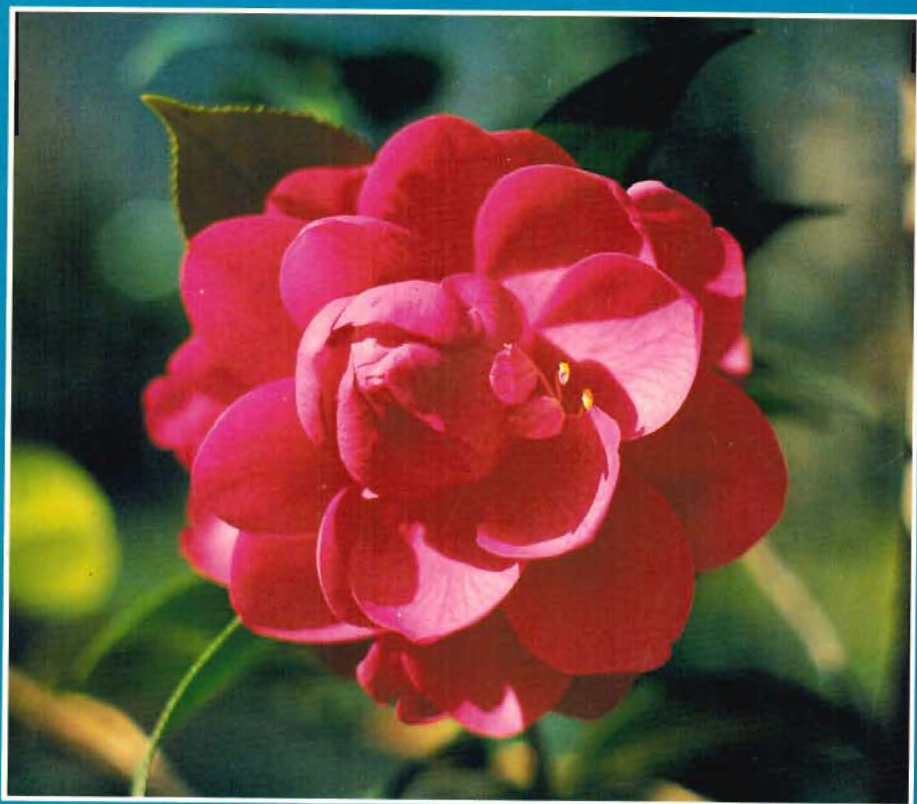


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International Camellia Journal

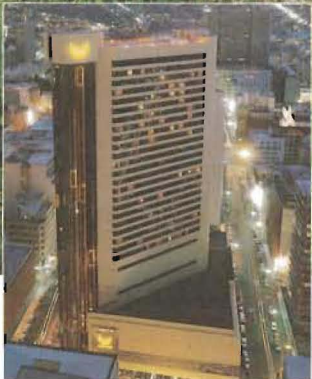


C. JAP. 'RED LOTUS' (BOSKOOP NURSERY, PRETORIA. S.A)

KOKUSAI TSUBAKI KAISHI
JOURNAL INTERNATIONAL DU CAMELLIA
REVISTA INTERNAZIONALE DELLA CAMELIA
REVISTA INTERNACIONAL DE LA CAMELIA
INTERNATIONALE KAMELIENZEITSCHRIFT
INTERNATIONAL CAMELLIA TUDSCHRIFT
REVISTA INTERNACIONAL DA CAMELIA

AN OFFICIAL PUBLICATION OF THE INTERNATIONAL CAMELLIA SOCIETY

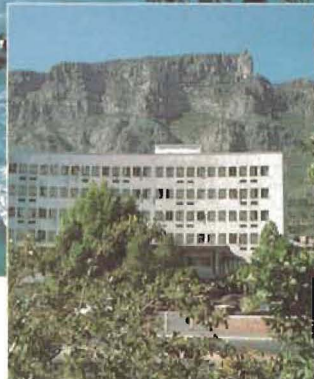
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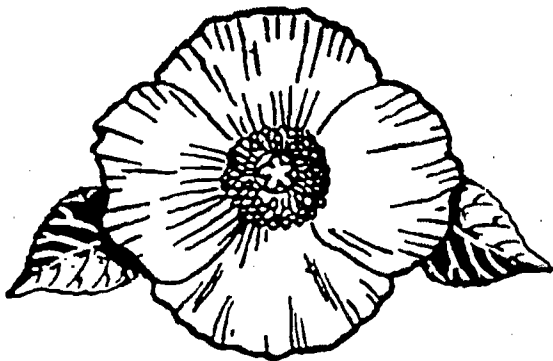
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* Papers presented at 1992 ICS Congress in New, Orleans, LA. U.S.A.



International Camellia Journal

No. 24 October 1992

An Official Publication of the International Camellia Society

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1992-93

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MESSAGE FROM THE PRESIDENT

THOMAS H. PERKINS III

UN MESSAGE DU PRESIDENT

BOTSCHAFT DES PRASIDENTEN

UN MESSAGGIO DEL PRESIDENTE

UN MENSAJE DEL PRESIDENTE



We, the American Executive, hope that everyone enjoyed the recent conference in New Orleans. We attempted to have an interesting time for everyone for both the International Society and also for the American Society - but with separate business sessions. We are certain that everyone succumbed to the lure of the old city of New Orleans. I think we all owe a big "Thanks" to the organizing committee for the extraordinary venue of the programs and the ease of hospitality throughout. We tried to offer hospitality at every turn on the pre-conference trip, the conference itself and the post-conference trip. My personal regret is that I did not find the time to be with old friends and new friends as much as I would have liked.

Our great accomplishment at the business session of the international society was the final arrangement of the finances of the publishing of our camellia register with pledges of the governing board of personal loans to the society to assure its publication. The register should be in the hands of subscribers before you see this note. We in the United States have been making a concerted effort to sell more of the registers, particularly to hybridizers, botanical groups and gardens and to all the appropriate libraries. A

special note should be made that the conference had as its guests our esteemed registrar, Tom Saviage and wife, Olive - just our small honor to this great man and his devotion to the vision of a true nomenclature of the genus, camellia.

As I enter my second term as steward of the society, I must note that we are still losing more members that we can afford. Surely everyone can make an extra effort to secure more new members, at least to replace the normal attrition. I will try as much as I can to encourage this. My thanks to the society for re-electing me to this honorable presidency. I will try to improve things and invite all criticism directly to me. My executive is remaining loyal to me and will serve in the various capacities with what I think as great loyal effort.

Our thanks go out to Eric Craig and Cecily Perring of their long service as our Vice-Presidents. They certainly helped the society and especially the various presidents, including myself. Please note that we have two new Vice-Presidents on the job now - Mrs. Mayda Reynolds for the European region and Richard Clere for the Asian region. I have word from Richard Clere that New Zealand intends to offer the society a venue for the 1997 conference - a joint meeting with the very large national New Zealand Camellia Society.

This journal carries news of the arrangements made for the upcoming conference in South Africa. I hope many will be able to go to this marvelous country with its vaunted flora and fauna. They have made excellent arrangements and their conference speakers are the best in our society. The next journal will have the most interesting venue of a joint conference in 1995 with Jersey and France.

