2}$ inches in diameter.

Towards the end of our stay in Stresa, the Chinese *Paulownia tomentosa,* usually grown as a tree, was just beginning to open its autumn-formed flower-buds to reveal the heliotrope-blue, fox-glove shaped flowers carried in erect panicles. The leaves 8 to 10 inches wide are handsome; if the shoots are cut to ground level annually very much larger leaves can be produced with striking effect. Effective, but in quite a different way, are the leaves of the shrub *Nandina domestica,* sometimes called the sacred bamboo though it is in the Berberidaceae. The large compound leaves are very elegant, though at the time of our visit suffering from the after-effects of the winter. It was interesting to see that the female bushes still carried sprays of small red fruits. Introduced to Europe about 1804 from China, the specific epithet *domestica* is said to have been given because of the Japanese habit of regularly siting this plant in front of their homes.

As might be expected so early in the season, conifers were very much in evidence, in particular the Japanese cedar (*Cryptomeria japonica*). While visiting Monte Oro, by courtesy of Baron Monaco, a fine specimen of the parasol or umbrella pine (*Sciadopitys verticillata*) was seen. At Isola Bella few visitors passed the *Cedrus atlantica* 'Pendula' without favourable comment on the gracefulness of the weeping branches. At the old Rovelli nursery Mr. H. G. Hillier identified a very fine specimen of *Keteleeria davidiana.* Introduced about 1830, the best specimen in Britain is about 30 feet, a third the size of its Italian relation. Dwarf conifers are obviously very popular in this part of the world and in one new garden visited, terraced on steeply sloping ground, they had been used to great effect, planted in association with winter flowering ericas and daffodils. This question of plant association is very important, and one of the most rewarding aspects of visiting gardens anywhere is to have the opportunity to study the methods of others and to see with which plants they get their best effects. It sometimes happens that plants thrive much more in one garden than another, and this is equally true between countries. The free-flowering propensities of *Kerria japonica* were remarked upon by several of the delegates. It would be interesting to know whether this is simply a case of the plant doing better in north Italy because of soil or climatic conditions, or whether it is the more discriminating nurserymen, raising plants for retail sale, who have a hand in it. It is known that *Kerria japonica* 'Pleniflora' not only produces some of the best double yellow flowers, but that it is also more vigorous than the type. Possibly the vigorous, free-flowering kerria in Italy springs initially from such a clone.

It was, of course, rather too early in the season for herbaceous perennials to be much in evidence, but *Othonnopsis cheirifolia,* a familiar plant, at least to those of us from the U.K., that hails from Algeria, was already in

bloom, its yellow flowers reflected against the glaucous-blue almost succulent leaves. *Ficus pumila,* originating from China and known to many as a house plant, is a common wall plant in north Italian gardens. It appears to be tolerant of shade and very sparse growing conditions, though healthier in conditions of moist shade. On waste ground and road-side verges clumps of the yellow cypress spurge (*Euphorbia cyparissias*), or something very like it, were a common sight. On Isola Bella a variegated form of Solomon's seal—possibly *Polygonatum japonicum,* as its vigorous growth suggested a stronger growing plant than with *P. hybridum* (multiflorum)—was unfurling elegant shoots. A variegated *Liriope* made attractive ground cover in several gardens visited, but for dry shaded areas, especially below trees, *Ophiopogon japonicus* seemed the first choice, being used as a grass substitute. This is a member of the Liliaceae, producing nodding whitish flowers in late summer from which Paris-green fruits develop, but as they are almost hidden in the grass-like leaves their presence can very easily go undetected.

Although this article has concentrated on the description of the more interesting plants seen during the visits to gardens, it cannot be concluded without stressing the importance of the lectures given, especially those on nomenclature by Mr. Albert Fendig from the U.S.A., and also the value of the personal contacts that an international conference of this kind facilitates. While it may be invidious to single out one contributor from so many for special mention, there was obvious widespread approval by delegates for the presentation made to Professor Tuyama from the University of Tokyo. The only representative of a country to which, horticulturally, we owe so much, his was a heavy responsibility which he discharged with the dignity typical of his people but which was so much at variance with the almost roguish sense of humour displayed in personal contacts as he struggled with the complexities of the English language.

The "characters" among the delegates were too many to mention individually; suffice it to say that we all enjoyed the conference immensely. We were gratified and deeply appreciative of the generous hospitality proferred by our Italian hosts, and were at one in thanking Charles Puddle, Dr. Sevesi, and the Italian Camellia Society for making this an experience never to be forgotten.

Camellias in Australia

A. W. JESSEP Victoria

IN THIS brief account I hope to give you some idea of the interest in the species of camellias in Australia.

