

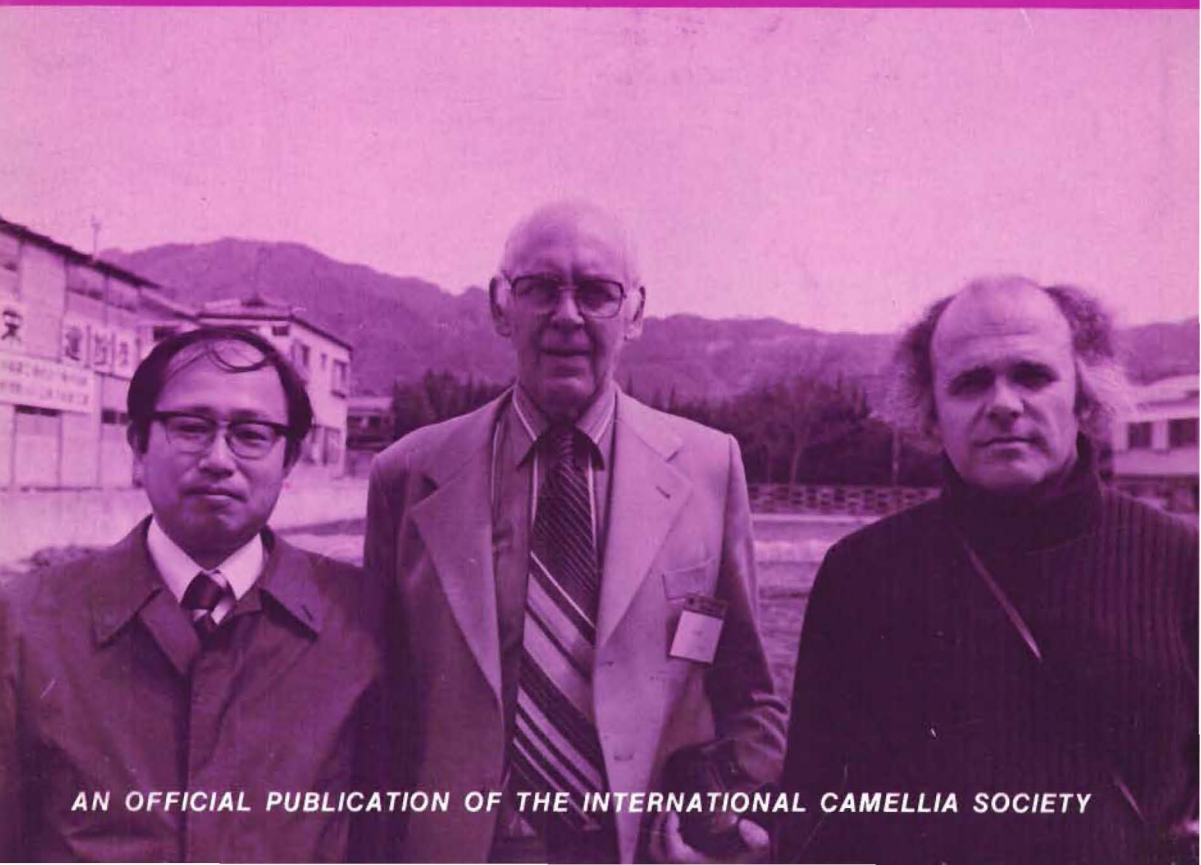
No. 12

OCTOBER 1980

INTERNATIONAL CAMELLIA JOURNAL

国際ツバキ会誌

KOKUSAI TSUBAKI KAISHI
LE JOURNAL INTERNATIONAL DU CAMELLIA
RIVISTA INTERNAZIONALE DELLA CAMELIA
INTERNAZIONALE ZEITSCHRIFT FÜR KAMELIEN
REVISTA INTERNACIONAL DE LA CAMELIA
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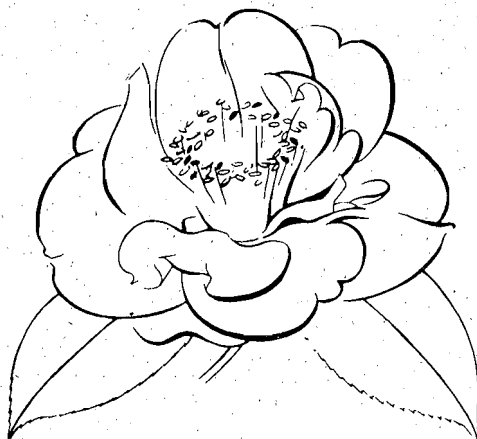


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THE INTERNATIONAL CAMELLIA JOURNAL

No. 12 OCTOBER 1980

An Official Publication of The International Camellia Society

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Cover

Two of the notable contributors at the Kyoto International Congress, Dr Katsuhiko Kondo, Hiroshima, Japan (left) and Dr Clifford Parks, Chapel Hill, N.C., U.S.A. (right) with I.C.S. President Tom Savige.

The vast and varied land which is Mainland China was for countless centuries a prime source, a veritable treasure trove, of plant material which was taken to all corners of the earth. After a period in which there was little contact between Chinese horticulturists and those of the outside world there has been a re-awakening which is constantly accelerating. Nothing but good can come from this and, happily, devotees of the genus *Camellia* are in the forefront of those who are visiting China and re-establishing contact with the learned plantsmen who work in the area which is truly the cradle of the genus.

I.C.S. Journal has been fortunate in being able to present to members the observations and impressions of experts amongst our membership who have visited China (particularly Yunnan Province) in the recent past. Each of them highlights the exciting potential as plantsmen move deeper into the hinterland of this fascinating country but each of them also is impressed by the work of the dedicated researchers and horticulturists of the past. Last year Mr Harold Fraser remarked: "... as more and more informed people visit this area a new conception of plant life generally... must emerge".

Mr Fraser's thoughts are reflected in various ways by each of our 1980 contributors. Mr Savige remarks: "It is evident that there are many more species of horticultural interest still to be found in Western China, and that these will finally find their way into gardens around the world", while Dr Hayter writes: "... thanks must also go to the Buddhist monks who, centuries ago, seeing so much beauty in *C. reticulata*, preserved the species for mankind to enjoy today". Mr Campbell emphasises the degree by which Western gardens have been enriched by Chinese native flora and how much is owed to the skill of the early Chinese plantsmen.

Mr Yoshiaki Andoh is another who, in 1979, gave I.C.S. members the benefit of his observations in China earlier that year. It was he who told us so much about *C. chrysantha*, the yellow species, which has continued to excite so much interest and on which Dr Tsuyama delivered a paper at the Kyoto International Congress.

We are certainly privileged to be given these insights into a land so fascinating to people interested in gardens and plants and particularly to those whose special interest is the camellia.

* * *

The writings on China and Yunnan quickly remind us that it was the introduction of the "Yunnan" *reticulatas* which opened new vistas for Western hybridists in the drive towards bigger and brighter camellias. Access to more Chinese *reticulata* cultivars could be expected to revive the quest for size. But there are signs that it will be the greater access to other and smaller species which will spur hybridists to seek virtues other than size. In this *I.C.S. Journal*, No. 12, Dr Bill Ackerman of the U.S. National Arboretum urges hybridists to direct their efforts towards other qualities, instancing adaptation to adverse climatic and soil conditions. He refers to the great number of camellia species about which little is known, pointing out that more than two hundred of these may be endemic to Mainland China.

Horizons certainly do continue to widen in this wonderful "camellia world" of ours!

* * *

Your *I.C.S. Journal* avoids reprinting articles which have appeared in the publications of other camellia societies. However I.C.S. believes that there is scope for sensible use by societies of valuable material which other societies have already published. It feels complimented when any other camellia body, national, regional or local, seeks to reprint, with acknowledgement, any article which has appeared in *I.C.S. Journal*. Subject to author's concurrence, our agreement is readily forthcoming.

It scarcely needs to be said that an over-indulgence by all societies in the use of reprinted material would result in a diminution in the total quantum of original thinking and writing on camellias. Fortunately this is not happening, but I.C.S. believes that its own *Journal*, as an international publication, should be one which serves as a source of original material only.

SOME OBSERVATIONS OF CAMELLIA RETICULATA

COLONEL T. DURRANT

Rotorua, New Zealand

After nearly 30 years of growing and observing *Camellia reticulata* in New Zealand and seeing their performance in many other countries, it is difficult to reconcile what we see here with their reported behaviour elsewhere. One assumes that most people who commit themselves to published writing on the subject are reporting their actual experience and observations though there is some evidence that this is not always the case and statements in earlier writing are repeated without checking them for accuracy. Anyone who has done literary research in any field, knows that this is by no means confined to camellia writing! One frequently reads descriptions of *Camellia reticulata* which suggest that the plants are leggy, sparse and ungainly; that they suffer from apical dominance, which means that growth usually occurs only from apical buds; that they must not be pruned beyond a developed growth bud; that leaves on the current season's growth tend to fall, and that they are more difficult to establish than the better known *C. japonica* and *C. sasanqua*.

None of this coincides with their observed behaviour in New Zealand conditions where such symptoms would be taken as clear evidence that the plant was not thriving. Habit of growth varies between varieties but plants are well furnished and graceful, flowering is prolific and there is no evidence of apical dominance. They are, in fact much more handsome garden plants than are most japonicas, they make brilliant displays of colour with the flowers held boldly erect, neither concealed in the foliage nor drooping their heads. When necessary, we have repeatedly pruned *reticulata* plants very severely, reducing them to a bare framework of heavy wood without a single leaf of growth bud remaining. Invariably they have produced ample, adventitious buds and grown away with great vigour. Provided new plants have been grafted on healthy vigorous stocks, they establish without difficulty and with very little care and attention.

How can we account for these extraordinary differences in *reticulata* behaviour? It is certainly not due to any special cultural treatment given to them in New Zealand where most gardeners expect to give minimal attention to their plants; nor do we have any secret magic formulae by way of fertilizers! The only logical conclusion seems to be that, unlike some other camellia species which appear to flourish in a wide range of climate

- *Quelques Observations sur le Camellia Reticulata*
- *Alcune osservazioni sulle Camellie Reticulate*
- *Algunas Observaciones sobre la Camellia Reticulata*

conditions, *Camellia reticulata* requires much more specific and limited conditions in which it can thrive. The range of conditions which make up the New Zealand environment — latitude, free draining, acid soil, temperate climate and ample rainfall, apparently meets *reticulata* optimum requirements. If this is correct, then the indifferent growth habits reported from many other countries are the plants' response to marginal conditions in which they are struggling to exist and are unable to flourish.

Another indication that New Zealand conditions are eminently suitable for *Camellia reticulata* is the fact that the plants, or most of them, set seed very freely, both casually and to hand pollination. Much of our seed has been distributed to many other countries, including Japan, Britain, Italy, U.S.A., and France. Our Japanese correspondents say that seed-set on *Camellia reticulata* rarely, if ever, occurs in that country. A recent communication reports that plants originating from our earlier seed shipments are now flowering and setting seed without difficulty. This opens up the possibility of breeding programmes in that country using *Camellia reticulata* as a seed parent. Some writers in the U.S.A. have reported poor fertility in *reticulata* seed with germination rates as low as 20% - 25%. Our experience is that, provided seed is germinated immediately it is ripe, rates of 95% - 100% are usual. Similar rates with our seed are reported from countries as far apart as France and Japan. It should be noted that the seed is packed in dampened plastic bags and shipped by air mail as soon as it is gathered.

Root Systems

Horticultural writers constantly describe camellias as being surface rooters, warn against surface cultivation and regard ground cover plants with suspicion. E. Hyams (co-author with Neil Treseder of "*Growing Camellias*", Nelson, 1975) even goes so far as to say on page 22, "The roots of the camellia are fine, fibrous and densely crowded; they are neither adapted to, nor is there any need for them to grow far from the plant and deep into the subsoil. Thus, camellias are among those plants which form a root ball, a dense and stable mass of top soil held together by the system of fibrous roots; this makes it easy to transplant them at almost any age,..."

The late Dr B. W. Doak, a soil scientist of international reputation and one of New Zealand's earlier successful camellia breeders, wrote the following in *New Zealand Camellia Bulletin*, Vol. 1, No. 6, dated July 1960:

"A fallacy that has gained considerable credence of recent years is that camellias by nature are surface rooters. Some writers have even gone so far as to say that camellias do not form tap roots, even when raised from seed. This is quite untrue. Even with cutting grown plants heavy secondary tap roots are formed, provided that drainage is good and the subsoil is not virtually impenetrable by roots. Even in quite heavy clay subsoils, camellia roots will go down to a considerable depth when drainage conditions permit."

These remarks apply to *Camellia reticulata* and to all the other camellia species which we have grown. All germinating camellia seeds put down a very long tap root, even before the plumule appears above the surface. We have measured tap roots, from *Camellia reticulata* seeds which were 27 inches long before any branching occurred and when the plumule was barely an inch above the ground. In our experience, container grown plants, including seedlings which have had the radicle severely cut back, invariably put down strong secondary tap roots within a season or two of being planted in open ground. After several years in one position, so far from being "easy to transplant at almost any age", it is virtually impossible to find any feeding roots within 2 or 3 spits of the surface. If the shifting goes ahead in spite of this, one is usually left with a plant with several long tap roots, and no feeding roots, which means that the top must be cut off almost to ground level, if there is to be any chance of survival.

It is quite clear that camellias are not surface rooting by nature but do possess the important capability of adapting their root systems to the situation in which they find themselves. In containers they form the dense root ball to which Hyams refers; where the subsoil is impenetrable, they will form surface roots which may travel some distance from the plant. Their root systems are totally different from those of rhododendrons which have true fibrous roots, never straying from the surface.

Propagation

Cleft-grafting continues to be the principal method of propagating *Camellia reticulata* and undoubtedly, the use of inferior and badly grown stocks continues to be the cause of most failure to establish successfully. Many grafting failures arise from the same reason. The latter was dramatically illustrated in a garden we visited in England in 1978. In spite of very adequate propa-

gating facilities, some 40 or 50 *reticulata* grafts had failed completely. The stocks used were japonica/sasanqua rooted cuttings, pencil thickness and in small plastic containers. Examination showed that cambium layers had been matched correctly, that no callous had occurred and that none of the stocks had regrown from the base — which usually occurs when grafts have failed to take. We then turned out the stock plants to find that all were heavily infected with *Phytophthora cinnamomi*. Stocks in this condition do not survive the cutting back process involved in cleft grafting. The grafts had failed because the stocks had died. There should be no need to labour this point.

In 1967, in 'Some comment on *Camellia reticulata*,' we reported considerable success in grafting on *reticulata* seedling stocks. Commercial propagators had found that it was not possible to achieve a sufficiently high percentage of 'difficult' varieties of *Camellia reticulata* ('Purple Gown', 'Pagoda' and 'Moutancha') when using the normal japonica and sasanqua stocks. After successfully grafting the difficult varieties on seedling *reticulata* stocks at our suggestion, a prominent Australian nursery found itself with a substantial stock of *Camellia reticulata*, 'Captain Rawes', for which there was no particular demand. An enterprising propagator cut back these plants to about 4 inches above the original grafting point and regrafted them with 'Purple Gown' and 'Moutancha' with remarkable success. We continue to graft *Camellia reticulata* on its own seedling stock whenever this is possible. Within the Genus *Camellia* we have grafted many species on whatever camellia stock has been available and have no clear evidence of incompatibility.

New Developments

'*Camellia Nomenclature 1978*', published by the Southern California 'Camellia Society, has 250 main entries under the heading 'Species *reticulata* and hybrids with *reticulata* parentage'. This is double the number which appeared in the 1972 edition of the same publication and illustrates the very keen interest now being taken in the development of new garden varieties based on *Camellia reticulata*. Almost all the more recent hybrids have *reticulata* as the female parent and *Camellia japonica* as the pollen parent. There are probably at least another 250 varieties likely to appear in the next year or two and one already hears cries of alarm at this continuous proliferation. To bring the numbers into perspective, it should be noted that '*Camellia Nomenclature 1978*' has over 5,000 entries under the heading, 'Species *Camellia japonica*' and that

the 'American Camellia Yearbook', published at the end of 1978, includes 33 further registrations of varieties of that species.

It is undoubtedly true that many of the newly raised varieties based on *Camellia reticulata* are so similar that they are difficult to tell apart and that confusions of identity are bound to occur. Against this, it must be remembered that the only way to ensure emergence of really superb varieties is to make certain that the maximum numbers of seedlings are grown on to flowering and that it would be counter productive to discourage any camellia grower from taking part in this. It is quite remarkable how many fine varieties are recorded as 'chance seedlings' — many more, in fact, than are the result of deliberate breeding programmes.

Some regional considerations must also be taken into account. Currently, the main flow of new varieties comes from four widely separated regions, the East and West coasts of the U.S.A., Australia and New Zealand. Varieties are evaluated initially under regional conditions and by regional standards of judgement. For example, in the U.S.A., camellia hobbyists place far more weight on the production of flowers suitable for competitive shows than on garden merit, while in Australia, and certainly in New Zealand, the reverse is the case. While a good deal of interchange occurs between regions, varieties, highly regarded in one region may not necessarily achieve the same status elsewhere. Valid judgements of quality and general merit are extremely difficult to arrive at, particularly since individual preferences play a large part in any evaluation, and varieties would need to be in a general circulation for several years before any such attempt could be made. Many varieties will only achieve limited local distribution but there is enough intercommunication between regions to ensure that anything really outstanding will quickly be recognised. Provided it is clearly understood that registration conveys no implication of merit, it is better that even varieties with very limited circulation should be properly recorded, than that they should appear in nursery catalogues with names which may be already recorded or not be in accordance with international nomenclature rules.

There is growing feeling that too much emphasis has been placed on size of flowers as a measure of merit. I trust that our distinguished President will forgive the statement that 'large is not necessarily beautiful!' The current interest in miniatures and small flowered hybrids indicates a swing of the pendulum away from the 7 and 8 inch flowers which one sees so often on honours tables. In the last few years some very remarkable new varieties have emerged but has any of them

exceeded the grace and beauty of 'Chrysanthemum Petal', the splendour of 'Pagoda' or the quality of 'Moutancha'? That, of course, involves a personal value judgement!

The Yunnan Reticulatas

Study of this fascinating complex of ancient varieties of *Camellia reticulata* received a serious setback last year with the death of Dr Kinhachi Ikeda, of Japan. With remarkable persistence and the great advantage of being able to read Chinese characters; he had assembled the available Chinese literature, established contact with the authorities in Kunming, exchanged plants and plant material with them and published very detailed accounts of all his work in the American Camellia Society's Yearbooks and other Camellia literature. He edited the reticulata section of the Japanese "*Encyclopedia of Camellias in Color*" Vol II, and carried on a world wide correspondence in search of information. We had exchanged letters and camellia material with him for many years and I would like to record a most sincere tribute to this kindly, generous and scholarly man who made such an important contribution to camellia knowledge.

Most Western studies of the Yunnan camellias have been greatly hampered by having to rely on translations, or partial translation of the relevant Chinese literature and it has never been possible to be certain whether discrepancies within and between documents arose from inaccurate translation or existed in the originals. It is certain that there is considerable disagreement between scholars on the transliteration and translation of Chinese characters. Dr T. T. Yu (in *R.H.S. Camellia and Magnolia Conference Report 1950*) said "old literary descriptions are inadequate for diagnostic purposes and the characteristics that are mentioned for separating the varieties are in many cases so slight that it is impossible to distinguish the 72 distinct kinds." He went on to describe 18 varieties which could be clearly identified. More recent accounts (Ikeda K. '*A revised list of Yunnan reticulatas*', *A.C.S. Yearbook 1976*, p. 136 at seq.) indicate that several more old varieties have now been distinguished and also that a number of newly raised varieties have been named in Yunnan.

Dr Ikeda records having received plants of some of the varieties not previously seen in the West including 'Hentienko' ('The Dwarf') but the elusive 'Paochucha' ('Noble Pearl') is apparently still missing. We have no details yet available on whether these varieties established safely or on their performance in Japan.

Inability to read Chinese makes it impossible for most of us to make any contribution to the

JOURNEY IN WESTERN CHINA

T. J. SAVIGE

Wirlinga, N.S.W., Australia

- *Voyage dans la Chine de l'Oest*
- *Viaggio nella Cina Occidentale*
- *Jornada en China Occidental*

A group of 10 Australians led by Mr Harold Fraser, an agronomist from Wagga Wagga, who was in China in 1978, visited Western China and Beijing in March, 1980. The party included Dr Peter Valder of the Botanical Department of the Sydney University; Mr Peter Campbell and Mr Neville McMinn, the proprietors of the two best known camellia nurseries in Australia, Camellia Grove and Camellia Lodge, with their respective wives; Dr Ross Hayter, Mr Alan McNeish from the Australian Broadcasting Commission and the writer.

The party entered China from Hong Kong by an express train to Quangchou. Tours in this area included the Botanic Gardens, the Orchid Gardens and a memorial park where a flower show was in progress. This included colourful displays of chrysanthemums with hundreds of flowers forming a hemisphere growing from one main stem; potted dahlias, cactus and various other plants including camellias, of which 'Otome' and 'Alba Plena' were recognisable. The Chinese name for 'Alba Plena' is "Paiyangcha". Another variety which was most common was a small peony form red called "Hedinghong" or "Cranes Crown Red".

At the Orchid Gardens the party was served

Orchid Tea, a speciality of these gardens and the Gardens were presented with an Australian epiphytic orchid by the Frasers. The Botanic Gardens was notable for its fine bamboo collection where species with very short internodes, looking like wrinkled elephant legs, vied in interest with square sectioned bamboo, as well as bamboos of various colours such as gold, silver, variegated, striped, deep green, black, blue green, brown, orange and more.

An overnight trip to a hot springs resort gave members the first chance to examine the indigenous plants growing naturally in the forest. However, the only camellia species located here was *Camellia oleifera* var. *oleifera*.

An air journey brought the group to Kunming where an initial overnight trip was made to the Stone Forest. This unusual limestone formation had originally been laid down under the sea and had then been elevated when eons of weathering had reduced the limestone layer to a maze of grotesque and convoluted spires, towers and pinnacles.

In the grounds of the Stone Forest Hotel was a planting of reticulata camellias which included 'Baozhucha' or "Red Jewellery". This cultivar is the long sought after "Noble Pearl". Also seen



C. reticulata 'Noble Pearl'

Continued from page 6

discussion of priority names and correct nomenclature of the Yunnan reticulatas but this group of cultivars continues to be of the greatest interest and importance to the horticultural world in general and to dedicated camellia lovers in particular. We can only hope that the current international and political climate will soon make it possible to arrange reciprocal exchange of visits with the camellia experts in Yunnan with the intention of sharing camellia knowledge and material on a worldwide basis.

Editor's Note:

Colonel Durrant's reference to the elusive 'Noble Pearl' (see previous page) was made in September 1979 at the Rotorua Congress. Since then groups visiting Yunnan Province in March 1980 came upon specimens of this cultivar, also variously known as 'Baozhucha', 'Paozhucha' and "Red Jewellery" (see Mr Savige's comments above and Mr Peter Campbell's reference on page 48.)



The author beside ancient *reticulata* in temple grounds



Pagoda at Wan-Men-ssu housing 80-ton white elephant in bronze

were 'Purple Gown', 'Chrysanthemum Petal' and 'Cornelian'.

Following visits to the Kunming Botanical Institute we visited a number of Buddhist temples, in the gardens of which were many plants, often of great age; including magnolias and camellias. Old trees of 'Willow Wand', 'Chrysanthemum Petal', 'Lion Head' and 'Crimson Robe' showed sad signs of their neglect during the "Cultural Revolution", but happily the great resurgence of interest which is apparent in China's cultural and historic background is leading to the restoration of the temples and temple gardens and these old plants are again receiving proper care.

From Kunming the party was flown to Chengdu, the old "Hibiscus City", main city of the province of Sichuan or "Four Rivers". This is situated in the heart of the "Red Bowl", one of the most fertile areas in China. Here a visit was made to an ancient irrigation scheme still operating as efficiently as the day it was completed over 2000 years ago. It was also possible for the writer to accompany Dr Peter Valder on a visit to the Sichuan University, where we were received by Dr Fang and his staff from the Department of Biology, Botany and Herbarium section. Dr Fang is a world authority on *Rhododendrons* in particular, and has recently completed a monograph on the Genus *Rhododendron* in China, which is in the course of publication. Dr Valder was requested to lecture to the staff on Australian Flora, and was very well received.

A visit to the Herbarium found a large collection of material of camellia species, particularly from the Sichuan area, and largely from Mount Omei. These were of great interest as it was planned to climb the lower slopes of this mountain and do as much botanising as possible in the area. In particular the species *C. dubia*, *C. rosthorniana*, *C. tsofuii*, *C. punctata*, *C. villi-carpa*, *C. lawii*, *C. elongata*, *C. wenshanensis*, *C. tuberculata* and *C. szechuanensis*, which are all natives of Sichuan, were studied.

From Chengdu the group travelled by bus to Loshan and the river Lin, a tributary of the Yangsi. Along a crowded country road, lined with Australian Eucalypts and Silky Oaks, past fields of winter wheat, flowering rape and tick beans, past paddy fields lined with white mulberries for the silkworms, past tea terraced hillsides, through many country villages; the endless tide of China swept by in all its forms. In Loshan a view of the largest seated Buddha in existence, 71 metres high, carved from the living rock of a riverside cliff was an amazing sight. From Loshan to the foot of Omei Shan by bus with a night in the "Red Pearl Mount" guest house, originally built for Kiankishek, and the party was ready to start the climb.

Omei Shan is formed by a peninsular of limestone thrust out into the Red Basin from the massif of Chuinghaishan. It has been a holy Buddhist mountain for centuries and on its slopes and crest are about 60 Buddhist monasteries or their ruins. Some of these monasteries have been re-activated and again occupied by Buddhist priests and act as guest houses for travellers ascending the mountain. About 60 monks and 16 nuns have returned to the monasteries after the vicissitudes of the "Cultural Revolution" and the persecutions of "The Gang of Four", a small remnant of the 600 odd who previously occupied these monasteries.

The first stop on the climb was at the Qinyin Pavilion, the "Sound of Waters", at the junction of the white river and the black river. The elevation here was about 600 metres, and some botanising was done in the river gorges where a mauve primula of the *obconica* type was found as was *Rhododendron Simsii*, *R. stamineum*, five Camellia species, *Stachyurus chinensis*, 2 *Rosa* spp., a small flowered *armandii* a species of *Prunus* with white flowers making a large tree in places, a small tree with umbells of yellow flowers and a wide range of unidentified evergreen trees and shrubs.

Of the camellias collected were *C. oleifera*, and *C. sinensis* var. *sinensis*, probably escapees from



Two views of Omei Shan sweeping down to plain of the Red Basin

cultivation. Large plants of *C. tsaii* in flower were identified and probably *C. dubia* and *C. szechuanensis*.

The party climbed on from the Qinyin Pavilion up continuous flights of stone steps for 4 kilometres before reaching the Buddhist Monastery Wan-Men-ssu at about 1200 metres altitude. The temple housed a large Buddha mounted on the back of a 80 ton bronze elephant painted white. After a rest some members of the party climbed on to the Hsi-hsin-so Monastery where the woodland started above the cultivated slopes, while the remainder examined the extensive gardens of tree peonies and other plants.

Up to 1500 metres the natural vegetation is largely confined to stream banks, steep slopes and cliffs, the remainder being cultivated. Many of the fields are being re-planted with *Cunninghamia lanceolata*, *Trachycarpus fortunei* and *cryptomeria*. Above the monastery at 1200 — 1500 metres an evergreen forest starts with *Castanopsis*, *Camellia saluenensis* and what appeared to be a form of *C. reticulata*, and on steep ridges, tall growing, open plants of *Rhododendron hemisleyanum* were seen. Also in this region a hydrangea similar to the species *H. villosa* was quite common. Between 1000 — 1200

metres a *Betula sp.* was often seen. According to Professor Fang of the Sichuan University, a number of other *Rhododendron* species occur at higher altitudes, such as *R. chengianum*; *R. davidii*; *R. discolor*; *R. ririei* and *R. argyrophyllum*, while at the highest altitude can be found the epithetic *R. dendrochans* as well as *R. concinnium*; *R. chengshienianum*; *R. pingianum* and the tree-like *R. calophytum*.

At the time of our visit the "blossom haze" which covers China and Japan during February, March and April, made photography difficult and the summit of Omei Shan at 3400 metres was rarely visible. A six day trek is recommended to climb to the top. As the party could only spare two days, a return was made by an alternative route. At present the accommodation in the monasteries is adequate, although the only luxury was a bucket of hot water in the morning. To be awakened at 6.30 a.m. by the thud of drums, the beat of gongs and the chant of priests had the interest of novelty. The return trip was made through cultivated hillsides and terracing fed with an intricate system of channels and water courses, carefully contoured so that all terraces could be flooded.

From the limited observation available, it appeared that the total assessment of plant species on the mountain is incomplete. The impression gained from discussions with the forestry staff on the mountain and the botanists at the University was that most collecting in the past had been done adjacent to the paths in areas where natural flora remained. The higher forest areas have not been systematically searched. If this is so for the more accessible Mount Omei region, how much more it applies to the relatively inaccessible mountain regions further west. However, the Chinese botanists are now active and collectors are working steadily to complete the listing of the flora of the various regions.

It is evident that there are many more species of plants of horticultural interest still to be found in Western China, and that these will finally find their way into gardens around the world.



Seated Buddha carved in cliff at Loshan

EXTENDING THE CLIMATIC RANGE OF CAMELLIAS

- *Augmentation de la Zone Climatique des Camellias*
- *Estendendo la Sfera Climatica delle Camellie*
- *Extendiendo la Zona Climaterica de la Camelia*

**DR W. L. ACKERMAN and
MISS MARGOT WILLIAMS**

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Camellias are grown out-of-doors in the United States along the East Coast from Maryland to Florida, westward among the Gulf States to Texas, and along the West Coast from southern California to coastal Oregon and Washington. This region described roughly as the "Camellia Belt", is responsible for most of the camellias grown in the United States. Beyond this region there are scattered plantings, usually under protected microclimatic conditions, in the east as far north as coastal New England and in certain interior states. Here, camellia growers struggle to grow plants under climatic and/or soil conditions not conducive to the cultivars presently available in the nursery trade.

Following three devastating winters in the Eastern United States beginning with the 1976-77 season, growing camellias even in the Washington, D.C. — Baltimore area has been deemed hazardous to camellia health and well-being. In contrast, southern Florida and the Caribbeans are considered unsuitable for camellia culture because of excessive heat and light intensity, while soil conditions in many interior states are considered too alkaline.

In some respects, camellia growers are themselves largely responsible for the present limitations in the range of out-of-door culture of camellias. Our over-dependence upon cultivars of a half-dozen or so species is a major reason why camellias are not more widely grown. Today, probably 98 percent of all camellias grown for their ornamental qualities are cultivars derived from *C. japonica*, *C. reticulata*, *C. rusticana*, *C. saluenensis*, *C. sasanqua*, *C. hiemalis* and *C. vernalis*. Yet, these species represent a small fraction of the 98 species described by Sealy in his *Revision of the Genus Camellia*. With recent improved relations with the People's Republic of China, other species, previously unknown to us, are becoming available. Reports coming out of China indicate there may be close to 200 species endemic to mainland China, with 53 species in the Canton Province alone, and even greater numbers westward into Yunnan Province.



On the basis of the species diversification within the genus, mainland China, and most likely Yunnan Province, was the centre of origin of camellias. During its evolution the genus spread throughout much of South-eastern Asia with naturally occurring mutations and strains adapting to prevailing climatic conditions as it spread to new areas. Early man undoubtedly aided in the dissemination of plants and seeds to new areas, more because of the valuable oil from their seeds than their ornamental characteristics. None-the-less, adaptation and natural selection resulted in the establishment of camellias into new areas where plants became part of the endemic vegetation. Thus, today the geographical distribution of the genus encompasses China, Nepal, Burma, Vietnam, Malay Peninsula, Java, Sumatra, Borneo, Philippines, Taiwan, Japan and Korea. Climatic conditions within this vast region include tropical, subtropical, warm-temperate and cold-temperate zones.

If natural selection and adaptation has allowed the genus to spread over such a wide climatic range, why should not our camellia cultivars be developed to reflect a similar cultural range? The answer is that we have been too complacent with our own limited breeding accomplishments and too indifferent to utilize species beyond the commonly accepted large-flowered cultivars. Most of the lesser known species have small flowers and but one or few admirable characteristics from the viewpoint of most camellia growers. Other characteristics, such as adaptation to adverse climatic and soil conditions are not obvious to the eye, but can only be ascertained by testing, evaluation, and selection prior to the breeding effort. Yet, in the development of new camellia cultivars, which will have the greatest impact on future camellia culture? Shall we continue to make intra- and interspecific crosses within the cultivars of the already acceptable species which can only result in minutely different flower characteristics from those already abundant? Or, should we break

away from our obsession with dinner-plate sized flowers and start thinking about the camellia plant as a whole? It is a sad thing that so many camellia growers think only of the plant as a prop that supports a show quality bloom. These people call themselves "growers" but actually they are merely "miners" of silver and blue ribbons.

It is highly unlikely that the continued redundancy of most camellia breeding today will substantially change camellias in the next hundred years other than clutter our nomenclature books with more thousands of additional cultivars much like we already have. It certainly will do little to expand the world of camellias beyond its present geographic limitations.

On the other hand, an in-depth testing and evaluation of the many lesser known species should reveal distinctively unique plant and flower characteristics that will make them of great value to future breeding programs. Preliminary results indicate the long range possibilities of such undertakings.

Prior to 1977, *C. oleifera* was considered of little ornamental value and merely a poor cousin of *C. sasanqua*. However, three devastating winter seasons at the National Arboretum, Washington, D.C., resulted in the death of 120 *C. sasanqua* specimens, some of which were 25 years old and 14 feet in height. P.I. 162475, a large specimen of *C. oleifera* introduced from Kuling, China, which was centrally located among the *C. sasanquas*, was untouched by leaf-burn, defoliation, or dieback. Several hundred *C. oleifera* seedlings growing nearby were also unaffected by the severe weather. During the spring of 1977, plants of 37 interspecific hybrids involving *C. oleifera* as one parent were planted in the vicinity of the *C. sasanqua* collection. During the following two winters, no injury was observed among the hybrids of *C. oleifera* with either *C. sasanqua* or *C. hiemalis*. Hybrids of *C. oleifera* × *C. miyagii*, a tender introduction from Okinawa, were badly injured but not killed. Yet, comparable-sized *C. sasanqua* cultivars planted at the same time were with few exceptions killed. Evidently, our *C. oleifera* introduction is not only extremely cold hardy in itself, but also conveys a high degree of hardiness to its hybrids with other species.

Interest in extending the range of camellia culture into southern Florida, where *C. japonica* does not do well because of excessive heat and light intensity, was responsible for our initiating a program in 1978 to test hybrids involving parental species from sub-tropical Asia. Hybrid plants of *C. hongkongensis*, *C. miyagii*, and *C. kissi* were distributed to six co-operators in southern Florida, two in southern California and

one in Texas. In southern Florida, the hybrids were planted in both partial shade and full sun. Preliminary results indicate that the hybrids are doing exceptionally well under both sets of light conditions and are maintaining vigorous growth with little signs of chlorosis even under high light intensity. The use of *C. kissi* hybrids in these tests is particularly interesting. *Camellia kissi* has a very wide geographic range in southeastern Asia, from South Vietnam and Burma north into Nepal. One of the *C. kissi* parents used came from Nepal, hardly a sub-tropical region. Yet, its hybrids have performed well in the full sun of southern Florida. It appears that adaptation of this introduction to high elevations with the accompanying high light intensity has made it also adaptable to the full sun of Florida. A seemingly contradictory observation is that these same *C. kissi* hybrids have done well during recent winters in Maryland.