Our thanks go out to Dr. Ingrid Batzenschlager and Mr. Peter Fischer for re-organizing the German region.

I hope to see many of you in South Africa for a very unique conference.

NOTE FROM THE EDITOR

JEAN COMBER

NOTES DU REDACTEUR EN CHEF

ANMERKUNGEN DER RADAKTION

NOTA EDITORIALE

NOTA DE LA REDACCION



Thank you for all of the help you have given me the past year. It has been a hard year - I lost my husband (He was a camellia nut) and I have had to learn the hard way

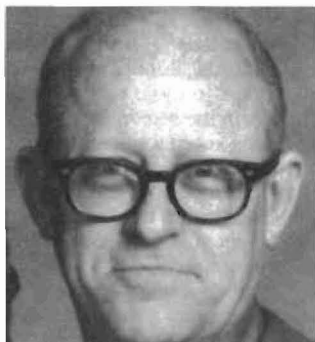
about the care of his plants. The first thing was to take an inventory - thankfully he had tags on them. Then I had to do the "Camellia Chores" such as pruning, spraying and feeding them. He always told me it was easier to write about camellias than do the actual work of taking care of them. Now I will wait for the camellia season to see how they are surviving.

Many thanks for the title translators - Dr. Pierre Kaufke (French), University of West Florida; Dr. Arthur W. Krause (German), Gulf Breeze, FL.; Joe Bonfiglio (Italian), Brookhaven, MS.; and Alfonso Valles (Spanish) Spanish Navy stationed at Naval Air Station, Pensacola.

The deadline for the next issue is 15 July 1993 and I hope that you all will send in your articles before that time so the journal will be ready to go to press on time.

NEW AUDITOR

ART LANDRY, U.S.A



Ted Gant

Our new auditor for ICS is Mr. F.W. "Ted" Grant, replacing John Movich who had to resign for health reasons.

Ted is a certified Public Accountant who has been in practice for over 27 years in

Baton Rouge, LA. He has a Bachelor of Science and a Master of Business Administration degree from Louisiana State University and is a retired U.S. Army Colonel. He has a varied background and experience in many aspects of accounting, taxes and auditing. He is eminently qualified to serve as auditor for ICS. He and his wife, Rita, reside in Baton Rouge.

Ted has had a keen interest in camellias for a long time and maintains a number of plants in his garden. He has been actively involved with the Baton Rouge Camellia Society in a number of capacities. He is currently, and has been since 1986, treasurer of the Baton Rouge Society.

The USA executive feels that the ICS is fortunate to have a person of Ted's caliber, experience and interest serve as our auditor, and bid him a warm welcome.

NOTE FROM THE SECRETARY

ICS GOVERNING BOARD MINUTES

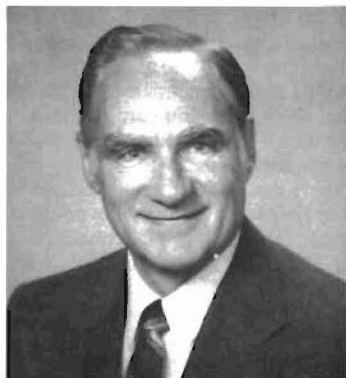
ARTHUR LANDRY, Secretary, The International Camellia Society

COMPTE DE L'ICS

NOTAS DEL CONSEJO GOVERNADO POR EL I.C.S.

LA PROCESSI VERBALE DEL CONSIGLIO D'AMMINISTRAZIONE DELLA I.C.S.

OROTOKOLL DES I.C.S. VORSTANDES



The Board of Directors for ICS met at the Monteleone Hotel in New Orleans on January 31, 1992. Proxies for those members unable to attend the meeting were approved as nominated.

Minutes of the ICS meeting held in Kyoto, Japan on April 5, 1990 were approved. Treasurer Greg Davis gave the financial report indicating that the Society's income was about equal to expenses for 1991. He indicated that Spain has not remitted funds for 1990 and 1991 and Germany and Portugal had not remitted funds for 1991. He also pointed out that the revenue per member remitted by some countries do not cover the cost of the *Journal* which was \$7.58(US) last year.

ICS Registrar Tom Savige reported on the status of publication of the International Camellia Register. There have been delays due to several reasons which have now been resolved. Delivery of the Registers is now expected in August. A letter of explanation about the delays and expected delivery date will be prepared and sent to all subscribers. The Register will consist of three volumes, about 1000 pages each and will be a numbered edition limited to 1500 copies. A lengthy discussion ensued by the Board regarding financing publication of the Register.

The ICS Register Publication account

reflects an approximate balance on hand of \$67,000.00 (A) from orders and donations. It is expected that publication of the Register will cost about \$114,000.00 (A) leaving a shortfall of about \$47,000.00 (A) or \$35,000.00 (US). After applying the Brighton balance of about \$20,000.00 (US) to the deficit, we are left with a remaining unfunded deficit of about \$15,000.00 (US). Board members made personal pledges of varying amounts in interest-free loans to the Society to make up this deficit so that publication can proceed.

The Board approved an amendment to the By-Laws, Article IV, Section B, replacing the last sentence with: "A President or Vice-President may not hold office for more than two successive periods of three years except for having filled a vacancy in the office for a preceding period of less than three years." (The change consists of adding the office of Vice-President to that of President limited to two three-year terms.)

The Board approved an amendment to the By-Laws, Article II, Section A-1, to rename the "Other Regions (Different Regions)" to: "Channel Islands, Republic of Ireland and Other Regions" to more properly reflect the membership in the region served.

The Board voted to increase the number of directors for the Germany/Austria Region from 1 to 2 to more properly represent the large membership in the Region. Dr. Ingrid Batzenschlager was elected to fill this new Director position.

The Directors and Proxies from the various Regions reported to the Board on the status of ICS activities in their Regions. Most of the Regions reported stable or growing membership and various meetings, gardens support and other activities of their membership. Werner Fritchi and Ingrid Batzenschlager reported to the Board the concern of members in the Germany/Austria Region with lack of communication with Dr. Klaus Hacklander. A meeting of the membership

was scheduled for March 7 at Wingst. (Secty note: The Executive has been advised that at the meeting in Wingst, the members of the German/Austria Region confirmed Dr. Batzenschlager as Director and Membership Representative and elected Mr. Peter Fischer as the second Director for the Region.)

There was a discussion about the need for communications between the Directors and Membership Representatives with members of their Region and with the Executive. It was pointed out that it is sometimes very difficult to get information on membership, Register sales, dues remittance, etc. In order for the society to function properly, good communication is a must between the Executive and with all Directors and Membership Representatives. The Secretary was directed to use all possible methods to ensure good communication with all Regions in the future.

The next ICS Congress will be in South Africa, August 1-21, 1993. Leslie Rigall, Director for South Africa, described the plans and told Board members to plan on about \$175 (US) per day for travel in South Africa. The Registration fee for the Congress is expected to be about \$300 (US). Leslie asked for an estimate of expected attendance at the congress and obtained an estimate of a total of 170 attendees. All who are interested are urged to make a preliminary registration to get on the mailing list of the South African organizers, so they can be kept advised of all developments as they happen.