We know that camellias, after about 50 years of popularity, commenced to decline and by the end of the last century the demand for them was practically nil. Why should such a beautiful plant and flower receive such a fate? I would suggest that one reason is that the famous plant collector Hooker, was sent to the Himalayas in 1849-50 and he brought back to England a large collection of rhododendrons which acclimatised very quickly and withstood the cold European climate better than the camellias from the warmer climate of China and Japan. Another reason was that the formality of the Victorian era declined, and the popular taste became more informal in Britain and Europe, and also in Australia, because we followed our mother country. However, the beauty of the camellia was such that it could not be ignored, and in the nineteen-thirties a revival in their interest began in Australia.

Most names had been lost and nurseries started to sell them according to the colour of their blooms—white, red, pink and variegated. Soon clients requested cultivar names and the nurseryman obliged by giving them names which were sometimes correct, but often, when the name was unknown, a local one was substituted such as "Hollyhock" for what was later found to be 'Kumasaka.' This was not satisfactory and a few enthusiasts commenced to investigate the nomenclature, but until 1950 we did not get very far. In 1950 the Royal Horticultural Society of England conducted a camellia and magnolia conference in London, and Professor Waterhouse and I attended it. It was a stimulating experience. At Borde Hill—the home of Colonel Stephenson Clarke—we saw our first interspecific crosses. 'Salutation' (*C. saluenensis* x *C. reticulata*); 'Donation' (*C. saluenensis* x *C. japonica* 'Donckelarii') and 'Cornish Snow' (*C. saluenensis* x *C. cuspidata*). To add to this, the next day, Dr. Hu gave a lecture, aided by splendid colour transparencies, of 20 reticulatas found growing around the temples in Kunming, Yunnan province of China, and what food for thought were these almost unbelievable beauties. An excellent report of this illustrated lecture is in the Royal Horticultural Society report of the conference in 1950.

The next phase was the formation of the Australian Camellia Research Society with 4 members in 1952, and now with over 1,000 members and 7 branches. The first investigations were mainly into the nomenclature. Fortunately between 1873 and 1878, the Director of the Melbourne Royal Botanic Gardens (Australia) had planted out some 149 different cultivars,

including one *C. reticulata* and one *C. sasanqua* 'Rosea' which I suspect was *C. maliflora* but was not there when I was appointed the Director in 1941. Most of them were labelled and on investigation some were found to be correct, some incorrect, some mis-spelt and a few without labels. With the aid of old Australian catalogues, colour illustrations in *Flore de Serres, Edwards Botanical Register, Loddiges* and others, all except two cultivars have been traced. The one labelled 'Pilida' cannot be found in any camellia literature and it is suggested that it may have been a label from another plant and placed on the camellia by a Botanic Gardens employee by mistake and cuttings taken and plants distributed under that name. It is in *Camellia Nomenclature* published by the Southern California Camellia Society but the information was sent to the editor by an Australian. It is too good not to have been named and it looks very similar to 'Althaeiflora' of Chandler, 1824, and illustrated in Loddiges, but as that opinion is not unanimous it is known as 'Pilida.' Other notable old cultivars at the Melbourne Botanic Gardens are: 'Madam Pepin,' 'Azurea,' Archiduchesse Augusta,' 'Francois Wiot' and 'Aspasia.'

Other important activities of the Society were to investigate mutants with the object of ascertaining which was the parent plant, and more recently the development of an Australian National Camellia Garden. In 1970, Sydney celebrated its bicentenary of the landing of Captain Cook in Australia and Queen Elizabeth II and other members of the Royal Family attended the celebrations. In 1969, Mr. Utick, chairman of the St. George's Branch of the Australian Camellia Research Society was instrumental in getting a beautifully situated area of land near Captain Cook's landing site set aside for a camellia garden. It has beautiful vistas, undulating and with an attractive small rivulet running through it. It has been named, in honour of our President, the E. G. Waterhouse National Camellia Garden. The St. George's Branch commenced work on it in 1969 and the Australian Camellia Research Society supported it. The state branches and other horticultural societies and interested overseas camellia enthusiasts are supporting it and the master plan makes provision for beds of camellia cultivars suitably named. Several overseas camellia societies have had camellias planted by their representatives including the American Camellia Society, Japan Camellia Society, New Zealand Camellia Society, Southern California Camellia Society and a bed representing camellias from these and other societies will eventuate.

With the assistance of a very co-operative and interested Shire Council plus the support of camellia enthusiasts both in Australia and overseas this project is already giving promise of being a great national asset as well as a haven for camellia lovers.