Largely unexplored is the problem of developing greater alkaline tolerance among camellias. There are large areas of the United States, particularly in the southwest, where alkaline soils are the limiting factor in the growing of camellias. It is entirely conceivable that among the lesser-known species, degrees of alkaline tolerance exist. It is only a matter of someone taking the initiative to collect, propagate and test a large cross section of camellia species for potential alkaline tolerance within the genus. There are a number of us having substantial species collections who would be glad to furnish cuttings for such an undertaking. Once individual plants possessing desired tolerance were identified, it would be a relatively simple matter to hybridize these to improve their commercial acceptability while retaining their alkaline tolerance.

Presented here are but a few examples of some of the possibilities for extending the climatic range of camellias. These opportunities have been with us for many years, yet little has been done about it. Instead, the minor species have remained largely collectors' items, grown by a few camellia fanciers more as curiosities than for any gainful purpose. The re-establishment of plant exchange with mainland China has the potential for vastly increasing the genetic foundation of future breeding programs. It is therefore imperative to the future of international camellia culture that we do not mis-use this opportunity. We need to change from the short term, quick results, dinner-plate concept so prevalent in our present camellia breeding philosophy. Greater depth and long range objectives involving a wide range of camellia species is needed if we are to substantially advance the camellia culture of the future.

I.C.S. — N.Z.C.S. INTERNATIONAL CONGRESS — SEPTEMBER 1979

- *Le Congres International de ICS-NZCS*
- *ICS-NZCS Congresso Internazionale*
- *Congreso Internacional ICS-NZCS*

VI STONE

Baton Rouge, La., U.S.A.

How does one begin the telling of a romance in the middle of the affair? It is likened to a serial — no beginning and no end — only the climax. a bit hard to understand, you say? I can only lay blame to John Alpen who asked me to write up the International Congress in Whakatane and Rotorua, New Zealand.

We were "escorted" out of Auckland by that charming and beautiful lady, Myra Price. Through necessity I will have to omit our stops along the way and start with the Tainui Hotel in Whakatane, where we arrived in time for a late dinner on Thursday, 30th August. We went down to the Hall where the show would be staged. I sat in wonderment and awe struck amazement watching the people who were doing the artistic arrangements in the foyer. We did not enter the hall where everyone was busily engaged in "benching" their blooms, as we were to judge in the New Zealand show on Friday.

The usual Camellia weather prevailed. On show day it was my privilege to work with the very knowledgeable Jim Hansen of Waikanae, who allowed me free run. No matter how many times one judges there is always something to learn. This time it was the removal of individual blooms from trays (collections of up to 12) to go to the honours bench for competition. Must say, I am happy we do not practise this custom. I can only ache for the clerks who must handle and return blooms to their proper places.

The show was officially opened by the immediate past High Commissioner to England. The hall was absolutely jammed with spectators. It was understood that 4,852 people paid \$1.00 each to attend and this from a community of little over 6,600 people. Nowhere in the world could one see so much beauty in such a span of time. Orchids abounded as did just about any early spring flowers one would wish to see. There was a craft room where I purchased an opossum hat and beautiful hand loomed woollen place mats. Camellia plants were for sale at a price little over that we pay for understock here in America.

Friday night we were bussed twelve miles to a dinner at Edgecumbe Hall. The abundance and quality of the food would take reams to describe.

Saturday morning we went up for a visit with



Vi Stone admiring one of the Whakatane camellias

those two enchanting people, Ida and Les Berg, whom we had met in 1976. I can only tell you that you would have to see their garden to believe it. Camellias, Rhododendron, Magnolias and countless plants and flowers at every turn in the path and on every terrace level. What a delightful few hours we had strolling with them prior to the arrival of the two bus loads of tourists. It was fun inspecting Bubbles Rivet's rock collection and having tea in their living room overlooking the water and surrounding countryside. It was a happy time I shall long treasure.

Next we went to Sheila and Bob Russell's at Ohope Beach. It was the former home of Molly and D'arcy O'Toole, whom we had met on our last trip. Time was taken to relax and swing out over the cliff overlooking the beach. We were almost late for "lunch" at the Intermediate School. They had whole suckling pig, roast turkey, many "side" salads, a hot vegetable casserole (new to me) with cauliflower, broccoli, carrots and cabbage. As we say in this part of the U.S.A. "everything in it but the kitchen stove". We sat on the floor propped against the wall to eat. Then, I couldn't get up; the whipped cream was beginning to tell on me.

Next we went back to the show to take pictures and to visit a little more calmly. There was some concern among the New Zealand members that the quality of the blooms on the benches was not as good as they should be. We suggested that they might try to do as we do here, best individual bloom to bench and judge trays separately. No blooms on trays are eligible for individual competition; but the trays are judged as a whole. I remember too well that many overseas visitors at the 1978 American Camellia Society show at Perry, Georgia were appalled at



Scene of N.Z. National Show. Whakatane

the quality of the blooms. One thing they did not take into consideration was that 98 percent were gibbed blooms, out of season, or ones which had been transported entirely across the U.S.A. (about 3,000 miles).

The farewell banquet was at 7.30 p.m. and the New Zealand Camellia Society general meeting was convened at 8.30 p.m., and adjourned at 11.30, with Richard Clere being elected National President. It was my honoured privilege to hand out all trophies and cards from the show. "Vonnie" Cave could hardly stagger off the platform with their trophies.

The overseas visitors from Australia, England, Japan, Italy and the U.S.A. had stayed in Rotorua and were bussed back and forth.

By 4 a.m. Sunday it was storming, but we took off for Rotorua as the morning garden tours were rained out. We went to the International Hotel, headquarters for the International Congress. The accommodations were "beautiful". The buffet in the dining room was like one great big bash in America, beautiful and very good.

At 2 p.m. in a rainstorm, the ICS directors were bussed out to the school for the official Board of Directors meeting. We adjourned at 6.15 p.m. Tom Savige, our very knowledgeable and personable International President presided. His conduct of the entire proceedings was most efficient and admirable, yet all in attendance felt they had had an opportunity to speak freely on any and all subjects before the board. We took a tea break, at which time I handed out official keys to the City of Baton Rouge and Tabasco cook books given by the McIlhenny family of Avery Island, Louisiana. Speaking of "Tabasco", we introduced the Aussies and Kiwis to "Bloody Mary" drinks.

Monday, when the Congressionists went to Tauranga and Tepuke, where we had already spent four days with Allison and Trevor Lennard, we took off for the Blue Lake home of Plemmie and Jim Millar and spent an entire morning

wandering, between showers, in their manicured gardens.

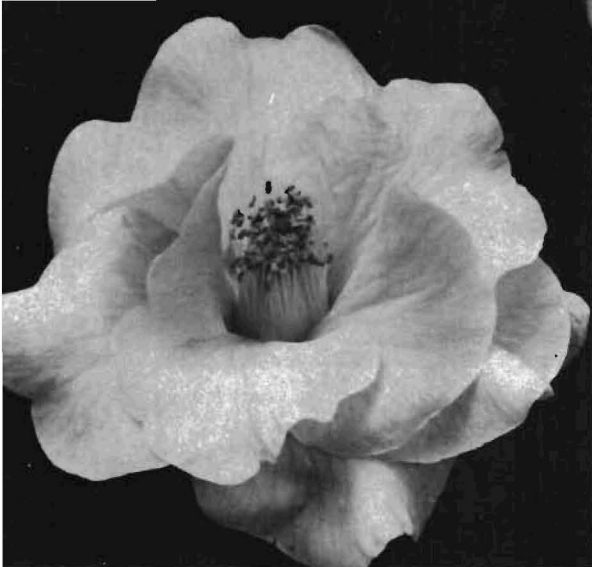
Evening session — welcomed by Chairman Owen Moore and Tom Savige. Owen spoke on the "The New Zealand Camellia Scene"; then Vonnie Cave treated us to a breathtaking show of her Camellia slides and flower photography. As I put it, "It was worth the entire price of admission to just sit and gasp as each new slide appeared." We thought they were unbeatable until she began her "fade in fade out" presentation. I think that to the last man and woman we could have stayed all night in enchanted wonder.

The presentations of Col. Tom Durrant, "The *Camellia reticulata*"; Mr Tom Savige, "Genetic Fixity and variation in the Genus"; Mr Chūji Mita, "The Apple Camellia" and Dr C. H. Catlin, "Camellias in an English Garden" showed evidence of extreme knowledge on the subjects.

The Third session at 3 p.m. — we have a true confession to make. We had all heard Ken Hallstone, in person, discuss his work with flower fragrance; so, we played hookey from school and went in search of a young greenstone carver and for me to have a hairdo. We wanted to get a little



Edith Mazzei (California), Richard Clere (now NZCS President) and Tom Savige judging some of the big ones.



'Lasca Beauty'. Champion of Show



'Moutancha', best Yunnan Reticulata

shopping done. We were successful in all instances.

Fourth session at 3.50 — Dr Bob Withers of Melbourne presented his view of the use of Gibberellic acid. I do believe that the session we had with Bob in his own living room changed his mind slightly about the results from the use of "gib". Should we have been blessed with their beautiful climate, wonderful soil, and pest free conditions there would only be a place for gib amongst hybridizers, which is what we suggested. I can only pray that the people "down under" will never have the battle we do here in America. This article is being written on 18th December whilst it is 20 degrees F, so you can guess what happened to all those blooms I had gibbed to have open for 22nd December when our daughter will arrive from New York for the holidays.

Before conclusion of my article I want this to be the climax. Our highest praises and salutations go to Owen Moore and everyone who had a part in the organization and conduct of the entire Congress. It was the epitome in efficiency

Dr Charles Catlin from Staffordshire, England writes: "Looking back over three weeks in New Zealand we remember particularly the beauty and peace of the Bay of Islands, the magnificent tree ferns growing wild in the bush, and the Eden Garden which was most impressive, as were the happy band of volunteers who care for it. Here under the supervision of Jack Clark I planted a camellia on behalf of the English party.

We were all very impressed by the smooth organisation of the Congress. All speakers adhered strictly to their allotted times and each session included good discussion on the papers delivered. Typescripts of each paper were

as everything seemed to move so smoothly. Special thanks go to all who worked so far in advance to prepare and translate all of the papers given and to have copies for each of us to bring home, mull over and fill in any tiny gaps we may have missed.

Now you may envisage our loading up the station wagon to the ceiling and on top of it, all of the baskets of oranges, grapefruit, Kiwifruit, and Tamarillos everyone had given us (they could not take them back to Australia). We really needed a trailer. We felt we came away doubly enriched — not just by food, but the warm and wonderful friendships we made and also renewed. To spend so many very happy hours with such a widely knowledgeable group of people who have one interest in common, Camellias, is beyond any dream.

As in a serial, I will say "watch for ensuing articles", you have only heard of five days experiences. Can you bear to hear about the other 30 days we spent in Australia and New Zealand?

available before the session and this enabled us to appreciate their high standard. I was amused at the reaction to my paper on "Growing camellias in North Staffordshire". It seemed that the congressionists could not understand why I bothered to try!

Our final memories are of the beauty of the new green of the weeping willows at Christchurch and of the wonderful backdrop of snow-clad mountains behind the city; of the little chapel on the shores of Lake Tekapo; of that pleasant place, Queenstown; and finally a breathtaking view of Mount Cook absolutely clear of cloud and bathed in the light of a full moon."

DIRECTORS' MEETING Rotorua, New Zealand, 2nd September, 1979.

- *Reunion des Directeurs*
- *Riunione dei Direttori*

- *Junta de Directores*

The annual face-to-face Directors' Meetings, which have been possible over the past three years — Nantes, Perry, Rotorua, — have served a most useful purpose in the consolidation of the I.C.S. Through these meetings the voices of various regions have found expression and from this many harmonious decisions have been made to improve the operation of a very wide-spread multi-national society. The Directors' Meeting at Rotorua followed the pattern of the previous meetings and it was obvious that each Director, while putting forward a particular requirement of his area, always had in mind the interest of an International Society.

The representation of most areas was quite strong. In most cases, if the particular area Director could not attend, a suitable proxy was available. The areas represented were: New Zealand, Owen Moore; Australia, John Pedler, Peter Levick (representing Eric Craig), Harry Churchland (Secretary); Japan, Yoshiaki Andoh; United Kingdom, Charles Catlin (representing John Tooby); Africa, Leslie Riggall; Italy, Antonio Sevesi; U.S.A., Vi Stone, Lou Fetterman (representing Milton Brown), Mrs C. Allen (representing Bill Kemp) Caryl Pitkin (representing Ken Hallstone); the Channel Islands and other Regions, Tom Savige, President (representing Violet Lort-Phillips).

One of the first items raised was the membership from Mainland China. Mr Andoh had made a journey to China, specifically to ascertain the possibility of membership from that area. He felt that China, as the habitat of 80 percent of the known camellia species and with a developed horticultural basis, particularly in regard to *Camellia reticulata*, would have much to contribute to camellias internationally. In his journeys Mr Andoh visited the Kunming Botani-

cal Institute and the Peking University where he met Professor Yü, the Deputy Director of the Institute of Botany. It was a paper presented by Dr Yü to the R.H.S. Magnolia and Camellia Conference that first directed Western eyes to the Kunming *reticulatas*. However, due to the People's Republic of China refusing to recognise Taiwan as being separate from China, it seemed that while the I.C.S. continued to list its Taiwanese members separately the Mainland Chinese could not join the society. The Directors appointed a Select Committee comprising Tom Savige, Harry Churchland, Yoshiaki Andoh, Leslie Riggall, and Mr Chi Shong Chang to investigate alternative possibilities and report to the Directors' Meeting at Kyoto, Japan, 1980.

The President then reported on activity of the I.C.S. as International Registration Authority. An International Nomenclature Advisory Panel had already carried out a considerable volume of work investigating the validity and orthography of some of the older cultivars where there was a conflict of opinion between areas. A particular problem in a largely Western Society was the treatment of oriental cultivar names. Mr Yokoyama of Japan had been appointed Eastern Nomenclator to co-ordinate. Mrs Vi Stone, U.S.A. Director, had developed a card index of several thousand Japanese cultivars and appealed to Mr Andoh to assist her with translations to enable an indexed list to be ready for the Kyoto Conference in 1980. She believed that transliterated names with English translation of all oriental camellia cultivars should be published. It was agreed that an historical list of camellias with references, should be maintained for research purposes.

Dr Catlin for the U.K. raised the matter of financing the manufacture of the I.C.S. ties and



The Directors Meet. Left to right: Peter Levick, Harry Churchland, Yoshiaki Andoh, Antonio Sevesi, Tom Savige, Catherine Allen, Lou Fetterman, Vi Stone, Owen Moore, Leslie Riggall, John Pedler, Charles Catlin

scarves. Two batches of ties, one with a blue background and one with a maroon, have been made and have been most popular. It was suggested that future batches be in other colours such as grey and green. Largely the cash flow was covering manufacturing costs. However, in the case of the proposed I.C.S. scarves, with the cost approximately £6 Sterling each, advance orders would need to be taken and the Executive was asked to investigate various methods of financing this operation. Silver emblems for the I.C.S. were agreed to be too expensive for further consideration.

The financial report showed that expenses were continually rising; expenditure for 1978 was \$5,569 and for 1979 \$6,886; nevertheless the increase in membership meant that the subscriptions for 1980 could be kept to the present level.

One problem was the rapidly varying exchange rate in some areas, which substantially changed the effective subscription as expressed in Australian Dollars. This was most evident in Japan and it was agreed that Asian Region Directors may retain 20 percent of the subscriptions received in 1979 and 1980 to assist in extraordinary local expenses including a Japanese language condensed version of the I.C.S. Journal. It was also agreed that life membership subscriptions for any region may be set at a level that equates its life membership fees with those of other regions generally.

Membership reports were incomplete but generally showed an increase in all regions except the Asian. Mr Andoh said this was because the Journal was only published in English. He felt that publication in Japanese also would be necessary before there could be a substantial improvement in that area.

Harry Churchland said that the editor's task was difficult and could be frustrating if all material was not available on time. The Editor should receive reports and papers presented at all I.C.S. Conferences and have first opportunity to select. Any material which could not be published in the Journal in a reasonable time should be made available to other interested bodies at the Editor's discretion.

Lou Fetterman raised the question of tax exempt trusts with the I.C.S. as beneficiary. It was agreed that the Executive investigate the possibility of grants for publishing nomenclature information, having regard to the I.C.S. being the formally appointed International Registration Authority.

The responsibility of Directors was raised, and it was agreed that they should be in regular contact with their Regional Membership

Representative with a view to assisting with the maintenance and increase in regional membership. They were also requested to deal promptly with any question submitted for postal ballot.

Mr Andoh reported on the organisation for the 1980 Conference in Kyoto. He stated that the President would take the chair, and that 10 papers had been promised, coming from Japan, Africa, Australia, Italy, the U.S.A. and France.

The question of the 1981 Conference was not resolved. Both Spain and the Channel Isles had made proposals. Negotiations with the Spanish Director, the Marques de Figueroa, indicated that the Conference there would best be based around the Vigo Camellia Show in March, 1981. The Conference could be divided between Spain and the Channel Isles. Further information was to be obtained before a decision could be made.

The frequency of the International Conferences was raised. It was felt that Annual Conferences put too great a financial and organisational burden on the Directors and it was agreed that, following the 1981 Conference, such Conferences be held at periods not less than 18 months and not more than 27 months apart. This would allow for adjustment to suit the varying flowering periods from one side of the equator to the other.

Mr Peter Levick advised that "Eryldene", the home of the founder President of the I.C.S., the late Professor E. G. Waterhouse, had been made available for acquisition by a Trust, for the benefit of camellia lovers. The amount of \$150,000 would need to be raised to enable purchase. An appeal for funds is being launched.

The President pointed out that on the completion of his term as President the incoming President, to be most effective, would require the members of the Executive to be substantially drawn from his own region. The Australian members of the Executive also wish to relinquish their offices at the end of the next term. Therefore, the Directors of the Society should look toward regional change of domicile of the I.C.S. Executive.

The proposition put forward by Milton Brown that the I.C.S. join with the American Camellia Society in proclaiming 1980 as "The Year of the Camellia" was discussed but it was felt that there was not sufficient notice to be able to make successful plans for 1980 from an International viewpoint.

The New Zealand Director, Owen Moore, was thanked by the President for his efficient organisation and generous hospitality and the meeting closed with wishes for a happy and successful Congress.

RECENTLY SAID AND WORTHY OF RESTATEMENT

- *Ce qui été récemment et mérite d'être redit*
- *Cose Recentemente Dettè E Meritevoli Di Ripetizione*
- *Recientemente Dicho Y Digno De Repetirse*

DAVID FEATHERS, Lafayette, U.S.A.: "The obstacles to attainment of a pure-blue camellia appear to be so great as to persuade this writer that such a project is best left to a generation much younger than his".

DAVID HENDERSON, Editor New Zealand Camellia Bulletin: "...the Rotorua Congress was about camellias and camellia people. About camellias in seeing them on the show benches, and in gardens, exchanging views about them, and expanding knowledge of them. About people in seeing the other person's point of view, and above all, in forming and cementing friendships among camellia lovers wherever they come from".

DR CHARLES CATLIN, Staffordshire, England, in commenting on the reaction of the congressionists at Rotorua to his address on growing camellias in North Staffordshire: "It seemed to me that they could not understand why I bothered to try to grow them".

OWEN MOORE, ICS Director, Wanganui, N.Z., quoting a report of 1870 on Alfred Ludlam, a pioneer of New Zealand horticulture: "He has three beds containing about eighty varieties of camellias, which probably were never equalled in the open air in the finest gardens of Europe".

PAT GOONAN of Strathfield, Australia as quoted by DR BOB WITHERS at the Rotorua International Congress: "Gibbing, like in the automobile industry, may be regarded as an optional extra".

DR TAKESHI WATANABE, Kyoto, Japan: "No other plant in the cultural history of flowers is so closely related to the cultural history of Japan and the Japanese people as the camellia".

DR ANTONIO SEVESI, Milan, Italy: "I wish that in the future, even in the philatelic field, the camellia will have the place and space that it merits, and that he who designs a camellia for a stamp does so with the maximum care in order that the identification does not give rise to headaches".

YVONNE CAVE, Wanganui, N.Z.: "...get there before the crowd as people have no respect for tripods or photographers. I've even had a bloom picked up while I've been trying to focus on it!".

LESLIE RIGGALL, Natal, South Africa: "...to obtain the most aesthetic effect from camellias we must return to Nature. The camellia is a plant of the forest and in gardens all plants of the forest will contribute to the creation of a natural environment which will improve the health of our camellias and enhance their beauty".

ERIC CRAIG, Warrawee, Australia, speaking at the Kyoto International Congress about the late Professor Waterhouse and Mr Yoshiaki Andoh, principal architect of the Congress: "Both of them will long be remembered as great men of letters. As great scholars. As great gentlemen".

Dr KAORU HAGIYA, Niigata, Japan, when telling how the flexibility of the branches of the Snow Camellia saved them from breaking under the weight of the snow: "What a subtle, adaptable character this is!"

RAY GARNETT, Beaumaris, Australia: "...in the near future more hybridists will concentrate on the profuse blooming, small flowered species..."

DR BILL ACKERMAN, National Arboretum, U.S.: "...should we break away from our obsession with dinner-plate sized flowers and start thinking about the camellia plant as a whole?" and later: "It is highly unlikely that the continued redundancy of breeding today will substantially change camellias in the next hundred years other than clutter our nomenclature books..."

CHARLES NEWMAN, Perth, West Australia, writing in the Australian Camellia News: "Let us all go forward and spread the gospel of camellias".

SLOWLY BUT SURELY

- *Lentement mais Surement*
- *Piano ma Sicuro*
- *Despacio pero Seguro*

KEN HALLSTONE

Lafayette, California, U.S.A.

Slowly but surely the fragrant camellia flower is making its way into prominence in the camellia growing world. It all started with Dr William Ackerman's, Howard Asper's and Dr Clifford Parks' first crosses for fragrance made during the early 1960s. From these beginnings the hybridizer's dream of developing a show quality flower with ample pleasing fragrance began.

It is generally agreed there should be a sufficient amount of this pleasing scent so that the general public will be able to detect it easily under average conditions. The fragrance of *C. lutchuensis* and its hybrids is recognized as the most desirable, but it is followed closely by that of the hybrid developed by David Feathers, which he calls 'Salab'. The many fragrant *Camellia japonica* cultivars such as 'Kramer's Supreme', 'Fragrant Frill' and 'Scentsation' are good but seem to be more sensitive to temperature and moisture than the hybrids, and under certain conditions the fragrance tends to disappear. Slowly but surely with the combining of these fragrances the flowers are getting better and more fragrant.

Dr Ackerman and I have waged a campaign to increase the awareness of fragrance in camellias, to the growers throughout the world. We have done this through our free exchange of scion material and by recruiting more members into the hybridizing for fragrance programme. One final step is needed — to get the general public and the typical camellia grower interested in fragrant camellias. To accomplish this we must provide the opportunity to see and smell them in a show. A fragrant division in a show would also provide the opportunity for the grower of seedlings and the hybridizer to show off the results of his labours.

To my knowledge the first shows with competition for the best fragrant flower began in November 1974 at the Northern California Camellia Council meeting in Sacramento, when the Northern California Society authorized me to announce to the members present that we were adding a fragrant division to our show, (the fifth show of the year in this area). Furthermore the Robert K. Cutter Memorial Trophy would be presented annually to the winner. When announcement of the Santa Clara County Camellia Show at San Jose (second show of the

year in this area) arrived, to my surprise and delight their programme had added a fragrant division. I later found out that Barbara Butler and Dr Ackerman, who had been working with Dr Cutter, had made elaborate plans for a similar division in the Modesto Society Show (sixth show of the year). Details of the judging for fragrance in this show were published in the February 1975 issue of the *Camellia Review*. A brief account of the results of these first three shows' fragrant flower winners is given in my article "Fragrance Is Here to Stay" in the 1975 I.C.S. Journal.

Slowly but surely we added one more society when in 1977 Sacramento provided competition for the best fragranced flower. In addition they came up with a new category for the best yellow bloom. Incidentally the *C. rusticana* 'Botan-Yuki' and *C. japonica* 'Elegans Champagne' have been the winners in this division for yellow. In 1978 the New Zealand National Show at Lower Hutt became the number five society to include a division for scented blooms. Which society will become number six to promote fragrance? How about a society in Japan? I am using from there about ten fragrant Higos in my breeding program. Or what about societies in Australia, France or England being unafraid to try something new? When a trophy is offered, it is surprising how many people will suddenly discover they have some fragrant seedlings of which they were not aware. I would be delighted to provide information to any society on how to establish a fragrant division in your show.

NORTHERN CALIFORNIA 1979 SHOW WINNERS (Fragrance Division)

Feb. 17, 18

Santa Clara County Camellia Show held in San Jose. Competition open to any fragrant cultivar.

Winner: Cutter hybrid E40 shown by Ken Hallstone of Lafayette, Ca.

Flower: 9½ cm, a loose peony, light pink with red veining throughout, pleasing lutchuensis fragrance. Upright vigorous growth.

Parentage: *C. japonica* 'Mrs Bertha Harms' × Parks #69(2) — (*C. japonica* 'Reg Ragland' × *C. lutchuensis*). Scions and pollen available.

March 3, 4

Sacramento Camellia Society Show held in Sacramento. Competition open to any fragrant cultivar.

Winner: Feathers hybrid #3073 shown by Dave Feathers of Lafayette, Ca.

Flower: 11½ cm, a tall upright semi-double, red with darker veining, with a pleasing spicy fragrance. Excellent foliage and garden plant.

CAMELLIA CHRYSANTHA

T. J. SAVIGE

Wirlunga, N.S.W., Australia

As a consequence of the published descriptions of *Camellia chrysantha* by the late Professor Hu Hsien-hsu of Peking in 1963, horticulturalists in Australia, America and Japan have been negotiating to obtain some propagating material of this species.

Following the visits in 1979 of Mr Harold Fraser of Australia and Mr Yoshiaki Andoh of Japan, the Kunming Botanical Institute arranged to collect seed for distribution to interested parties. Also Professor Takasi Tuyama visited the Institute in December 1979 and photographed the flowers of the yellow camellia. He also obtained scions of this and other species which are now growing in Japan.

In February 1980 packets of seeds were received by Mr Fraser and the writer in Australia, Mr Andoh in Japan and the American Camellia Society headquarters in the U.S.A.

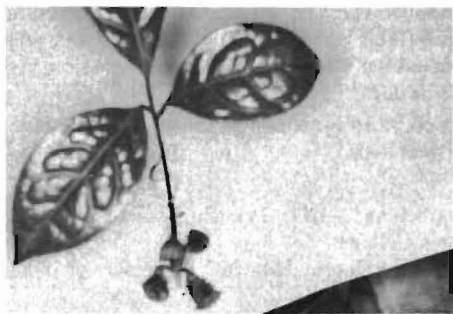
The seeds of *Camellia chrysantha* sprouted with similar vigour to *reticulata* seeds. The radicle and plumule were initially quite red, the leaves becoming dark green as they developed. However, the most amazing thing was that the seed cotyledons split into four. As far as the writer knows this is the only plant with this



Close-up of cotyledons, divided into four "seed leaves"

peculiarity. Discussing this later with the propagator at the Kunming Institute, he said that occasionally larger seed split into 6 seed leaves. He also said that chromosome counts established the species to be a diploid. Crosses had hopefully been made with *C. reticulata* but there is some doubt as to their success as the seedlings have checked out as diploid. The leaves are quite reticulate with the surface swelling up between the veins in the manner of *C. granthamiana* and *C. taliensis*. Two forms of *C. chrysantha* have been described: *C. chrysantha* var. *microcarpa* and *C. chrysantha* var. *macrophylla*. Var. *macrophylla* has larger leaves and flowers which are bell shaped, somewhat like *C. taliensis* in form but yellow and a little larger, while the flowers of var. *microcarpa*, besides being smaller, are a six petal, simple single of a flatter form. The leaves are also a little smoother. The seedlings in Australia appear to be of the variety *macrophylla* and are growing vigorously while Dr Ackermann reports similar success from America, where the seeds have been grown by aseptic culture.

The camellia world owes much to the dedicated botanists of the Kunming Botanical Institute and in particular to the Vice Director, Dr Chang-Ao-lo, without whose kind cooperation the transactions leading to the distribution of the yellow camellia would not have been so fruitful.



Seedling *C. chrysantha* showing the bullate leaf form and the unique four "seed leaves"

Parentage: *C. japonica* 'Waterloo' × *C. japonica* 'Debutante'
× hybrid 'Salab' × *C. reticulata* 'Crimson Robe'. Pollen available.

March 10, 11

Northern California Camellia Society Show held in Concord, Ca.

Competition open only to fragrant seedlings.

March 17, 18

Modesto Camellia Society Show held in Modesto, Ca.

Competition open to any fragrant cultivar.

Winner of both shows: Harrison's #W-70 shown by Woodford Harrison of Berkeley, Ca.

Flower: 10 cm, a high loose peony, light vibrant pink with a good sweet spicy fragrance. The plant is a vigorous grower with beautiful foliage.

Parentage: *C. japonica* 'Mrs Bertha Harms' × Feathers hybrid 'Salab'.

Scions and pollen available. Please also see page 67

LITERATURE CITED

1. Feathers, David L. *Some Observations on Camellia Heredity*. American Camellia Society, Yearbook 1971 p. 85.



Congressionists at Conference Hall



Spring morn. Congress Hall grounds

AN INTERNATIONAL CONGRESS IN JAPAN

- *Un Congres International au Japon*
- *Un Congresso Internazionale in Giappone*
- *Congreso Internacional en Japon*

Kyoto is one of the most beautiful cities in Japan. It has a proud history going back more than a thousand years and it is widely acknowledged as being the virtual birthplace of the modern *Camellia japonica*. The ancient camellia trees in many of the temple gardens, some of them four hundred years old or more, bear testimony to this. With such a background it was evident that Kyoto would be a wise choice for the venue of the first international congress to be held by the I.C.S. in its Asian Region. In the event the success of the venture, which ran from Sunday March 23 through to Thursday 27, confirmed the wisdom of the choice.

Those who were familiar with the meticulous care for detail of Mr Yoshiaki Andoh, ICS Vice President and joint secretary of the Congress knew that the organisation would be good. But even they, and all the other congressionists, continued to be deeply impressed, day after day, as Mr Andoh's planning translated itself into a series of smoothly running events.

Three mornings were devoted to technical sessions, the papers being amply supported by projected colour transparencies. The opening session was chaired by Dr Yotaro Tsukamoto, Emeritus Professor of Agriculture at Kyoto University. He read a message from the Prefectural Governor who referred to the old camellias of Kyoto and said that many of the city's trees are designated as the living national treasure.

The Kyoto International Conference Hall, a recently completed complex, very large and specially designed for such functions, was admirable for the purpose. It afforded simultaneous translation facilities. Several of the speakers were Japanese, eminent in their respective academic and cultural fields. They showed special consideration by presenting their papers in English. This was greatly appreciated by the many participants from English-speaking Regions. Valuable discussion in the form of questions and answers rounded off each presentation.

On each of the three days the congressionists moved on to luncheon in the spacious restaurant area in the Conference Hall. Here again the standard was high.

The technical programme was:

- Monday 24 March** "On the wild yellow-flowered camellias" — Dr Takashi Tsuyama, Professor Emeritus, Ochanomizu Women's College.
 "Snow Camellia in Japan" — Dr Kaoru Hagiya, Professor of Niigata University.
 "40 Years of Camellias" — Mr David Feathers, California
- Tuesday 25 March** "The Camellias of Dr Sacco" — Dr Antonio Sevesi, Italy
 "The Roots of *C. vernalis* in Hirado" — Dr Shumpei Uemoto, Prof. Kyushu University.
 "Giemsa C-Banding and Karyotype of Camellia" — Dr Katsuhiko Kondo and Dr Clifford Parks.
 "Camellia Culture in Vitro" — Dr Jean Creze, France.

- Wednesday 26 March** "Flower Colours in Camellia" — Dr Kenichi Arizumi, University of Kagoshima
 "The Companion Plants for Camellias" — Mr Leslie Riggall, South Africa
 "Japanese Culture and the Camellia" — Dr Takeshi Watanabe
 "Eryldene, a spiritual home for camellias" — Mrs Mary Davis, Australia.

Accommodation for the visiting congressionists, as well as the various social functions, centred on the very adequate Kyoto Hotel. On the Sunday evening at the first function, the Cocktail Hour, the relaxed and happy atmosphere presaged an occasion where many old friendships were going to be



Mrs Andoh with Mrs Sachiko Ohtomo



Japanese Musicians at Final Banquet

renewed and many new ones made.

At the Monday night's Welcome Party a message of welcome from the Mayor of Kyoto, Mr Motoki Funahashi, was read by Dr Eiji Nakamura of the Shiga Agricultural College. He told of a campaign launched in 1971 to plant a million trees in Kyoto and how each year since then about 100,000 trees have been planted, with completion of the million now close at hand. The camellia as well as the azalea is designated as the flower of the city. The Welcome Party was notable for the range of the excellent food served buffet style, both "Japanese" and "Western".

Afternoon activities of the congressionists, en masse, commenced at the Kyoto Botanical Gardens where a camellia show presented by the Gardens in conjunction with the Kyoto Garden Club was attracting much patronage and interest. Apart from the fine display of blooms, there was a fascinating collection of camellia artifacts and memorabilia. Most of the items in this display came from the private collection of Dr Takeshi Watanabe whose paper on "Japanese Culture and the Camellia" was presented at the Congress and appears on page 54 of this Journal.

Other visits that afternoon were to the Old Imperial Palace, immaculately maintained, and the Daitokuji temple where the ancient plant of Goshiki Chiri-tsubaki 'Polypetala' was inspected.

The Tuesday afternoon's offerings were again of much interest to camellia lovers, being to the Herbal Garden of the Takeda Chemical Industries company where a vast collection of camellias is packed in on a steep hillside, and then on to the Reiganji temple and the Heian shrine. Participants were busy again on the Wednesday afternoon going to the Kyoto Tea Institute and to temples which carry much camellia interest.

Thursday offered an all day visit to Nara, the former capital of Japan with its huge image of the Buddha and then on to historic temples in the charming Nara locality.

The final banquet on the Thursday night was a formal but very happy function superbly presented. The several sumptuous courses were served in the finest tradition with accompanying wines and sakis. Dr Takashi Hosoki from Kyoto University read a message from the Education Minister who stressed his appreciation of the work being done by the I.C.S. in promoting cultural exchange. It was about two hundred years since the camellia had been introduced from Japan to Western societies. He went on: "Having many foreign researchers and lovers of the camellia here in Japan today, I feel as though the camellia has come back to its birthplace. . . ." This gracious banquet was enlivened by a delightful presentation of Japanese music.

I.C.S. President Tom Savige extended felicitations to all participants and expressed the thanks of all of them to the organisers. Representatives of the various Regions when conveying thanks to Mr and Mrs Andoh for their central role in the Congress all paid tribute to its international significance. The sentiments expressed by all of them would have some reflection in the words of Mr Eric Craig when he spoke for the Australian and New Zealand delegations:

"Until Japanese members of the I.C.S. visited Sydney last year on their way to New Zealand, I had not realised that Professor Waterhouse and Mr Andoh had never met in person. This was a surprise, for Professor Waterhouse always spoke of Mr Andoh as though they were very close friends. The truth is that they **were** the closest of friends...even though this had come about

through correspondence.

As you know, Professor Waterhouse was — and Mr Andoh still is — a fantastic correspondent. Both of them will long be remembered as great men of letters. As great scholars. As great gentlemen.

Professor Waterhouse loved Japan, and

admired the Japanese people. Last Monday, at Dr Watanabe's exhibit of camellia art, we saw a beautiful plate, hand-painted with a camellia, and the small signature of Paul Jones. In large letters were the words: "E. G. Waterhouse... Kyoto 1962". Yes, Professor Waterhouse was here, in Kyoto, just before he and several friends launched the International Camellia Society. He loved the Japanese concept of beauty... the beauty of simplicity. So it is no wonder that his favourite sasanqua was a Japanese variety: 'NARUMI-GATA'. And his favourite japonica was the very camellia Mr Andoh chose for page one of his delightful 1971 publication: the Japanese 'KAMO-HON-AMI'.

How dearly Professor Waterhouse would have

loved to attend this Congress in Kyoto. He would have known that it would be superbly organised. He would have known that it would make a major impact on the furtherance of camellia knowledge and camellia friendships.