Mayda Reynolds reported that plans are

well under way for the ICS Congress in 1995. They are planning for a pre-Congress tour from March 26-30 to nurseries and gardens on Guernsey, Sark and Herm. The Congress will be at Jersey, Channel Islands from March 30 - April 4 and will include the usual technical/educational sessions as well as visits to gardens, Jersey Wildlife Park, and Eric Young Orchid Foundation. The Post-Congress tour will be from April 4 - April 10 with visits to gardens in Nantes and Paris, France.

J. Trehane suggested a Congress in 1997 be held at New Zealand or the United Kingdom. Mrs. Moncrieff, J. Trehane's proxy, proposed that the two Regions study and report back to the Board at the meeting in South Africa on where the 1997 Congress will be held.

Herb Short gave a talk on problems he had with production and content of the 1991 Journal and damaged copies received overseas due to improper packing by the Publisher. The Board agreed that the Society should strive to produce a quality publication which meets the needs of our membership. The Board pledged its support to the Editor and the Executive promised to provide her with help in the various stages of producing the *Journal*. The Secretary was directed to advise the Publisher of the concerns of the Society about packaging and shipping. (Secty note: This has been done and the Publisher has committed to correct all deficiencies to our satisfaction.)

The meeting adjourned at 11:30 p.m.

ATTENDANCE LIST

ICS Governing Board Meeting • New Orleans, Louisiana, USA - January 31, 1992

Mr. Thomas H. Perkins	President	USA
Mr. Richard Clerc	Vice-President	New Zealand
Mrs. Mayda Reynolds	Vice-President	Channel Islands
Mr. William Stewart	Vice-President	USA
Dr. Shunpei Uemoto	Director	Japan
Mr. Lewis Fetterman	Director	USA
Mrs. Vi Stone	Director	USA
Mr. Boyd McRee	Director	USA
Mr. Eric Craig	Director	Australia
Mr. Leslie Rigall	Director	South Africa
Mr. John Tooby	Director	United Kingdom
Mrs. Ann Bushell	Director	Jersey
Dr. Ross Hayter	Director	Australia
Miss Nance Swanson	Director	Australia
Dr. Ingrid Batzenschlager	Director	Germany
Mr. Herb Short	Membership Rep.	United Kingdom
Mrs. Edith Mazzei	Membership Rep.	USA
Mr. Tom Savige	ICS Registrar	Australia
Mrs. Jean Comber	Editor	USA
Mr. Greg Davis	Treasurer	USA
Mr. Art Landry	Secretary	USA
Mrs. Mary Caroni	Proxy for Sevesi	Switzerland
Mrs. Jo Freeman	Proxy for Assinder	United Kingdom
Mr. Werner Fritschi	Proxy for Hacklander	Germany
Mrs. Jean Clerc	Proxy for N.Z. Director	New Zealand
Mrs. Scott-Moncrieff	Proxy for J. Trehane	United Kingdom
Mr. Goro Imure	Proxy for Tsushi	Japan
Dr. Kaoru Hagiya	Proxy for Arai	Japan
Mrs. Anne Thoby	Proxy for C. Thoby	France

SEE YOU IN JOHANNESBURG, S.A.

Rendez-vous A La Johannesburg

Aus Ein Wiedersehen Johannesburg

Ci Vediamo In Johannesburg

Vease usted en Johannesburg

ICS CONGRESS IN JOHANNESBURG, REPUBLIC OF SOUTH AFRICA AUGUST 11-15, 1993

GENERAL INFORMATION:

Send Registration and Fees to

Allison Adair
P.O. Box 783180
Sandton. 2146
Rep. of South Africa
Tel: 27 11 315-1920
FAX: 27 11 315-1369

Rate of Exchange: United Kingdom - R5.06: 1
United States - R2.89: US\$1

Cost of Congress (U.S.)\$300.00	P/P in TWB	SWB
Sandton Sun Hotel (Bed & Breakfast)	R1320	R1790
Sandton Holiday Inn (B&B)	R 840	R1180
Johannesburg to Cape Town, up the garden route to Port Elizabeth. Durban Back to Johannesburg	R5295	R1180

If traveling on Blue Train, deduct R180 P/P (twin with bath) and R290 P/P (single room supplement) and add Blue Train fees.

Cost of Blue Train		P/P
Suite A Twin bed/bath (1 available)		R6270
Suite B Twin bed/bath & 1 single		R2405
Suite C 4 twin beds/bath & 2 single		R2265
Suite D 29 twin bed/bath & 5 single		R1645
Suite D+ 7 twin beds/bath incl toilet/wash basin		R1945

Game Lodge -Per Person	Twin W/ Bath	Single
Mala Mala mail camp (3 nights)	R4425	R6630
Kirkmans camp (3 nights)	R3375	R5055
Inyati (3 nights)	R2590	R3890

These prices are based on and include - accommodation in specified hotels on a bed and breakfast basis plus lunch or dinner daily.

Transportation in deluxe coaches with a driver and an English speaking guide with botanical knowledge.

Entrance fees per itinerary.

Porterage of one average sized case per person, excluding any airfares, tips, drinks and beverages or any personal items.

Group bookings on the flight to Johannesburg to Cape Town and Port Elizabeth to Durban have been made and will entitle members to a discount, and when paid from their home town, will entitle them to a tax saving.

From a political point of view, the S.A. Citizens are very positive about the future of their country and the places that are scheduled to visit are nowhere near the action.

TENTATIVE SCHEDULE

ICS CONGRESS

11-15 AUGUST 1993

JOHANNESBURG, REPUBLIC OF SOUTH AFRICA
SANDTON SUN HOTEL

1993 ICS Congress - South Africa

Congres ICS - En Afrique Du Sud

1993 - ICS Kongress In Sued Afrika

Il Congresso Del Anno 1993 In L-Africa Meridionale

El Congress ICS Sulafrica

WEDNESDAY - AUGUST 11

Registration - Sandton Sun Hotel
 Welcoming cocktail party

THURSDAY - AUGUST 12

Educational Session*
 Visit Johannesburg Botanic Gardens
 or Witwaterstrand Botanic Gardens
 Visit Dr. Nancy Van Schaik and Louis
 Van Heerden's home for cocktails

FRIDAY - AUGUST 13

Educational Session*
 Visit union buildings in Pretoria, a private
 visit to the State President's Garden or to the
 administrator, and then to Boskeep Nursery.
 ICS Board meeting

SATURDAY - AUGUST 14

Scientific Sessions or
 morning leisure for shopping,
 JHB flower arranging and tea.
 Dinner - "Indaba Club", Sandton Sun

* Confirmed speakers as of this journal going to press
 Dr. John Rourke
 Mr. John Tooby
 Dr. Ross Hayter
 Dr. Clifford Parks
 Dr. Rod Bieleski
 Dr. Nancy Van Schaik
 Mrs. Mayda Reynolds
 Jan Van Bergen

(Note - special translation/interpreting arrangements will be available)

Cost of Congress 11-15 August 1993. U.S. \$300 including all meals.

1993 ICS PRE AND POST TOURS

Congres de ICS - En Afrique Du Sud

Congresso de I.C.S. en 1993 Swed Afrika

Congresso di la Societa Internazionale di Cammelie - Africa Meridenale

1993 I.C.S. Kongress - Sudafrica

PRE- CONGRESS TOUR

(Sun) 1st Aug. 1993

Arrive Johannesburg. Stay at Carlton Hotel

(Mon) 2nd Aug. 1993

Johannesburg to Cape Town by Blue Train or fly.