Monte Oro and the Villas of the Lago Maggiore

Professor BRUNO CARAFFINI Italy

THE welcome task, given to me by the Società Italiana della Camelia, of telling you about Monte Oro and the villas of the Lago Maggiore would require much more space than is now available.

Hence I thought to present you the villas with their parks and gardens with a synthetic "running shot" of news, rather than an analytical review, that could have been interesting. I hope that the resulting historical-topographical outline can be sufficient to show the great importance the villas, with their many-coloured gardens and their parks with numberless hues and various tones of green, had in the past and still have now for the lake area.

At first we will dwell on the description of Monte Oro, a wonderful place we will be delighted to visit, thanks to the hospitality and courtesy of the owner, Barone Monaco, who has been so sensitive to the initiatives of the Società Italiana della Camelia: we thank him in advance.

Monte Oro, for its style, form, architecture and for the trees and shrubs constituting its vegetal population, is representative of the basic features of many villas in the Lake area, even if they are different in size and shape. Monte Oro is a wonderful park in the commune of Ameno, an area at the foot of the hills, 1,500 ft. high, in the land of the Cusio.

During the winter the climate of the area is milded by the influence of the Orta lake nearby, and during the summer is made cooler by the fresh breeze that periodically blows from the valley of the lake. The amount of rain is good, as is general in the whole area of the Lago Maggiore and its surroundings, with an annual rainfall of about 1,800-2,000 ml.

The area has never offered many resources, and so often men used to emigrate and work as cooks and waiters: chefs and waiters from Ameno are famous even abroad in many renowned restaurants and hotels.

From Monte Oro, one can see the Orta lake, the Monte Rosa chain, the Mottarone, the Monte Pecora, the Sanctuary of the Bocciola, the tower of the Buccione, the Crucifix. The Agogna, a torrent which quite easily overflows, flooding the plain, runs at the foot of Monte Oro.

The park of Monte Oro has a surface of 470,000 sq. yds. Its settlement was begun in 1897 by the owner, Conte Gaudenzio Tornielli, who was, among other things, a great benefactor in the area. The design of the park is a work of the architect Nigra, from neighbouring Armeno; his family

is tightly related with Constantino Nigra's (a well known political man of 1800). Later, the family of the Barone Monaco succeeded the Conte Tornielli in the ownership of the villa, which still belongs to them.

The park and gardens are now directed by Mr. Giulio Romagnoli, who has been no less than 40 years in Dr. Monaco's service. With the co-operation of his son, Antonio, he takes care also of the greenhouses for growing house plants, border plants and shrubs for the needs of the villa and the garden.

It is possible to see plants of many species and of astonishing number and size. For example a group of *Sciadopitys verticillata* 50 feet high. Groups of *Fagus sylvatica* 'Purpurea' and *Fagus sylvatica* 'Purpureo-pendula,' also *Betula pendula* 'Purpurea,' 'Tristis' and *dalecarlica* have reached great proportions. *Juniperus virginiana* is a huge size, also the form 'Glauca' as well as *Cupressus arizonica* and *C. macrocarpa* 'Lutea.' There is an avenue of *Magnolia grandiflora* and a superb group of *Araucaria araucana* and fine specimens of *Cedrus atlantica* and *C. deodara. Sequoidendron giganteum, Abies lowiana* and *Picea pungens* 'Glauca' are other notable conifers. Rhododendrons and azaleas abound, to be followed by hydrangeas, and are intermixed with olea, *Osmanthus fragrans,* elms, sweet chestnuts and a vast number of trees and shrubs. Then there is the large show group of camellias suffering a little from the sunny exposure, also . . . so beautiful a view!

If the visitor has the luck to catch a sunny day, Monte Oro's vegetation offers the possibility of making many observations and of realising the instincts and the habits of plants. I was so lucky to have the chance of visiting Monte Oro on a sunny afternoon at the end of May, taking part almost in the "unveiling" of the new vegetation, and of seeing it again this year, in January, on a clear windy morning, with the hills and the outlines all around covered with snow and the lake, down in the valley, almost too blue: two so different and so likewise wonderful shows, that I convinced myself that a wonderful faculty of self-adapting leads the plants, and this faculty allows the complex and wonderful relationships of their associated living, regulating and preserving the ecological equilibrium. I hope that the visit will allow you to perceive the beauty of "botanical philosophy."

Let us go on with the villa's review.

After the second half of the XIXth century, in the Lago Maggiore area began a period of peaceful calm, which allowed enterprises and a general trend towards progress.