Ware-ware Ōstoraia-jin wa Andō gōfusai to Nihon-jū no, kankeisha no katagata no, Kokusai Tsubaki no kai no mokuteki tassei no tame ni, ōkina kōken o saretā koto ni, fukaku keii no i o hyō shimasu. Dōmo arigatō.

(We, the Australians and New Zealanders pay tribute to the dedicated team of Mr and Mrs Andoh, and to their associates throughout Japan, for a truly memorable contribution to the objectives of the International Camellia Society. Thank you very much.)"

Registrations for the Congress were:

Belgium	1	United States	29
France	43	United Kingdom	9
Italy	1	Australia	36
New Zealand	6	Japan	79
South Africa	2		

Ghislaine Loos, founder of the Belgian Camellia Society, came to Kyoto with the French group. Her thoughts which came to us under the title "**A Dream Come True**", would be typical of those of many of the overseas visitors to the Congress:

"Since my tenderest years I had dreamed of Japan. Over the years this childhood dream became an obsession. Thanks to the I.C.S. Congress in Kyoto it all became possible.

With joy but with some apprehension I anticipated the approach to Japan. Rapturously I perceived that the reality was even more beautiful than the dream. What a magnificent country.

The welcome and the gentleness of the Japanese equal the splendour of their temples and gardens. My personal thanks go to all our Japanese friends for the warmth of their welcome.

It was with admiration that each day I rediscovered the art of the Japanese garden. 'TSUBAKI' therein holds a place of honour. The beauty and majesty of these camellias are full of fascination. More than ever I am convinced that 'TSUBAKI' is the most beautiful shrub in creation.

It is my fondest wish to return to Japan and once again to see this land of my dreams."



The Paul Jones "E. G. Waterhouse" Plate in Dr Watanabe's collection



Mme G. Loos (right) enjoys Welcome Party with Mrs Margaret Levick (Australia)

DIRECTORS' MEETING

KYOTO, MARCH 1980

The directors met immediately after the happy cocktail hour on Sunday evening, March 23.

Once more the discussion on the varied list of agenda items was wide ranging, so much so that the meeting had to be adjourned at 11 p.m. It reconvened on the Wednesday evening.

With the President, Tom Savige, in the chair those present were Leslie Riggall (South Africa); Richard Clere (N.Z. — proxy for Owen Moore), Milton Brown, Vi Stone, David Feathers and Catherine Allen (U.S.A., with Catherine proxy for Bill Kemp and David proxy for Ken Hallstone); Yoshiaki Andoh (Asian Region); Claude Thoby (France); John Tooby, Cecily Perring and Mr A. Barry (U.K., with John carrying David Trehane's proxy and Mr Barry carrying Dr J. Smart's); Jean Laborey was proxy for Mrs Vi Lort Phillips (Other Regions); Eric Craig and John Alpen (editor) (Australia). Observers were Dr J. Crézé (France); Mrs G. Loos (Belgium) and Mr John Roberts the society's auditor.

There was a lengthy list of apologies.

Arising from the previous meeting a lengthy discussion ensued on the circumstances attaching to Chinese membership as it affected the Taiwanese members. Mr Andoh re-affirmed his belief in the importance of Mainland Chinese membership and recommended listing China as two provinces, Mainland China and Taiwan, China. A motion that the I.C.S. should recognise the People's Republic of China, with the Taiwan members being listed under "Taiwan, China" was lost after exhaustive discussion. The problem remains unresolved but it was evident that a strong desire remained for an eventual mutually acceptable solution.

International Nomenclature

The President announced the completion of the first report by the International Nomenclature

- *Reunion des Directeurs a Kyoto*
- *Riunione dei Direttori Kyoto*
- *Junta de Directores Kyoto*

Advisory Panel, which will appear in the I.C.S. Journal and which he hoped all regional societies would publish. He requested that he be advised by end 1980 by all national societies as to new cultivars registered for the twelve months.

On Asian/Eastern nomenclature Mr Savige mentioned that Mr Andoh is publishing a new book and that the Yunnan Institute is to publish a list. Mr Andoh reported that Mr Tsuneko Nakamura had agreed to carry on with the work of the Eastern nomenclature collation. The President was congratulated on the significant progress he has achieved in this matter of international nomenclature.

Items for Sale

Mr Tooby reported that the few I.C.S. ties which remained were expected to be cleared at Kyoto; also that investigations were continuing about head scarves with the object of being able to supply at about £10 including overseas postage.

Tax deductability of donations to I.C.S.

The executive believed that this was a matter essentially for Regional investigation. The President asked all directors to advise if any satisfactory formula or information was ascertained.

Editor's Report

In advising progress on preparation of the 1980 Journal the editor asked that appreciation be recorded of the co-operative stance of the N.Z.C.S. in the making of best use of the papers presented at the Rotorua conference.

Sharply increasing printing and postage costs were giving the executive much concern. Complimentary comment came from the meeting relating to cost control as well as to the contents of the 1979 Journal. *Continued on page 24*



Mr Andoh discusses details on eve of Conference with John Alpen (ICS Editor), Eric Craig (Director) and President Tom Savige

THE SNOW CAMELLIA OF JAPAN

- *Le Camelia des Neiges du Japon*
- *Le Camelia della Neve del Giappone*
- *La Camelia de las Nieves del Japon*

DR KAORU HAGIYA

Professor in the Agricultural Dept.,
Niigata University, Japan

Hearing the word "Camellia", one may picture a scene of flowers and shining leaves in the warm southern sunshine. In fact, the cultivation of camellias has become popular only in the milder parts of the world. But after World War II, a camellia, quite different from the usual Japonica camellia, was found in the mountainous districts in the north of Japan where wind and snow are very severe. This kind was named Snow Camellia, *Camellia rusticana*.

Continued from page 23

The editor introduced an Index of all I.C.S. Journals. Copies of the Index had been brought to Kyoto for sale. The enthusiastic support of all directors was essential to ensure clearance of sufficient Indexes to cover costs.

Treasurer's and Membership Report

The reports which gave analytical background to the worsening financial trends were adopted. In 1979 moderate membership growth had been sustained. Several Regions reported on membership, New Zealand noting some progress, particularly since the Rotorua conference. The French delegates were also very confident.

The treasurer had drafted a procedural timetable with helpful notes for Membership Representatives. A motion calling for its enthusiastic adoption was carried.

Subscription Rates

There was much discussion on the rates to be set for 1981, which included debate on the differential between the rates for individuals and those for joint husband/wife memberships. After amendments for substantial increases to meet the inflationary pattern, which were lost, the executive's recommendation for the more gradual increase to \$A7 (or its equivalent) for individual members and \$A10.50 for husband/wife was adopted.

At the adjourned session on Wednesday, March 26 there were apologies from Messrs Riggall and Clere and Mrs Stone, who nominated Thomas Perkins as her proxy. Several important matters were disposed of, several of which have



DISTRIBUTION OF SNOW CAMELLIA

Sasanqua is distributed in the warmest areas of Japan, Kyushu and Shikoku. Japonica Camellia grows throughout the same areas, but grows mainly near the seashores in Honshu, and there is no camellia in Hokkaido. On the other hand Snow Camellia is confined to the snowy mountain areas on the Japan Sea side, from the north shore of the Lake Biwa, and north to the south shore of the Lake Tazawa in Akita Pref. There is no Snow Camellia on the Pacific side of Honshu.

In the Hokuriku district, Japonica Camellia is distributed on the plains along the coast of Japan Sea, and the Snow Camellia in the snow

been reported in the Mid-year Newsletter or in this Journal.

These included:

Election for period covering the years 1981 and 1982.

March 1981 Congress in Spain/Channel Islands.

Preliminary consideration of the next conference after that of March 1981.

It was moved and carried that the I.C.S. should make a donation of \$A125 to the Eryldene Trust Appeal which is dedicated to the acquisition and preservation of the house and garden of the late Professor Waterhouse.

Director William Kemp's resignation was accepted with regret, and Mrs Catherine Allen of Wilmington, N.C. was elected to fill the vacancy.

The meeting recorded thanks to the society's honorary auditor, Mr John Roberts. It further agreed that the directors for each Region should ensure that satisfactory local audit procedures should be established.

It was agreed that a letter should be sent to the New Zealand Camellia Society complimenting it and its office bearers on the excellence of the Rotorua Conference.

The French delegates expressed a readiness for France to be considered as a venue for a 1985 Congress.

The President concluded the meeting by thanking the organisers, and in particular Mr Andoh, for the smooth running and highly satisfactory arrangements for the Kyoto Congress.

mountain areas. "Yukibata Camellia", a group of intermediate hybrids between the two species is distributed in the middle areas.

MORPHOLOGICAL ASPECTS

The name Snow Camellia may lead one to think mistakenly that it has a white flower, but the flowers are, in fact, red or pink in colour and white flowers are seldom found. Its name means the camellia which grows in districts of heavy snows. Flowers of wild Snow Camellia open out flatways, their stamens are yellow, and do not form a cylinder but are divided from each other like those of *Sasanqua*.

Leaves of Snow Camellia are conspicuously veined — one can see the nerves clearly up to their very ends — and serration is coarsely denticulate; petioles are hairy on both sides and are shorter than in *Japonica Camellia*. Fruits of Snow Camellia are often narrower, the pericarp thinner, the seed coat thinner and paler in colour than those of the *Japonica Camellia*.

Japonica Camellia grows, in time, to a tree but the Snow Camellia sends out many twigs from near its roots, and forms a shrub especially in snowy mountains where its branches creep above the ground and occupy a large area. Because of this the Snow Camellia has another name, "Creeping Camellia". This shrubby shape does not change, even if it is planted in flat countries without snow, if planted in the garden, or if grown in a pot with the branches appearing low down.

ECOLOGICAL AND PHYSIOLOGICAL ASPECTS

As can be expected from its distributional difference, Snow Camellia has a different nature from *Japonica Camellia*. When cultivating or breeding Snow Camellia, one should be well aware of its characteristics.

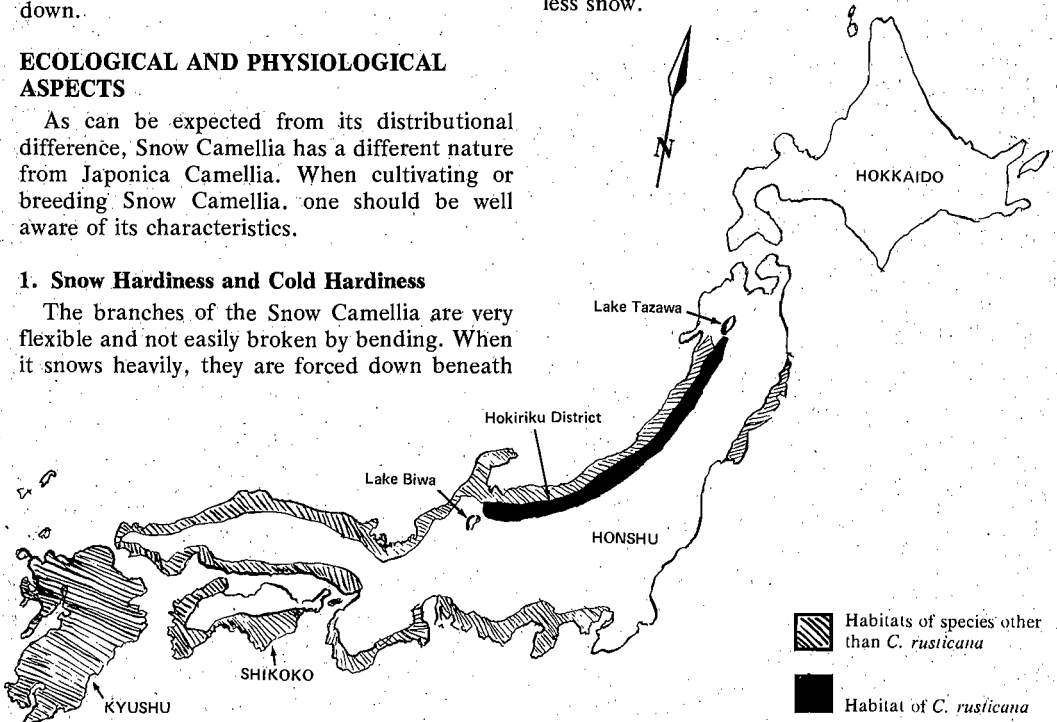
1. Snow Hardiness and Cold Hardiness

The branches of the Snow Camellia are very flexible and not easily broken by bending. When it snows heavily, they are forced down beneath

the snow, but when spring comes and snow thaws, they rise up again. Further, it is not completely uprooted by snowslips. What a subtle adaptable character this is! Our microscopic studies of the histological differences which cause such flexibility of Snow Camellia branches, showed that the xylem fibre cells of Snow Camellia are distinctly longer than those of *Japonica Camellia*.

Hence, when Snow Camellia was introduced to the world it was believed to be very strong against the cold because it was growing in the cold districts in Japan, and that it would provide a great help in breeding for cold hardiness. But the results of experiments using low temperatures in my laboratory show that the Snow Camellia is rather weaker than *Japonica Camellia* in cold hardiness. In fact, *Japonica Camellia* can bear up against temperatures as low as -15°C , while the leaves of Snow Camellia are damaged by frost at -12°C .

It may seem contradictory that Snow Camellia, growing in cold mountain areas, is weaker against the cold than *Japonica Camellia* which comes from warmer areas. The fact is that Snow Camellia passes the cold winter under the snow which keeps the temperature underneath always 0°C . no matter how cold it may become outside. Therefore, Snow Camellia does not actually have to be very strong against the cold. It nearly always gets damaged by the cold when cultivated in cold areas north of the Kanto district that have less snow.



2. Growth Period

The flowering time of Snow Camellia is about the same as that of Japonica Camellia, but Snow Camellia sprouts three weeks earlier than Japonica Camellia in spring, and has vivid green shoots by the time of flowering. Flower buds of Snow Camellia also differentiate three weeks earlier than Japonica Camellia. All these facts show that Snow Camellia is cleverly adapting itself to the severe snowy environment by growing quickly during the short summer period and preparing itself for the coming winter.

3. Rooting of Cuttings

The branches of wild Snow Camellia shrubs, crushed down by heavy snow and spreading widely like the undergrowth in a forest, grow adventitious roots at places where they touch the ground. By nature they are always quite ready to root. Cuttings of Snow Camellia root very well and rooting of cuttings is excellent even in the flowering time in spring. This fact is proved by a large-scale experiment carried out in my laboratory, using over 400 cultivars of both Snow Camellia and Japonica Camellia.

4. Flowering Habit

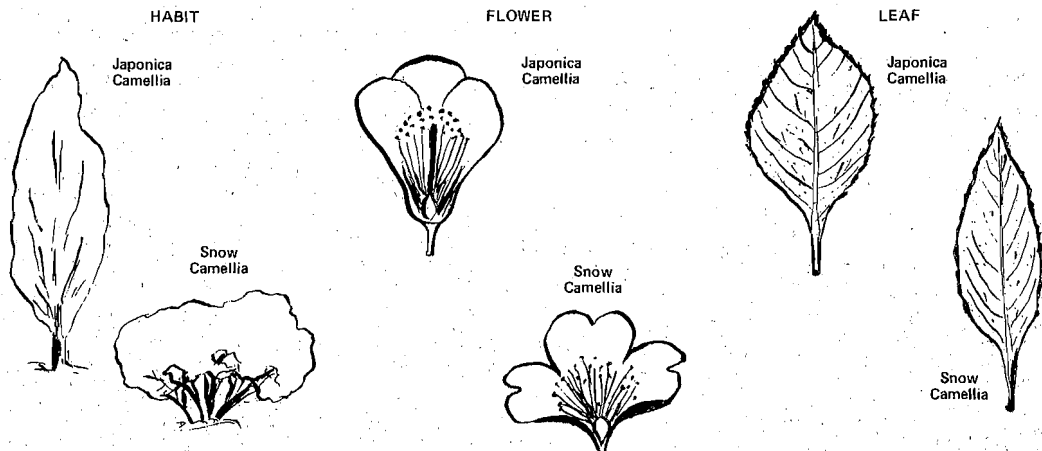
Camellias generally drop their flowers easily, but the flowers of Snow Camellia last longer and it has many flowers, so that the whole bush looks really red. We can control the time of flowering because its buds, and its leaves too, do not drop easily. When His Majesty the Emperor and the Empress came to the University of Niigata in June 7, 1964; we showed him flowers of Snow Camellias. We had cut off branches with tightly shut buds in April and had kept them in store at 0° C (32°F) in refrigerators, and then let them blossom by keeping the temperature at 25° C (77° F) for one week. Using these methods, we

can delay their blooming for two months in the case of cut flowers and much longer in pots. As we can control its bloom freely by temperature we can have a much longer flowering time than that of other camellias.

VARIETIES OF SNOW CAMELLIA

Most of the wild Snow Camellia have single flowers which are not of much appreciative value. Still there are a few wild forms that have beautiful or promising flowers. In many gardens of farmhouses and temples in the Hokuriku district, we find nameless varieties with beautiful flowers which are suspected to have originated from such promising wild camellias. We believe that in former days the farmers found such promising natural variants when they went out into the mountains, brought them back, and planted them in their gardens, though their exact history is not known. In this sense, the farmhouse gardens are treasuries of promising camellias. In my laboratory, we have investigated and collected these camellias. As a result, the number of varieties of Snow Camellia which are valuable for the garden already exceed 1500. Furthermore, these varieties of Snow Camellia not only cover all known flower forms such as single, semi-double, anemone, peony, rose, formal double and so on, but there are also some variants from these. In size, the flowers vary between 3 cm and over 13 cm in diameter. The colour range is also wide and includes white, pink, crimson, red, dark red, streaked and variegated.

The resistance to cold of the Snow Camellia fell short of our expectations but as it is very varied, and has excellent features from the ecological point of view it has a high horticultural value. Even in its present state, without artificial improvement as a result of breeding I think it will have a large role in the field of camellia development.



FLOWERS AND PHOTOGRAPHY

- *Fleurs et Photographie*
- *Fiori e Fotografie*
- *Flores y Fotografía*

VONNIE CAVE F.P.S.N.Z., A.R.P.S.
Wanganui, New Zealand

Flowers and photography go almost hand in hand, yet one is a fleeting transient thing and the other a permanent record. Perhaps we could look on our photography as an extension of the flowering season and it is indeed a doubly satisfying experience for the grower-photographer to produce flowers of such beauty and then to tuck them away safely on film to savour at a later date. Photographs of our gardens taken when special corners are at their best are a wonderful record to have and it is surprising to find after just a few years how much growth the garden has made and how much it has changed.

CAMERAS AND LENSES

The 35 mm camera is one most commonly used these days and there are many makes of good reliable cameras available. For those purchasing a camera keen to take good close-ups, it is best to get a single lens reflex camera with interchangeable lenses and "through the lens viewing and metering". Cameras come now in manually and automatically operated models, so there are a lot to choose from and it is all very confusing until you learn some of the terms. The cameras I use are Asahi Pentax MX models which are manually operated and they give me what I want for flower photography as well as for other photographic subjects such as landscape and portrait work. They are not the most expensive cameras available, but are very versatile and will accept a choice of lenses and accessories.

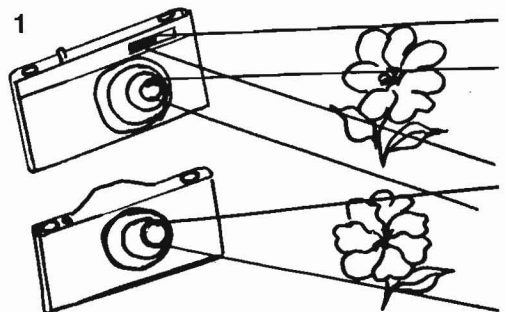
For most garden scenes I find the 35 mm wide angle lens useful as it takes in a wider view than the standard 50 mm lens that usually comes with the camera, and you get more of the scene into your slide or print. In a small garden where you can't get back from the scene you want to photograph, a wide angle lens is very useful and it also conveys a sense of space in the bigger gardens. Should you wish to extend your range of lenses further, there are wider wide angle lenses available, but care is needed in using them or distortion can result. The 20 mm lens that I consider my expensive luxury lens gives a very wide view and has a great depth of field, but is really only used occasionally. We'll discuss the term "depth of field" later on.

Most 35 mm cameras have a standard lens of about 50 mm that will focus down as close as 45 cm from the subject — some even closer. At 45 cm reasonably close shots can be obtained and



for groups of blooms this lens is very good. For some garden shots where you want to select a small area or just one shrub, this lens is ideal. A standard lens usually has a full range of f stops from about 1.8 which is wide, to $f/16$ which is very small. These f stops are the lens aperture sizes or openings — another group of unusual terms to learn.

For close-ups of your best blooms the standard lens at 45 cm is not quite close enough for the average sized blooms, but there are several ways of making this lens take photographs closer up. The diopter lenses available fit most cameras, just screw on to the front of your existing lens and allow a much closer approach without any exposure adjustment. They are the only way of making a fixed lens camera take close-ups, but because of the parallax error, close-ups are hard to take with these when they don't have "thru the lens" viewing. You will see what is meant by parallax error in the diagram (1). In the upper



sketch the view from the finder takes in the flower alright, but the lens, which is the recording instrument, is seeing only the lower half of the bloom. With "thru the lens" viewing in the lower sketch, accurate recording and lining up of the subject is easy, and the subject can be taken as close as your lens will focus. The only way to take good close-ups with a fixed lens

camera is with the use of a special frame, measurements and a lot of patience, but these cameras are perfectly alright for general garden scenes.

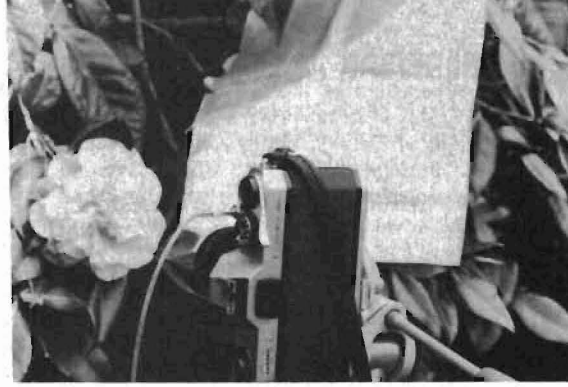
Dioptors come in several sizes or degrees of enlargement and are usually numbered, 1, 2 and 3 being generally available to fit most camera lenses. They can be screwed on singly or in any combination for greater enlargement, but when I made a few tests with dioptors I found the definition is poor when a wide f stop is used on the lens, so remember to stop down to a small f stop as your shutter speed will allow. More terms — “shutter speed” relates to the time the shutter takes to open and close, allowing the light to fall on the film during that time. The combination of the speed of this opening and the size of the aperture give the perfect exposure of the film to the light.

When you have a camera with inter-changeable lenses and want to take closeups, you too can use diopter lenses or alternatively extension rings. These rings are just bands of metal that are screwed singly or in combination, between the lens and the camera body to extend the lens away from the camera without letting in any light. Exposure increases are necessary with these rings to allow for the light to travel down the extension, but with the advantage of “thru the lens metering” the camera does the arithmetic for you — very much easier!

The easiest and best way of taking close-ups is with the Macro lens, a lens designed for close-up work, but it is versatile in that it can be used as a standard lens too. The only drawback is that most Macro lenses don't have such a wide f stop as a standard lens, it is usually $f/4$, but to balance this they have a smaller f stop for greater depth of field, usually $f/22$. The Macro that I use and couldn't live without, gives 1 to 1 copying, that is will photograph something as small as the actual 35 mm transparency. Currently manufactured Pentax Macro lenses give 1 to 2 copying — that is they photograph, at fullest extension, an area double that of a 35 mm transparency, but that is more than close enough for a camellia portrait.

PHOTOGRAPHIC TECHNIQUE

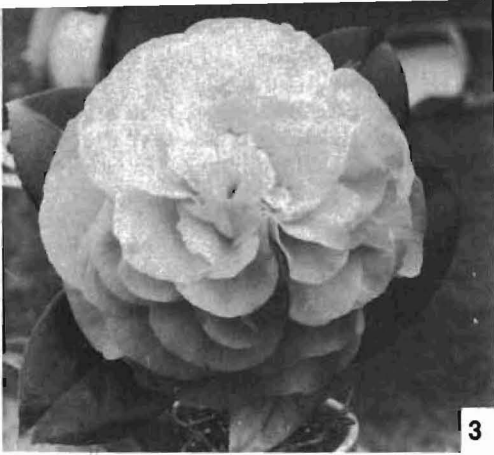
When you come to actually taking your flower close-ups, there are many details to watch before you press the button. The movement caused by wind in NZ is a constant problem, and at a shutter speed of one thirtieth of a second, blurring will occur. Usually one sixtieth of a second will be alright if you choose a lull in the wind gusts, but of course you have to be able to hold your camera still yourself, or else attach it firmly to a steady tripod. Some people should never hand hold under a one hundred and



twenty-fifth of a second, but this all depends on how steady you are in the hand, or how you train yourself to be steady. If you're taking a number of shots at the one time, it is easier to have the camera on the tripod, leaving a hand free to hold the reflector if necessary. — (2). Harsh sunlight from above or to one side needs balancing a little with reflected light from foil, plain white paper or even a newspaper to avoid the high contrast between light and shade which can be too great for the film to handle. Experience and observation soon show you where to hold the reflector to turn the light back into the shadows. Should you wish to reduce the intensity of the bright sunlight, a crumpled polythene bag will help this and doesn't seem to alter the colour balance of the light. Soft early morning light is usually excellent for close-ups and backlighting is a help in making shots of bushes of camellias stand out. If photographing against the light, take care that the sun is not shining directly into your lens or you will get flare patterns on the lens and these will spoil the photograph. Usually you can hold your hand up to cast a shadow over the lens or enlist someone else to do this for you.

Always look at the angle of light falling onto your blooms before taking a closeup as the light is what makes the petals either stand out or merge into just a blob on a plant. If it is falling directly over your shoulder onto the bloom, you'll more than likely have a flat and uninteresting picture, so move the bloom so that the light falls onto it, from an angle.

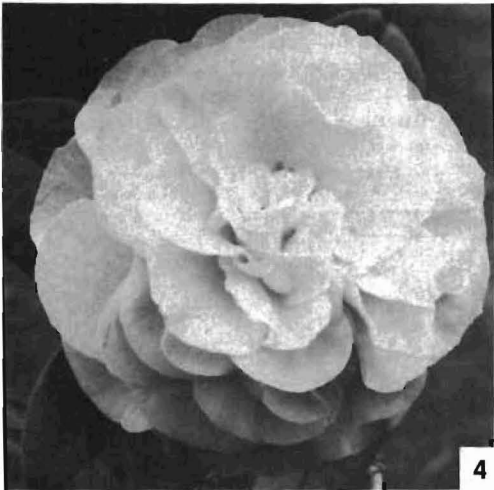
One of the most important points to watch in close-ups is that you avoid background distractions. Who wants to see the golf trundler, a pole, a car, a hose reel and a basket all mixed up with Tomorrow Park Hill? — (3). I've deliberately included all these things just to make the point, but it is so easy to overlook the background when you're busy concentrating on the focussing on the flower and all the other things you have to remember. It is better to move in a little closer sometimes to eliminate more of the background. With slide film being so costly it worth thinking about filling the frame of your



viewfinder with the subject matter rather than wasting it on extraneous material.



choose perfect blooms, preferably typical of the cultivar rather than the unusual, unless of course

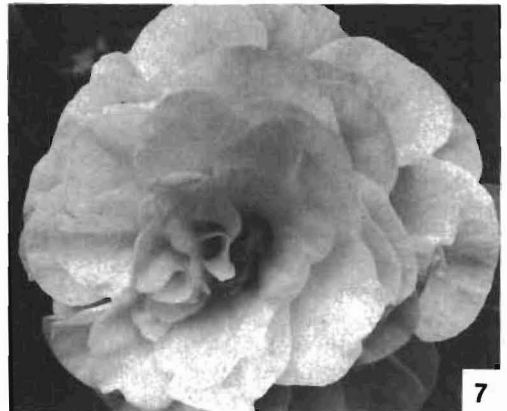


I prefer the natural foliage of the bloom in the background — preferably it's own bush, but this isn't always possible. Plain card can be used, but watch that the colour of this is subdued and not too demanding. You can paint your own background card in soft muted shades of your own choice for times when you don't have a suitable plant to photograph the bloom on, but make sure you prepare a big card as the edges of this look dreadful in your picture. Needle holders can be used to support your bloom or place it in a container with wire netting to keep it firm, but please don't let any of this show in your picture — (4). I quite often cut and move blooms from one part of the bush to another to place them in better light, wiring them onto branches and watching that the wires don't show from the front — (5).

Have a good look at the foliage that is showing with your blooms, making sure that you don't feature something like a leaf that the caterpillar fed on last summer — (6). Even more important,



you want to illustrate something different. A full face view of one bloom and a side view of one or more others can portray more information than just a single frontal portrait, but the inclusion of more than one bloom depends on their availability. When a heavy bloom such as Tomorrow Park Hill is photographed I like to record it from a low angle to show the typical hanging position of the flower on the bush — (7).



DEPTH OF FIELD

We referred to this term earlier and to explain briefly, the zone of sharp focus in your picture varies according to whether you use a wide or small lens opening or *f* stop. If you want to have a flower near the camera in sharp focus as well as everything in the background, a big depth of field, then the smallest *f* stop would be needed. On the other hand, you might want the background rendered in soft focus with a sharply focussed flower in the foreground, then a wide *f* stop is used. It is this option of focussing that can make some shots so much more pleasing than others and with "thru the lens" viewing you can see exactly what effect you're creating for yourself. In extreme close-ups of flowers it is usually best to have the near petals in sharp focus and if the depth of field won't cover the whole flower at your smallest aperture or *f* stop, then don't worry, as the effect will be of sharpness in the foreground. The closer we get to any subject, the shallower the depth of field or zone of sharp focus becomes.

FLASH

Flashlight can be used for flower photography and is sometimes the only light source to use in a dark hall. I prefer not to use flash because of the uncontrollable highlights from leaves etc. Recent improvements in flash units give automatic adjustments to as close as 45 cm and would be very good if you find it necessary to do much flash work with flowers. If there is any daylight in a hall I prefer to use my camera on a tripod with a long exposure time and good results can be obtained with this method. However it is necessary to get there before the crowd as people have no respect for tripods or photographers. I've even had a bloom picked up while I've been trying to focus on it!

FILMS

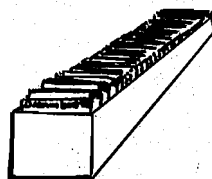
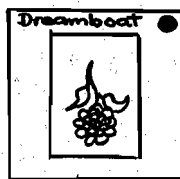
The choice of colour films or colour negative films for prints depends on which medium you prefer, but good prints can be made from colour slides now, so you don't need to feel restricted by one film type. The brand of film you use is your choice, but I prefer Kodachrome 64 for transparencies (slides) and colour blocks can be made from these for magazine use. Late afternoon sunlight gives a very warm colour cast to colour film and can completely alter the shade of a delicate bloom, so avoid this if you can. Morning light is much safer. For black and white illustrations I use FP4 film, processing and printing them myself, but I prefer to let Kodak process the colour slides.

LECTURES

Why not try to make up a lecture for your Camellia Society with the aid of your close-up photography on grafting, growing from cuttings, aerial layering, pollination or propagating from seed? Preparation and benching of Show blooms could be covered in this way too and considerably help your newer members in the finer points of showing prize winning blooms.

PRESENTATION

Finally, the presentation of your photographic efforts is important. If you have prints made, group your subject matter into interesting layouts in the readily available cling albums. If you take slides, a little preparatory work can improve your presentation on the screen. Mark each slide with a spot in the top right corner when the slide is held upside down. These spots will then be all in the top right corner of your magazine for projection and can be easily checked to see if they're the right way up — (8). With the titles



8

written along the same edge of the mount, you can also see this easily for quick identification. There's nothing worse than slides presented wrong way up during screening, so your work beforehand should be rewarded by better presentation.

Group your slides into sections according to subject matter so that they're much easier to view. A mixture of ill assorted slides is tedious to look at. Slide sorting boxes can be purchased, but are not hard to make with a sheet of flashed opal. My home made box takes 60 slides at once and is invaluable for sorting the slides and arranging the layout of my programme.

I hope that you'll soon master the technique of flower and garden photography with your camera equipment and in particular the close-up aspect and that you'll thoroughly enjoy recording the best and even the unusual of your blooms. Your photography will improve with practice and you'll find that you are more observant of light and shade, texture and colour and the sheer beauty of the flowers and plants we're so fortunate to share in our combined hobbies.

CAMELLIA CULTIVATION IN VITRO

DR JEAN CRÉZÉ

St. Georges sur Loire, France

M. G. BEAUCHESNE,

Angers, France

The Congressionists who were at the Nantes Congress of the I.C.S. will remember M. Beauchesne's lecture on meristem-propagation and that he has been a student of Professor Chouard and Professor Morel.

Thanks to him and to his very well equipped laboratory (Laboratoire de Recherches Fondamentales de Physiologie Vegetale: Boulevard Lavoisier — ANGERS — FRANCE), his help has been determinant in the positive results that we now publish.

I have been working on camellia meristem since the Nantes Camellia Congress. Our first trials have given exuberant calluses, but without any propensity to differentiation.

In 1970 OKANO N. and FOCHINOUEY Y. working with *Camellia sinensis* anthers had also faced this problem.

We came to think that it would be better not to have any callus formation, and this is why we have been using the Polyvinyl-Pyrrolidone, used as a dose of 10 g per litre of the medium. It prevents the callus formation, probably by a physical action, without preventing development of the meristem of plantlets.

At the Perry Congress in 1978, (*I.C.S. Journal* No. 11, 1979 pp 8-9) we showed our first favourable results: they were young plantlets about 10 mm high. They were practically at the phase of development of Murashige, which corresponds to the adaptation of the plant to the growing medium.

Today I can show you plants that give birth, at their basis, to new buds, that should be capable of adaptation to the external medium.

WHAT DO WE USE FOR THE CULTIVATION OF MERISTEMS?

If we still use the term "meristem of camellia", the camellia meristem is in itself relatively small; isolated and placed in a growing medium, it vegetates for a time and then vanishes. On the contrary, if, at the same time, we cut off one or two folia primordia that are surrounding it (it must not be bigger than 0.5 mm) we come to the reported results.

A meristem joined to some folia primordia is what Murashige was calling the "shoot-tip".

- *La Culture du Camelia en Laboratoire*
- *Coltivazione della Camelia "In Vitro"*
- *Cultivo de la Camelia en Vitro*

These two words have no equivalent in French, and we prefer for this reason to speak of a "meristem with one or two primordia".

These meristems are, generally speaking, cut from one year old rooted cuttings, grown in C. Thoby Nurseries in Nantes, and sometimes on seedlings, 3 or 4 years old, which have not yet flowered.

Before using them, these bits of stem are put in plastic bags in my refrigerator at 4°C.

Some *Camellia japonica* hybrids seem to do better than others for the in-vitro propagation: 'Debbie' (*C. saluenensis* × *Japonica* 'Debutante') promises to be one giving the best results.

The season when we cut and use these camellia shoots is important. It is between April and August that we have had the best results.

The state of juvenility of the plants from which they are cut is probably important. The best results have been obtained with the 3 to 4 years seedlings which have not yet flowered. On the contrary, the experiments we have done of rejuvenation on old japonica clones, such as 'Ville de Nantes', that have only been propagated from cuttings taken from old plants, have not given us positive results.

THE TECHNIQUE

The dissection of the vegetative bud for the meristem cut-off, is done with small bits of razor-blade fixed on a watch-maker's tool-holder. These blades are disinfected by immersion in 90° alcohol. The manipulation is done with a stereoscopic microscope, protected from any dust under a plexiglass hood.

There is no necessity, we believe, to disinfect the buds before their dissection: protected by their tight scales, we assume that they are infection free. We only change the scalpel, when the scales are taken off, to take off the meristem.

For the Japonica camellias, the risk of infection of the glass-tubes sown under these conditions is lower than 10%.