(Tues) 3rd Aug. 1993

Arrive in Cape Town. Stay at Mount Nelson Hotel. Visit Groot Constantia Wine Estate - visit and lunch. Dinner Victoria & Alfred Waterfront.

(Wed) 4th Aug. 1993

Drive along Chapman's Peak Drive to the Cape of Good Hope Nature Reserve. Then to Vergelegen.

(Thu) 5th Aug. 1993

Leave Cape Town, driving to Oudtshoorn, thru Swellendam, the third oldest city in S.A. Oudtshoorn is known as the "Feather Capital" in the world. Stay at Oudtshoorn Holiday Inn.

(Fri) 6th Aug. 1993

Visit the Cango Caves, from the caves go to an ostrich farm. Continue across the Outeniqua Pass to the Wilderness Karos Hotel for the night.

(Sat) 7th Aug. 1993

Tour thru Knysna where you view the heads, the point where the lagoon enters the sea. Continue to Plettenberg Bay, a sea-side resort. Catch flight to Durban, a major holiday resort. Overnight at Maharani Hotel on the beach.

(Sun) 8th Aug. 1993

Visit Durban's Botanical Gardens where there are over 3000 orchids. Afternoon free.

(Mon) 9th Aug. 1993

Visit Fern Valley Botanic Garden at Kloof, Leslie Riggall, a keen collector of all beautiful plants, including camellias, azaleas, rhododendrons and magnolias. Lunch at Rob Roy Hotel and visit to Assegaai Safari Park, known for its reptiles, and to Zulu village and Zulu dancers. Evening free or an optional evening to the theatre can be arranged.

(Tues) 10th Aug. 1993

Take the coach from Durban to Drakensberg, stopping for tea at Granny Mouse's Country home. Staying at Sun Resort Hotel. Afternoon and evening free.

(Wed) 11th Aug. 1993

Continue north to Johannesburg, checking into Sandton Sun Hotel.

POST CONGRESS TOUR

(Sun) 15th Aug. 1993

Travel by coach from Johannesburg to Tzaneen through Pretoria to the Northern Transvaal. Also passing thru Warmbaths, a mineral spa and Turfloop University. Overnight in the Coach House Hotel and Magoebaskloof Hotel.

(Mon) 16th Aug. 1993

Travel to the realm of the Rain Queen and Duiweiskloof, north of Tzaneen. Visit to Sapeco Tea Plantations. Overnight in the Magoebaskloof/Tzaneen area.

(Tues) 17th Aug. 1993

On your route to the eastern Transvaal, you pass a garden of sub-tropical fruitlands, stopping at Blydepoort where you find a 16 km long canyon. Continue through Sable and Hazyview to the Kruger National Park where you check into a rest camp for three night stay. Optional - accommodation at Mala Mala, a private game reserve in nearby Sabi Sand Game Reserve.

(Wed) 18th Aug. 1993**(Thu) 19th Aug. 1993**

Game Reserve - drive out early for a day's viewing in the famous Kruger National Park. Enjoy lunch in one of the rest camps. Return to the Rest Camp late afternoon for dinner and overnight. (Tour members staying in the Private Game Lodge will be taken on morning and afternoon drives by experienced game rangers and trackers in open landovers).

(Fri) 20th Aug. 1993

Leave game reserve early and drive over Long Tom Pass to Coromandel Farm near Fullstroom. Continue to the Carlton Hotel, Johannesburg. Farewell dinner.

(Sat) 21st Aug. 1993

Departure.

Alternative Tour - Pre- Congress Tour 7-11 Aug. 1993

Meet at airport to join delegates at Maharani Hotel. This tour will include a visit to Durban's Botanical Gardens (over 3000 orchids), visit Fern Valley Botanic Garden at Kloof with Leslie Riggall, visit to Assegai Safari park and to Zulu Village. Take the coach from Durban to Drakensberg, stopping for tea at Granny Mouse's Country Home, staying at Sun Resort Hotel. The next day travel to Johannesburg, checking into Sandton Sun Hotel.

Fee - R2350 per person, sharing a twin with bath. R 415 single supplement.

The Blue Train has only 90 berths in various categories. This method of travel to Cape Town is very popular with overseas visitors. South Africa Airways is the preferred carrier. SAA has special rates for senior citizens over 60.

The majority of the hotels selected are of the international five star standard, except in the smaller towns. All of the hotels will be offering an inclusive "English" Breakfast. The hotels selected offer a benefit, i.e., the Mount Nelson in Cape Town is set at the foot of Table Mountain in wonderful gardens; the Maharani is across from the promenade in Durban, with warm Indian Ocean available for the swimmers. The Sandton

Sun, the Congress Headquarters, is 20 minutes away from Johannesburg in an exclusive suburb. It is attached to the country's largest shopping center and has ten cinemas. Comfortable, in thatched 'Rondavels' with private abultions, the Mala Mala is very exclusive. The game is the same as the two parks are adjoining.

Climate and clothing - It will be winter in Cape Town (Mediterranean Climate) and it could rain. Johannesburg has hot dry days but cool evenings. A jersey and jacket is definitely required.

Grosvenor Tours (South Africa) are the official tour operators and South African Airways are the official carriers.

See you in Johannesburg 1 August for a wonderful tour and ICS Congress. Please write Allison Adair, P.O. Box 2146, Sandton 2146, Republic of South Africa, if you need additional information.

Should delegates travel together from the major points of departure around the world, e.g. New York, London, Paris, Lisbon, Rome, Zurich, Hong Kong, Taipei, Perth on South Africa Airways, it would be possible to arrange group fares and discounts, also an additional perk on internal travel.

FUTURE ICS CONGRESSES

CONNGRES ICS A VENIR

ICS - KONGRESS VORSCHAU

LI CONGRESSI PROSSIMI DELLA ICS

EL PROXIMO CONGRESSOICS

- 1993 International ICS Congress in South Africa - August 12 - 14, 1993, Pre and Post Tours available.
- 1995 International ICS Congress at the Channel Islands, Brittany and Paris.
- 1999 International ICS Congress at Miyazaki, Japan where a Camellia Garden is under development on top of a mountain.

NEW DIRECTORS

LES NOUVEAUX DIRECTEURS

DER NEUE VORSTAND

NUOVE DIRETTORE

NUEVOS DIRECTORES

DR. INGRID BATZENSCHLAGER

Dr. Ingrid Batzenschlager was elected Director of the International Camellia Society for Germany/Austria at the ICS Board of Directors Meeting 31 January 1992 in New Orleans, LA, U.S.A.

Ingrid was born in 1948 in Duisburg, Germany, daughter of a French officer and his German wife. She studied medicine in Freiburg, Erlangen and Marburg. She received her specialist qualification as a Dermatologist and is in private practice in the Bavarian town of Landshut, east of Munich.

Ingrid lives in an old farm house in the hills outside of town which she shares with her camellias and animals. Besides camellias, she is interested in roses and cottage gardens. Her other hobbies include dogs (especially Irish Wolfhounds), horses (Dressage Riding), collecting country antiques and Italian cooking.

Ingrid was one of the three founding members of the German Camellia Society six years ago.