Before that time, it had not been possible, because of the rather persistent and hard rhythm of the changing events: first the Gauls, then the Romans, the barbaric invasions, the feudal age full of fights, of power changes mixed with famines, plagues and other troubles; then, the Napoleonic age, and then the Savoia and the Austrians, and at last the Risorgimento and the constitution of the "Regno d'Italia."

Only after the Lago Maggiore became a part of the Italian Kingdom was it possible to start building villas and settling parks and gardens, which, added to the few already existing, gave origin to a sort of "meristema" that, during the following years, will expand and develop into the wonderful

tissue that makes today every park, every garden, every villa irreplaceable and essential components of the typical and distinctive landscape of this wide area.

A landscape that is valued even more today than yesterday, made kind and aristocratic in beauty and refinement by the villas and the parks, which carry out the important function of subduing the even evidently marked contrasts existing among the natural elements; the great body of the lake water; the spontaneous vegetation; the hills and the high mountains so close that seem to be impeding; confused rural elements, memories of an agriculture once typical, but now nearly neglected; and, unfortunately, insertions of new, disfiguring buildings. But the presence of villas, parks and gardens, succeeds in harmonising all these contrasts to such a point that they constitute an original, relaxing and pleasantly romantic whole, thanks also to the sun, that shows on the lake shining rise-ups and colourful sunsets, and thanks also to the moon, that is always so "sentimental" on lakes.

The oldest villas are neoclassical, some with reassemblies earlier styles; other have mixed styles, and some are "Norman" or "Oriental." There are also examples of Renaissance and Liberty styles.

Parks and gardens settled between the middle of XIXth century and the first years of the XXth have a style that cannot be defined "mixed," because each of them has its own face and style.

Almost in all of them you can find terraces, different levels, saddles and small valleys, boundary walls, dry stone walls still in perfect condition, basins, fountains, statues, balustrades, railings, alleys and lanes which allow silent and peaceful walks, paths which lead to surprising corners, to relaxing and meditating areas, to open spaces, to spots with beautiful views, to play-yards, to flowered places, to the hortus.

Vegetation is luxuriant, even if here and there you can find some spots of "tired" green, but many plants are more than a century old. There are trees and shrubs of the most different species, many of them remarkable and some exotic.

Their choice, positioning and harmonisation were made, at that time, with criteria considering not only aesthetical factors and chromatic contrasts, but also exposure, wind frequency and future developments of plants.

Also the ratio of evergreen to deciduous plants is almost always well respected, so that there is a fair ecobiological balance, so useful to the healthiness of the environment, that the lake climate has become almost "thermal."

Consequently it is possible to say that the vegetative body of the parks, so harmonised also from the biological point of view, with its complex physiological activity, always contributes to maintain the environment healthiness, and to reshuffle the effects of pollution that the invading "progress" gives us.

As parks and villas were rising, gardening began developing in the lake area, and became, in a short time, a true profession, a true art, since among gardeners there was a silent and friendly competition, which brought them to vie and then to improve and specialise in decoration, in landscaping, in forcing attempts and finally in nursery and hybridation techniques.

Just thanks to this professional competition the gardeners of the lake achieved wonderful results in hybridations of medium growing conifers (the Chamaecyparis Verbanensis, created by Contini, the Isabella are still well known today) in hybridation of azaleas (the hybrids lake azaleas still win important awards in international flower shows) but here we must remember mainly the splendid results attained at that time in multiplication and hybridation of camellias.

Several cultivars had their origin just in the area of the Lago Maggiore; among many other hybridators, we must remember at least the Rovelli brothers, who have the merit of obtaining the still known cultivars 'Regina Margherita,' 'Ristori,' 'Paolina Lucca,' 'Isabella Galletti.'

Well, those gardeners had the merit of giving such a prominence to the camellia, that it has been planted in almost all the parks and gardens, in the wide set of then available cultivars, like a wonderful and magic factotum, capable of finishing each element; its use allows us to see secular plants around the lake, still so strong that they can afford plentiful flowerings with colour variations so surprising to deceive still now the experts who want to discuss their identity to nominate and catalogue them.

My panoramic review on the villas of the Lago Maggiore is at the end, but, to be complete, it needs a general visit, different from the ones that you are going to do: a visit that I suggest to carry out from the lake, covering the distance from Arona to Cannobio by ship or motorboat, because (quoting some lines of the poet Gallina):

". . . . admiring the parks
from a small boat sailing
under a white sail,
swinging in the sky,
Greenish, side by side"

you will be able to observe the most spectacular view, which will allow everyone to record the most personal impressions, being caused and urged by an actual, but fairly spaced, vision, that discloses and lets enjoy shades, perspectives, the whole deepness and beauty of the wide landscape.

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