This is not true with *Camellia sasanqua* buds, not so well protected without so many scales and not so tight and hairy. In this case the in-vitro cultivation is very often polluted and it would be probably preferable to disinfect the buds before using them for dissection.

The meristem having been placed on the gelsed medium, the tubes are left in dark at the laboratory temperature of 20° C for 7 days. They

assiste au Congrès de Nantes ont pu l'entendre parler de la culture des Méristèmes. Mr G. Beauchesne est un élève de Chouard, et de Morel. Sans lui et sans son laboratoire bien équipé, (Laboratoire de Recherches Fondamentales de Physiologie Végétale. Boulevard Lavoisier — ANGERS — FRANCE —) les résultats que nous publions n'auraient pas été obtenus.

Nous nous intéressons aux Méristèmes des Camellias depuis le Congrès de Nantes en 1977.

Nos premiers essais de culture ont donné issue à des cals exubérants mais qui n'avaient aucune tendance à se différencier. (C'est aussi ce qu'avaient obtenu, en 1970, OKANO. N. ET FOCHINOUEY. Y. avec les anthères de *Camellia Thea*.)

Nous avons pensé qu'il serait préférable d'éviter la formation de cals, et pour ce faire, nous avons utilisé le Polyvinylpyrrolidone, qui, à raison de 10 grs par litre de milieu, empêche la formation de cals, probablement par action physique, sans empêcher le développement des "méristèmes" en plantules.

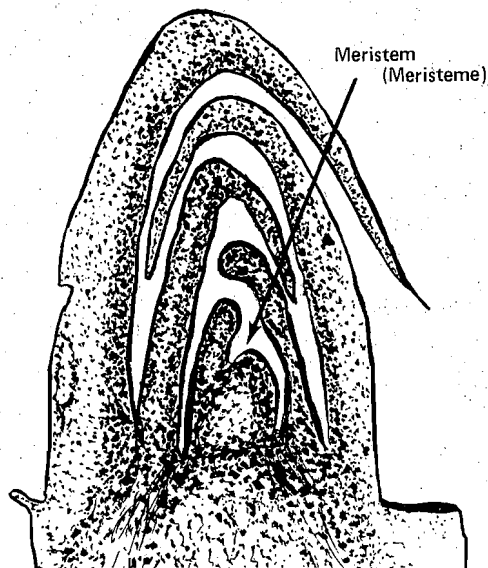
Au Congrès de Perry en 1978, nous avons montré nos premiers résultats favorables. Il s'agissait de jeunes plantules de 10 mm. de hauteur environ. C'était, pratiquement, le stade I de Murashige, qui correspond à l'adaptation de la plante au milieu.

Actuellement nous pouvons vous présenter de jeunes plantes qui donnent naissance, à la base, à de nouveaux bourgeons, qui devraient être capables de s'adapter au milieu extérieur.

LE MATÉRIEL UTILISÉ POUR LA CULTURE DES MÉRISTÈMES

Nous avons gardé le terme de méristème de *Camellia*, en réalité le méristème de *Camellia* est relativement petit, isolé et mis en culture, il végète un certain temps, puis disparaît. Au contraire, si en même temps que lui, on prélève 1 ou 2 primordia foliaires qui l'entourent (sans que le prélèvement excède 0,5 mm), on obtient les résultats que nous rapportons. Un méristème accompagné de quelques primordia foliaires, c'est le "shoot tip" de Murashige; mais cette expression n'a pas d'équivalent en français, et il est aussi facile de parler d'un "méristème avec un ou deux primordia".

Les méristèmes ainsi définis sont, en général, prélevés sur des scions de *C. Japonica* de bouture, qui proviennent des Pépinières Thoby à Nantes. Quelques-uns ont été prélevés sur des semis de 3 et 4 ans, qui n'ont encore jamais fleuri. En attendant leur utilis-



tion, les scions sont conservés au frigidaire, dans des sacs en plastique, à 4° degrés centigrades. Certaines variétés de *Camellias Japonica* semblent se prêter mieux que d'autres à la culture in vitro. "Debby" nous a paru l'une des plus favorables.

La saison où sont prélevés les scions, nous a semblé importante, c'est entre Avril et Août que nous avons obtenu les meilleurs résultats.

L'état de juvénilité des cultivars sur lesquels les scions ont été prélevés joue peut-être un rôle. Nous avons obtenu de bons résultats avec les *Camellias* de semis de 3 et 4 ans qui n'ont jamais fleuri. Par contre les quelques tentatives de rejuvenilisation que nous avons pratiquées sur de vieux clones, comme "Ville de Nantes", jusqu'ici reproduits uniquement par bouturage, ne nous ont pas donné de résultats probants.

TECHNIQUE

La dissection du bourgeon végétatif pour le prélèvement du méristème, est faite avec des fragments de lames de rasoir, montés sur des porte-outils d'horlogers. Ces lames sont désinfectées par immersion dans l'alcool à 90°. La manipulation est faite avec un microscope stéréoscopique, à l'abri des poussières, dans une hotte en plexiglass.

Il nous a paru inutile de désinfecter les bourgeons avant de les disséquer : protégés par leurs écailles serrées, ils sont à l'abri de l'infection. Il suffit de changer de scalpel, quand les écailles sont enlevées, pour prélever le méristème. Pour les *C. Japonica* l'infection des tubes ensemencés dans ces conditions, est inférieure à 10%. Il n'en est pas de même pour

les *C. sasanqua*, moins bien protégés, par des écailles moins nombreuses, moins serrées et couvertes de poils, les cultures in vitro sont très souvent souillées et il conviendrait peut-être de désinfecter les bourgeons avant de les disséquer.

Les méristèmes une fois ensemencés sur le milieu gélosé, les tubes sont laissés dans l'obscurité, à la température du laboratoire (20° degrés centigrades) pendant 7 jours. Après ce temps, ils sont placés dans les conditions normales de culture.

MILIEU DE CULTURE

— Le milieu de culture est constitué de la manière suivante:

Les sels minéraux, en millimole/litre
NH₄ NO₃ 6mM.—KNO₃ 7mM.—CaCl₂,
2H₂O 0,5mM.

KH₂PO₄ 2mM.—MgSO₄, 7H₂O 1mM.—

Les Oligoéléments peuvent être ceux de Murashige (1962) FeEDTA préparés selon Murashige 5 ml & Les vitamines : du groupe B, soit pour 1 litre de milieu de culture : Pantothenate de Calcium, Acide Nicotinique, Pyridoxine et Thiamine : 1 mg de chaque, Biotine 0,01 mg Inositol 10 mg — Polyvinylpyrrolidone 10 g.

Glucose 30 g — Agar 8 g.

En outre, sont ajoutées les substances suivantes: Adénine base 20 mg. Acide Indole Acétique 0,1 mg. Kinétine 1 mg. Benzylaminopurine 1 g. Isopentényladénine 1 g. Gibberelline 1 g.

— C'est sur ce milieu que les variétés ayant le mieux réagi, ont donné des plantules.

Les plantules développées, en tubes à hémolyse ont été repiqués sur un milieu réparti dans les tubes de 25 m/m de diamètre.

CONDITIONS D'ENVIRONNEMENT

— La température a été réglée à 26° centigrades ± 1° centigrade

— L'éclairage utilisé a été faible : environ 3000 Lux.

Les deux buts de nos cultures in vitro sont, la multiplication rapide des plantes et l'élimination des virus. Etant donnée la lenteur avec laquelle les *Camellias* se développent, nous ne savons pas encore si les plantes obtenues par culture de méristèmes, répondront à notre attente. Aussi nous avons cherché si d'autres méthodes ne nous donneraient pas des résultats plus rapides.

POUR LA MULTIPLICATION

Nous avons pratiqué la culture des noeuds.

Des fragments de tige de 3 cm environ, portant un bourgeon végétatif à l'aisselle d'une feuille ont été prélevés (la feuille enlevée) désinfectés à l'hypochlorite de soude (à 12° Cl + 1 goutte de TWEEN 20) pendant 10 minutes et mis en culture dans le milieu utilisé pour les méristèmes. Quand le bourgeon s'est bien développé, il est séparé de la tige et remis en culture dans un milieu neuf. La croissance semble plus rapide que celle des méristèmes isolés, mais les virus ne sont pas isolés par ce procédé.

POUR L'ÉRADICATION DES VIRUS

Nous avons pensé employer la méthode utilisée par Murashige pour les Citrus, et qui consiste à greffer le méristème avec ses deux feuilles primitives sur un jeune plant de semis, cultivé en tube stérile. Les graines décortiquées sont mises à germer après désinfection, dans des tubes contenant le milieu de TUKEY, conseillé par Ackerman.

Quand les plantules ont 2 vraies feuilles, elles sont amputées à 3 cm. de la graine. Le méristème est inséré, avec une pince d'ophtalmologiste, sur la coupe, à l'union de l'écorce et du cylindre central, et l'ensemble est replacé dans un nouveau milieu stérile. L'opération doit être faite rapidement pour que la surface de coupe n'ait pas le temps de sécher. Dans ces conditions, l'humidité suffit à faire tenir le greffon. Toutes les manipulations doivent être faites dans une hotte à l'abri des contaminations et au microscope stéréoscopique.

Jusqu'ici nos succès sont peu nombreux, de l'ordre de 1 pour 17. Il est probable qu'avec l'habitude, le rendement sera meilleur. Nous cherchons à remplacer la gelose, par de la perlite, car il nous semble que la gélose est nuisible aux racines. Il reste à savoir si les greffons de méristème pris sur des sujets virosés, donneront des plantes exemptes de virus.

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CLUES TO THE ENIGMA OF 'TAROKAJA'

- *Indices a l'Enigme de 'Tarokaja'*
- *Indizii Sull'Enigma di 'Tarokaja'*
- *Claves en el Enigma de. 'Tarokaja'*

DAVID TREHANE

Truro, Cornwall, England

Mr Yoshiaki Andoh has concentrated his attention on the botanical characteristics of *C. 'Tarokaja'*. I would like to widen the discussion by bringing into it the geographical origins of this camellia, and the camellias listed in *Camellia Nomenclature* under the two headings "Species *Saluenensis*" and "Species *Wabisuke*", for they all emanated from China.

'Tarokaja' or 'Uraku', is so close, botanically, to one of the species *saluenensis* named 'Rose Bowl' as to be entitled to the same classification. 'Rose Bowl', in turn, is so similar to 'J. C. Williams' in foliage and flower that it helps to substantiate Mr Nikamura's opinion that 'Tarokaja', at least, is 'an early williamsii hybrid'. I would go much further.

There is good reason for grouping together the camellias listed under "Species *saluenensis*" for they were all collected together by George Forrest in one area as such. If 'Rose Bowl' forges a link with 'Tarokaja' another of the species *saluenensis*, 'Bow Bells', forges an equally strong link with *C. 'Wabisuke Pink'*, ('Momoiro-Wabisuke'), similar in colour, flower form and foliage. It is logical then to group together the species *saluenensis* and the species *Wabisuke* under one heading. The question is — "should that heading be 'williamsii hybrids'?"

My answer is "Yes" with a reservation in the case of *C. 'Shiro-wabisuke'*. Mr Andoh, dealing with 'Tarokaja' only, draws back from this conclusion because of the scent of 'Tarokaja', saying "C. *saluenensis* has no scent, consequently *C. williamsii* have no scent". This is not so. The Caerhays williamsii hybrid, 'Mary Jobson', which, incidentally, looks like an enlarged 'Tarokaja', has a scent which Neil Treseder describes as a cold-weather scent and it may have been this variety of which J. C. Williams said that 4 out of 5 people could smell its fragrance. Scent in williamsii hybrids is probably as ephemeral as in varieties of *C. japonica*.

The vital clue is that all these camellias originated in China whence the ancient forms were taken to Japan and the recent forms were sent to England.

George Forrest sent the recent forms under various numbers to Caerhays, Lanarth and Trewithen in Cornwall. At Trewithen Mr George

Johnstone put the resultant seedlings in what he called his *Camelliarium* around the old cockpit and there today can be seen bushes 12-15 feet high of most of those listed as species *saluenensis* plus some additional forms not named. They were put on the market originally by Mr W. J. Marchant of Keeper's Hill Nursery in Dorset who, also, distributed two or three *wabisuke* camellias.

Here we run into difficulties. Geo. Forrest was normally meticulous in identifying his herbarium specimens with his collected seeds under the same collectors' numbers but Mr Sealy said "The herbarium specimens of all these numbers are typical *C. saluenensis* but this is not true of all the plants raised from Forrest's seeds." He also² joked about the abandon with which camellias seeded themselves in Cornish gardens and suggested hybridity with *C. japonica* but, in his book,¹ he says that although these broadleaved collections resemble the hybrids raised between *C. saluenensis* & *C. japonica*... "there is nothing to support the suggestion that *C. japonica* figures in their ancestry." However, continuing, he casts doubt on the authenticity of Forrest's number 24090, named *C. saluenensis* f. *macrophylla*, and says "the only possible conclusion must be that it is a *C. saluenensis* — *C. japonica* hybrid which originated in China".

Sealy did not believe that *C. reticulata* would cross with *C. saluenensis* and he was led towards *C. japonica* by Mr Yu, from Kunming, who mentioned² that the Kunming *reticulata* camellias were sometimes grafted on *japonica* stocks. Here Sealy missed one important clue. Although mentioned in his book in reference to each species he overlooked the fact that Forrest collected, in the same Shweli-Salween-Tengyueh area, *CC saluenensis*, *oleifera*, *reticulata*, and *kissi* and, also, *japonica* which he found "growing in thickets" and therefore long naturalised. This implies that *C. japonica* had reached this area of west China from Japan many years earlier. It is equally feasible that camellias from this area had been taken to Japan long ago.

Had Sealy connected the presence of *C. japonica* with *C. saluenensis* in the same collecting area I think that he would have faced the inevitable conclusion that Geo. Forrest collected herbarium specimens and relied on native collectors to harvest the seed and that these collectors took seed from natural hybrids, as Mr Nikamura says, williamsii hybrids. Speaking of Geo. Forrest's wild forms of *C. reticulata* Sealy suspected that some of them came from temple gardens or Chinese nurseries².

If this area of China is reopened to botanists these suppositions should not be difficult to

POST SCRIPTS TO 'CAMELLIAS IN BRITISH ISLES'

(I.C.S. Journal No. 11 pp 30-33)

JOHN TOOBY

Bransford, Worcester, U.K.

CAMELLIA SASANQUA IN ENGLAND

In the 1979 Journal I gave the misleading impression that *C. sasanqua* was introduced about 1812 as 'Lady Banks' Camellia'. In those days the Chinese *C. oleifera* was not distinguished from the Japanese *C. sasanqua* both being known as *C. sasanqua*. The captains of the tea clippers obviously had access to *C. oleifera* and J. R. Sealy has shown that this is what they brought back. It seems certain, as he says, that *C. sasanqua* was first introduced to Messrs Veitch's Nursery by their collector Charles Maries in 1879.

Since that time there have been many importations of different varieties. Some, such as 'Narumi-Gata' and 'Plantation Pink' are reasonably satisfactory on a sunny wall or in a cool — or even cold — greenhouse, but others do less well and some fail to bud up even in such protected situations. *C. sasanqua* has a more southerly range than *C. japonica* and it seems to require a rather warmer climate than ours to perform satisfactorily. Nevertheless we British keep trying. Some 40 different sorts have been offered over the last 10 years or so and others can be found in private gardens. It is, however, doubtful whether more than 20 or so are actually obtainable. Let us hope that this constant screening of new varieties will eventually uncover

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verify.

It is easy now to speculate on the part played by *C. reticulata* in the origins of these and the wabisuke camellias but Sealy was writing before the present phase of hybridising right, left, and centre. He did not believe that *C. reticulata* would cross with *C. saluenensis*. Had he seen how like the williamsii hybrids are 'Dr Louis Pollizzi' and others of which the pollen parent was *C. reticulata* he might have paid greater attention to the fact that *C. wabisuke* was named by the Japanese botanist Makino *C. reticulata wabisuke*. Sealy did go so far as to say that *C. wabisuke campanulata* might be an imperfect form of *C. reticulata* but he needed to see material before expressing an opinion.

Again it should be possible by exploration of the Shweli-Salween-Tengyueh area to find out whether *C. reticulata* does give rise to natural hybrids there and whether it has played any part in the origins of 'Tarokaja' or the wabisuke camellias.

- *Post-Scriptums* a "Camelias dans les Iles-Britannique"
- *Postcritto* a "Camelie Nelle Isole Britanniche"
- *Postcripto* "a las Camelias de las Islas Britanicas"

some really suited to British conditions.

DID GEORGE EDWARDS PAINT CAMELLIA RETICULATA IN 1747?

A printer's error in the list of references on page 32 of the 1979 Journal has "3. Edwards, George, *A Natural History of Birds 1947*". This date should be 1747. (Editor regretfully confirms)

This correction allows me to express a doubt, which has been growing in my mind since I first saw Edwards' painting, as to whether the camellia he depicted really was *C. japonica*. Edwards wrote: "The flower here figured by way of decoration is called the Chinese Rose; I drew it from nature; it is what we see most frequently painted in Chinese pictures; it blows broader than a rose and is of a red-rose colour" (in his painting the colour of the petals is near RHS 54B, shading to about 54D with the stamens close to 12B) "with the stems in the middle of a yellow or gold colour. The green leaves are stiff firm and smooth like those of evergreens." Here we have a plant with semi-double wavy-petalled flowers and smooth, ovate leaves, a favourite of Chinese painters. Lord Petre may have been growing a form of *C. reticulata*, grafted on to the 'Single Red' *C. japonica* which was used as a rootstock and long survived.

Editor's note: The Edwards' painting was reproduced on page 33 of I.C.S. Journal No. 11 (The Peacock Pheasant).

Finally the anomaly in this discussion — *C. 'Shiro Wabisuke'*. I have never believed that this camellia should be lumped in with the coloured wabisuke camellias simply because its form had some slight similarity. Mr Andoh inclines towards Dr Hilsman's suggestion that this is a hybrid between *C. kissi* and *C. japonica*. Three significant attributes of 'Shiro Wabisuke' have come to notice recently, (1) its great hardiness in the USDA collection of camellias, (2) its autumn or early winter flowering and (3) its fragrance. All of these indicate that *C. oleifera* may be one of its parents. The petals are white: if they are also free and caduceous, as I believe they are, *C. kissi* could also be involved. This should not be difficult to prove by deliberate crossing nor, if the case is made out by the result, should it then be difficult to find 'Shiro Wabisuke' in western China.

References

- 1 *A Revision of the Genus Camellia* — J. Robert Sealy 1958.
- 2 *Camellias & Magnolias* — Report of the conference held by the Royal Horticultural Society April 1950.

EARLY NEW ZEALAND CAMELLIAS

- *Camelias Precoces de Nouvelle-Zelande*
- *Camelie Precoci Dalla Nuova Zelanda*
- *Las Primeras Camelias de Nueva Zelandia*

COLONEL T. DURRANT

Rotorua, New Zealand

Since this is the first time that the International Camellia Society has held a conference in this country, it is appropriate that some account should be given of how the Genus *camellia* came to be established in New Zealand and why it flourishes here with such abandon. New Zealand's natural flora, developed in some 60 million years' isolation, is almost entirely evergreen, so it must be assumed that soil and climate conditions are eminently suitable for plants of that character. Soils are largely volcanic in origin, acid and very free draining, except in some low lying districts which include alluvial and sometimes swampy areas. Fertility is generally low but responds very quickly to cultivation and the addition of humus and basic fertilizers. The country lies between 34 and 47 degrees of South Latitude, giving a wide range of climatic conditions, from almost subtropical in the far north to much wider extremes of temperature, particularly on the eastern side of the Southern Alps. Rainfall is ample and fairly evenly spread throughout the year — the only dry areas being in the rain shadow of the main mountain ranges. All this adds up to a very suitable environment for the Genus *camellia* which grows and flourishes in New Zealand, even when receiving little care and attention.

When European settlement commenced in the early years of the 19th century, settlers brought with them substantial numbers of familiar trees, plants and seeds, with which to establish productive farms and gardens. It was probably nostalgia for the familiar things of their far distant homeland that led to the importation of many other kinds of trees and plants. Among these camellias were included and many of them planted in those early days still survive. It will be recalled that, during the 19th century, camellias enjoyed a period of enormous popularity in Europe and the U.S.A. and that by the middle of the century, many hundreds of new varieties had been raised. The main stream of British settlement here coincided with this period and this no doubt accounts for the very large number of camellias which arrived in New Zealand at that time.

Some 20 years ago we began a study programme to record, and attempt to identify



some of the large numbers of fine old camellia plants which seem to be spread from one end of New Zealand to the other. We concentrated attention on the sites of early mission stations and known organised settlements and, in doing so, learned a great deal of the fascinating history of those days. Almost without exception, old camellias were found in all of the areas visited. We had the inestimable advantage of personal assistance from the late Professor E. G. Waterhouse and from Tom Savige, both of whom made several visits to New Zealand to help identify some of the old varieties we had discovered. The fact that Tom was sometimes seen some 15 or 16 feet above the ground, in an attempt to reach the lowest flowers, gives a fair indication of the size of some of the old camellias!

Dating some of the old plantings was sometimes possible by reference to family diaries, documents and other early records. From 1860 onwards, when settlement was sufficiently far advanced to support some apparently prosperous nursery businesses, catalogues and advertisements helped provide evidence both of date and identity.

The Treaty House, at Waitangi in the Bay of Islands, was the scene of the proclamation of British sovereignty on February 6, 1840. In the grounds of the Treaty House are two examples of a fine camellia, said to have been planted in 1833 by the first British resident, James Busby. They have long been known as the 'Busby Camellias' and still produce quantities of fine blooms. We have been unable to make a positive identification but the flowers closely resemble those described as 'Rose coloured, or Middlemists Camellias' in one of Clara Maria Pope's fine illustrations to the 'Monograph on the Genus *Camellia*' by Samuel Curtis, F.L.S., published in London in 1819.

In 1834 the first inland mission station south of Auckland was established on the banks of the Puniu River at Mangapouri, near Te Awamutu, by W. Williams, later Bishop Williams, and A. N. Brown, who subsequently set up the Mission at Tauranga where his fine garden still remains,

lovingly attended. They were troubled times and the Waikato Maoris had been pinned back against the Puniu River by attacks from tribes from the North, armed with muskets. Across the river, the fierce King Country tribes held their frontier against the Waikatos and fighting was bloody and frequent. In spite of this the missionaries planted their garden, preached their gospel and wandered about unarmed, unprotected, and unmolested by the warriors! Some remnants of the garden planting still remain and the most notable one a fine plant of *C.j.* 'Triumphans'. Its branches are cleared to about 7 feet by grazing animals; when we saw it, the venerable tree was splendid with pink flowers; it was providing shade and shelter for sheep and cattle and being fertilized and fed by their droppings. There were no fallen flowers under the tree — they were being eaten as fast as they fell by some prosperous looking Southdown rams!

It is frequently forgotten that in the 1840s, France had colonial aspirations in New Zealand. In August 1840, the French ship, "Comte de Paris", arrived at Akaroa on Banks' Peninsula with sixty men and women who began a settlement around the shores of Akaroa Harbour. This land-locked and secure anchorage had been used by French whaling ships and, though there is no record of the settlement having been subsequently reinforced, contact with France was, no doubt, maintained for some time. This French arrival was the first European settlement in Canterbury, apart from a whaling station at Peraki, and predates the advance party of the Canterbury Association at Christchurch by eight years. Today, Akaroa is a quiet peaceful place, perhaps with an air of gentle decay. The streets carry French names and a few of the original French families are still represented, but the language has disappeared.

It seems that the French settlers, too, brought camellias with them. There are numbers of fine old camellia trees, one of which merits special mention. The flower has the form and shape of 'Debutante' but the colour is a bright cherry red and it has remarkable keeping qualities. It is quite distinct from all the other varieties we had seen around in New Zealand and we were at that time, quite unable to identify it. It was brought into circulation as 'Akaroa Rouge' but has now been identified, by no less a personage than our President, as an old French variety, 'Madame Picouline', which is still being commercially grown in France.

To assist in identification we studied some microfilms of mid-19th Century pictures from Verschaffelt, Berlese and from 'Flore des Serres'. Illustrations of that period are drawn in a highly stylised manner and show formal double flowers

with a geometrical precision which one would scarcely expect to find in Nature. Perhaps, the most remarkable was a variety, 'Vergine di Colle Beato' (*Flore des Serres* Vol. XII, p. 123, 1857) a white, formal double with the petals arranged in seven exact spirals. This, we thought, would be very easy to identify if one turned up in New Zealand. Many formal double camellias produce very occasional flowers with spiral formation but usually only on mature plants. Tiered petals occur in the same manner and we have seen examples of both on old plants of the variety known in Australia as 'Prince Frederick William'. There was considerable excitement when we discovered at Kati-kati, in the Bay of Plenty, an old tree with all its beautiful white flowers in spiral formation (see illustration 'James Lockington'). It had hundreds of blooms, all arranged in either right or left-handed spirals but there were only five and not seven! All the other examples of this flower formation which we had seen also had five spirals and we began to wonder whether the extra two in the *Flore des Serres* plate were artistic license. Dr Antonio Sevesi, however, was able to produce evidence of the true 'Vergine di Colle Beato' still existing in Italy, and the Botanical Institute at Batumi, Georgia, in the U.S.S.R., sent us photos of flowers from a plant of it in their collection. We were never able to identify the Kati-kati camellia, so we called it 'James Lockington' after the old settler in whose garden we found it. Subsequently, two other old plants were found, one at Cambridge and one at Rotorua, which seems to indicate that it could not be an isolated, local sport of another variety.

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Spiral formation of 'James Lockington'

FORTY YEARS OF CAMELLIAS

DAVID FEATHERS

Lafayette, California, U.S.A.

As the title of my presentation implies, this paper deals largely with personal experiences and observations, from the inception of my interest in camellias in the year 1937, when our first camellia was acquired, ('ELEGANS VARIETATED'), up to the present time when our garden contains several thousand plants composed of many varieties and species. It began with the importation of a great many of the then popular *C. japonica* from such old line nurseries in the southern part of the United States as Kiyono, Sawada's 'Overlook', Fruitland, and California nurseries such as Lindo and Domoto — some of which are no longer in existence, unfortunately. This was followed by the importation from Australia in 1945 of 14 of their most popular japonicas on their own roots. The great majority of these plants came to me in very small sizes bare-rooted, and practically all of the hundreds brought in survived. I even experimented with the importation of a half-dozen small plants both bare-rooted and defoliated, to facilitate passing inspection, and most of these also survived although it required an extra year for them to attain the size of those not defoliated.

Insofar as seedlings are concerned, my first plantings were seed from a nearby public garden in which all the camellias had simple single flowers, more or less like the original native plants. This seed, of course, produced similar plants, of no particular interest and of value only as grafting stock. Our camellia collection at that time consisted solely of *C. japonica*. So after studying up on plant genetics I made my first hand pollination, based upon the advice of one of the American camellia pioneers, C. M. Hovey. He wrote that he had learned after 14 years of experimentation that the way to get a formal double camellia seedling was to cross any good

- *Quarante ans de Camélias*
- *Quaranta Anni di Camélie*
- *Cuarenta Años de Camelia*

seed-bearing single or semi-double type with a peonyform flower. Following this advice, I crossed the semi-double white *C. japonica* 'Waterloo' with pollen of the pink peonyform 'Debutante' — one of the great camellias of all time. This cross produced four seedlings, all of which were white, indicating that 'Debutante', the origin of which is unknown, must have come from a white parent. The flower forms which resulted were: 1 single, 2 demi-doubles and an 86-petal formal double which I named for my mother, whose maiden name was 'Julia Stafford'. The single-flowered plant was extremely compact and bushy and it bore seed copiously. For these reasons, when the *reticulatas* became available I crossed it with the fine red *C. reticulata* 'Crimson Robe' and produced the first commercially-offered *C. japonica* × *C. reticulata* hybrid 'Royal Robe'. The next generation from this cross showed larger and much improved flowers on vigorous plants.

In the years since, there have been hundreds, if not thousands, of valid crosses between these two pre-eminent species, *C. japonica* and *C. reticulata*, but, according to the American Camellia Society's new book, 'The Camellia', the vast majority of these are hybrids having *reticulata* as the seed-bearing plant. There are only about 14 named hybrids in which the mother plant was *C. japonica*. The reason for this is not entirely clear although experience would indicate that successful crosses on the 30-chromosome japonica may be somewhat more difficult than the reciprocal cross with the 90-chromosome *reticulata*. My reason for using japonica as the seed parent, rather than the *reticulata*, was because I had several extremely prolific seed-bearing plants of that species and wished to use the one that seemed the more likely of success. There was also the thought that the mother plant might have greater influence on the

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These are but a few of the hundreds of instances which connect camellias with early European settlements in New Zealand; enough however, to indicate the fascination and interest which can be found in studies of this kind. Some references are given below for those who would like to read more details of the subject.

Overseas visitors frequently comment on the existence of venerable camellia trees standing in open fields. These almost invariably mark the site of an original garden enclosure. When the fences fell down, or were removed, and sheep and cattle eliminated the cultivated plants and

shrubs, the camellias survived, provided that they were already tall enough to prevent cattle reaching over the top of them. With their lower branches removed by the grazing cattle, they continued to grow and flourish, providing shade and shelter to the livestock and receiving abundant animal fertilizer in return for this service — a truly symbiotic relationship.

References

- Some historical Camellias of New Zealand*, New Zealand Camellia Bulletin Vol. II No. 5, March 1962.
- South Island Journey*, New Zealand Camellia Bulletin Vol. IV No. 1, November 1964.



Dave Feathers and his daughter-in-law, in
Kyoto Botanical Gardens

offspring. At that time, it was not believed that such a wide cross was possible, and my main objective was to improve the foliage and growth habit as well as increase the hardiness of a species which had a glorious flower but a leggy and tender plant.

Subsequent events have proved that the foregoing suppositions were correct: the *C. japonica* × *C. reticulata* hybrids I have seen are generally bushier plants with better foliage. Experience in England particularly has demonstrated that they are also more cold tolerant than the straight *reticulata*. In fact, it is my understanding that the hybrid 'Innovation' (*C. williamsii* 'Williams Lavender' × *C. reticulata* 'Crimson Robe') has proved to be among the most cold tolerant camellias in England. Steps have recently been taken there to provide a class for the *japonica* × *reticulata* hybrids in the annual award competition in that country.

The principal objectives of camellia hybridists today are directed toward the following: (1) Fragrance that is notable, (2) Cold Hardiness sufficient to withstand 0° degrees Fahrenheit (32 degrees of frost), and (3) development of yellow and perhaps blue shades of colour. **Objective (1)** is already well on the way to satisfactory attainment through the work of such well-known hybridists as Drs William Ackerman and Clifford Parks, Kenneth Hallstone and the writer, among others. The first two named have used primarily the very fragrant but tiny-flowered species *C. lutchuensis* while the writer has concentrated his efforts primarily using the hybrid 'Salab', which he obtained by crossing the fragrant hybrid 'Apple Blossom' with *C. saluenensis*. Hallstone took over the plants and work of the late Dr Robert Cutter, who used both approaches, and has expanded upon each of these materially. Reporting upon only my own results to this moment, we now have 2nd generation hybrids derived from crossing 'Salab' with *C. reticulata* 'Crimson Robe' and *C. fraterna* with 'Buddha', which are showing much larger blooms with undiminished fragrance. The *C. lutchuensis* hybrids are also showing large flowers in the F2 generation. Two of the Salab series, derived from the aforementioned crosses, have produced satisfactory flowers up to 5" in diameter with good fragrance, borne upon very sturdy, handsome plants with particularly good growth habit and

foliage. It is certain that a considerable number of camellia enthusiasts are working with dedication to expand and improve the quality and quantity of scent in camellias and, from all indications, their efforts will soon be rewarded with satisfactory results.

Objective (2): Crosses of completely yellow flowers such as that of *C. chrysantha* (Hu) Tuyama with pink and red japonicas, for example, would be expected to result in new hybrids with pastel shades such as orange, copper and bronze. These attractive colours have greatly increased the popularity of the rose and are much sought after in such lovely flowers as tuberous begonias. In the culture of the camellia, this would constitute a major development — one whose importance could hardly be over-emphasised. There are indications that attainment of this goal is just over the horizon. However, the introduction of bluish or purple shades into roses has not met with the expected enthusiasm, probably because absolutely pure blue colour, which is so vital to universal appeal, has not been achieved. The obstacles to attainment of a pure-blue camellia appear to be so great as to persuade this writer that such a project is best left to a generation much younger than his.

We come finally to **Objective (3)**, the development of camellias so cold hardy that they may be grown outdoors almost universally. I hope that I am mistaken, but this undertaking would seem to be the most difficult of all to achieve, largely because the camellia is not by its very nature a cold weather plant. On the contrary, it is mainly a sub-tropic evergreen which bears flowers that contain so much moisture as to be unable to resist freezing. Furthermore, the considerable exposure to the elements inherent in all broad-leaved evergreens is not a condition conducive to protection from the rigors of winter. Deciduous plants can withstand such conditions because of the greatly diminished exposure due to their absence of foliage at that time. It is true we might produce intergeneric hybrids using such deciduous camellia relatives as *Franklinia* and *Stewartia*. But who would really want a camellia plant bare of foliage that flowers so late in the season as to lose its immense value as a winter-blooming plant? It is my considered opinion that cold hardiness in a camellia should not be gained at the sacrifice of its great attribute as a year-around evergreen ornamental that is adorned with most magnificent blooms when almost all else has hibernated for the winter. Therefore, I feel that cold hardiness in the camellia can only be accomplished to a limited degree. To go beyond that would seem to necessitate changing the fundamental nature of the plant.

HYBRIDIZING AND SEED CULTURE BY AN AMATEUR

- *Hybridation et culture de Semerces par un Amateur*
- *Cultura Ibrida e Cultura da Seme da un Amatore*
- *Cultivo de Semilla y de los Hybridos para un Aficionado*

RAY GARNETT

Beaumaris, Victoria, Australia

In the hybridizing of camellias and the growing on of the seedlings, a number of problems confront the amateur grower, especially with interspecific crosses when the resultant seed is sometimes small. Also, where intercrossing and backcrossing of the progeny is required for flower improvement, the time delay is often a deterrent to many hybridists. This paper is an attempt to identify some of these problems in hybridizing, and flowering the seedlings early, without the requirement of a heated glasshouse.

At the start of the flowering season pollen is collected from cultivars that are intended to be used as pollen donors during that year. The flowers are bagged prior to opening. When the anthers are ripe and shedding pollen, they are plucked off the flower with a pair of tweezers and placed in a gelatine capsule.

The capsule is then marked with the initial of the cultivar, e.g. ('GUILIO NUCCIO' : GN) and left with the cap off in a warm room overnight to dry, then capped and placed on a holding board. This is usually a piece of chip board 6" × 10" with 60 shallow holes drilled in it, equally spaced, and large enough to hold the gelatine capsule used. Each hole is marked with the initials of the cultivar from which the pollen came. The board is then kept in a cool dry place, such as an outside shed.

If you do not grow the cultivar you wish to use as a pollen donor, ask a friend who does to bag and collect the pollen for you. This pollen will remain viable for the rest of that season, with fresh pollen being collected at the start of each year.

To overcome the problem where pollen from late flowering cultivars is required to be used on the early flowering ones, gibberellic acid is used to bring these late flowers into bloom earlier.

The flowers to be pollinated are selected at the soft bud stage, usually three or four days before they would open normally. This usually precludes any chance of pollen ripening before emasculation. With a small pair of long pointed scissors



all the petals are cut off by piercing and cutting the bud either side of the centre, till only the pistil is left. Any remaining stamens are diligently removed.

The flowers are immediately pollinated by dipping the stigma into the preselected pollen capsule, or using the pollen covered cap of the capsule on the upright flowers. At this point the nearest leaf to the new pollinated flower is marked with the initials of the pollen donor. If the donor was 'GUILIO NUCCIO', "GN" would be marked on the leaf with a ballpoint pen, and if there are two buds (only two are left if the terminal is multi-budded) the top bud is indicated with a T, B for the bottom bud, and L or R for left or right buds when facing the plant. This type of marking will last till seed set is confirmed and sometimes for the life of the leaf.