Dr. Ingrid Batzenschlager

MRS. PAT MACDONALD

Pat Macdonald and her husband, Ron, have been members of the ICS since 1964, and of the N.Z.C.S. since 1963. Pat and her husband are enthusiastic growers of over 500 different camellias and other trees and shrubs in their 5-acre garden.

Pat and Ron led the New Zealand Delegation to the ICS Congress in Kunming, China, in 1984 and have returned to China three times since then to further their study of camellias and promote friendship with Chinese camellia experts. Pat has written articles for the *ICS Journal* on their travels in China. They have also organized and led a party of 18 New Zealanders which attended the ICS Congress in Spain and the Channel Islands in 1981.

Pat and Ron have hosted many overseas members of the ICS over the years, have attended other ICS Congresses and the U.K. gathering in Ireland in 1989, and have kept in touch with ICS members and the affairs of the society. They have been closely involved with the administration of the N.Z.C.S. at branch and national level for nearly 30 years.



PETER FISCHER

My first camellia contact was at my home in the Nursery of my father, who started growing camellias more than 50 years ago. It was, of course, a small step to be a camellia lover because I chose my studying places in Europe always in camellia areas. In the meantime, I have built a collection of more than 600 different varieties of camellias in my nursery including 40 different species. Five years ago I wrote the first German book on camellias. Next year I will follow with a second book but this time a more substantial one by ULMER-Verlag. In Germany I have

been the first and for a long time the only member of the ICS. During the last few years I have become a well known person in camellia activities. Many publications and TV stations have publicized your German camellia specialist and his fine camellia collection. A camellia center is growing in the last few years at my home place in the northern part of Germany near the Nordsee. Today and tomorrow my main intention is to do everything to gain more popularity for camellias, in my opinion, the finest flower of the world.

A NEW ZEALANDER'S MEMORIES OF THE ICS PRE & POST CONGRESS TOUR — 1992

RICHARD CLERE, N. Z.

UN ZELANDAIS SE RAPPELLE LES PREET POST TOURS DU CONGRESS ICS

ERINNERUNGEN EINES NEUSEELANENDERS AN SEINE REISEN VOR UND NACH DEM KONGRESS

LE MEMORIE DI UN NEOZELANDESE PER CUANTO/CONCERNE DEI VIAGGI PRIMO O DOPPO DEL CONGRESSE
DE LA SOCIETA INTERNAZIONALS DELLA CAMELLIA

MRMORIAS DE UN NUESO ZELANDES DEL AUG Y POSTERIOR CONGRESS

We realized what a huge country the United States is when it took us all day to get from Pasadena in California to Atlanta in Georgia. Here we joined the tours that had been organized by Dorothy and Bill Stewart. Tours that were to take us through Georgia, Florida, Mississippi and Louisiana. Coming from our New Zealand summer to the cold and snow of the Camellia Society, who home-hosted the tour group to an evening gathering at the home of John Newsome and Buddy Cawthon. The beautiful camellias on display, the superb meal and the company of the local camellia people and the ICS members from all over the world was a delightful start to our adventures.

Thankfully, running out of the snow the next day, we made our way to Masee Lane. Here we were immediately appraised of what they call a "freeze" which we gathered was a devastating frost that lasts for days. This had ruined the blooms in the garden, in spite of the canopy of large pine trees, but the glass houses held lovely blooms for us to drool over. One of the delights of travel in other countries is to see the different camellia cultivars grown and here for the first time we saw *C.J. Ivory Tower* — not a new variety by any means as it was first registered in 1966. The large white formal camellia with a high cone center was spectacular. We were also impressed with two *C. reticulatas* 'Blair Brown' and 'Dali Cha'. The former a Pursel seedling and the latter, the true Kunming *C. reticulata*, 'Tali Queen'. Masee Lane now has the largest collection of the famous Boehm porcelain figures. Housed in the Fetterman-Lundy building, it promises to be a wonderful drawing card when the camellias are not flowering. Also in the same building was a sales shop to cater to our souvenir hunting and a magnificent dining room to cater to our hunger.

More treats were in store for us that day as we traveled to Macon where Dr. Walter Homeyer conducted us through his large

glass houses where many of his *reticulata* seedlings were in bloom. He has registered some of them but as yet they have not been seen in New Zealand. He is better known here for his introduction of the yellow flowered, formal double *C. japonica* 'Dahlohnega' and we will certainly look forward to seeing his *reticulata* seedlings 'Frank Houser' and 'Walter's Formal'.

Several years ago in our home town, Taupo, I escorted Mr. Drayton Hastie, the present owner of Magnolia Gardens, through the Waipahihi Botanical Gardens. He was surprised to find we were growing *Camellia japonica* 'Julia Drayton', named for his grandmother. He presented me with his book on these famous Charleston gardens and it was with keen anticipation I looked forward to this highlight. As our coach reached the gardens, the heavens opened and solid rain fell during most of our visit, quite dampening our enthusiasm for walking too far. Under the stewardship of the Drayton family, Magnolia Plantation flourished and the gardens started, first as a formal planting and later changed to become one of America's foremost gardens of informal design. Now under the canopy of the evergreen oaks, magnolias, azaleas and camellias flourish. Nearly all the camellias are specie *japonica* and perhaps the most famous of these is 'Julia Drayton', for many years confused in New Zealand with 'Mathotiana'. Here was our first introduction to spanish moss and it was fascinating to see some of the camellias blooming out through the gray moss. Here too, great use was made of 'Nandina Domestica', known commonly as 'Heavenly Bamboo'. Planted among the camellias, the scarlet leaves and berries relieved the green of the camellias with a nice contrast. Another first was seeing 'Swamp Cypress' (*Taxodium Distichum*) growing in the many small lakes of Magnolia Gardens. Our thanks go to Drayton Hastie for braving the terrible weather and escort-

ing us around.

Nearby we visited Middleton Place, also on the banks of the Ashley River. This was another great plantation home that survived the Civil War. The camellia garden here was like small fruit orchard lined out under the oaks and nicely divided by evergreen azalea hedges. How we wished the camellias had been named for about the only variety I recognized was 'Adolphe Audusson', a large dark red semi-double variety. More often than not, we saw this camellia with a high degree of variegation making it very spectacular. Variegation is not seen to any extent in New Zealand and I'm sure if more of us saw how it can 'lift' a bloom, more of us would be putting a little white into our flowers. Like our first garden, Middleton Place, had, besides the huge plantation home, many outbuildings, that were once slave quarters, kitchens, stable and implement sheds. Like Magnolia Gardens, it too had suffered the ravages of Hurricane Hugo which devastated the East Coast states two years ago.

In Macon, Charleston and Savannah, we found these to be lovely historical cities, very much with the Civil War. More and more as we traveled around, we learned of the tragedy of this conflict and to see the Confederate flag flying just inches below and just as large as the Stars and Stripes, made us wonder if it was over! Much admired were the stately homes that graced these cities and thankfully a preservation order ensures the facades remain unchanged. Elegant trees and statues graced the many parks seen and we only wished we had more time to spend in these historic places.

Scenery from the coach was, in the main and by our New Zealand standards, extremely uninteresting. The four lane highway through scruffy pine forests in winter garb made for monotony but gave us time to get to know our companions and catch up on sleep. Alas. It was too early in spring to see the beautiful dogwoods and wild azaleas that abound Georgia.

Our travels took us to Hilton Head on Port Royal Sound, one of the many inland waters on the East Coast. Here Dr. Betty Brown graciously showed us her camellia garden which would perhaps be described as a forest, literally thousands of camellias were growing under a pine canopy. She has only recently inherited this garden from her father and was experiencing difficulties with naming the many varieties. Could we help? Sadly the only one I could assist with was *C. japonica* 'Lily Pons', a longtime favorite with us in Taupo. She has a pruning program that will be vital if she is to control this large plot

of camellias, growing just a few feet above sea level. It is evidently an ideal site to grow camellias — the Gulf Stream ensures an equitable climate and it has been unnecessary to water for many years. Darkness fell as we left this fascinating garden so we saw little of Savannah on our way to our hotel. It was a quick freshen up and off to dine in one of the old cotton warehouses on the ancient quay along the Savannah River.

After a lovely orientation drive through the squares and parks of Savannah, we set off for Florida. More of the same scenery and oh, so flat. A delightful interlude occurred at the lunch stop at Callahan. A pawnbroker's shop, close by the diner, was run by the ex-chief of Police for the District. A notice outside his shop telling us to empty our guns had us intrigued so in we went. The chief regaled us with stories of crime and drug running from the Caribbean. As a visitor, I was not permitted to buy one of the revolvers he had on display, but he informed me, I had only to go a couple of blocks to the high school and I would get one for a few dollars in a matter of minutes!

Later that day we found, with great difficulty, the home and garden of Ivan Mitchell at Keystone Heights. On the shores of Lake Santa Fe, this was another great collection of camellias — again grown under a high canopy of pines. I was told that Ivan was in his eighties but the enthusiasm and vigor he showed while taking us around quite belied his age. Here too was southern hospitality for he opened his home to our group and insisted we have a "Happy Hour" with him. Many and varied were the camellias Ivan had. Many varieties from the southern states have not made their way to New Zealand, Australia, or for that matter, Europe, so we could be excused for being unfamiliar with the many different flowers we saw.

Feeling that we may be getting a surfeit of camellias, our tour the following day was to Cape Canaveral and John Kennedy Space Center. Here we saw all the space rockets, the shuttle transporters and launching platforms and even made a simulated space flight to the Moon. Terrific Stuff! The spaceport is built on Merritt Island which is also a wildlife reserve. In our drive out to the launching pads, alligators basked on the grass verges and armadillos, looking like gray basketballs, snuffled through the grass in search of food totally indifferent to all the technology and noise involved in the rocket launchings that frequently take place.

Also as a change of pace, we spent the next two days at the Walt Disney World Resort. Here of course the "musts" were The

Epocot Center and Disneyworld. Both were fascinating attractions with beautifully landscaped gardens, fountains, waterfalls and lakes. A day at each attraction was not enough to see the sights of this giant playground.

On the final morning of this Pre-Congress Tour, we visited the famous Cypress Gardens. These were the nearest to a New Zealand Botanical Garden we had so far seen. Fine specimen trees, groomed lawns, colorful beds of annuals and well maintained beds of camellias were the order here. To make the place even more colorful, charming young ladies in crinoline gowns stroll the paths and were only too happy to pose with visitors for photographs. On the lake amid the cypress trees from which the garden takes its name, various aquatic displays of water skiing and parasailing were put on for our entertainment. It was snowing and cold in Atlanta, but here we were, several days later, enjoying the sun and watching these waters sports. Truly bringing home to us the vastness of The United States.

The 1992 ICS Congress, as you all know, was held in conjunction with The American Camellia Society making for a large gathering of camellia enthusiasts. Everybody was accommodated and all congress activities took place at the Monteleone Hotel on Royal Street in the heart of the old French Quarter. Starting the congress was a welcome reception put on jointly by the two societies. Drinks, food and a jazz band kept everyone in a jovial mood and we renewed acquaintances with members from all parts of the world. The usual procedures were adhered to, lectures in the mornings and sightseeing in the afternoons and free time to explore the fascinating city of New Orleans. What an exciting city it is with streets made famous in music by jazz musicians. The old French houses with their lace balconies of wrought iron were being readied for Mardi Gras, some already draped with colorful bunting. It was a fascinating experience to walk from our hotel to the banks of the Mississippi River being entertained with jazz bands, puppet shows, break dancing by young negroes, food stalls, portrait pavement artists, sex shops and others full of masks and costumes in readiness for the Mardi Gras parades.

A lovely day was spent visiting New Orleans' show place, Longue Vue Gardens, built on the style of the country houses of England between 1939 and 1942 by the late Edgar Stern, a wealthy cotton broker. It embodies 8 acres of garden adjoining a fine golf course and creates an oasis in the heart of residential New Orleans. A series of garden layouts create different vistas. Entering

by the wrought iron gates, framed by an avenue of live oaks, we immediately made for the wild garden which features the camellia plantings. Here too, many varieties were planted under a canopy of pine trees and again flower variegation was to the fore. This walk led to an attractive walled garden featuring floribunda roses awaiting warmer weather to start their flowering. On to the Canal garden where your eye was taken with the long water trough, constructed of brick and bordered by lawns and azaleas. Finally to the Spanish garden. This was a large rectangular lawn with box hedges of intricate design on both sides. Fountains, urns, and water mobiles gave a spectacular lead-up to the large brick and timber patio which graced the end of the area. Tall magnolias were flowering and large bushes of *Camellia japonica* 'Pink Perfection' and 'Alba Plena' gave splashes of color to this magnificent show place. The main patio of the house had been covered with a transparent roof and here a bar dispensed wines and soft drinks. A continuous buffet lunch, served with glamorous models, featuring high fashion garments, strolling around the dining tables was appreciated by both the ladies and gentlemen, probably for quite different reasons. Afterwards, we were conducted through the house. This beautiful home featured antiques, oriental carpets and striking displays of china and porcelain. Incongruously a gallery of ultra-modern art was eye-catching and intriguing.

Our absence from the hotel had given the Gulf Coast Camellia Society time to set up a show for the following day. The chandeliered ballroom was a fine setting for the many blooms gracing the long tables and a nice gesture was made by the Gulf Coast Show Committee and the New Orleans Camellia Society in asking many overseas judges to assist in selecting the winning blooms.

The combined American Camellia Society-International Camellia Society farewell banquet brought to a close this excellent congress. During the dinner the American Camellia Society announced the show winners and made several presentations and awards to prominent camellia personalities. Thomas Perkins, our ICS President, then took over the proceedings, thanking all who had contributed to the success of the Congress and expressing the hope that we could all be together again at the 1993 Congress in South Africa.

The Congress over, the following day we set off crossing Lake Pontchartrain for Slidell. More southern hospitality was to the fore as Erin and Bob Stroud hosted us to a wonder-

ful alfresco meal in the garden of their large property. All too soon, we had to move on to our destination that night — Brookhaven, the home town of President Thomas. No hotel for us that night! The local friends of Thomas had offered to have members of the tour as guests in their homes. This was indeed southern hospitality of the highest order. Thomas' camellia houses were thoroughly investigated (especially noticeable was the chrysanthemum in flower), before venturing inside to partake of "Happy Hour". More entertainment that evening at a country hall where we dined on such unknowns as catfish, hushpuppies and smoked ribs and at the same time were serenaded by a local country and western singer. Another first, foodwise, was our breakfast next morning of cheese grits. Lovely!