The pollinated flower is now covered with a small paper bag, the end of which is secured by a spring type clothes peg. The bag is dated for day of pollination, and is removed within ten to fourteen days, depending on the cultivar. Leaving the flower covered any longer often reduces success.

Bagging the cross prevents contamination and doubtful crosses; it also probably helps by raising the temperature within the bag to that required for fertilization in situations where the surrounding temperature could be too low, especially if the sun shines on the bag. By using this method pollination may be carried out at any time of the day, as sufficient pollen adheres to the stigma and will remain viable and germinate when the stigma is receptive. It is preferable not to allow any open flowers to remain on the cultivar being hybridized in case disturbed pollen should fall and ruin the cross.

When the seed capsule begins to swell and it seems fairly certain the cross has taken, a durable plastic tag is then used to mark the cross. At this point the growth bud nearest the seed capsule is broken out. This is done to prevent the capsule aborting during the spring, because on very vigorous cultivars much nutriment is used up by the new growth. With same species crosses



'Tiffany' × *C. lutchuensis* approach bark grafted December 1979



'Tiffany' × *C. lutchuensis* three months after bark grafting

this may not be a problem, but when attempting interspecific crosses, where pairing of the chromosomes is not always favourable, the said procedure may help to hold the seed capsule on. While it is hard to say how effective this is, it does seem to have the advantage of often producing larger hybrid seed, although it has the disadvantage of preventing flower buds from forming at that point for the following season.

The seed capsules are harvested in early February. This may be two months earlier than when they would have split naturally. Cultivars that are known to ripen early are picked first, with the later ones being taken near the end of February. The capsule is immediately broken out and the seed taken out. Often this will give you seed with a light brown coat instead of the usual black one, but they grow just as well. Seed has been sown that was nearly white when opened, yet has germinated quite well, although this early can be risky. The outer shell of the seed is now removed, preferably by carefully paring away with a small knife at the furthest point from the infant embryo. Occasionally you may nick the seed, but as long as you do not injure the embryonic point where the radicle emerges, no harm will be done. Taking the shell off the seed is done for a number of reasons:

1. It helps break dormancy by removing any possible inhibiting factor within the seed shell.
2. It provides instant moisture to the seed on sowing, usually creating quick germination.
3. Many seeds have a very hard outer shell, and it is felt that where the seed inside is small or weak, it now has a better chance of survival.
4. It immediately shows you the condition of the seed, whether strong, weak, or an empty shell.

5. The quicker the seed starts to grow the less chance of fungus infection.

The naked seeds are now placed in 3" or 5" plastic pots of sphagnum moss, that has previously been washed and then soaked in fungicide, with the excess moisture gently squeezed out. It is best to fluff up the sphagnum moss after this to give a more aerated medium.

The pots are two thirds filled with the sphagnum moss, and the seeds are laid horizontally or with the growth point slightly tilted downwards. The pot is then filled to the top with sphagnum. Anywhere up to fifteen seeds can be placed in a 5 inch pot. All pots are tagged with the particular cross. Planted this way all radicles and top growth grow perfectly straight.

More uniform germination is also possible by soaking the naked seed in gibberellic acid solution before sowing.

The pots are then placed on a propagating bed at a temperature of 75°F - 80°F (24°C - 27°C) with a glass cover over them to conserve moisture. They are checked in seven days' time, and every seven days afterwards. Radicle growth of 2 to 3 inches (5 to 7 cm) is not uncommon within seven to ten days of sowing, especially with strong hybrids. On some seed the radicle end is nipped back a ¼ inch (6 mm) when 2" long (20 mm) and the end is then dipped in a root inducing hormone powder and duly planted. The hormone powder produces a better root structure. Most seeds however do not have the radicle nipped, but instead a small quantity of gravel, or aggregate, is placed at the bottom of the pots to force the radicle to stop and send out feeder roots. This is a safer method with many hybrids, as they tend to shrivel and die when the radicle is cut, no matter how large the seeds.

All seed is planted individually in 3" × 3½"

deep pots in a mixture of 2 SAND 1 PEAT, with the seed just above the surface of the mixture, labelled, and then watered with fungicide. Because the seed has no protective coating, fungicide must be used at all times up to this point, and from then on an occasional spray every month.

These pots are placed back on the propagating bed at the same temperature, under a Gro-Lux light operating for the first 6 hours of darkness. Growth is sometimes very rapid, and many vigorous hybrid crosses will reach 4" to 5" (12 cm) in 6 to 8 weeks from planting the seed. The seedlings are watered for three months with formula 20 added to encourage better root growth.

The seedlings usually reach a certain height, stop, slightly harden up, and then quite often begin second growth during July and August. It is at this point before second growth that a 2" (5 cm) scion can be cut from the top section of the most vigorous seedlings. This can be grafted in the usual cleft graft procedure on stock plants in 8" (20 cm) pots or less. The tension of such large size stock plants can be reduced by making the vertical cut that splits the stock longer than usual, thereby preventing the squashing of the small scion.

You can also wait for the second growth to harden and use it instead, if you are not too late in the season. The early harvesting and germination of seed is partly aimed at obtaining larger seedlings for earlier grafting. These young scions callous very quickly. The late or slow ones can be bark grafted in the summer.

One of the safest and easiest to use is an approach type graft. This can be done using the cleft graft in late winter, by placing the seedling close to the stock plant either in its pot or planted in the stock plant's soil. Cut and split stock in the usual way. Scrape bark on both sides of seedling's stem to expose the cambium layer. Join this into the stock matching the cambium layer of both. Tie gently, and separate when cambium join has taken. Allow 2" (5 cm) of seedling above stock.

In the summer, when the stock plant's bark will peel easily, cut a T in bark. Scrape bark and expose cambium layer on both sides of seedling's stem, slip under bark of stock plant with all cambium layers touching. Tie with grafting tape. Prune stock plant moderately, and when graft has taken cut stock plant right back to scion, and cut seedling mother plant off close to stock.

The grafted winter seedlings will usually flower in two years, especially the vigorous hybrids, with the summer grafts often taking another year. Although many seedlings will flower unaided

within three years, the advantage of early grafting is:

1. The possibility of flowers in two years in outside growing conditions.
2. The safety in having a second plant where delicate inter-specific hybrids and exceptional crosses are involved.
3. The speeding up of any long term hybridizing programme.

In many cases hybrid seedlings no more than 2" (5 cm) high, that have shown signs of dying early through genetic or cultural problems, have been saved by approach grafting to another more vigorous seedling of the current or previous season's batch. In this case a small piece of stem is gently removed on both seedlings. They are joined and tied together at this point and duly trimmed when cambiums unite. They may also be cleft grafted. Although a delicate operation, it usually saves a promising cross.

Cleft or bark grafting using the radicle below the seed kernel as the scion can be tried, but it has been found that this part of the seedling seems to callous more slowly, and is a one way ticket if you fail.

Sometimes the seeds are so small that any effort to save them is a delicate task. This previous season a cross of 'Tiffany' (seed parent) × *C. lutchuensis* (pollen donor) resulted in 57 viable seeds. The problem here was that all 57 seeds were so small that the whole lot only filled a heaped teaspoon! Some of these were less than $\frac{1}{12}$ of an inch (2 mm) in diameter when shelled! At present some are growing quite well, others were lost in an Aseptic Embryo Culture experiment, and some 20 were given away to give other hybridists the problem of trying to raise them.

In the interspecific hybridizing of camellias, many interesting and varied leaf shapes will be noted among the progeny. This alone makes this type of hybridizing an absorbing pastime for the amateur grower. Studying the results and enjoying the effort is the reward, with the creating of an exceptional flower the bonus.

Mr Garnett has kindly followed up his step-by-step paper on hybridizing techniques by outlining some of the crosses he has undertaken. He writes:

"... My aim has been to study the results from the various interspecific and intraspecific combinations available from the seed parents I possess.

"The initial crosses were within the sasanqua group because I considered that most named sasanquas were probably only chance flowering

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S.C.C.S. — Awards for 1980

• *Prix Decernes en
Californie du Sud en
1980*

• *Premi del 1980 della
California Meridionale*

• *Los Premios en
California del sur
Para 1980*

I.C.S. is indebted to Mr Bill Donnan, editor of *The Camellia Review* for his informing us of the 1980 Awards by the Southern Californian Camellia Society.

WILLIAM E. WOODROOF HALL OF FAME. Added in 1980. 'Elegans Supreme' 'Francie L.'		Introduced by W. F. Bray, Pensacola, Fla. Nuccios
MARGARETE HERTRICH AWARD 'Midnight'	(Japonica Seedling grown outdoors)	Nuccios
WILLIAM HERTRICH AWARD 'Pink Frost'	(Japonica mutant grown outdoors)	S. E. Foster, El Cajon, Cal.
WILLIAM E. WYLAM AWARD 'Kewpie Doll'	(Miniature)	McCaskill Gardens
FRANK L. STORMENT AWARD 'Harold L. Paige'	(Reticulata)	Jack Osegueda, Oakland, Cal.
DR JOHN TAYLOR AWARD 'Elegant Beauty'	(Hybrid)	L. E. Jury, New Plymouth, N.Z.

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seedlings originally destined to be understock. I therefore thought that this Cinderella of the camellia world would be interesting to study. Originally I used 'Exquisite', a large single pink cultivar that sets seed readily. This has been crossed with many of the newer sasanquas such as 'Bonanza', 'Chansonette', 'Jean May', 'Sparkling Burgundy', 'Showa Supreme', and 'Yuletide'. Many of these seedlings have flowered. Although as yet none have been an improvement on their parents there has been a sufficient predominance of good semi-doubles and informal doubles to make the cross worthwhile.

"Interspecific hybridization with the sasanquas as seed parents has been tried but no results have been obtained as yet except with 'Dream Girl', and also the other "Girls", as pollen donors. In an endeavour to combine the sasanqua genes with the other species I have found 'Dream Girl' (*C. sasanqua* 'Narumi-gata' × *C. reticulata* 'Buddha' (*C. reticulata* × *C. pitardii yunnanica*) to be an excellent seed parent. To date this cultivar has set seed to japonica, reticulata, sasanqua, reticulata × japonica hybrids, Williamsii hybrids and a number of small flowered species.

"Compact free flowering cultivars may be possible from these hybrids, although further crossing or selfing of the progeny could be necessary to obtain such results. This line of hybridizing should allow the combining of genes from different species that are difficult, if not

impossible, to cross with each other.

"The present-day hybrids (reticulata, japonica etc.) tend to be large flowered and also large growing plants. Many of these will set seed readily. The intercrossing will undoubtedly produce still larger flowers. Over the past three years I have been crossing some of the largest with each other ('Lasca Beauty', 'Dr Clifford Parks', 'Arch of Triumph', 'Howard Asper', 'Milo Rowell', 'Massee Lane', 'Cornelian' etc.) in an effort to study any increase in the size of the flowers and also to ascertain whether a more compact plant can be created from this line of hybridization.

"Whilst this type of hybridizing still seems to be in vogue it may soon reach its limitations in public appeal. It is possible that in the near future more hybridists will concentrate on the profuse blooming, small flowered species and hybrids from which to evolve the "Camellia of Tomorrow". The hybridizing of these species and hybrids with large flowered hybrids (japonica, reticulata etc.) could produce cultivars which will provide unique garden displays. I usually attempt such crosses using a large flowered semi-double or informal double as the seed parent so that with any resultant offspring the chances of a larger and more complex flower form than that of the small flowered species or hybrid are stronger.

"Of course, like most amateurs, I still attempt to cross any two beautiful cultivars together simply because they appeal to me! Isn't this a weakness we all suffer from?"

SEEDLING CULTURE — 'THE HAMMER METHOD'

- *La Culture de Plants "La Methode Hammer"*
- *Cultura da Seme... "il Sistema del Martello"*
- *Cultivo de Semilla — el Metodo Hammer*

BARBARA BUTLER

Modesto, California, U.S.A.

The backyard hybridizer is truly an amateur; one who enjoys the camellia hobby to the utmost. It is the achieving rather than the achievement that keeps one experimenting year after year for a better method of seedling culture. The "try anything" syndrome naturally leads to a lot of individual expression that would not exist under a purely scientific approach.

It is this freer play of the imagination that allows the amateur hybridizer to attempt the impossible. Once a camellia cross is successfully made, and seed maturity is accomplished; what then? The question is whether to allow the seed capsule to dehisce naturally, or to harvest all the seed capsules at the hybridizer's convenience.

I have found that it is better to let the seed capsule dehisce naturally before harvesting the seed. In the fall I check the maturity of the seed pods twice a day. The Blue Jays tend to worry any mesh sacks that might be placed over the seed capsule. They will keep pecking away, until the sacks and seed are both dislodged.

Seed maturity varies greatly with each type of cross and with each individual growing season. For example, this year the Lutchuensis crosses did not dehisce until late December, and then the seed in some cases was not fully matured.

I limit the number of crosses I make each year for several reasons. One, lack of space; two, interest in fragrance; and three, the time and labour involved.

I tried several methods of seedling culture in a minor way many years ago; after two years of effort it had become apparent that a different approach to seedling culture was needed. It was about fifteen years ago that I first tried the "The Hammer Method". I just could not understand why so few of the seed would germinate naturally. So, after harvesting the seed and drying it for two days, out came the tack hammer. The outer hard shell opened rather easily with a few taps. By hulling the seed I soon found the answers to the problem. "The Hammer Method" revealed that over half of the crosses do not produce embryos. Another 25% of the hulled seed could be classified as weak and very small. (These would need an agar culture under very careful conditions to germinate.) The remainder of the hulled seed were large to medium in size; firm embryos with lots of vitality. The inner coat of the seed would either be smooth or rough depending on the parentage of

the cross.

If one used a small amount of care when cracking the seed one would have a perfect seed, free of blemishes and fungus. Once in a while too much muscle would result in a mashed seed and finger; but one soon learned to perfect the soft touch technique.

I allow the hulled seed to dry for 24 to 48 hours before planting. Each 4 inch pot has a label that records the date of cross, parentage of cross, and planting date. The planting mix is moist sterilized firbark, with no more than five seeds per pot. The roots will be out of the bottom of the pot in eight weeks.

The hulled camellia seed rests nearly on the surface of the moist firbark. The root end of the seed is just ¼ inch deep into the firbark. The pot is then enclosed in a small plastic bag and placed on a bench in my back porch. The temperature ranges between 60-70 degrees, with a south window for light. The root emerges in two to seven days. I nip the end of the root, just a thin section from the hard yellow tip, when the root is 1¼ inches long. This produces five to six good strong roots; and I believe, causes the shoot to emerge sooner. In May, I set the seedlings outdoors in raised redwood boxes (3' × 4' × 1') in a composted mix of firbark, blood meal, and iron. The young seedlings really take off. Some have been in boxes for ten years or more and the plants have good root systems. In these outdoor conditions, it takes from three to ten years for the seedlings to bloom, depending on the parentage of the cross.²

As with any project covering a long period of time certain modifications are bound to take place. I got tired of sterilizing 4 inch clay pots and switched to styrofoam drinking cups. These large size cups work fine for single seed culture, as most of my species crosses result in only one or two seeds per capsule. Just punch a hole in the bottom for good drainage.

I also became aware of the great variance in the colour and hairiness of germinating camellia seedlings. These factors might give one not only an indication of what flower colour could be expected from a given cross; but also the parentage of that given cross. Only time will tell.

I hope that in some small way I have encouraged others to become backyard hybridizers and seedling culturalists. At the very least, you will have all the sturdy understock you will need. There is always the added plus, that a truly outstanding seedling may emerge. A unique flower, as a reward for all your cultural efforts.

¹ *Camellia Review* Nov. 1970 — Vol. 32 No. 2
² *Carolina Camellias* Spring 1980.

A DAY AT KUNMING BOTANICAL INSTITUTE

- *Une Journée a l'Institut Botanique de Kunming*
- *Un Giorno al Giardino Botanico del Kunming*
- *Visita al Instituto Botanico de Kunming*

DR ROSS S. HAYTER

Albury, N.S.W., Australia

The arrival of our party at Kunming, Yunnan Province, in South Western China was the culmination of many months of careful preparatory work by I.C.S. members Harold and Dorothy Fraser of Wagga Wagga, N.S.W. At 6,000 feet above sea level and just north of the tropic of Cancer, Kunming has a climate which justifies its title of "Land of Eternal Spring".

Next morning it was in crisp Spring sunshine that we set out for the Kunming Botanical Institute. On arrival we were welcomed by the Deputy Director, Dr Chang Ao Lo and his wife Dr Xia Li Fang who is also a botanist with particular interest in camellias. Inside the substantial building we were seated for the traditional ceremony of welcome — green tea and reciprocal speeches. To our delight we were joined by the Director of the Institute, world famous authority on plant life, Dr Wu Cheng Yi. Although a bright-eyed interpreter was at hand it was evident that the Director and his enthusiastic staff were conversant with the English language. Most are able to read the journals published in English but have little opportunity to speak it.

Gifts of horticultural interest had been brought by our party. Amongst these were bare-rooted camellias and grafted macadamia nut plants; also seeds of magnolias, beans, clover, macadamias and, of course, camellias, as well as books of horticultural interest. There was also a quantity of colour film for recording research projects. In thanking us Professor Wu made special reference to the spirit of friendship which had prompted it all.

We were taken to the Institute's display centre which showed the various facets of the work being undertaken. A glowing container of *Camellia reticulata* oil caught our eyes. This oil can be used in cooking because it does not leave any taste in the food. Chinese botanists are interested in increasing oil yields from camellias because they see the genus as a future source of valuable edible oil. Other research demonstrated included the identification of the active ingredients in the herbs used in traditional Chinese medicine.

Then on to an immense garden of *reticulata*



Institute staff with Australian visitors

camellias where the magnificent plants were in full bloom. The timing of our visit was exactly right for this spectacle. . . *C. reticulata* plants had been collected from all over Yunnan Province, mostly from temple gardens, but also from the wild. Old favourites like 'Chrysanthemum Petal', 'Lion Head', 'Cornelian' and 'Purple Gown' were blooming in profusion with many other cultivars, some known but others quite new to the Australian party which included such experienced people as Tom Savige, Peter Campbell, and Neville and Erica McMinn. At present 71 different cultivars are grown in this *reticulata* garden. All the camellias were deeply trenched and dug around with no evidence of mulching. The soil appeared to us to be lacking in organic matter. When the time came for lunch they literally had to drag us away from this area which gave so much interest.

After lunch we went to the research garden where we saw *C. chrysantha*. It had been top worked on to *C. japonica* 'Alba Plena'. The leaves looked like a smaller and narrower version of *C. granthamiana*. We also saw *C. reticulata* 'Baby Face' or 'Tongzimian' in the pinyin transliteration, a very pale pink, almost white, bloom showing great promise as a colour break. Of much interest also in the species section was a flowering plant of *C. yuhsienensis* (it had previously been documented by Dr Hu Hsen-Hsu in *Acta Phytotaxonomica Sinica* and reprinted in *R.H.S. Rhododendron and Camellia Yearbook 1967*). The flat, white petalled, flowers of *C. yuhsienensis* were not particularly exciting but its perfume was, to me, gardenia-like. It gives great promise for those hybridisers seeking the perfumed camellia. Also in the species garden were vigorous seedlings of *C. gigantocarpa* and *C. semiserrata* and other species. The institute sends qualified plant collectors to all parts of Yunnan, hence the seedlings of these rare species.

It was interesting to hear several members of the senior staff claim that *C. saluenensis* had not been found on the Schwali-Salwein Divide as stated by Forrest when he originally described the species. *C. saluenensis* is stated by the Institute



Seedling of *C. gigantocarpa*



"White" *Reticulata* 'Tongzimian' with in-arch grafting arrangement at side

botanists to be a native of the Kunming area. This was supported a few days later when our party was lunching at the Dragon Gate temple in the Western Hills near Kunming. A young Chinese lady was seen carrying a bunch of *C. saluenensis* blooms which she had gathered in adjacent forest land!

As we walked through the research area we saw many camellia plants being in-arched and aerial layered. Peter Campbell suggested they should try the cutting graft technique. Erica McMinn, from Camellia Lodge Nursery, took the suggestion further by giving a most expert demonstration of this method under the keen eyes of the academic and lay staff of the Institute.

At the Common Room, where we took refreshments, portraits of China's leaders looked down on us from one wall, whilst prints of *C. reticulata* graced other walls. Slides of well known reticulatas and others new to us were shown as we sipped piping hot green tea. "Star" slide was one of *C. chrysantha*. Yes, it really is sulphur yellow and appeared to be about 3 cm in diameter, with a prominent bunch of bright yellow stamens. Again, what a challenge for the enthusiasts when it becomes available for hybridising in other countries where the research goes on in the quest for yellow.

Farewell speeches of appreciation were made and our members were each presented with copies of Nos. 1 and 2 of *Acta Botanica Yunnanica* plus two copies of Vols. 1 and 2 of *Botanica Yunnanica*. (Some of these have since been presented to the Department of Botany, University of Sydney).

It had indeed been a wonderful day with the gracious people of the Institute working together in a harmony which had to be experienced to be believed.

On our way back to our hotel we made a brief stop at an old Buddhist temple, the Black Dragon Pool temple — lovingly cared for by the present incumbents. Inside the walled gardens were many *C. reticulata* including a three hundred years old plant of 'Butterfly Wings' in full bloom. Its flowers were held high above the temple wall, silhouetted against the bright blue sky.

There is much for which the present botanists at the Kunming Botanical Institute should be thanked, in their enthusiastic work with camellias. Our thanks must also go to the Buddhist monks who, centuries ago, seeing so much beauty in *C. reticulata*, preserved the species for mankind to enjoy today.



Prints of *C. reticulata* cultivars in Institute Common Room

RANDOM NOTES ON *C. RETICULATA* AND OTHER PLANTS IN WESTERN CHINA

A. E. (Peter) CAMPBELL

St Ives, N.S.W., Australia

Much will be written about the camellias, both species and cultivars, seen by our party during our recent exciting visit to China. But this writer would like to present a few remarks on the more mundane aspects of horticulture as seen in the People's Republic — growing conditions, propagation, soils and so on. In such an enormous country as China there are obviously a multitude of conditions which suit all types of plants, from the almost tropical areas around Kwangchow (Canton) to the cold, arid lands of Mongolia and Tibet. We noted, for example, how well many types of Eucalypts and Silky Oaks grew, perhaps rather better in Southern China than in their native land.

To most of us used to seeing *reticulata* camellias in some quantity it was a revelation to see the great plantation of them at the Kunming Botanical Institute. Some acres given over to their exclusive cultivation though there were a few large pines dotted about giving a minimum of shade, showing again that *reticulatas* are more sun tolerant than is often imagined. They were flowering profusely, thousands of very good blooms, many outstandingly good.

The soil seemed to be a reddish type of clayey loam which had set very hard in many places. The stems of the plants were surrounded by low ridges of earth at the drip line so that watering could be controlled. The soil appeared to be completely lacking in any humus, the watering is done by hand and one imagined that the only fertiliser is an occasional ration from a "honey cart". But what surprised us all was the rather indifferent state of health of the plants; there appeared to be a lot of scale and the ravages of caterpillars and other leaf chewers were also evident. Also noted were the odd bits of dieback caused by the fungus *glomerela cingulata* to which many *reticulatas* seem rather prone, particularly in warm, humid climates. The tree-like habit of so many *reticulatas* was very evident in this plantation, many being at least 15 feet high with the rather sparse foliage we expect from the Chinese varieties.

It appears that the confusion surrounding the true identity of the variety known as 'Baozhucha' or 'Noble Pearl' has been resolved as the party saw a number of flowers answering to its description. Anyway the writer believes that this is one of the most spectacular of the Chinese



C. reticulata 'Noble Pearl'

reticulatas for its colour, form and size.

Probably no one has been propagating and cultivating camellias and magnolias longer than the Chinese so it came as some surprise to see the rather time-honoured way they propagate these subjects. *Camellia japonica* are propagated by cuttings in much the same way as we do in the Western World and with about the same degree of success. However *reticulatas* are in-arched which seems so time consuming. The stocks used often appeared unsuitable as "bottle-necking" of mature plants was very common. We stressed the advantages of the "cutting graft" method and a demonstration of the technique was given.

Magnolias are propagated in China by the aerial layering method which has the advantage of producing small size flowering plants which look so well in suitable pots. The Chinese are very skilled in pot culture of such plants as camellias, magnolias, peonies, azaleas etc. and the party saw very many fine specimens in temple gardens. These gardens have obviously been tended with great dedication for a very long time as witness a *Prunus* no less than 1,000 years old, a very fine *Sequoia* planted in the Sung dynasty (960-1274), a *C. reticulata* 'Butterfly Wings' almost 400 years old and a specimen of *retic.* 'Pine Cone' over 300 years.

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Mrs Barbara Campbell (Australia) in
plantation of large *Reticulata* trees

NORTH WALES AND BORDER COUNTRY TOUR 1980

LADY ANNE COWDRAY

Devizes, Wiltshire, England

Around 40 I.C.S. members assembled in the afternoon of Friday, April 18, at Hodnet Hall in Shropshire, home of Mr A. Heber-Percy. It was a lovely warm sunny afternoon which enhanced the beauty of that lovely sweep of lawns up the valley with its 6 pools and drifts of different shades of daffodils, the whole beautifully kept, and the rhododendrons generously mulched with well rotted manure. Apparently on that rather dry and hungry soil it does them no harm, as is popularly supposed, and they respond to it happily.

There were a few good examples of *Camellia* 'Donation' and in a tub C. 'Conquerant' donated by the I.C.S. on their last visit, but on the whole camellias were not much in evidence. Some interesting rhododendrons were in flower and many beautiful large trees of *Magnolia denudata*, *M. kobus* and many others.

After tea in the stables of the original house, surrounded by the lugubrious heads of every

- *Tour du Nord du Pays de Galles et de la Zone*
- *Il "Tour del Paese di Confine" del Galles Settentrionale 1980*
- *Viaje en 1980 al Norte de Gales y Provincias Fronterizas*

known antelope, buffalo, etc. shot by Mr Heber-Percy's ancestors, we sped on our way to the Imperial Hotel, Llandudno.

The next morning we walked to the Haulfre Gardens, terraced on the steep granite side of the Great Orme. Since the last I.C.S. visit to North Wales, some 10 years ago, the Parks Superintendent, Mr Helm, had felt enthused to start planting camellias at Haulfre in a prepared area and was keen for us to inspect them. They were only newly planted but looked well and we wish him every success. We also saw several other plants of interest in that attractive and unusual terraced garden, as well as some feral goats given by a Shah of Persia many years ago and living wild on the top of the Great Orme.

After collecting our picnic lunch we proceeded to Bodnant where we were greeted by Mr Charles Puddle (one of the original initiators of the I.C.S.) and his son Martin who is now in line to take over as head gardener (3rd generation). Bodnant is too well known for a description by

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Reticulata garden at Institute seen over boundary hedge



Mrs Fraser and Mrs Campbell hold R. scabrifolium for Tom Savige

The only magnolias seen were *denudata* in its usual creamy white form as well as that which shows a tinge of mauvey pink in the base of the petal which sometimes occurs in the seedlings of this species. It was too early to see them at their best but the buds were sufficiently advanced to indicate the spectacle they would provide. Whilst several interesting varieties of azaleas were seen in the Park of the Martyrs in Kwangchow, in all other places the variety we in Australia know as 'Alphonse Anderson' ('George L. Taber' in America) and its purple sport was almost the only one grown.

During our return from the Stone Forest near

Kunming, Dr Valder reminded us that *Rhododendron scabrifolium* was native to the rather barren hill country through which we were travelling. And to our delight we found a number of plants with their small pale pink tubular flowers.

It was plain from remarks made by our Chinese guides that never before had they cared for a party of foreigners who had such a deep interest in their native flora. Little did they know how much our Western gardens have been enriched by it and how much is owed to the skill of their early plantmen.

me — suffice to say that it was looking as beautiful as ever and our only complaint was that we were not allowed nearly enough time to see all we wanted to see, but I think every member still found time to buy a plant from the extensive garden centre, which is in fact being greatly enlarged with many more greenhouses.

Sunday morning we visited Penrhyn Castle, National Trust, a vast Neo-Gothic structure well situated above that lovely coastline, built by a slate Baron in the early 19th century. It is a fabulous example of carving on lime and sandstone and in the local timber of that area. There were also many household items made of slate, including a bed from the owner's own local quarries. After a very good introductory show of slides with amusing commentary by the Curator, Air Commodore Panton, we were taken round the castle.

The walled garden had many interesting plants, some huge *Eucryphias*, *cordifolia* and *Nymansay*, and tender plants such as *Leptospermums*, *Sophoras*, *Billiardiera longifolia* etc., against the tall sheltered walls.

We then proceeded to Plas Newydd, home of the Marquess of Anglesey. The house and gardens were taken over by the National Trust three years ago. After eating our picnic lunch in the car park under large chestnuts and beeches we were shown round the garden by Lord Anglesey at enormous speed. There were a few large *Camellias* but the bank of 24 flowering *Rhododendron schlippenbachii* was the sight that took our breath away.

It is a pleasant undulating garden with some good shrubs, many of a kind planted together for the visual effect, and very effective they were too. The view from the house over the Menai Straits to Snowdonia is really spectacular. We were then taken round the house and shown the famous Rex Whistler mural. There is also a collection of relics of an ancestor noted for his gallantry and for losing his leg at the Battle of Waterloo.

After tea in the cafeteria Lord Anglesey guided us by car to another part of the estate where his father had planted rhododendrons between the wars. There were magnificent examples of *Rhododendron molliyanum* (now *montroseanum*), *falconeri*, *sinogrande*, *cinnabarinum*, and many other species and hybrids. *Rh. montroseanum* had thrown up many large seedlings and Lord Anglesey had been busy layering and planting and trying to clear the area after the many years of neglect that it had suffered. Other than on the West Coast of Scotland I have never seen such ideal conditions for rhododendrons — boggy underfoot and with a light overhead canopy of Scots pines.

We should have liked to have spent more time there but had to return to be in time for the Mayor's Reception at 7 p.m. followed by a Banquet. Mr Savage was presented with a "Camellia" plate from the members and Miss Cicely Perring with a gift voucher to thank them both for all their hard work in organising such an excellent tour.

We left the Imperial on Monday, our last morning, for the Liverpool Botanical Gardens at Ness. We were given coffee on arrival; then the first 20 members were taken round by Mr Cunningham, a very knowledgeable and enthusiastic member of the staff. The latecomers, who had difficulty in finding the way, in spite of the excellent maps and directions provided, were taken round by Dr Hugh McAllister.

The gardens consist of some 60 acres and were originally owned and laid out by Mr A. K. Bulley some 80 years ago. He subscribed to many of the early George Forrest and Kingdom Ward expeditions so there is a very good and interesting collection of rhododendrons, many interesting trees and shrubs, some fascinating primulas and ground cover plants. A new area is being created with rocks and water for indigenous plants of every type as the emphasis is now on education for the students.

Most of the camellias were planted under trees, in conditions too shady for many *C. japonica* varieties to flower freely. Hybrids were doing better, especially a very fine plant of 'C. F. Coates'.

After our picnic lunch in their Hall we proceeded to Eaton Hall, home of the 6th Duke of Westminster: Here, in the 120 yard long conservatory, we saw perhaps more camellias, many of great age, than we had seen on the whole tour — *C. 'Elegans'*, *C. 'Magnoliiflora'*, *C. 'Lady Clare'*, *C. 'Alba Simplex'* and *C. 'Alba Plena'*, a wonderfully healthy-looking floriferous *C. reticulata* 'Captain Rawes', *C. 'Myrtifolia'*, a very pretty dark pink with a darker edge, *C. 'Kimberley'*, *C. 'Lavinia Maggi Rosea'*, *C. 'Hana-Fuki'* (covered in flower), *C. 'Lady Hume's Blush'* and many others, interspersed with plants of *Rhod. 'Lady Alice Fitzwilliam'*.

All the plants had been rejuvenated by Mr Ken Ledward when he took over as head gardener 3 years ago, and a wonderful job he had made of it. After walking round the formal gardens in front of the house and then partaking of tea and delicious home made cakes the tour dispersed.

It had been a very successful tour with fine weather all the time, although rather cold.

GIBBERELIC ACID IN CAMELLIA CULTURE

Dr R. M. Withers

Hawthorn, Victoria, Australia

Editor's note: Dr Withers prefaced his paper by saying that although much was known about "gib" and "gibbing" in some of the Society's Regions, there was little knowledge or experience of it in other Regions, mentioning in particular New Zealand and the southern states of Australia.

The unique property of Gibberellic Acid of increasing the growth of plants by greatly elongating the cells, was first discovered by the Japanese plant pathologist Kurosawa in 1926. Working in Taiwan, he was studying the bakanae or "foolish seedling" disease of rice, a disease known for over 100 years, in which infected seedlings grew much taller than healthy ones. Kurosawa observed that the causal organism was a soil-borne fungus *Gibberella fujikuroi*. It was not until the late 1930s that Yabuta and Hayashi isolated a crystalline active substance from culture filtrates which they called Gibberellin A, later found to be a mixture of 2 or 3 compounds.

In 1955, Dr P. W. Brian and his colleagues of Imperial Chemical Industries Pty Ltd, and Dr F. H. Stodola working independently in the U.S.A., isolated a pure plant growth promoting substance from *Gibberella fujikuroi*, distinct from Gibberellin A, and it was called Gibberellic Acid. More than 24 distinct Gibberellins have since been isolated from the fungus, and evidence for the widespread occurrence of gibberellin-like substances in plants has been obtained by many workers, and active extracts isolated from the seed, root and shoot tissues of many plants. Gibberellic Acid is now manufactured by I.C.I., and distributed by Plant Protection Ltd to all countries except the U.S.A. and Japan, where it is manufactured under licence by local chemical companies.

Gibberellic Acid is a white crystalline solid with the formula $C_{19}H_{22}O_6$, it is soluble in water to the extent of 5 grams per litre, at a pH 3-4. This results in a concentration of 5000 parts per million. It is stable when dry, but unstable in aqueous solutions. Keeping in a refrigerator will prolong the life of the aqueous solution.

Plant Protection Ltd market Gibberellic Acid as Berelex Powder and Berelex Tablets. Another preparation is available by the name of Grocel. In America, I bought a powder form called Gib-Pak produced by Elanco, a Division of Eli Lilly and Company, and it is available also in tablet form.

Initial work on the effects of Gibberellic Acid on camellias was carried out by Merck and Co. in the U.S.A. in 1956, using the preparation Gibrel. Much of the early testing was carried out at the

- *Acide "Gibberellic" dans la Culture la des Camellias*
- *Acido Gibberellico nella Cultura delle Camellie*
- *El Acido Gibberellic en el cultivo de la Camelia*

Los Angeles State and County Arboretum, and it was found that Gibberellic Acid produced cell enlargement, longer stems, new growth by breaking of dormancy, faster maturing of young plants, better seed production, and earlier blooming periods.

Camellia growers initially became interested following the appearance of articles by C. P. North of the University of California in Los Angeles which appeared in several camellia publications in 1959. About 1960 Colonel Frank Reed of Pasadena popularised the present method of using Gibberellic Acid, and treated blooms were produced which were from 10 to 50% larger than untreated blooms, and they flowered from 6 to 10 weeks earlier than normal flowering time.

Much has been written in Camellia Literature about the use of Gibberellic Acid in Camellia Culture. The most complete survey of the subject appears in the chapter "Gibberellic Acid and Camellias" page 131 by Mr Willard F. Goertz in "The Camellia", the new publication of the American Camellia Society. Much has been written on the subject in the *Camellia Journal* published by the American Camellia Society, and the *Journals* of July 1965, September 1965, and February 1979 are well worth reading. In the 1978 edition of the *American Camellia Yearbook*, two aspects of the use of Gibberellic Acid are discussed in a very interesting article by Mr Ken Hallstone.