Assembling at Woodleigh, our president's stately Georgian mansion, we said our farewells to our gracious hosts and set off on a short drive to historical Natchez, strategically located on the Mississippi River. Natchez was a lovely city with many pre-Civil War antebellum homes. We were able to visit three — Stanton Hall, Lansdown and Longwood. By far the most interesting was the latter. It vividly portrayed the tragedy of the Civil War. Construction was begun in the late 1850s but when the war broke out, the work was abandoned and the ground floor is all that is complete today. Climbing to the upper stories, one sees the timbers and tools simply dropped by the workmen as they abandoned the job to take up arms. The ground floor is finished with intricate woodwork and beautiful period furnishings. The elegant sitting room, the four poster bed and the dining room complete with a "shoo-fly" fan gave the impression that time had stood still since construction ceased. To round off the day, we were all invited to the home and garden of Mrs. Nita Stahlam, aptly named Magnolia Bluff. It is comprised of camellias and magnolias in a large grassed area and a commanding view of the Mississippi.

Our visit to Rosedown Plantations and Gardens at St. Francisville was marred by torrential rain. It daunted even the most adventurous members, but views from the upstairs gave us some idea of the scope of the garden which was modelled on the French style of the 17th century. Intricately patterned low box hedges encompassed evergreen azaleas while majestic oaks gave overhead shade. The creators of Rosedown are reputed to have been among the first plantation owners to have imported camellias from Europe so it was most unfortunate that we could not explore this lovely garden. We did, howev-

er, have time to thoroughly explore this beautiful plantation home and admire the richness of the furnishing.

As we made our way to Baton Rouge, there was no let up with the weather and the afternoon city and garden visits had to be abandoned. That evening we were the guests of the Baton Rouge Camellia Society. What a prestigious group this society must be for we rated a police escort to the garden club rooms and later when the festivities were over, an escort back to our hotel. The Baton Rouge friends really turned it on for us by providing a traditional cuisine and powerful home-brewed wine, courtesy of Art Landry, made from all kinds of fruit. It soon had us in a jovial mood. Following speeches of appreciation to all concerned, some of our party were honored with citations from Tom Ed McHugh, Mayor-President of Baton Rouge and to bring this happy occasion to a close, Vi Stone handed all a large plastic bag of local gifts. It certainly made up for the rain.

Yet another dismal day followed confining much of the scheduled program that was to introduce us to "Cajun Country". We shall never know what the swamp tour embodied but, because it was undercover, we were able to visit the Konriko Rice Factory and follow the treatment of this staple diet of so many countries from the paddy fields to the packaged product. Another great welcome awaited us on reaching our hotel. The South Louisiana Camellia Society had staged a display of local camellia blooms in the foyer and these lovely flowers and a concoction they called "Alligators Blood" did wonders in lifting our spirits so dampened by the weather. The alligator theme was carried on that evening when we visited Prejeans Restaurant for a cajun style dinner of alligator steaks, music and dancing.

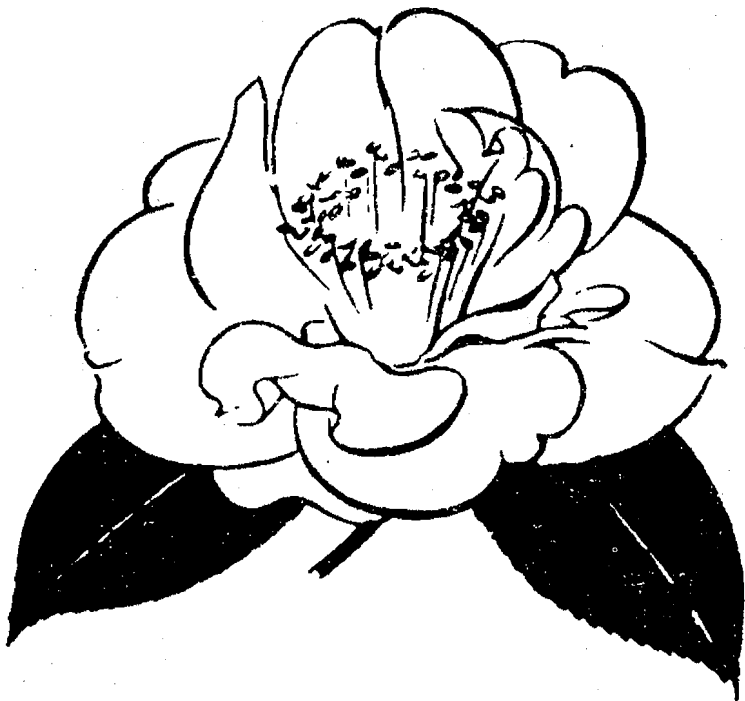
Thankfully it was fine for our last and perhaps, best day of the Post Tour. This was an all day visit to Live Oaks Gardens on Jefferson Island, near Delcambre. We first took an interesting boat ride on Lake Peigneur, seeing the shrimp boats and bird life. The large gardens had fine specimens of camellias, a Japanese tea house and Koi pool. Again magnificent specimens of oaks gave character to the walks that led to the Joseph Jefferson home. History of the garden tells us that in 1865, the site was purchased by Joseph Jefferson who had the charming Georgia-style home built to serve as a winter retreat from his acting life. For decades, he played the stage role of Rip Van Winkle, spending his retreats writing, painting and developing the 20 acre garden. Some of the first camellia varieties available in the U.S.A.

were included in the original plantings. Later, when the estate was purchased by J.K. Bayless, this collection was built up. The late Mr. Bayless must have been a great competitor at ACS Camellia Shows for a small attic room in the house was devoted to displaying his silver trophies and blue ribbons. Camellias of note in the garden were *Camellia japonica* 'Juanita Smith', 'Dixie Knight Supreme', 'Drama Girl Var.', 'C.M. Wilson' and a magnificent specimen of 'Mrs. D.W. Davis', the logo flower of the ICS.

With reluctance, we left this lovely tran-

quil place for a visit to Avery Island, another wild camellia garden which also had small lakes hosting thousands of white herons, before returning to our hotel. Time for a quick change into fresh attire, then off to our farewell cocktail party, yet another of the wonderful camellia tours that have been arranged for ICS members by countries hosting the Congress was over.

Sadly we said our farewells to new friends we had made and old friends of past tours.



NEWS FROM THE UNITED KINGDOM

JENNIFER TREHANE, U.K.

NOUVELLES DE AU ROTAUMOUNI

MELDUNGEN AUS GROBBRITANNIEN

NOTIZIE DE REGNO UNITO

NOTICIAS DE REINO UNIDO

The Royal Horticultural Society has combined with the powerful News International Newspaper Group in order to stage a mammoth International Spring Gardening Fair over the five day Easter period of 1993. It is to be at the Wembley Exhibition Centre, London, from 8 - 12 April. It is being organized as a companion to the Chelsea Flower Show, but as it is very much a spring show, it is all to be under cover, in the exhibition halls.