It would appear that the strength of Gibberellic Acid used is not critical, but Mr Bill Goertz writes that he had good results using one gram of Gibberellic Acid to 2 to 2½ ounces of water which results in a strength of 17 or 14,000 parts per million. A 1% aqueous solution is 10,000 parts per million. Gibberellic Acid powder alone is relatively insoluble in water. As stated earlier it will dissolve at a pH of 3-4, to the extent of 5 grams per litre, which is equivalent to 5,000 parts per million. Greater concentrations may be obtained by the addition of a few drops of a weak alkaline solution (such as non-detergent ammonia or bicarbonate of soda mixed at the rate of ½ of a teaspoon to one ounce of water). Add the drops, one at a time with a good shaking between, until the solution clears. Any sediment remaining should be strained out. This solution would remain active for 24 hours at room temperature but refrigeration will prolong its

useful life. The Gib-Pak which I obtained in America contained 4 grams of active Gibberellic Acid, and I was advised to dissolve this in 180 millilitres of water with the assistance of a few drops of weak alkaline solution. This resulted in a concentration of 22,000 parts per million.

In the treatment of the flower buds with the majority of camellia varieties, a local treatment on or near the flower buds with the solution of Gibberellic Acid, applied 1 to 3 months before normal flowering time, will enable bigger and earlier blooms to be produced. The best method of applying the solution is to remove the growth bud adjacent to the flower bud, and to pipette a single drop of solution into the cavity. Alternatively the flower buds themselves may be painted with the solution. Only a limited number of buds can be treated in this way on any plant, because if all buds are treated or if the whole plant is sprayed at such high concentrations, defoliation and bud drop may occur. In some varieties, even the most limited applications may cause bud drop. In some cases a reduction in the concentration may bring about the earlier flowering desired without damage to the remaining buds. Gibberellic Acid used in this way may advance flowering by as much as 2 months.

Treatment with Gibberellic Acid to produce flowering earlier in the season greatly extends the flowering season. In America, if not perhaps in Australia and New Zealand, mid winter in camellia growing areas is extremely cold, and it is an advantage to produce good flowers early in the season. In November 1978 when I toured America, I saw some magnificent camellia blooms, but without the use of Gibberellic Acid I would have seen very few indeed.

The production of larger flowers in many treated blooms is a bonus. The normal characteristics of the flowers may be changed, but in the majority of treated blooms I have seen, any alteration in the natural size, shape, form and colour, has not detracted from the beauty of the flowers. Mr Pat Goonan from New South Wales, Australia, in the *American Camellia Society Journal* of February 1979, writes that "Gibbing, like in the automobile industry, may be regarded as an optional extra. Flowers appeal to many in their basic form, and any changes are resented. Other people derive a lot of pleasure in making full use of whatever options are available."

Apart from earlier flowering, and an increase in the size of the blooms, other advantages are better texture and longer lasting flowers.

Reported disadvantages are irregularities of form, discoloration, a deeper colour in some varieties, while in others the colour may be

lighter and bleach out almost to white. In some varieties buds have been found to "bull nose", but buds occasionally bull nose without gibbing. Many camellia varieties are found to respond very well to gibbing and appear to like it, but other varieties do not respond and appear to dislike it.

Treatment of buds with Gibberellic Acid does not appear injurious to the plant. However, it should only be used on healthy plants. It should be pointed out that it is not a substitute for good culture. It should not be used on young plants, and after flowering, the treated area should be pruned back to the next healthy growth bud.

Gibberellic Acid has proved to be useful in hybridising in several ways. By producing blooms earlier than normal in the season, pollen from a later flowering variety can be obtained earlier in the season to cross with an earlier flowering variety. Mr Ken Hallstone reports in the *American Camellia Society Year Book* of 1978 that, apart from producing pollen from some varieties earlier in the season, gibbing also lengthens the hybridising season in America, by enabling him to set seeds in February, whereas previously his best crosses were made during the last two weeks of March and the first two weeks of April. It has also been found that gibbing seems to improve conditions for setting seed on near sterile plants, which have proved difficult or impossible to use as seed parents. Mr Ken Hallstone discusses this aspect in the same article and also describes the use of Gibberellic Acid in producing intergeneric hybrids between *Camellia* and *Gordonia*.

In "*The Camellia*" Mr Bill Goertz reports that seed germination is speeded up by soaking the seeds, after gently cracking the shells, in a weak solution of Gibberellic Acid. It is recommended that 10 drops of 15,000 parts per million concentration be added to a cup of water, and the cracked seeds soaked in this solution for 30 minutes. 'Mouchang' seedlings treated in this way become well foliated seedlings between 6 and 8 inches in height after 7 weeks. Although untreated seedlings catch up with those treated, at a later age, the big advantage in treating seeds is to develop quick growth and a better survival rate at the delicate early age when loss of seedlings is common. Mr John Hunt in Victoria during this year (1979), has experimented with the treatment of camellia seeds. Using the method recommended by Mr Goertz in "*The Camellia*" he treated and planted seeds of *C. 'Winifred Sebire'* on April 25th, 1979. After 6 weeks these treated seeds had germinated and developed stems 3 inches in height. The seedlings were well rooted with a mass of roots, and were potted on into individual pots. Control seeds of

C. 'Winifred Sebire' planted on the same date, had germinated after 6 weeks, produced a radicle, but growth of a stem was just beginning.

It has been found that Gibberellic Acid can be useful in grafting. The scions are dipped in a weak solution or the union between the scion and the understock is painted with the solution immediately after grafting. In the *Camellia Journal* of the American Camellia Society of September 1965, Mr Frank Key of Florence, South Carolina, reported that out of 25 plants grown from treated scions, after one year, 24 were still much larger than the 25 controls.

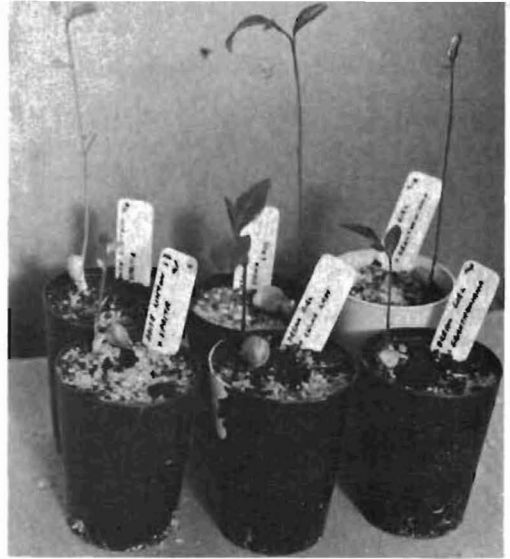
The use of Gibberellic Acid in Camellia culture creates problems for Society officials drawing up schedules for shows, but there are advantages to be obtained by its use, and there is much reason to believe that we have in this chemical another means to help us produce better and more beautiful camellias.

Pursuant to Dr Withers' above comments on the effects of GIBBERELIC ACID on seed germination Mr Ray Garnett of Beaumaris, Victoria, Australia, offers us some observations arising from his own studies on this aspect.

"... I decided to study the effects of GIBBERELIC ACID on seed germination as noted by Allan W. Irvin¹. Seed from various interspecific crosses were divided into groups of equal size. One group was planted in the manner described in my paper "Hybridizing and Seed Culture by an Amateur" (see page 41) whilst with the other group the naked seeds (seed coat removed) were soaked for 24 hours in a 1,000 p.p.m. solution of GIBBERELIC ACID. They were then planted similarly to the check group in sphagnum moss moistened with fungicide.

"Overall results did not indicate a much earlier radicle emergence than that obtained without "Gib", certainly not sufficient to justify the extra preparation.

"The main reason for using Gibberellic Acid was to obtain a more even germination, since it had been found that, even in naked seed culture, seeds from the same capsule could vary greatly in



Three pairs of seedlings, each pair same cross, those at rear from seed soaked in "Gib."

germination time — even by many weeks — thereby creating a danger of fungus infection. In this regard the results were excellent, with all seed commencing to germinate in a relatively short time. However there was one effect which I had not expected, although reference had been made to it by W. F. Goertz² and by Dr Withers. This was the rapid plumeole growth when GIBBERELIC ACID was used; also a lanky after-growth. Many seeds had a plumeole growth of 2" (5 cm) when radicle growth had only reached 3" (7.5 cm) in length. Some of these plants have grown to a height of 10" (25 cm) after only eight weeks. This growth is quite lanky and not as sturdy as that of the slower growing plants.

"Not all the seedlings treated with GIBBERELIC ACID have reacted in this way even when they are from the same cross. This may have occurred because the slower ones were "sleepers", while the lanky seedlings would have been quick growers in any case, but by using "Gib" they were over-accelerated!

"It is too early yet to form a conclusion as to whether the long growth is good or bad. It appears as though it will create the necessary growth for early grafting, which is one of the prime motives. Time will tell!"



- (1) ALAN WATSON IRVIN: A Study of the Effects of Storage, Gibberellic Acid and Embryo Culture on Germination in *Camellia Japonica*. (*A.C.S. Year Book 1979*).
- (2) WILLARD F. GOERTZ: Gibberellic Acid and Camellias, (*The Camellia 1978*).

From seed treated with "gib" (left), untreated on right.

JAPANESE CULTURE AND THE CAMELLIA

- *La Culture Japonaise et le Camelia*
- *Cultura Giapponese e la Camelia*
- *Cultivo Japones de la Camelia*

DR TAKESHI WATANABE

Kyoto, Japan

Food, clothing and housing as well as the life culture of the Japanese people cannot be explained without reference to the camellia which is an endemic plant of Japan. In the cultural history of flowers, there is no other plant which is so widely diffused in terms of geographical distribution, or more widely appreciated.

Camellia culture has spread widely and planted its roots deeply in all brackets of the Japanese people, rich or poor, civilians or warriors. This can be attributed to the fact that camellia played an important role in the formation of Japanese culture because it was a flowering plant appreciated in horticulture, landscape gardening, and flower arrangement. Also the wood, leaf and seed of the camellia were important for food, clothing and shelter in Japan. Camellia are utilized in dyeing and weaving, pottery manufacture, breweries, and for china, furniture, tools, printing, arms, technical art, agriculture, shipping, fuel, medicine, food and cosmetics.

Geographically, camellia are distributed as far north as Hokkaido. On the coastline, Japonica camellia thrive while in the mountainous snowy regions, *C. rusticana* grows, forming a scene of colour and variety rarely found in nature.

Camellia has also played an important role in Japanese history. Camellia whose branches are intersecting each other have been preserved in the Izumo Yaegaki shrine dedicated to Susanoo-no-mikoto and Inadahime-no-mikoto since the age of the gods. Those camellias are said to avert evil and to symbolize friendship, conjugal harmony and the prosperity of descendants. This characteristic of the camellia was recognized by shrines and infused itself into the customs of various regions. According to "*the Chronicles of Japan*", the emperor Keiko used camellia sticks to conquer barbarians and also camellia were used to avert evil during the new year's celebration. As camellia characterizes the war-like spirit in quest of truth, it is said to be a talisman against evils. It has been regarded as a symbol to protect military generals and was applauded by the Kamakura regime until the end of the Tokugawa regime. The length of this



period began in ancient times and extended into Japan's modern age as well.

In the imperial Nara and Heian period, camellia were employed in the culture of the Imperial Court by the emperor, as well as court nobles and literary men, for it characterizes longevity, tradition, the new year, auspicious events and marriage. Camellia have also contributed to the graceful culture of nobles in court functions, religion, construction, landscape architecture, art, technical art, poetry and entertainments.

In particular, the forerunners in landscape gardening, flower arrangement and the tea ceremony employed the camellia most effectively in the unique culture of Japan. As a result, the brilliant beauty of the camellia was recognized for its classical grace.

During the Kamakura, Momoyama and Edo periods, shogunates and generals appreciated camellia since they characterize a war-like spirit which fights for truth. Especially in the Edo period, the Tokugawa family developed the Kanto type C. Edo ('Tricolor') to symbolize the Tokugawa family, the commander-in-chief of an expeditionary force against the barbarians and the city of Edo. It also tried to introduce the magnificent camellia culture which is quite different from the culture of the Western part of Japan to that of the warriors and feudal clans.

Moreover, owing to the masters of tea ceremony and the ceremony itself, the precious tradition of the camellia was maintained even during the dark age of the camellia culture from the Meiji to the Showa period and lead to the present world-wide revival of the camellia boom.

Continued on page 55

A.C.S. Awards — 1980

The American Camellia Society has announced its awards for 1980.

		Introduced by
THE HARRIS HYBRID AWARD	'Harold L. Paige'	Jack Osegueda, Oakland, Ca.
THE JOHN A. TYLER AWARD (Miniatures)	'Tammia'	Zerkowsky's Tammia Nursery.
THE ARMINTA CAWOOD AWARD	'Tomorrow's Dawn'	Ruffin & Allums. Exhibited by Marshall Rhyne, Ms.
THE SEWELL MUTANT AWARD	'Elegans Champagne'	Nuccio's Nurseries.
AUSTRALIAN CAMELLIA RESEARCH SOCIETY TROPHY	'Margaret Davis'	Arthur N. Davis, Australia and Hawaii, Exhibited by Bagby Hall, Ms.

The 1980 additions to the A.C.S. Hall of Fame were 'Man Size' and 'Dr Clifford Parks'.

At the personal level the society awarded its RECOGNITION BRONZE PLAQUE to G. Stuart Watson of Albany, Ga., and the CERTIFICATE OF COMMENDATION to John Sewell of Jacksonville, Fla., for the 1979 year, and Dr Daniel E. Nathan of Fort Valley Ga., and Vera and Al. Parker of Sebastopol, Cal. for the 1980 year. Congratulations to all these enthusiasts.

Congratulations also to the A.C.S. whose *The American Camellia Yearbook* has received the important national AWARD OF MERIT TO A PLANT SOCIETY.

Continued from page 54

The geographical distribution of camellia which is an endemic plant of Japan, the usefulness of camellia as resources for life, the historical background which can be found in the life of our forefathers and the empathy and faith for the plant have been preserved in the life of the court nobles, shogunates, chief of the clans as well as the common people living in cities, fields and mountains. It also rooted itself in people's religion, customs and their life style until the present day.

Moreover the camellia has been adopted as the sacred tree. The tree and flower can be used for construction, ornamentation, landscape architecture in various religions such as Shintoism, Buddhism and Christianity.

In the art of public entertainment, the masterworks of erudite literature, poetry and Noh songs, whether ancient or modern, deal with camellia. Also it is mentioned in haiku, folk songs, ballads and popular songs, indicating that people had some psychological as well as material exchange with camellia.

Also camellia are appreciated in paintings, metalwork, woodwork, stonemasonry, lacquerwork, ceramics, dyeing and weaving for its elegant and brilliant beauty. Of course it has

not only been employed in the noble culture, but played a large role in the folk craft of the general citizens through which various daily necessities were made.

As camellia have played an important role in our culture, the standard of culture indigenous to a certain land, age or person can be known by studying the camellia. No other plant in the cultural history of flowers is so closely related to the cultural history of Japan and the Japanese people as the camellia.

Camellia also played an important role in the exchange with foreign countries. The introduction of camellia oil by Japanese envoys to China in the Tung and Sui dynasty and the introduction of flowering plant camellia to the modern Europe from Nagasaki have led the way to the present world-wide camellia boom.

It is surprising that this member of the plant kingdom located mainly in the small islands of the Far East and partly in South East Asia has sailed across the Seven Seas and is now being appreciated widely in all five continents.

The cultural history of camellia has characteristics and further possibilities still further to widen and deepen its glamour on various scenes and races.

FIRST FINDINGS OF THE INTERNATIONAL NOMENCLATURE ADVISORY PANEL

The establishment of the Society's International Nomenclature Advisory Panel, and the names of its members, were announced in the 1979 Mid-year Newsletter and in Journal No. 11 of October 1979 (page 21). We now present the Panel's Report on camellia names studied in its first year.

Most of the cultivars submitted for investigation were European named camellias where confusion had arisen in orthography or priority of name. This was sometimes due to a cultivar name being translated from one European language to another. As so many of these camellias were named after European nobility or royalty, investigation into historical precedence was sometimes necessary to establish the correct form of a title or the orthography of a name. The Articles of the *International Code of Nomenclature* to which particular attention has been given are:

ARTICLE 28. The orthography of words in Latin form, which are used as cultivar names, should be in accordance with the Botanical Code; if not, the spelling should be corrected.

ARTICLE 32. When a cultivar name has to be rendered in another language, it is preferably left unchanged.

ARTICLE 35. Each cultivar has one correct name, the single name by which it is internationally known. It may also have one or more legitimate synonyms.

ARTICLE 46. When a cultivar name is generally used instead of any earlier legitimate name of the same cultivar, the former is retained as the correct name, if the use of the latter would lead to confusion. Such action may only be taken with the approval of the Registration Authority.

1. 'Dom Pedro V Rei de Portugal' Portuguese

First valid listing, Loureiro catalogo Nr. 9, 1872. Formal double white, stained and spotted rose. Obtained from a seed in the Loureiro Nursery. The cultivar was described and illustrated in *L'illustration Horticole*, 1874 under the incorrect name "Don Pedro". "A plant of the first rank with stout branches supporting large, thick broadly oval, serrulate, almost crenulate, shortly mucronate leaves. Flowers admirable, imbricated, regular with rounded, oval, orbicular, retuse or reniform, slightly apiculate, fleshy petals of a beautiful white, here and there faintly painted with longitudinal stripes of delicate rose".

The camellia has been generally distributed in Australia, U.S.A. and England under the incorrect name of "Don Pedro". However in Spain and Portugal it has been known by the abbreviated form of 'D. Pedro V.'

2. 'Don Pedro' Italian

This name first appeared in the 1851 list *Traite de la Culture Camellia*, by de Jonghe, but without description. However its first valid listing is

- *Les Premieres Decouvertes du Comite Conseil pour la Nomenclature*
- *Prime Scoperte del Pannello Consultativo della Nomenclatura*
- *Los Primeros Resultados del Grupo de Consulta en Nomenclatura*

Franchette 1855: "'Don Pedro'. Very large, petals wide, bright rose, imbricated".

3. 'Dom Pedro II Imperator do Brazil' Portuguese

First valid listing: Loureiro Catalogo Nr. 9, 1872. "Rose form, white, striped and spotted carmine".

4. 'Imperator e Rei, Dom Pedro IV' Portuguese

First valid listing: Loureiro Catalogo Nr. 9, 1872. "Regular rose form, striped and spotted white".

HISTORICAL NOTES ON THE "PEDROS"

Pedro V, born 1837, son of Queen Maria II and Ferdinand, Prince of Saxe-Coburg and Gotha, who became known as Ferdinando II on marriage. Pedro succeeded his mother as Pedro V in 1853, however Ferdinand was Regent until 1855 when Pedro turned 18.

Pedro V died from cholera in 1861, aged 24.

Pedro II was Emperor of Brazil 1831-1899.

Pedro IV was King of Portugal for a month in 1826 and Emperor of Brazil 1822-1831 as Pedro I.

5. 'Eugenie de Massena'

The name first appears as 'Eugenie de Massina' without a description in Loureiro Catalogo Nr. 9, 1872, under "Foreign Novelties".

The Floral Magazine, 1873, Plate 84 illustrates a camellia "Eugene de Massina" described as a "cupped flower of deep blush colour". The illustration shows a uniform deep pink. From the date, it would appear too soon for it to be a sport of 'Dom Pedro V' and Franchetti's 'Don Pedro' is already pink. Its origin is unknown.

In *Rollison's Plant Catalogue 1877-78*, P. 153, is listed "Eugene de Massena", bright rose with salmon tint, veined crimson, neatly and broadly bordered white. Large and well imbricated".

As this latter form is the cultivar in general distribution, while that illustrated in *The Floral Magazine* seems to be lost, it is proposed that Article 46 be invoked and the "bright rose form with the white edge" be confirmed as the valid form. It is a sport of "Dom Pedro V".

However, there has been some dialogue over the orthography of the name. That originally published is incorrect as it is neither French nor Italian. Eugenia Massena or Eugenia di Massena is Italian and Eugenie de Massena the French form. It is presumed the camellia was named for the wife of Napoleon's Marshal, Andre Massena, Duc de Rivoli, Prince d'Essling. Most of the listings located are either Portuguese or English and they favour the French form. The consensus of opinion of the Panel is to retain the French form, 'Eugenie de Massena'.

The following variations of the name found in horticultural listings include "Eugene de Massina", "Eugene Massina", "Eugene de Massena", "Eugenia de Massena" and "Eugenia di Massena".

6. **'Montironi'** Italian

The first valid listing of 'Montironi' located in Berlese *Monographie du Genre Camellia etc.* 3rd Edition, 1845, P. 289. 'Montironi' or "Helene Longhi" (Italy).

Vigorous shrub, pyramidal, leaves 4-5 cm wide by 9-10 cm long, rounded or oval, surface bullate, widely dentate, dark green; flowers 10-11 cm in diameter, full formal double, sometimes pure white, at other times rosy white, marked with stripes or lines of light rose; petals in 9 to 10 rows, 4 cm wide by 5 cm long, concave close-set, some entire, others emarginate and imbricated from the outside to the centre.

Verschaffelt, Graffi and Loureiro all listed it as "Montironi Vera". The 1855 Graffi Catalogo, Barcelona, has "Montironi Vera" (Casorette). De Jonghe listed it in 1851 as "Montironi Alba".

There is no doubt that the cultivar 'Montironi' was validly published and described in Berlese *Monographie*, 1845 and that "Montironi Vera" and "Montironi Alba" are later synonyms. The alternative Italian synonym "Helen Longhi" should be discarded as published as an alternative name.

7. **'Montironi Rosea'**

A pink sport of Montironi validly listed by Carriere in *Production et Fixation dans les Vegetaux* published in 1865.

8. **'Princess Frederick William'** Chinese

There was originally some confusion over which Prince Frederick William of Prussia was involved, but the publication of *Queen Victoria's Sketch Book* by Marina Warner published by Macmillan, London 1979 makes it clear that Princess Frederick William was Victoria, the first born of Queen Victoria and Albert; the Princess Royal. She was born November 21, 1840, and engaged at the age of 14 to Prince Frederick William of Prussia, son of Prince William, later King William II of Prussia, finally Emperor William I of Germany. He was known as "Fritz" and she as "Vickie". They were married in the Chapel Royal at St James on January 25, 1858. Their son was The Kaiser.

Mr Robert Fortune the renowned plant hunter had brought a number of camellias of Chinese origin into England shortly after 1850. These included the formal reticulata, now known as 'Robert Fortune' (syn. Pagoda), the *C. japonica* 'Cup of Beauty' and an informal striped cultivar which was grown by Mr Glendinning of the Chiswick Nursery.

This was first displayed at a meeting of the Horticultural Society, a report of which was published in the *Cottage Gardener*, 19:290, on February 9, 1858, the name being incorrectly given as "Princess William of Prussia". This was sub-

sequently corrected in the *Florist, Fruitist and Garden Miscellany* 11:129, c.t. 139 (colour) May, 1858 to 'Princess Frederick William' with the following report:

"We have frequently noticed in our pages the many valuable plants transmitted to English gardens by that enterprising traveller Mr Fortune, when resident in China...; and we again avail ourselves through the kindness of Mr Glendinning of the Chiswick Nursery, who holds the stock, of giving a coloured plate of a new Chinese camellia from the same collection, and which is unquestionably the handsomest variety in cultivation of a striped or mottled kind."

This cultivar received widespread circulation as many listings of it occur in Europe, U.S.A., England and Australia. Various forms of its name have been published as follows: "Princess Frederick William of Prussia", "Princesse Frederique William", "Princesse Frederick William" and erroneously "Prince Frederick William".

The first valid listing of the correct name is in the May, 1858 issue of the *Florist, Fruitist and Garden Miscellany* as the *Flore des Serres* 12:181, c.t. 1277 (colour) 1857, was actually not issued until later and included a copy of the colour plate from *The Florist*.

9. **'Prince Frederick William'** Australian

First valid listing in Sheather's *Camellia Grove Sydney*, catalogue 1872, and described as "most delicate shade of pink, perfectly imbricated form".

The origin of this cultivar is not known. Although it was referred to as Sheather's 'Prince Frederick William', Sheather never listed it as one of his raising. Its colour, form and plant habit indicate that it is not related in any way to 'Princess Frederick William'. The cultivar is still a most popular camellia in Australia.

10. **'Princesse Bacciocchi'** Italian

The first valid listing of this cultivar is in Berlese's *Iconographie du Genre Camellia*, Vol. 3, 1843. However, the name was spelt "Princesse Bacciocchi". He corrected this to 'Princesse Bacciocchi' in the third edition of his *Monographie*, 1845. This was repeated by Louis Van Houtte in the *Flore des Serres* which illustrated it and described it as a seedling raised by Boffi in Italy and says: "This variety attracts attention due to the regular arrangement of the petals in an unusual star shape with irregular rays of white."

The flowers are 10-11 cm in diameter, full and regular. The petals are arranged in 5 or 6 uniform layers, imbricated. The colour is bright red with metallic tints and longitudinal band of white, formed like a star.

As the name Bacciocchi has been spelt Bacciocchi and Bacciocchi, this was investigated at length. The *Encyclopaedia Britannica* 1968 ed. Vol. 3 p. 899 used "Bacciocchi" as does *The Court of the Tuilleries* 1852-70 by Le Petit Homme Rouge and

also *The Corsican: A Diary of Napoleon's Life in his Own Words*, Grant Richards Ltd, London, 1911.

Although many other references give alternative spelling the above are considered more authoritative. Also the basic meaning of the name "bacio-occhi" (comparable to the French "baiseyeux") translates as "kiss eyes".

Further discussion has been on the title — the French Princesse or the Italian Principessa, as it was originally an Italian cultivar.

However, it is clear from *The Court of the Tuileries* that the title is French and granted by Napoleon III to the Ladies of the Court at the Tuileries. The lady herself was named Napoleone and was the daughter of Eliza, the sister of Napoleon Bonaparte, and Felix Baciocchi who was made an Adjutant General in the French Army after his marriage.

11. **'Dama do Paco'** Portuguese

First validly listed in Loureiro Catalogo Nr. 9, 1872 under Portuguese camellias, "Dama do Paco" Formal double, soft rose, lighter centre, striped white."

12. **'Dr Balthazar de Mello'** Portuguese

Validly listed by Sequeira, E. *Chronica Jornal di Horticultura Practica* 22:4:93 April, 1891. "Shown at the Crystal Palace, Oporto, March 22 to 25 by the Real Companhia Horticola... 'Dr Balthazar de Mello'. Very regular rose form, white with bright carmine stripes. Fimbriated petals". A fimbriated sport of 'Bonomiana'. The name has also been spelt "Baltazar de Mello".

13. **'Dona Jane Adressen'** Portuguese

First publication of this cultivar was in the *de Matto Catalogo* Nr. 20, 1904. "D. Jane Andresen (Portuguese). Red, petals fimbriated as those in 'Fimbriata'. Regular rose form. Moreira da Silva in "Camellias in Portugal".

American Camellia Yearbook, 1955 says that it is a sport of 'Dr Balthazar de Mello' fixed by his father. The name is correctly spelt Adressen although most references use the single 's'.

14. **'L'avenire'** Italian

The first listing of the name is in the 1851 Catalogue of Luzzatti. However Verschaffelt's *Nouvelle Icon*. 1854, livr. 3. Pl. 4 has "L'avenire" — distinctly lanceolate — acuminate or elliptical leaves — very large delicate pink perfection blooms, veined a deeper shade." It is of Italian origin.

Verschaffelt's 'L'avenire' seems to be an attempt at the Italian 'L'avenire' which translates as "the future" and L'avenire thus becomes its correctly spelt, valid name.

Some time after 1908 Guichard commenced cataloguing this variety under the synonym "Lallarook", which in America, collected a further synonym "Laurel Leaf". However the cultivar in America is virus blotched and

described as "Pink, marbled white". It is recommended that 'Lallarook' apply to the variegated form only while 'L'avenire' is the valid name of the unvariegated original cultivar.

15. **'Incarnata'** Chinese

First mention of this camellia is in Andrews' *Botanists' Repository* t 660, f. 1., 1812 with colour illustration as *Camellia japonica* var. flore plino incarnata. Flesh coloured camellia. Aiton's *Hortus Kavensis* P. 235, Vol. IV, 1812 lists it as the "Buff Camellia". However, the first valid listing of the name of the cultivar as 'Incarnata' is under the illustration of the camellia in Loddiges *Botanical Cabinet* F. 140, Vol. II, 1818.

As this camellia was originally imported from China for Lady Amelia Hume, an alternative name used was 'Lady Hume's Blush'. The cultivar has been variously known as "The Buff Camellia", "Flavescens", and incorrectly as "Carnea" and "Kew Blush"; "The Blush Camellia", "Incarnata Alba", "Humes Blush" and, in Portugal, by the local synonym "Camurca" (wash leather).

16. **Deleted from Report**

17. **'Commensa'** Belgium

First listed in *Revue Horticole*, 1844 then in *The Floricultural Cabinet*, Vol. 14, P. 43, 1846, as "'Commensa', Rose with white markings Verschaffelt *Iconographie*, Pl. 2, Book 6, 1848 says that 'Commensa' came from seed of 'Donkeleri' and was raised by Mr Donkelaar who sold the stock to Mr Makoy who put it on the market in 1845. Its description — "Blossoms 10-11 cm in diameter, symmetrical, 60-70 petals of vivid red occasionally streaked white".

18. **'Reine des Fleurs'** Belgium

The first listing located is in *The Floricultural Cabinet*, Vol. 14, P. 90, 1846, as 'Reine des Fleurs', Red, imbricated.

Verschaffelt *Iconographie* Pl. 1, Book 7, 1848, says: "This camellia is a product of Belgium Horticulture. It was obtained by Mr Donkelaar, chief gardener of the Botanic Gardens of Ghent, from seed of 'Donkelaarii'. The blossoms, 9-10 cm in diameter, are full, of perfect regularity and imbricated. Bright cherry red intersected with a white stripe."

Louis van Houtte was of the opinion that this was the same variety as 'Commensa' however both Verschaffelt and the *Horticultural Cabinet* listed them as two separate cultivars in the same year, and from this distance in time we can only accept them as two validly named and separate camellias.

19. **'Bealei'** Japanese

This camellia was the subject of two separate and distinct importations from Japan. The first, by Thomas Beale, Portuguese Consul at Macao, was sent to England where it was named and described in *Illustrations and Descriptions of*

Plants, etc., Chandler and Booth, Pl. 42: 1831 — 'C. Bealii'. The original plant came from Japan to Macao in 1828 in the Dutch ship "Rotterdam" and was exchanged for Chinese plants by Thomas Beale. The flowers are large, not very double, about 4 inches. They are a clear red of four to five rows with a slucter of stamens mixed with narrow irregular petals in the centre.

Berlese *Iconographie* Pl. 100, Vol. 1, 1841 describes the same cultivar which was brought to Europe from Japan by Von Siebold in 1830 (together with 'Donkelaarii', 'Delicatissima', and 'Ochraleuca') and released under the name 'Leana Superba'. This has sometimes been spelt Leana Superba. The cultivar was confused with 'Palmer's Perfection' which was also known as "Palmer's Bealii" and "Coccinea Major". It was usually listed as "Bealii" or 'Beali' but as the importer's name is spelt Beale it should be corrected to 'Bealei' as per article 28 of the Code. "Leana Superba" becomes a synonym.

20. '**Albino Botti**' Italian

This cultivar was validly listed, described and illustrated in *L'Illustration Horticole* Vol. 22, P. 46, Pl. ccvii, 1875. "Camellia 'Albino Botti', Italian seedling. Flowers amongst the largest of the genus, regularly imbricated in zones with obcordate, flat, entirely or slightly emarginate petals of deep rose in the centre, encircled by a marginal band of pure white".

This cultivar has been listed in Australia, America and Europe. It has been identified and re-established in Italy.

21. '**Alfredo Cappellini**' Italian

This cultivar name was first published in a list of new varieties from the garden of Franchetti by the *Societe Toscana Orticoltura*; 1876 as 'Alfredo Cappellini'; cinnabar red.

22. '**Althaeafloa**' English

The cultivar was first validly listed and illustrated in Chandler and Buckingham's *Camellia Britannica*, Pl. 4, 1825 as "Althaeafloa" or the "Hollyhock Flowered Camellia". It was re-listed by Chandler and Booth in their *Illustrations and Descriptions etc.* Pl. 20, 1831, 'Althaeafloa' (Hollyhock Flowered).

"A seedling we owe to Mr Chandler of Vauxhall Nursery where it was raised in 1819. The flowers measure 4 in. and are a rich crimson. . . When the flower is expanded it has a very different appearance, resembling that of a large double hollyhock". It is a seedling of 'Anemoniflora'.

This camellia was grown in England, Europe, America and Australia and in the large numbers of listings the name is spelt in a great variety of ways, Althaeafloa, Althaeafloa, Althaeafloa, Althaeiflora, Althaeiflora, Althaeiflora, Althaeiflora and Althaeafloa.

However, the hollyhock's botanical name is *Althaea rosea*. Therefore Chandler and Booth's 1831 listing as 'Althaeafloa' becomes the valid name.

'Childsii', 'Rosette' and 'Blackburniana' are given as synonyms in England and "Thunbergiana" in Italy.

23. '**Andrea Doria**' Italian

This name was first validly listed in Carlo Luzzatti's catalogue, 1853, as having a form similar to 'Incarnata' but of deep red, striped white. This was repeated in Burnier's 1855-56 catalogue.

24. '**Angelica**' Italian

This cultivar was first validly listed in the 1846-47 catalogue of Burnier Grilli, Firenze, as "white, slightly striped and spotted clear pink". They code it as their original introduction. 'Anglica' is a different cultivar.

25. '**Auguste Delfosse**' Belgium

Verschaffelt *Nouvelle Icon*, Pl. 7, Book 8, 1855, contains the first valid listing of this cultivar. "From the skilful grower, Mr Emile Defresne of Liege who obtained it from seed and bloomed for the first time in 1853. It is dedicated to the President of the Belgium Chamber of Representatives, Mr A. Delfosse. Besides their starlike arrangement of splendid regularity the blossoms are a pure carmine with a few white stripes. *La Belgique Horticole* P. 129, 1856, also describes the cultivar in full and states that it was obtained by M. Defresne by fertilising the camellia 'Weimarii' with pollen from 'L'Eximia' which produced seed in 1846.

In America a red peony form camellia also is listed as 'Auguste Delfosse'. This is invalidly named and its origin obscure, although incorrectly ascribed to Andre; France.

26. '**Triumphans**'

This cultivar was first listed and described with a plate, in the *Horticulteur Belge* P. 92, Vol. 2, 1834. Flower a full cherry red shaded rose, petals large with small centre petals striped with white. A popular variety still grown, it is listed by nurseries in all camellia growing areas.

Synonyms are: "Lady Parker Peony", "Allen's Pink", "Harmony", Orthographic variation "Triomphant".

Investigations on the origins of other varietal names of camellias are in progress and similar reports will be published from time to time. If any persons have nomenclature problems or wish to have varietal names investigated; they can direct enquiries, giving all known data, either to the Secretary of the I.C.S., Mr Harry Churchland, 32 Darnley Street, Gordon, N.S.W. 2072 Australia or to the President of the I.C.S., Mr T. J. Savige, Hawksview Road, Wirlinga, N.S.W. 2640 Australia.

The International Camellia Society is the properly approved International Registration Authority for the Genus *Camellia* and, as such, it offers the above service to gardeners and horticulturalists interested in the *Camellia*.

COMPANION PLANTS FOR CAMELLIAS

LESLIE RIGGALL

Kloof, Natal, South Africa

In a society such as ours, devoted to one genus of plants, there is a natural tendency to forget the important part that other plants must play, if we are to derive the maximum value and enjoyment from our camellias. The following notes on companion plants for camellias may help to restore the balance.

The first group of plants to which I shall refer will surprise most people, as they are seldom cultivated or even encouraged deliberately in gardens. They are the mosses, which create exquisitely beautiful compositions as they clothe shady paths, banks, stone walls, old rocks, trees and even bare soil, with mantles of velvet in various shades of green.

One of the most important principles of good gardening is to follow Nature and to use natural effects whenever possible. Camellias grow naturally in the moist regions of Asia such as Japan, which has a constant and ample rainfall which causes moss to grow almost everywhere. Thus camellias and mosses are natural companions and should be grown together.

If there is shade and moisture, which can be provided by irrigation in dry climates, it is surprising how quickly small pieces of planted moss will cover an area where moss is desired. If grass competes with the moss while you are trying to establish it, a grass and weed-killer such as Dalapon will kill the grass without damaging the moss. And if you have established an environment in which mosses are thriving you can be fairly sure that your camellias will be happy. Even a container-grown camellia will look more attractive if moss covers the soil. Moss covered stones and logs can be found in any forest or woodland, and provide ready-made ornaments for the garden at no cost.

I have enjoyed looking at camellias in many countries of the world, but the one which remains most vivid in my memory was a camellia I saw in Kokedera, the Moss Garden at the Saihoji Temple in Kyoto. I will quote the description I wrote in the Royal Horticultural Society's Year Book in 1965. "This large 'strolling garden' is entirely covered with more than a hundred species of soft beautiful moss. I was fascinated by one scene, where a tall camellia tree with a bare trunk had shed hundreds of single scarlet flowers with golden stamens, which were lying on the carpet of rich green moss around the tree."

- *Plantas Asociadas aux Camelias*
- *Piante Complementari per Camellie*
- *Plantas Congeniales de la Camelia*

I have referred to shady conditions for growing moss, and this leads to the question of trees as companions for camellias. The choice of trees depends upon the climate. As an extreme example, on the West coast of Scotland, the mild cool weather is so wet and cloudy that there is insufficient sunlight to induce japonica camellias to flower, and only Williamsii hybrids (*C. japonica* × *C. saluenensis*) will flower in those conditions. Here obviously it would be a mistake to plant any trees for shade. But in the average British climate trees are necessary to reduce damage to the flowers by frost. In the hotter countries of Europe and in America, Africa and Australia, trees may be necessary to protect the flowers from hot sun or drying winds. In the milder and wetter regions of New Zealand and in my garden in Natal, South Africa, *C. reticulata* and its hybrids succeed without shade and will actually flower better in the open, although the sun may fade the flowers too quickly. But, generally speaking, camellias require trees among them for one reason or another. Quite certainly they look more attractive among trees, and for artistic effect should never be grown without them.

Coming to the question of which trees to choose, we must first consider whether deciduous or evergreen trees are best. This again depends on the climate and this can be illustrated best by discussing the problem as it relates to South Africa. In the Cape the winter is mild and wet and the summer is hot and dry. For this climate deciduous trees are best, as they allow more light and air circulation in winter, and provide essential shade in summer. But in Natal and the Transvaal the climate is the reverse, the winter is very dry and sunny and there is plenty of rain in summer. Therefore we must use evergreen trees to provide shade in winter. Nature is helpful in this respect in subtropical climates such as Natal, because the natural forest is evergreen.

Pine trees are often used in America but unless the climate is moist I do not favour them, because they create a rather dry environment. The only conifers I would recommend, purely for aesthetic effect, would be smaller plants preferably columnar or narrowly conical, with yellow, golden, blue or grey foliage to contrast with the camellias. Deciduous or evergreen oaks are much better than pines and the annual fall of oak

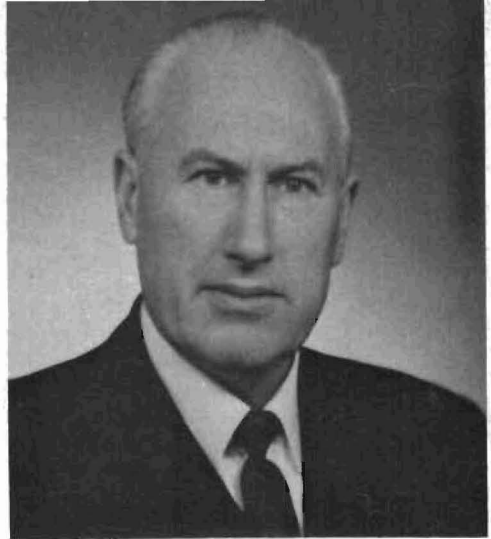
leaves provides all the nutriment and humus that camellias require. If you have only pines or other unsuitable trees on your land, take out every other tree and plant fast-growing oaks in their place.

In choosing evergreen trees care must be taken to avoid trees that cast too heavy a shade, which is not infrequently the case with evergreens, as the camellias may not flower. If such trees are already established they must be thinned out so as to allow air and 50% of the light to reach the camellias.

Before any trees are used their effect on the camellias must be assessed very carefully. For example, in the northern hemisphere beech and lime are impossible, not even weeds will grow under them, because of dense shade and greedy roots. In the southern hemisphere acacia and eucalyptus are dangerous because of roots and suckers and thousands of seedlings, although there are a few exceptions in these two genera. In Portugal some neglected gardens were completely taken over by *Acacia melanoxylon*, and I feared this species until I learned that rhododendrons are grown under these trees in the Dandenong hills of Australia. I tried camellias under them and they thrived, perhaps because of tannin which they may have derived from the acacias. It is indeed fortunate that among the eucalypts the most spectacular, *Eucalyptus ficifolia*, happens to be a tree which can be associated with camellias because it has very deep roots. Small plants will grow up to the trunk of this species and I grew it with camellias in Portugal. I have quoted these exceptions to emphasize the point that the choice of trees for camellias must involve careful investigation, bearing in mind that camellia blooms need protection from frost, wind and sun.

To sum up this important question, one needs trees which have deep roots, and which cast a light, dappled shade amounting to around 50%. Trees with ferny foliage often provide this and look very beautiful. Examples which are fast growing in climates favourable to camellias are *Melia azedarach*, *Rhus succedanea*, (which provides brilliant autumn colour), *Tipuana tipu*, *Carya illinoensis* (which provides delicious nuts) and *Jacaranda mimosifolia*, which is undoubtedly one of the most beautiful trees in the world.

Ground covers are most important as they save labour as well as beautify the garden. Apart from organic mulch under each camellia, all the soil should be covered with plants, both for the aesthetic effect and to provide a more natural environment for the camellias. Ground covers keep the soil cool and damp, prevent erosion, suppress



weeds, and provide variety and contrast in a camellia garden.

For me the most beautiful ground cover in shade or half-shade is a Mexican plant which is seldom used, *Schizocentron elegans*, also known as *Heeria elegans* and *Heterocentron elegans*. In South Africa another Mexican plant, *Heterocentron roseum* (syn. *Heeria rosea*) has been confused with this, but is much inferior to the plant I am recommending. *Schizocentron elegans* is a completely prostrate mat-forming plant with beautiful cyclamen-coloured flowers, and its exquisite foliage creates a perfect carpet all through the year. It will also creep over rocks or the base of a tree and it tolerates up to 5 degrees (centigrade) of frost.

For quick results the ivies are good. In cold climates *Hedera colchica* 'Variegata' will cover the ground with colourful leaves which contrast well with the dark green foliage of camellias. In milder climates *Hedera canariensis* 'Variegata' produces a similar effect, but the colour is paler. Less vigorous and with smaller leaves is the strikingly variegated form of *Hedera helix* known as 'Jubilee', or 'Goldheart'. It has dark green leaves with a golden central blotch, and unlike most variegated plants, the colour is good or even better in shade. This is also true of the variety 'Buttercup', and both are very ornamental grown on a tree stump or wall. Another attractive ground cover is periwinkle in various forms. *Vinca major* 'Elegantissima' (syn. *V. major* 'Variegata') is one of the best. The dark green leaves are splashed with creamy-yellow, and the large flowers are lavender blue. Vincas will grow anywhere and in any soil.

As beautiful as the mosses, and a visual link between them and the ferns, are the selaginellas. They spread rapidly in moist shady situations, but are never a nuisance as they can be removed

easily. Many of the smaller ferns provide beautiful ground cover, and they too will spread rapidly if the conditions are right for camellias. If maidenhair ferns are not growing naturally they should be introduced, because the delicate light green fronds provide a perfect contrast with the dark leathery leaves of the camellias. Here I would like to emphasize that all the ferns, large and small, are appropriate companions for camellias, because like the mosses they are always found with them in their natural environment.

Cyclamen hederifolium, better known as *C. neapolitanum*, is a very pretty plant for difficult situation. It is useful in the heavy shade right under the trees where other ground covers would fail, and will thrive in the dry soil between their surface roots. It will also grow under pines and in any soil. Related to cyclamen are the primulas. *Primula japonica* is a natural Japanese associate of camellias, and spreads thickly by seeding. *Saxifraga stolonifera*, (syn. *S. sarmentosa*) also from Japan, is a carpeter with leaves variegated white and pink.

Wild strawberries spread rapidly and provide delicious fruit, and alpine strawberries can be used also. *Lysimachia nummularia* covers bare soil quickly and has yellow flowers. *Chlorophytum comosum* 'Variegatum' is a beautiful and rapid ground cover which tolerates a little frost. *Ajuga reptans* in various colour forms covers the ground quickly if there is enough moisture. *Hypericum calycinum*, with large golden yellow flowers, and various tradescantias provide quick cover, but the latter may be difficult to control. A full list would be too long, but suitable ground covers are available in every locality.

Rhododendrons, which are descended from camellias, are the plants most frequently grown with them. They are a good choice because they flower after the camellias have finished blooming. Of the thousands available only a few can be mentioned. Among the species within the Azalea series the best would be the parents of the Kurume azaleas, *Rhododendron kiusianum*, *R. obtusum* and *R. kaempferi*. For a really showy effect one can use the Kurume azaleas. These evergreen plants are compact, so can be planted in front of camellias. A low-growing species which can be used in front is the creeping, scarlet-flowered *R. nakaharai*, and if a taller evergreen is required with brilliant scarlet flowers, *R. scabrum* grows up to 6 feet (2 metres).

For a really intriguing contrast with camellias, and indeed with all other rhododendrons, choose *R. linearifolium*. This is cultivated in Japan for its delicate beauty but it is not known in the wild.

In my English garden the large-leaved rhododendrons contrasted well with camellias. Mostly the flowers are soft pinks or creamy yellows, and the backs of the leaves are often silver, or covered with velvety indumentum in many shades of colour ranging from pale fawn to brilliant cinnamon. *R. sinogrande* has pale yellow flowers and enormous leaves up to 3 feet (1 metre) long, and 12 inches (30 centimetres) broad, and the plant grows to 30 feet (10 metres) high.

Another genus of which the most species, and certainly the best ones, come from the Orient is the Magnolia. These are very ancient plants from which camellias are descended. They are easy to grow and free from fungus diseases. Magnolias are truly noble plants with magnificent fragrant flowers ranging from white to deep purple, and they lend distinction to any garden. They are natural companions for camellias, and as they like sunshine they can be used for providing shade which is not too dense, where camellias require this in summer. Beautiful deciduous species for this purpose include *Magnolia campbellii*, *M. dawsoniana*, *M. denudata* (syn. *M. conspicua*), *M. kobus*, *M. mollicomata*, *M. obovata*, *M. salicifolia*, *M. sprengeri*, and hybrids such as *M. 'Veitchii'* and *M. 'Iolanthe'*. The lovely but rather bushy hybrids in the *Soulangeana* group are not suitable for providing overhead shade, but the best varieties are well worth some space in any camellia garden.

As a final guiding principle for those who wish to obtain the most aesthetic effect from camellias, we must return to Nature. The camellia is a plant of the forest, and in gardens all plants of the forest will contribute to the creation of a natural environment which will improve the health of our camellias and enhance their beauty.

IT WAS RETICULATA, NOT CUSPIDATA!

On page 75 of *I.C.S. Journal* No. 11 of October, 1979, we reproduced a list of fifteen cultivar names which had come from the Institutum Botanicum Yunnanensis at Kunming. This list was doubly interesting because it showed the names in Chinese characters as well as English. It is well worth close perusal.

Unfortunately the varieties were shown as being of the species *C. cuspidata*. Dr Zang Mu of the Institutum has written requesting that this be changed to *C. reticulata*. We thank Dr Zang Mu for drawing attention to the error.

Camellia waldenae (S. Y. Hu)

T. J. SAVIGE

Wirlinga, N.S.W., Australia

This is a new series of camellia found in the Hong Kong New Territories at Tai Mo Shan.

It was published and illustrated in *Wild Flowers of Hong Kong* 1977 P. 61, Plate 79. The species was described by Dr Shiu Ying Hu from Chung Chi College, the Chinese University of Hong Kong. She is a world famous taxonomist from the Arnold Arboretum of the Harvard University, where she was the specialist on the flora of China.

The species commemorates Mrs Beryl M. Walden, a fine artist who painted 255 flowering plants for the publication *Wild Flowers of Hong Kong*.

Walden's Camellia forms an evergreen tree up to 6 metres high, young stems light brown; leaves elliptic-oblongate up to 10 cm long by 4 cm wide; apex acuminate-caudate, flowers shortly

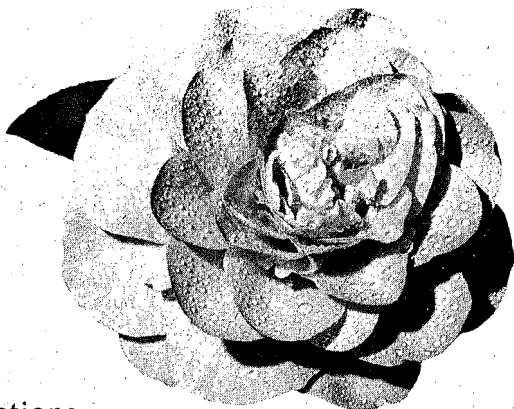
pedicellate, solitary and paired in the leaf axils, white with a light pink flush on the outside of the petals 5 cm in diameter with numerous cream coloured stamens and yellow anthers; pedicels 4-5 mm long; bracteoles pointed, caducous; calix 12 mm dia., glabrous; 4-5 sepals, rounded and ciliate; androecium 8-12 mm long, glabrous; gynoecium 12-14 mm long, white pilose; style glabrous.

The material seen in the Herbarium at Hong Kong came from a 5 metre high tree located on Loc Tai Mu Shan at about 1800 feet. Plants usually grow along rocky stream beds and they flower in mid-winter.

The fact that a new species of camellia has been found in one of the most densely populated areas on earth leads one to wonder what new plant material still remains to be discovered in the relatively unexplored (from the botanist's viewpoint) forested mountains of Yunnan and Sichuan.

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IT'S SPAIN — CHANNEL ISLANDS FOR MARCH 1981

• *C'est L'espagne et Aussi les iles Anglo-Normandes en Mars 1981*

• *E Spagna/Channel Islands, per Marzo 1981*
 • *Es Espana y las Islas del Canal en Marzo 1981*

Camellians will come together in Europe for the first time since the memorable I.C.S. Congress at Nantes in France in May 1977 in an international gathering which will see activities, first in Spain and then in the Channel Islands. This will be in March next year.

I.C.S. Mid-Year Newsletter of May 1980 confirmed to members that planning had proceeded satisfactorily for these activities. Since then the organisational work has proceeded and an exciting experience is in store for all who participate.

The actual Congress will be on the isle of Jersey, home of Mrs Violet Lort-Phillips the I.C.S. Director for Other Regions, who is directing preparations with her own inimitable enthusiasm. She is supported by a committee of I.C.S. stalwarts from France, the United Kingdom and the Channel Islands.

The events in Spain will centre around a meeting of the Society's Directors at Santiago de Compostella on March 22. With an International Camellia Show at Vigo from Saturday March 21 to Tuesday March 24 and special tours around Santiago de Compostella a fascinating time in Spain is assured. Many members have already arranged to spend several days in Spain. Accommodation and travel should be arranged with members' own travel agents.

Continuing on from Spain en route to the Channel Islands, some groups have already decided to take the opportunity to travel through France, taking in Nantes, scene of the 1977 International Congress. All of this offers the opportunity for a really memorable journey.

Participation in the Congress is offered to members in two separate parts, the basic Congress in Jersey (Part A) and a special Guernsey programme (Part B). Mrs Lort-Phillips in her keenness to give members an informative preview has contributed an article "Notes on Camellias in the Channel Islands" which we are very grateful to present below. Her enthusiastic co-worker, Mrs Barbara De Veulle has also followed up her article in last year's *I.C.S. Journal* No. 11 (pp 69-71) "Old Varieties of Camellias in Jersey" with further observations. All of this should whet the interest in a "Camellia Happening" which is sure to be a fascinating experience.

Details of the Congress programme are:

PART A — BASIC CONGRESS PROGRAM

Tues. 31 March: Members to register upon arrival Hotel de France, Jersey.
 Wed. & Thur.) Lecture sessions each morning; Garden tours each afternoon; Dinner at
 Apr. 1 & 2) hotel each evening.
 Fri. Apr. 3 : Special tours. Farewell Banquet in evening.
 Sat. morn. Apr. 4: Conclusion of basic congress program.

Cost per person: 4 nights accommodation and dinners; all island transport and tours £110.00 stg.

Congress Fee per person: £ 20.00 stg.

PART B — EXTRA — SPECIAL GUERNSEY PROGRAM

for members who are able to stay in the Channel Is. a little longer.

Sat. Apr. 4, 1 p.m.: Leave Jersey by boat for Guernsey. Dinner at hotels.
 Sun. Apr. 5 : Island tours. Dinner at hotels.
 Mon. Apr. 6 : Day tour to Island of Sark. Dinner at Guernsey hotels.
 Tues. Apr. 7 : Part B program concludes after breakfast, but individual arrangements can be made to stay longer, if desired.

Cost per person: Boat Jersey to Guernsey; all travel on Guernsey; visit to Sark; 3 nights accom. & all meals £95.00 stg.

HOW TO BOOK: Unless your Regional Director/s is organising group travel,

1. Airmail your bookings and remittance as soon as possible to CON-SOL TRAVEL, 68 Bath Street, St Helier, Jersey, Channel Is. (Telex 41685)
2. Airmail bank-draft made out to CON-SOL TRAVEL... covering Congress Fee £20 and deposit of £30 (or full cost) clearly stating whether you wish to book for PART A ONLY — OR PART A PLUS PART B.

Your bank draft must reach CON-SOL TRAVEL no later than 31/12/80.

3. Airmail bank draft for any balance of your PART A or PART A PLUS PART B program to reach CON-SOL TRAVEL no later than 15/2/81.

Continued on page 65

NOTES ON CAMELLIAS IN THE CHANNEL ISLANDS

Mrs VIOLET LORT PHILLIPS,

Jersey. C.I.

GUERNSEY is a must for Camellia lovers and will be visited by I.C.S. members next year, with one day in Sark.

In 1887 the Caledonia Nurseries imported from Van Houte's of Belgium a consignment of *Camellia japonica* from Japan, that included C. Lady Clare, C. Empress 'Akashi Gata', C. 'Tricolor' which had many sports. One of these, 'Lady de Saumarez', was named after the wife of the Fourth Baron de Saumarez who served in a Diplomatic post in Japan in 1869. There were at one time over thirty old Camellias at Saumarez Park, which is now an Old People's Home. The Caledonia Nurseries, too, have some very fine old trees and one of the first Reticulata 'Captain Rawes'. The Guernsey members of the I.C.S. have not neglected the new varieties, which are propagated extensively: though the 1970 planting of "new" camellias by the Jersey Wildlife Preservation Trust owes a debt to Charles Puddle VMH, who sent a consignment from Bodnant, and to other generous benefactors from Cornwall and elsewhere. This illustrates the ancient rivalry which still exists between the islands. Many Jersey people who will have travelled the world will not think of setting foot on Guernsey; "what have they got that we have not got better?"

SARK, the smallest island to be visited, is unique. It was colonised from Jersey by order of Queen Elizabeth I in 1565 to prevent its being used as a pirates' lair. The Seigneur of St Ouen, Jersey, Mallet de Carteret, settled forty families from the west coast of Jersey on Sark. The patois, local dialect, of Sark is similar to the St Ouenaise patois, both springing from the same root of Norman French. There are old camellias in the garden of the Seigneurie, the home of the present Seigneur of Sark, Mr Beaumont. On my first visit to the late Dame of Sark, over twenty years ago, I was met by a horse carriage whose driver sported in his button-hole camellia 'Lady Hume's Blush'. I have written before of the magic of Sark; no cars, no aeroplanes, the lark singing; wild flowers in the hedgerows.

Returning to our island of JERSEY, to which I proclaim my allegiance, American, Australian and New Zealand cultivars are represented in our gardens. We hope that the visit of the I.C.S. next year will stimulate our local authorities to use



La Collene, the home of Mrs Lort Phillips

Camellias for landscaping and street planting in the new Village Developments. The cause of our Society would prosper if the secret of how to extract the precious oil from the seeds and nuts of camellias could be explained. We hear that the oil makes a wonderful dressing for hair, enabling grey locks to glisten and regain their colour. I remember too learning that the ash of camellia wood imparts a special glaze to pottery.

There are so many facets to our loved camellias; beauty, use and toughness — half my hedge and fence of C. japonica was blown out in our last mini-hurricane. It is now replanted and looks like surviving. We look forward to welcoming members and fellow enthusiasts to this small corner of the globe in 1981.

Les Camellia dans les Îles Anglo-Normand

Une visite a Guernsey est essentiel pour les passionnés des camellias. L'île sera visité l'année prochaine par les membres de la I.C.S. aussi l'île de Sark pour la journée.

En 1887 les Caledonia Nurseries importa de van Houte's de Belgique un lot de *camellia japonica* du japon entre autres C. 'Lady Clere', C. 'Empress Akashigata', C. 'Tricolor' avaient beaucoup de 'sports' une de celle-là, 'Lady de Saumerez', nommée pour l'épouse du 4 eme Baron de Saumerez, diplomate en poste au Japon en 1869, à un moment donné il y avait plus de 30 anciens camellias a Saumerez Park, de nos jours une maison de repos pour le 3 eme âge.

Les Caledonia Nurseries aussi ont des arbres anciens magnifiques, et aussi un des premiers reticulata Captain Rawes. Les membres I.C.S. Guernsey n'ont pas négligé les nouvelles variétés qui sont largement propagés: quoique la plantation des nouveaux camellias en 1970 par le Jersey Wildlife Preservation Trust est endettée a Charles Puddle VMH qui a envoyé un lot de Bodnant Pays de Galle, ainsi qu'à d'autres donateurs de la

Continued from page 64

I.C.S. President Tom Savige has arrangements in hand for speakers for the two lecture sessions. He has had favourable responses from well known speakers from most of the Society's Regions and an interesting, well balanced, agenda is assured.

Cornouailles et d'ailleurs. Ceci montre l'ancienne rivalité entre les îles. Maintes Jerseyaises qui ont visité le monde entier n'auraient jamais l'idée de mettre pied sur Guernsey — "qu'ont ils chez eux que nous n'avons pas meilleur chez nous"?

L'île de Sark, la plus petite que nous visiterons, est unique. Colonise de Jersey sur l'ordre de la Reine Elizabeth 1^{er} en 1565 pour qu'il ne devienne pas un lieu de corsaires. Le Seigneur de St. Ouen Jersey, Malet de Carteret y installa 40 familles de la côte ouest de Jersey. Le Patois ressemble à celui de St. Ouen, les deux d'origine Français Normand. Il y des anciens camellias dans le jardin de la Seigneurie, la residence de l'actuel Seigneur de Sark Monsieur Beaumont. Au moment de ma première visite à la feu Dame de Sark il y à de cela plus de vingt ans je fus accueillie par une carrosse, le cochez avait à sa boutonniere la camellia 'Lady Hume's Blush'. J'ai déjà decrit la magie de Sark; aucune voiture ni avions, les alouettes qui chantent et partout les fleurs des champs.

Revenant à notre île de Jersey proclamant

ma dévotion, les cultivateurs Americains Australies et nouvelle Zeelandais sont représentés dans nos jardins. Nous espérons que la visite de la I.C.S. l'année prochaine incitera nos autorités locales à plantez de camellias dans les platebandes des rues et developpements urbaines. L'image de notre société aggrandirait si nous pouvons expliquer le secret d'extraire l'huile précieuse des graines et des noix de camellias. On nous dit que l'huile est un tonique merveilleux pour les cheveux, les cheveux gris retrouveront leur couleur et la qualite de la jeunesse. Je me souviens aussi entendre dire que les cendres du bois camellia donnent une finition très speciale à la faience et la poterie.

Il y a tellement d'aspects à nos camellias adorés, beauté, utilité et résistance — la moite de mes *camellia japonica* on été détruit au moment de notre mini-ouragan mais replanté ils survivront.

Surtout la camaradie des membres anciens et nouveaux. Nous nous réjouissons de souhaiter le bienvenu au co-membres enthusiastes dans notre petit coin du globe en 1981.

OLD VARIETIES OF CAMELLIAS IN JERSEY, C.I.

Mrs BARBARA DE VEULLE

Jersey, C.I.

I return to my original subject of the old varieties and would refer once more to Sir John Le Couteur's diaries, and to his '*Garden Book*' which spans the years from 1819 to 1868. Both are fascinating when read in conjunction with the living plants he mentioned as growing at his home, lying at the head of a valley in the south-west of the Island.

In my previous article I spoke of his "recipes" for the cultivation of camellias. Today they seem rather primitive, compared with modern techniques but he appears to have had amazing successes. In 1854 he describes that he used a deal box for his cuttings, filled with 2" of small broken stone, 1" of broken charcoal on top of this, and 4" of garden soil containing one part of sand. I may mention, according to his diary, that his "garden soil" was a mixture of natural Jersey earth, rich in humus and organic manure, (his methods of obtaining the latter... also described!!). Into this box he put "Two eyes of last year's growth, 3-5 inches long, and placed the box over water in a gentle hot-bed for two weeks. Transplant one year later, and after five years the cuttings should be six inches high". A

second method he described consisted of boring six holes, four inches from the bottom of a box that was filled with rough drainage up to four inches and topped with turf turned upside down, and finished with sifted soil. The bottom of the box was filled daily with boiling water via the holes, and there was no top watering.

During the last two years (1979, 1980) I have made a study of the older individual trees in the Island, visiting them at various stages of their flowering, noting their location, time of flowering, type of flower, and treatment by their owners. It is a little piece of historical botany, not so far recorded in Jersey, and I would very much like to have these notes published. Amongst the "treatment" of the various trees, I particularly noted an old tree in the east of the Island, which grew to a height of 20-30 feet, reaching up to the second floor windows, and obscuring those on the ground floor. It has been trimmed severely into a Christmas-tree shape, and the leaves clipped back, resulting in masses of rose-pink flowers being tightly packed to the top of the tree — very effective, if artificial.

The natural shape of most of the large trees locally, seems to be a single trunk with foliage mushrooming out above, though sometimes the older trees are very divided at the base, with

several branches from the one main tree, making them extremely difficult to measure accurately to assess their age. An interesting feature seems to be, that if only two trees are planted, one is a white variety, and one a red, which are the colours of Jersey's flag.

An example of this is to be found in an old cemetery beside a memorial Chapel. La Societe Jersiaise, our local history society, celebrated its centenary in 1973, and one of the ceremonies was the planting of a red and a white camellia in the grounds, the red one by Dr Taylor, the Director of the Society of Antiquaries of England, and the white by Professor Musset, of Caen University in France, a happy way of marking the Island's centuries old ties with both countries.

Sources:

Le Couteur Mss., Societe Jersiaise Library.

Les Vieilles variétés de Camellias à Jersey

Encore quelques observations au sujet des vieux camellias à Jersey, en avance de la visite des membres de I.C.S. à notre Ile en mars/avril 1981, afin que nos hôtes puissent mieux apprécier ce que nous espérons ils pourront voir pendant leur séjour.

Je reviens encore à mon sujet original (*I.C.S. Journal* 1979) en expliquant quelques extraits du journal et du '*Garden Book*' de Messire John Le Couteur pour la période 1819-1868. J'ai trouvé ces sources originales vraiment fascinantes vu que son propre jardin existe toujours, quoique bien changé. On y voit encore les mêmes arbres qu'il a soigné, abrités à la courbe d'une vallée au sud-ouest de l'île.

J'ai déjà fait allusion au sujet des moyens qu'il a employé pour faire ses boutures, par contrast avec les méthodes modernes, ils paraissent un peu primitifs, mais il obtint un grand succès. En 1851 pour nourrir ses boutures, il mettait dans une boîte en bois 5cms de petites pierrailles, 2,5 cms de charbon de bois, 10 cms de terre de son jardin mélangé avec du sable. La terre de son jardin fut un mélange du riche humus naturel de Jersey, fortifié avec de l'engrais organique. Son journal continue:— 'prenez deux jeunes boutons de l'an dernier de 8 à 12 cms de longueur et placez la boîte sur une couche de fumier pour deux semaines. Les petites plantes peuvent être transplantées un an plus tard, et puis en cinq ans les arbustes auront atteint une hauteur de 15 cms.' Pour sa deuxième méthode, employant toujours une boîte, il perceait six trous dans les côtés de la

boîte à 10 cms du fond; il emplissait la boîte avec des pierrailles jusqu'en haut des trous, mettait de la turbe renversée la-dessus, et finalement de la bonne terre passée au crible. Chaque jour le fond de la boîte, par moyen des trous, receva de l'eau bouillante. On n'arrose pas le dessus.

Pendant les deux années 1979-1980, j'ai étudié les arbres individuels de l'île. Je les ai visités au moment de leur floraison, faisant note de leur locations, les types de fleurs, et le traitement qu'ils ont souffert parfois, au mains des propriétaires. J'espère que ma liste sera publiée étant une contribution à l'histoire du camellia à Jersey, que dès maintenant a été ignorée. Au moment actuel j'ai visité plus de 77 locations différentes, c'est un travail difficile, mais fort intéressant.

J'ai noté, parmi d'autres, le traitement d'un vieil arbre dans l'est de l'île, âgé de cent ans ou plus, et qui atteignit une hauteur de 7 à 9 metres jusqu'au deuxième étage de la maison. On l'a taillé sévèrement en forme d'un arbre de Noël, et presque toutes les feuilles sont coupées. Malgré cela, la floraison est si épaisse que l'arbre est une masse de fleurs roses... très effectif et assez bizarre.

La forme naturelle de la plupart des vieux arbres consiste d'un seul tronc, couronné de feuilles, le tout en forme d'un enorme champignon; enfin souvent les branches sont très divisées, surtout au niveau de la terre et de ce fait il est très difficile de les mesurer pour obtenir une indication de l'âge.

Dans les lieux où on a planté seulement deux arbres on trouve que souvent il s'agit de deux couleurs, rouge et blanc les couleurs du drapeau de Jersey. Un exemple se trouve dans un vieux cimetière à côté d'une petite chapelle mémoriale.

La Société Jersiaise s'intéressant à l'histoire locale, en célébrant son centenaire en 1973, a choisi pour une des cérémonies à cette occasion, de planter deux camellias dans le jardin du Musée. Le rouge a été planté par M. le Docteur Taylor, Directeur de la Société d'Antiquaires d'Angleterre, et le blanc par Monsieur le Professeur Musset de l'Université de Caen, en France; un geste heureux indiquant les liens amicaux qui pour des siècles ont existé entre notre Ile et ces deux pays.

NUMBERS 6 & 7? FRAGRANCE CLASSES

Perhaps it was two Australian camellia shows which became the sixth and seventh to stage classes for fragrance. At St Alban's (Epping, NSW) Show in July 1980 the winner of the new class was 'Fragrant Pink' with *C. lutchuensis* second. A class was also scheduled for the National Show at Albury NSW (Hume Branch A.C.R.S.) on September 6, 1980. Good luck to Ken Hallstone in further spreading the gospel.

A.C.S. MEMBERS IN JAPAN

ESTHER G. PARKER

Sherborn, Mass., U.S.A.

The first day of Spring is a national holiday in Japan, and it was an auspicious one for members of the American Camellia Society with whom I travelled to the 1980 International Camellia Congress in Kyoto. It was to be our first full day in Japan and our first opportunity to meet with Japanese people and to sightsee in Tokyo.

A bus ride and a trip to the top of the Tokyo Tower helped us to get our bearings that first morning, as did a walk in the grounds surrounding the Imperial Palace and another through the very crowded Nakamise arcade en route to the Asakusa Kannon Temple. Following all this a lunch at the Chinzanso restaurant introduced us to the pleasures of a barbecued meal.

A camellia show was taking place in one of Tokyo's largest and most beautiful department stores and many of us spent the afternoon there. Members of the Japanese Camellia Society welcomed us, and we all sat down together in a private room and were served tea and strawberry shortcake while welcoming speeches were made, in English, and we Americans could admire the charming Japanese ladies in their lovely kimonos.

We returned to our hotel by taxi, and it is worth mentioning that it is wise if not essential for those who do not speak Japanese, when planning to take a taxi, to have someone write the name of the destination on a card (in Japanese, of course) to give to the driver. "Taxi drivers in Tokyo are very stupid," said our guide.

The "Hatoya", a Japanese inn or Ryokan at Itoh Spa was to be our home for the next two nights, and the drive from Tokyo was most interesting. I noticed plastic shelters everywhere protecting newly planted vegetables from frost and admired the way Japanese people make use of every spare inch of land.

On the way to Itoh Spa we stopped at Kamakura to visit the "Great Image of Buddha in the Open Air", a huge bronze statue of Buddha with an extraordinarily appealing face. I found it quite moving.

I had looked forward to staying at a Japanese inn and it proved to be a delightful experience. In each guest's room a little maid in kimono greeted us as we were shown in, and she made sure we took our shoes off at the correct spot, not out in the hall as I did (I was made to feel quite ashamed of that faux pas) or too far inside the room either, but in a tiny triangle, marked off for that purpose, just inside the door.

With charming smiles but great firmness of purpose she seated us on the floor by a low table on which she served us tea and small bean curd cakes.

Guests at the Ryokan were there to either drink the beneficial waters of Itoh Spa or to bathe in them or both, and it was necessary to wear a simple kimono supplied by the management all the time, even in the dining room for meals.

When the 29 members of the American Camellia Society assembled for dinner that first evening, all in kimonos they were most unaccustomed to wearing, we could best be described as "a motley crew". What to put on underneath the kimonos had been the burning question as we dressed; it seemed impossible to keep them closed for any time at all. Turtle-necked sweaters, long winter underwear, assorted scarves and belts kept peeping out here and there throughout the evening to the wearer's embarrassment and everyone else's amusement.

We were served our first Japanese meal at Itoh Spa, all of us seated on the floor, individual tables in front of us, in a horseshoe pattern, the maids serving us from the centre. Regrettably, almost all of our meals in Japan were so-called American style meals; therefore it was impossible to decide whether we liked Japanese food or not.

The bullet trains of Japan are deservedly famous. On Sunday morning we boarded #221 and **sped** to Kyoto. Passengers must be absolutely ready to board the train the instant it stops; directions are painted on each platform as to where to stand in line for which car. Although many of the bullet trains travel at over 100 miles an hour, one does not have a sensation of break-neck speed as I had expected, due probably to the excellent condition of the roadbed and of the trains themselves.

As we had already learned to expect in Japan, the Congress in Kyoto was very well organized. Free buses took us to the K.I.C.H. (Kyoto International Conference Hall) on Monday, Tuesday and Wednesday mornings of the Congress; the speakers were excellent, and earphones and interpreters translated instantaneously when needed. We had lunch at the K.I.C.H. each day in a handsome dining room overlooking a splendid garden, and in the afternoons buses took us on various study tours in the vicinity of Kyoto. As we came and went from the K.I.C.H. we enjoyed an unusually fine display of camellia bonsai which had been arranged in the entrance hall.

All this studying kept us so busy there seemed no time to make friends with camellia enthusiasts from other countries. A buffet party one evening



Display of Camellia Bonsai

remedied this situation somewhat (I shall never forget how beautifully all the tables were arranged), and on the final evening of the Congress all nations dined together again.

A long day of sightseeing had been planned for the American Camellia Society for the day following the ending of the Congress, beginning with another speedy trip on a bullet train to Okayama to visit a celebrated garden park and thence to Kurashiki City by bus. This little city should be included in every tour of Japan. Shops and dwellings are situated on each side of a little river, there are charming back streets too, where buildings which used to be granaries have been converted into interesting folk art museums. The O'Hara Art Gallery, which houses a good collection of paintings, was also within easy walking distance.

We continued our journey southward, revelling in the warmer weather and enjoying rural scenery and views we had not encountered before. An overnight boat trip brought us to

Beppu Spa and a visit to the outstanding Marine Palace Aquarium.

The Yamanami Highway from Beppu to Kumamoto (Mountain Wave Highway) winds through dramatic mountain scenery and past Mt Aso, an active volcano. We drove through this National Park in sparkling clear weather so we were able to see it at its best.

Monday, 31st March, was our last full day in Japan and an especially interesting one for the dirt gardeners among us. In the morning we walked over to Kumamoto Castle with its lovely gardens and saw the interesting Higo camellia planting, and in the afternoon we visited two nurseries which specialized in Higo camellias. The owners of the nurseries generously gave us scions of the ones we admired and served us tea, cold drinks, tangerine oranges and little cakes, most welcome refreshments.

A new method of grafting was demonstrated, and each visitor was given a bag of sprouted camellia seeds to take home and tiny pots in which to plant bonsai.

In spite of the language barrier, when it came to discussing camellia culture with these accomplished plantmen, our enthusiasm and theirs took over and we hardly noticed the heavy rain which made dodging from greenhouse to greenhouse a most dampening experience.

We were tired, and it was very late when we finally returned to Kumamoto, but some of us were still talking about Higo camellias and I felt our last day in Japan had been our best.

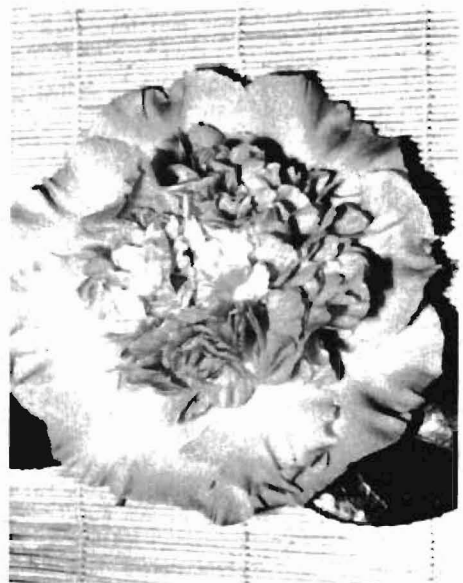
Some people
come all the way to Australia

just to visit

CAMELLIA GROVE

one of the world's great nurseries.

Mona Vale Road, St. Ives
N.S.W. 2075.



VALE EIKICHI SATOMI

- *Dece de M. Eikichi Satomi*
- *Morte di Eikichi Satomi*
- *Funerales del Senor Eikichi Satomi*

We regret to inform members of the death of a pioneer member of the Japan Camellia Society and of the International Camellia Society, Mr Eikichi Satomi. He died on May 26 this year at the age of 82.

In writing to tell us of Mr Satomi's death, Mr Yoshiaki Andoh said: "He was the first person who served as an intermediary between Japan and the rest of the world on camellia information. We have a high regard for his work in the period of enlightenment".

Mr Satomi wrote the first two camellia books published in Japan in modern times, "*Camellia Varieties of Japan*" in 1956 and "*Nomenclature List of Sasanquas of Japan*" in 1958.

No. 1 issue of the *International Camellia Journal* (December 1962) includes an article by Professor Waterhouse, detailing his visit to Japan earlier in that year. In that article the Professor tells of the kindnesses he and Mrs Waterhouse received from Mr Satomi and of his careful work in ensuring the success of the visit as they moved around Japan and amongst its camellias.

Mrs HELEN SIMON of Sydney, Australia, was another I.C.S. member who received great kindness from Mr Satomi. She writes in appreciation:

I am grieved at the news of the death of Mr Satomi — really sad, but at the same time glad to recall a happy interlude in 1958 with him and with camellias, in Japan, — now so long ago.

The late Professor Waterhouse and his wife, Janet, encouraged me to do the trip to Japan. Professor suggested that he should write to the Japan Camellia Society. To absorb the atmosphere of the East he took me to the Chinese tea house in his garden to prepare this letter. Eikichi Satomi was then the Executive Secretary and his courteous reply said "... I intend to have meeting with some members of Japanese Camellia Society to welcome you and enjoy Japanese Camellia Flower Arrangement and slides of your country and our country".

Shipping delays caused my late arrival but dilemma was overcome with a taxi to Satomi's address on the outskirts of Tokyo. As he was not at home, I left a message near a garden sign: "The Largest Camellia Garden in the World". This was no doubt true at the time as Eikichi Satomi was one of the camellia pioneers in Japan,

having listed many names and written several books on the subject.

Holiday time was near and Japanese Camellia Society members were in recess, so alternative arrangements were made by Satomi; I was to be a guest of the Adachi family.

A storm raged, the peak hour traffic and the crowds were incredible, but an apparently calm, patient and good-humoured Mr Satomi escorted me from Marunouchi safely through various forms of transport to the Adachi home behind a high wall in a narrow, winding, peaceful lane without even a bicycle to be seen!

The friendly smile of Mr Choka Adachi from a wide front porch was most welcome. Satomi and I exchanged our water-sodden shoes for snug scuffs of velvet and followed Choka in his black and grey kimono, embroidered in silver thread, to his study via an unpainted timber spiral staircase.

Throughout the evening, Satomi was an ardent interpreter for Mr Adachi and myself. Sitting on cushions, an air of painting and poetry pervading the room, endless cups of green Japanese tea, warmth from red hot coals glowing through grey ash... this was the Japan I enjoyed.

A dinner that was different, on a black laquer tray with a crisp white camellia, freshly picked in the rain, was set down by daughter, Toko, who floated in and out with an easy grace.

Colour slides of Australian camellias and camellia people were admired. I was also fortunate to view many of the Japanese camellia slides and handle the precious 300-year-old scroll, later to be incorporated in Adachi's famous book.

After supper, laden with gifts, Satomi and I bade farewell to the hospitable couple. The return trip was in rain but was much shorter in the comfort of a taxi all the way. On reflection I pondered just how much farther the gallant Satomi had to travel that night; I hoped it was not far, but I feared the worst when I looked on a map. I was aware of his enthusiasm in willingly and cheerfully planning my evening's entertainment and appreciated such earnest efforts. Although complete strangers, the bond of camellias gave us a certain regard for each other. I still treasure several Christmas cards he sent me over the ensuing years, all depicting camellias in the snow.

I wrote to Satomi early this year, without reply, and my endeavours to telephone him in March this year when in Tokyo en route to the I.C.S. Congress were unsuccessful. However I am sure of his real desire to help by his passing the letter on to Miss Toko Adachi who came to Kyoto and graciously left presents for me.

SOME NEW KUNMING RETICULATAS

T. J. SAVIGE,

Wirlinga, N.S.W., Australia

The Kunming Botanical Institute has a basic list of one hundred and five individual reticulata cultivars of local origin which they believe, comprises all cultivars they have been able to collect and identify and which includes not only those of ancient origin but others recently collected from the wild and named, as well as more recent garden hybrids. A recent list of cultivars was selected from collections from the wild, made in the Tunchun Province, West Yunnan. These are all either pink to scarlet and single or semidouble.

The fifteen newly named reticulata camellias are listed in the new Pinyin Transliteration followed by the earlier Wade-Giles spelling, if it is substantially different. The transliteration can be translated in many ways with the particular Chinese character being of very significant relevance. For example there are four basic ways in which to pronounce each syllable: even tone, rising tone, falling tone and falling and rising tone, each conveyed by variations in construction of the character.

It is obvious that everything has to be taken in context and that the Chinese character is important in indicating which meaning is intended.

In the list the number shown in brackets is the number of the relative cultivar in the Kunming list of one hundred and five varieties:

1. (4) 'Fenyu' — "Pink Jade".
A pink, trumpet shaped single. The name is directly translated.
2. (12) 'Luanyeyinhong' — "Ovate Leaf Spinel Pink".
A silvery pink cupped semidouble of about 11 cm in diameter. The name is directly translated. In most Chinese descriptions the characters for silver-red are translated as spinel pink.
3. (2) 'Erqiao' — "Beauties Twin".
The camellia is a single red softening to pink to the centre. The name refers to an ancient Chinese story regarding two beautiful young women named "Daqiao" and "Xiaoqiao". People called them "Erqiao". As the colour of the inner petals differs from the outer petals of this cultivar, so it was named "Erqiao" following the old Chinese story to describe one flower with two colours.
4. (31) 'Jinxinbaozhu' (In-Wade-Giles "Chingsinpaochu") — "Golden Heart Precious Pearl".
Also translated as "Golden Heart Jewellery".
A large semidouble red with fluted and undulating petals and a golden central stamen cluster.
5. (10) 'Jinxindahong' ("Chingsintahung" in Wade-Giles)
A scarlet cupped semidouble with golden central stamen cluster.
6. (13) 'Lianrui' — The translation of this is given as "Double Bowl". Apparently the stamens are joined to make a cup shaped form in the centre of a bowl shaped flower, hence "Double Bowl".
7. (9) 'Dajinsui' ("Tachingshuai" in Wade-Giles)
Translations for this have been given as "Large Sunshine" and "Early Sunshine". Analysis of the Chinese characters suggests that a truer translation would be "Large Golden Wheat Ears".
8. (5) 'Hongwancha' — "Red Bowl Camellia"
This is illustrated opposite p. 145, *The American Camellia Yearbook 1976*, where it is shown as a large red semidouble with wavy petals and rabbit ears.
9. (19) 'Yinhehua' — "Silver Lotus Flower"
This is a direct translation. A silvery pink semidouble of lotus form.
10. (20) 'Fenchaoyun' — "Rosy Clouds"
A rosy pink lotus shaped semidouble. This name is a close translation.
11. (16) 'Dayunpian' ("Tayunpien" in Wade-Giles) — "Large Cloudy Petal"
A semidouble lotus form.
12. (14) 'Lianpiantuozhu' ("Lienpientuochu" in Wade-Giles)
A translation given is "Lotus Pearl".
The petals of this variety are like those of a lotus in full bloom, while the stamens are like golden pearls held in the centre of the petals. It was named "lianpian", petals of the lotus; "tuo", holding; "zhu", pearls.

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AN INDEX OF ALL I.C.S. JOURNALS

- *Index pour toutes les revues de la Societe*
- *Indice di Tutte le Pubblicazioni ICS*

In I.C.S. Journal No. 11 of October 1979 on page 62 we announced the completion and availability of an index covering all the contents of each Journal from No. 1 of October 1962. Journal No. 11 is included and it is intended each year to produce "up-dating" slips to enable the addition of the contents of future Journals.

This Index will be of inestimable value as a concise and ready point of reference for members, not only those who write or speak on camellias but also for those who enjoy browsing

through an informative and heavily cross-indexed adjunct to their Journals. Some of the many carefully prepared sections are almost small text books in their own right.

Good demand has already been experienced but supplies are still available. Basic cost is \$A3. Request your copy now from your Membership Representative who will advise you the additional amount required to cover postage. As an alternative you may order your copy direct from the editor at a cost of \$A4 including postage to all Regions. The editor's address is: 42 Myola Road, Newport Beach, NSW 2106, Australia.

UP-DATING OF INDEX — ADDITIONS FROM JOURNAL No. 12, 1980

ENCLOSED WITH THIS JOURNAL NO. 12 ARE SHEETS OF "TEAR-OFF, PASTE-IN" ENTRIES FOR THE INDEX OF ALL I.C.S. JOURNALS. THESE ENTRIES WILL ENABLE THOSE MEMBERS WHO ALREADY HAVE THE INDEX TO KEEP IT FULLY UP-TO-DATE. FOR THOSE WHO HAVE NOT YET OBTAINED THEIR COPY OF THE INDEX, THE ENTRIES SHOULD SERVE TO DEMONSTRATE THE SCOPE AND VALUE OF THIS DOCUMENT. COPIES ARE STILL AVAILABLE.

OUR MULTI-LINGUAL TITLES

I.C.S. JOURNAL continues to hope that the inclusion of the titles to its articles in French, Italian and Spanish is a worthwhile facility for those members who are only facile in those languages. It should be of assistance to them in deciding which of the articles they should have translated into their own languages. Our regret is that practical considerations preclude the inclusion of titles in Japanese characters.

We are fortunate in having supporters who cheerfully lend their linguistic skills in the provision of the additional titles. They are John Paton of Killara N.S.W. (French), Silvio Torrisi of Strathfield N.S.W. (Italian) and Augustin Ramirez of Melbourne Victoria (Spanish). There is a distinct "family" element in the interest of these three gentlemen. John's wife is "Freddie" Paton, the Society's Australian Membership Representative, Silvio is well known in Sydney Camellia circles as a gifted recorder of camellias in motion picture film, while Auggie is son-in-law of Tom Savige, the I.C.S. President. Our grateful thanks to all of them.

Continued from page 71

13. (17) 'Yumeiren'. The translation given is "crimson corn poppy". However the dictionary gives 'Yumeiren' just as "corn poppy". Perhaps originally poppies standing in the corn were likened to beautiful people. This is a crimson semidouble.
14. (18) 'Xiyinchun' — "Happy Spring"
Analysis of the Chinese characters suggests that perhaps "Joyous Spring" may be a more apt translation. A pink semidouble.
15. (25) 'Yudaihong' — "White Striped Crimson"
A deep pink semidouble with white stripes.

VISITING A HIGO TSUBAKI NURSERY IN KUMAMOTO—JAPAN

Mrs HELEN SIMON,
Wahroonga, N.S.W., Australia

Higo is the old name of the present Kumamoto Prefecture; it has been given to certain flowers including the *Camellia japonica*, a particular form of which grows prolifically in that area. Tsubaki is Japanese for camellia, the study and appreciation of which in Japan has flourished since the Edo era, (1615-1867).

The Higo Tsubaki is large, flat and single with 5 to 10 broad white, pink or red petals around a prominent circle of rich yellow pollen-tipped stamens sometimes showing one or many petaloids. The number of stamens ranges from 100 to 250; length, number, colour and size of stamens play a big part in identifying certain Higo Tsubaki.

For the Australian group of camellia lovers touring Japan in March 1980, a visit to a Higo Tsubaki Nursery came as a delightful surprise. This was made possible by the extremely thoughtful president of the Japanese Higo Society, Professor Futoshi Murayama, who had patiently awaited the late arrival of the coach at a Kumamoto hotel.

All day in the rain, the group had travelled along the Yamanami Highway from Beppu on the east coast of the island of Kyushu across the Senomoto Plateau to Kumamoto. The scenery was dramatic; snowy white and stormy black clouds swept across the sky, lush green fields were dominated by the volcano Mt Aso rising 1524 m (5000 ft) with five distinct peaks, one of which incessantly emits a stream of fumes and gas. Truly a land of fire!

Admiration was high for the grandeur of the Kumamoto Castle framed with delicate flowering

cherry trees and the 300-year-old Suizenji Park, surely one of the finest Japanese landscape gardens.

Plans were easily adjusted for the group to leave early next morning to visit the Higo Tsubaki Nursery of Mr Tsugio Ohta, just a short detour from the main road.

Anxiety was allayed when the day dawned bright and sunny. A brisk walk from the coach through open country revealed a lovely prunus in full flower and a wonderful collection of camellia plants sheltered by tall conifers. It was no time before we were examining shade houses where some of the blooms were familiar. A table of Higo Tsubaki, all clearly given varietal names looked attractive in small green bamboo containers. Cameras also clicked on the stock bushes in full flower in the open; 'Donation' and 'Flower Girl' made a colourful picture in pinks.

It is understood that the art of creating tsubaki bonsai is a technique characteristic of the horticulturists in Kumamoto-Ken and well-known throughout Japan. Indeed this was evident in the artistic display on three different levels of covered benches showing miniature camellia plants in thimble-sized containers up to those with 8 cm diameter trunks, in flower and appearing to be hundreds of years old. A bonsai enthusiast's dream!

An eager group intently watched the expert Mr Ohta give a meticulous, informative demonstration of grafting and early training of a tsubaki bonsai. He was anxious for everyone to accept a bag of essentials for success in this procedure including two exquisite containers; everyone, too, was full of good intentions!

We were fortunate in having Kami, our guide and master interpreter, who handled all the questions and answers with great fluency.

Sorting out the Ohta families would have required much more time but uncles, cousins,



Continued on page 74

Mr Ohta (right) with Professor Murayama

S.C.C.S. ADOPTS NEW POLICY FOR "CAMELLIA NOMENCLATURE"

The Southern California Camellia Society has been led by circumstances to the adoption of a new policy with regard to its universally recognised publication *Camellia Nomenclature*. It is important that I.C.S. members should be made aware of the changes and to this end we reproduce the policy statement:

The increasing size of *Camellia Nomenclature* has caused concern by the publishers for two reasons: the increasing cost of the publication which is reflected in the price, and the multiplicity of names through which one must search to find the name he wants. The cost factor is particularly aggravated by the increases in paper and labour costs.

The Nomenclature Committee of the Southern California Camellia Society, publisher of *Camellia Nomenclature*, has decided that the contributing factor to both problems is the large number of old varieties, mostly out of general distribution, that are listed in the book. The Board of Directors of the Society, following the recommendation of the Nomenclature Committee, has adopted the following plan for *Camellia Nomenclature*.

(1) The forthcoming edition will follow the pattern of the current 1978 edition; namely, it will include the listings of all varieties of all species that are now listed. The 1981 edition will be designated the "Historical Edition of *Camellia Nomenclature*".

(2) The following editions of *Camellia Nomenclature*, the first of which under present plans will be the 1984 edition, will include for the species japonica and sasanqua, only those names that were registered or introduced during 1950 and thereafter. Dates shown in the "Historical Edition of *Camellia Nomenclature*" or otherwise available will be used to determine the cut-off date for japonicas and sasanquas, except that such varieties registered or introduced prior to 1950 that are now in substantial commercial distribution in the English speaking world, or have sports that were introduced during 1950 and thereafter will be listed. In such cases involving sports, all related sports and synonyms will be listed for completeness.

(3) For species other than japonica and sasanqua and for hybrids, all varieties regardless of date of registration, will be listed.

The S.C.C.S. Board debated whether to make available, hard-cover copies of the 1981 "Historical Edition". This ambitious project was turned down due to the uncertainties entailed and the lack of financial and secretarial resources. Recipients of the 1981 edition will be obliged to have their own copies bound if they so desire.

The cost of the 1981 edition will be \$6.00 for single copies with bulk price of \$4.50 — plus postage.

Continued from page 73

sons, nephews and brothers were all very helpful to us. Attentive ladies had prepared appetising refreshments, tasty snippets of dried fish, cookies sprinkled with fine flakes of seaweed, delectable savouries and cakes, Japanese beer and sake, delicate green tea, pungent coffee — all were irresistible and greatly appreciated.

It is indeed fortunate that the Higo Tsubaki have survived devastation by war and gone on to gain popularity throughout the world as desirable garden plants.

Great concern for a future without destruction of all life on earth is apparent throughout Japan. Seeing the bright Ohta children revel in a mound of rich potting soil was certain evidence of an assured future for the Higo Tsubaki.



Grandchildren of the Ohta family revel in the potting soil

Editor's note: *I.C.S. Journal* looks forward to including in its 1981 issue a technical article by Mr Ohta on the latest developments in his mini-bonsai work.

**BY-LAWS OF THE
INTERNATIONAL CAMELLIA SOCIETY
as at August 1, 1980**

**and incorporating amendments by the Directors since November, 1974 in accordance with Clause 7 of
The Constitution of The International Camellia Society**

ARTICLE I — MEMBERS, MEMBERSHIP AND FEES:

- A. There shall be the following classes of members of the Society:
1. **REGULAR MEMBERS.** Persons who are interested in the purposes of the Society and who make an annual contribution to the Society, such contribution to be determined by the Directors from time to time.
 2. **LIFE MEMBERS.** Persons who desire to contribute a sum equal to at least twenty times the current annual subscription, in lieu of any annual contributions.
 3. **HONORARY MEMBERS.** The Board of Directors, in its sole discretion, may bestow this title on any person who has furthered the purposes of this Society in some outstanding manner. Such Honorary Member shall be relieved of any requirement to make any monetary contribution to the Society.
- B. **RIGHTS OF MEMBERS.**
1. Each member of the Society shall be entitled to cast one vote for the election of Directors and other officials in the manner hereinafter prescribed.
 2. Each member shall be entitled to attend and participate in any annual or other meeting of the membership as may be called by the Directors.

ARTICLE II — DIRECTORS:

A. **NUMBER.**

1. Apart from the duly elected officers, who shall be ex-officio members of the Board, having the same powers, voting rights and responsibilities as other members of the Board, members residing in each specified region shall elect their own Director or Directors in accord with the following numbers:

UNITED KINGDOM	3	ITALY	1
AMERICA	3	FRANCE	1
AUSTRALIA	2	NEW ZEALAND	1
JAPAN/TAIWAN	2	SPAIN/PORTUGAL	1
AFRICA	1	OTHER REGIONS	2
		(different regions)	

2. The number of the Board of Directors may be increased or decreased within the limits of the charter by majority vote of the Board of Directors.

B. **TERM.**

1. The term of office of a member of the Board shall be two years or thereafter until a successor has been elected.

2. If any member of the Board dies, resigns or for other reasons ceases to be a member, the vacancy shall be filled by the remaining members of the Board for the unexpired term.

C. POWER OF BOARD.

1. The Board of Directors shall regulate and supervise the management and operation of the Society. It shall attend to and manage all of the affairs of the Society, shall make such arrangements for carrying on the business of the Society as it deems best, and in addition to the powers by these By-Laws expressly conferred upon the Board, it may exercise all of the powers of the Corporate Society and do all such lawful acts and things as are not by statute or by the charter or by these By-Laws required to be exercised or done by the members.
 2. A majority vote of the Board of Directors shall constitute a decision of the Board.
 3. Because of the International aspect of the Society it is contemplated that practically all of the affairs of the Society shall be conducted by mail. Board of Directors meetings and decisions necessarily will have to be conducted by mail and the Board is hereby expressly authorised to promulgate such rules of procedure for presentation of policy and voting thereon as it deems expedient.
- D. Absence from a Meeting of Directors-in-person: When a meeting of the Board of Directors is called, a Director who cannot attend may nominate a proxy from his Country or Region to act in his stead. The Secretary must be advised in writing by the Director concerned prior to the commencement of the meeting. Acceptance shall be on the vote of those Directors present, with immediate effect.

ARTICLE III — PLACES OF BUSINESS, MEETINGS OF MEMBERS:

- A. The Society may have as many places of business and in such locations as its Board of Directors deem required.
- B. It is not expected that it will be possible for members from every part of the world to gather at an Annual Meeting, but there may be periodical Regional Meetings of the Society, the time and place of such Regional Meetings to be fixed and notified to the President, the Secretary, and to all members resident in the region by the Regional Director or Directors.

ARTICLE IV — OFFICERS:

- A. The Officers of the Society shall be a Patron, a President, three Vice-Presidents, an Editor, a Secretary and a Treasurer. From time to time the Board may create such other offices as it may deem necessary.
- B. The President and Vice-Presidents of the Society shall be from members of the Society and shall be elected by the members every two years. Vacancies may be filled or new offices created and filled at any meeting of the Board. Each Officer shall hold office until his successor shall have been duly elected and shall have qualified. A President may not hold office for more than two successive periods of two years, except for having filled a vacancy in the office for a preceding period of less than two years.
- C. The Secretary, Treasurer, Editor and Officers other than the President and Vice-Presidents shall be appointed by the Board of Directors, and shall serve for such length of time as the Board of Directors determines.
- D. The duties of the Officers shall be such as usually attach to such offices, and in addition thereto, such further duties as may be designated or delegated to them from time to time by the Board. The Board of Directors shall be authorised to prescribe the amount of compensation for any Officer, or employee of the Society.

ARTICLE V — COMMITTEES:

The Board of Directors may delegate such of its powers as deemed required to Officers of the Society or to any committee it may see fit to create.

ARTICLE VI:

The Board shall promulgate such rules as may be deemed proper to permit this Society to affiliate with other Horticultural Societies, or other societies to affiliate with this Society.

ARTICLE VII — CONTRACTS, CHEQUES, DEPOSITS AND FUNDS:

A. CONTRACTS:

The Board of Directors may authorise any Officer or Officers, agent or agents of the Corporate Society, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporate Society and such authority may be general or confined to specific instances.

B. CHEQUES, DRAFTS, ETC.:

All cheques, drafts and other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporate Society, shall be signed by such Officer or Officers, agent or agents of the Corporate Society and in such manner as shall from time to time be determined by resolution of the Board of Directors.

C. DEPOSITS:

All funds of the Corporate Society shall be deposited to the credit of the Corporate Society in such banks, trust companies or other depositories as the Board of Directors may select.

D. GIFTS:

The Board of Directors may accept on behalf of the Corporate Society any contribution, gift, bequest or devise for the general purpose or for any special purpose of the Corporate Society.

ARTICLE VIII — BOOKS AND RECORDS:

The Corporate Society shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of its members and Board of Directors, and shall keep at the registered or principal office a record giving the names and addresses of the members. All books and records of the Corporate Society may be inspected by any member, or his agent, or attorney for any proper purpose at any reasonable time.

ARTICLE IX:

These By-Laws may be altered, amended or repealed and new By-Laws may be adopted by the members at an annual meeting or by a majority vote of the Board of Directors provided that at least thirty (30) days written notice is given to each member of the Board of the intention to alter, amend, or repeal or to adopt the new By-Laws at such meeting.

INTERNATIONAL CAMELLIA SOCIETY

FINANCIAL STATEMENTS

(Preliminary and Subject to Audit)

STATEMENT OF INCOME AND EXPENDITURE — YEAR ENDED 31st DECEMBER, 1979

INCOME		EXPENDITURE	
1978	1979	1978	1979
\$	\$	\$	\$
1979 Subscriptions (in Aust. currency)			
251	France (F. Francs 3380)	4048	** Publication production
74	Italy (Lira 93625)	569	** Publication despatch
1165	Asian Region (Yen 604535)	287	Publication Addressing
372	New Zealand (NZ\$560.00)	414	Postage, cables, freight & stationery
22	South Africa (Rand 45.20)	11	Sundries
1620	United Kingdom & Western Europe (£978.50)	1119	Representatives' expenses (including publication despatch)
1148	U.S.A. (US\$1403.80)	339	Membership/Receipt cards
1252	Australia		
5904			
112	Life Members' Subscriptions		Transfer to Life Members'
259	Advertising Income	100	Amortisation Reserve
356	Interest Received		
62	Sales of prior years' publications	6887	
205	Income from Sale of Ties		
—	Donations	20	Surplus for year
—	* Bounty from Australian Government re production of publication		
9	Reduction in funds held o/seas earned before current year		
6907		6907	

* Extraordinary item — non recurring

** Production & despatch costs subject
to massive escalation in 1980 year.

ASSETS AND LIABILITIES AS AT 31st DECEMBER, 1979

LIABILITIES			ASSETS		
1978		1979	1978		1979
<u>\$</u>		<u>\$</u>	<u>\$</u>		<u>\$</u>
3118	Accumulated funds as at 31st December, 1978	3137.77	3188	Credit balances at bank	6631.50
20	Add surplus for year	<u>2311.71</u>	180	Interest accrued but not yet received	303.62
3138		5449.48	50	Sundry debtors	152.61
394	Life Members Amortisation Re- serve (incl. interest)	1952.24	394	Life Members Amortisation Reserve Bank Acct (incl. interest)	409.38
142	Subscriptions paid in advance	66.12	256	Subscriptions received in arrears	1145.67
768	Sundry creditors/ Accrued Charges	1174.94	374	Funds held by Membership Representatives relating to 1978 income	—
115	E. G. Waterhouse Memorial Fund — credit at bank	119.55	115	E. G. Waterhouse Memorial Fund — credit at bank (incl. interest)	119.55
<u>4557</u>		<u>8762.33</u>	<u>4557</u>		<u>8762.33</u>

K. R. MEALEY, Treasurer

WHERE TO SEE CAMELLIA SHOWS IN 1981 — AND, IN U.S.A., LATE 1980

- *Ou Voir Les Expositions De Camélias En 1981*
- *Dove Vedere Le Mostre Di Camelia Nel 1981*
- *Donde Ver Exposiciones De Camelias En 1981*

U.S.A.

1980

- Oct. 24-25 Columbia S.C.
25-26 Greenwood, S.C.
Nov. 1 Fresno, Cal.
1 Washington, D.C.
1-2 Savannah, Ga.
8-9 Fort Valley, Ga.
15-16 Valdosta, Ga.
15-16 Monroe, La.
22-23 Brookhaven, Miss.
22-23 Gulfport, Miss.
22-23 Charleston, S.C.
29-30 New Orleans, La.
Dec. 6-7 Albany, Ga.
6-7 Slidell, La.
6-7 Port Arthur, Tex.
13-14 Moss Point, Miss.

1981

- Jan. 3-4 Panama City, Fla.
10 Beaumont, Tex.
10-11 Pensacola, Fla.
10-11 Augusta, Ga.
10-11 Baton Rouge, La.
10-11 Ruston, La.
17-18 Mobile, Ala.
17-18 Aiken, S.C.
24-25 New Orleans, La.
31-Feb. 1 Tuscaloosa, Ala.
Feb. 7-8 Savannah, Ga.
14-15 Birmingham, Ala.
21-22 Macon, Ga.
Dec. 5-6 Slidell, La.

ENGLAND

1981

- Mar. 10-11 R.H.S. Camellia Competition, London
31-April 1 R.H.S. Fortnightly, London
April 14-15 Outdoor Camellia, London
May 19-22 Chelsea Flower Show

AUSTRALIA

- June 20 St John's, Gordon, Sydney, NSW
27 Bowden Brae, Normanhurst, NSW
July 11-12 St Alban's, Epping, NSW
23-25 Westfield Miranda Fair, Miranda, NSW
25 Hornsby, NSW
20-25 Marion, South Aust.
Aug. 1 Roseville Chase, NSW
3-6 Myer Blaxland Gallery, Sydney, NSW
8-9 St John's, Toorak, Vic.
15-16 Portrush Road, St Georges, South Aust.
29-30 Hahndorf, South Aust.
29-30 Waverley, Vic.
Sep. 5 Box Hill, Vic.
4-12 Adelaide Royal, Wayville, South Aust.

NEW ZEALAND

- Aug. 28-29 New Plymouth (National Show & Conference)

ICS MEMBERS' SUBSCRIPTION RATES and the representatives to whom payable

AFRICA (R 6.00, or Husband and Wife R 9.00)

Mr Leslie Riggall, Mdoni Road, Kloof, Natal 3666, South Africa

AUSTRALIA (\$7.00, or Husband and Wife \$10.50)

Mrs Freddie Paton, 3 Redgum Avenue, Killara, N.S.W. 2071 Australia

AMERICA (\$8.00, or Husband and Wife \$12.00)

Mr Caryll Pitkin, 2465 Sherwood Road, San Marino, California 91108, U.S.A.

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Dr Antonio Sevesi, Piazzale Cadorna 6, 20123 Milano, Italia.

NEW ZEALAND (\$8.00. or Husband and Wife \$12.00)

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UNITED KINGDOM (£3.50, or Husband and Wife £5.25)

Mr H. John Tooby, "Acorns", Chapel Lane, Bransford, Worcester, WR6 5JG, England

Life Memberships available for an amount of at least twenty times that rate for annual subscriptions.

To assist you to avoid overlooking payment of your subscription, by remitting NOW, an invoice-memo with tear-off portion is enclosed with this Journal. A second invoice-memo is also included to assist you in encouraging a friend or friends to join and enjoy the benefits of I.C.S. membership.

STOP PRESS MEMBERSHIPS REGISTERED SINCE 31 JULY 1980

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DAVIES, Mrs Vesta, 26 The Avenue, Collaroy, N.S.W. 2097
NEWMAN, C. A., 51 Slade St., Bayswater, W.A. 6053
PARKER, E., 8 Berwick Rise, Templestowe, Vic. 3106
POWER, Mrs J. E. S., 42 Eastern Road, Turramurra, N.S.W. 2074
SWANSON, N. J., 43 Wellington Road, East Lindfield, N.S.W. 2070
WEST, G. A., P.O. Box 4, Killara, N.S.W. 2071

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MACKINNON, Mrs D. S., Oaklands, Trinity Hill, Jersey

NEW ZEALAND

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CLARK, Mrs Mary, 53 Fifield Terrace, Christchurch 2
CLEMENS, Mr & Mrs D. J., 18 Vista Place, Rotorua
GAMLIN, Mr & Mrs A. P., Lower Glenn Road, RD 27 Manaia
HUMPHREY, J. H., Kenepuru Sound, Private Bag, Picton
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LOMAX, Mrs Hazel A., 5 Broadway, Kaikohe
POWELL, Miss B. K., 6 Magnolia Drive, New Plymouth
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van THIEL, M. J., 78 Nelson St, Howick
WALLIS, Mr & Mrs G. W., P.O. Box 12001, Beckenham, Christchurch

REPUBLIC OF IRELAND

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Glounthaune, Co. Cork

UNITED KINGDOM

ACHESON, John A., 2 Grove Lane, Crockley Hill, York YO1 4SN

U.S.A.

FAUSTMAN, D. Jackson, 1243 Marian Way, Sacramento, Cal. 95818
MAYO, Fred B., 334 De Vane St., Fayetteville, N.C. 28305

CHANGES OF LISTED ADDRESSES

UNITED KINGDOM

HARRISON, Mr & Mrs E. M., Crosstrees Barn, Lea Road, Otterton,
Budleigh Salterton, Devon
* KITSON, Mrs B., West Wing, Antony House, Torpoint, Cornwall
PL11 2QA

MEMBERS

OF THE INTERNATIONAL CAMELLIA SOCIETY

registered at 31 July 1980

*Life Members

See Stop Press on page 81 for members whose subscriptions were subsequently received.

ARGENTINE

CASTRO PEDROS, Guillermo G., Tacuara 1456, Capitol Federal 1407, Buenos Aires.

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ABBOTT, Mr & Mrs K., 109 West Riverton Drive, Rossmoyne, W.A. 6155.
ADAMSON, J., 180 Shaftesbury Av., Bedford, W.A. 6052.
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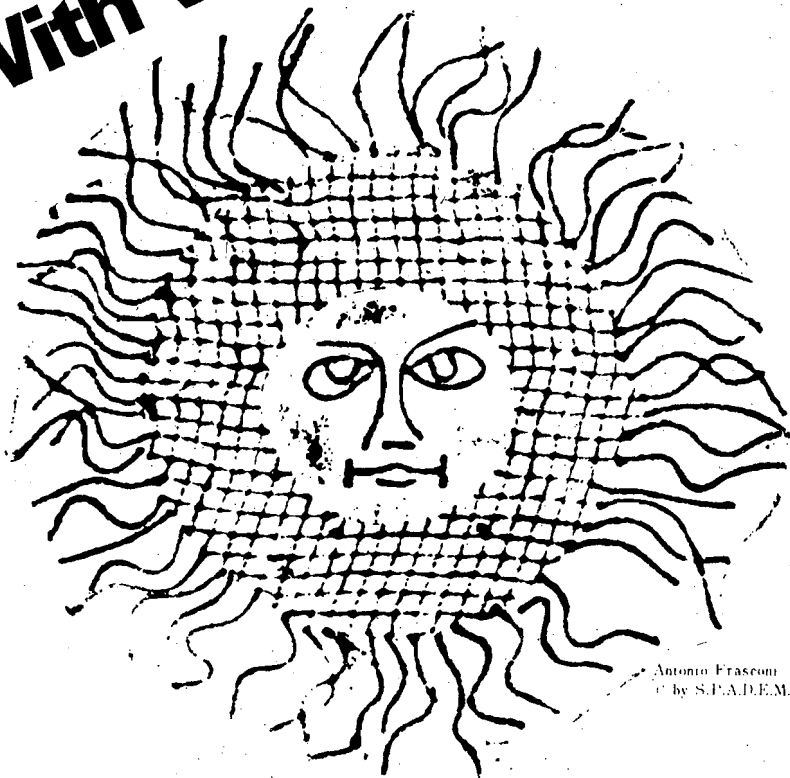
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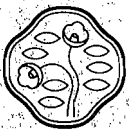
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