The U.K. Region of the ICS usually has an exhibit at the much smaller main Spring R.H.S. Show at Vincent Square in London, which Wembley is replacing and we had to decide whether to take part. No one likes the idea of exhibiting over Easter. In addition to Easter being a religious and family holiday, it is often the first chance we have to get out in our gardens and really enjoy our camellias. However, we felt we could not afford to be left out and, after discussions with members at meetings in London and Kent, we found there was sufficient support to go ahead. A meeting in Somerset resulted in less enthusiasm for the project - members there are busy forming the first area group in our region.

The "Wembley Project" has evolved into a full scale camellia show within the main show. So far, we plan a large I.C.S.-U.K. exhibit designed to help the novice camellia grower select suitable varieties for his/her garden, to plant, cultivate and enjoy them. We are to have a table to sell artifacts to help raise funds and another as a "clinic" to help with the queries we always get at these shows. There will be a storage and rest area behind the stand where we can have a break from time to time and socialize a little.

In addition to our main stand, there will be six smaller exhibits from different areas of the U.K., to show what is possible - ranging from north of England down to the far south west and south east. Our friends from the Channel Islands will construct a Jersey garden to show us their magnificent camellias, grown in extremely windy conditions.

We have exhibits promised from the national collection at Mount Edgumbe and

from Borde Hill Gardens where 'Donation' was raised. There will be exhibition displays and competitive classes for flower arrangers and an Ikebana Display, all using camellias as the dominant flower in their work. There is normally a camellia competition for individual blooms at the R.H.S. April Show and this will be held at Wembley but, hopefully, with many more entries competing for more awards.

Trade exhibits from Trehanes and Coghursts are expected so that people can buy plants to take home.

It is hoped that one of the tea companies will take part, to show the public how important camellias are in their daily lives, as a genus of great economic importance. We are also in the process of encouraging landscape design companies to produce a "town garden" and a "country garden" featuring camellias, together with the other plants they associate with, to fire the public's imagination.

It promises to be a real challenge and is potentially the spectacular camellia show that nobody in this country has seen. We hope it will act as the catalyst we need to encourage greater membership in the ICS and it could be great fun, as well as hard work for all concerned.

After Wembley, there are two days' break, then we will have our annual U.K. Regional Spring Long Week End, organized by Jo Freeman in the glorious camellia growing country of Cornwall. She has booked a hotel (maximum 70 people) in the romantic old port of Falmouth and we shall be visiting some of the most interesting gardens of Cornwall over the Thursday to Sunday period. It will be a complete contrast to the exhibition atmosphere of Wembley, making an interesting camellia "package" at our peak flowering time.

This is not a Conference, but it is our own "Celebration of the Camellia". We extend a very warm welcome to any of our fellow ICS members who would like to join us. Just contact any of the U.K. Directors for further information about accommodations, etc.

NEWS FROM THE CHANNEL ISLANDS

ROBERT CHAPMAN, Jersey, Channel Islands

REPUBLIQUE IRLANDAISE D'ISLES DE LA MANCHE ET REGION EUROPE OCCIDENTALE

KANALINSELN, IRSCHRE REPUBLIK UND WESTEUROPAEISCHES GEBEIT

REPUBBLICA IRLANDESE D'ISOLE DEL CANALE DELLA MANICA E REGIONE EUROPA OCCIDENTALE

ISLA CANAL DE LA RÉPUBLICA DE IRLANDA Y LA REGION DE EUROPE OCCIDENTAL



ROBERT CHAPMAN

Situated in the 22 acres surrounding Les Augres Manor, in the Parish of Trinity in the Channel Island of Jersey, is the world famous center for the preservation of endangered animals, established by Gerald Durrell in 1963.

In 1970, a garden committee was appointed under the chairmanship of Mrs. Violet Lort-Phillips, past president of the ICS, with the brief where possible, to integrate plants with the animals. With the enthusiastic help and advice of Mr. Arthur Hellyer and his late wife and Mr. Roy Lancaster, who researched and suggested appropriate planting, the members of the committee worked hard planting trees and shrubs. Those of you who know the grounds of the zoo, will know that the various animal enclosures are linked by a series of avenues and paths. Between the lemur wood and red-ruffed lemur enclosure, a camellia walk was established, planted with varieties of *C. Williamsii* and *C. Japonica*. In 1991, when the adjoining colobus monkey colony was rehoused in a new home within the zoo grounds, it was decided to redesign their old home and Mrs. Lort-Phillips was asked if she would like to plant more camellias. After consulting the ICS Committee for Local Affairs, plans were drawn up by a local landscape architect.

Mrs. Vi Lort-Phillips wrote to ICS Directors and Officers world-wide inviting them to donate plants, or money to pay for plants bought on their behalf. As a result, we have had beautiful camellias from France (Claude Thoby), The UK (David and Jennifer Trehane; Mrs. J. Miller), China (Gao Jiyin), and donations from the USA (President Thomas Perkins, III; Vice President Bill Stewart; and Jean and John Comber), Australia (The Directors and Dr. & Mrs. Hayter), South Africa (Mr. and Mrs. Van Heerden), the Republic of Ireland (Col. &

Mrs. Price), the Channel Islands (Mrs. Lort-Phillips; Mrs. M. Reynolds; Mrs. A. Bushell; Dr. Thurston and Dr. Chapman; and Mr. & Mrs. Novak). Camellias are also being sent from Italy, Japan and New Zealand.

A special evening was arranged on 1 April 1992 for the official planting to be performed by Lady Sutton, the wife of Jersey's Lieutenant Governor, herself an enthusiastic gardener.

In a howling gale and driving rain, attended by many ICS members with zoo officials, Lady Sutton performed the ceremonial planting of the final camellia, 'Vicomte de Noailles' completing the planting of 35 plants.

After the planting, 98 members and friends enjoyed a brilliant lecture by Mr. Tony Schilling; the well-known horticulturist and plant finder, illustrated by some stunning color slides of an expedition he had recently led to south-eastern China.

As all plants have not yet been received, a full list of the planting will be given in next year's *Journal*. We have tried to introduce a representative selection of *reticulatas*, *japonicas*, *sasanquas* and *bigos*, relevant to countries which have contributed.



Lady Sutton assisted by Mrs. Vi Lort-Phillips 1-April '92

ICS WEEK END IN KENT

ROBIN MILLER, U.K.

Week End De LICs Kent

ICS En Kent

IL Wek End ICS A Kent

ICS Woecheende In Kent

"The Garden Of England," as Kent is called lived up to its name as some 80 ICS members toured the area, giving us an abiding impression of old cottage gardens ablaze with spring flowers, beamed medieval houses, village greens unchanged since the 18th century, orchards in bloom, hop gardens and rolling hills with fine prospects opening up from their summits. We assembled on Friday at Knole, a national trust property, still the home of the present Lord and Lady Sackville, one of the largest private houses in England dating from 1467, Knole is noted for its silver carolean furniture and tapestries.

We proceeded to Emmetts Garden, another national trust property which is the highest garden in Kent, crowning a hilltop which commands magnificent views in fine weather. Emmetts suffered severe damage in the 1987 hurricane which the trust is repairing. It is also restoring the garden to something approaching its former glory. After a very cold, wet afternoon, we arrived at our hotel. After dinner, Mr. Garwood, a national trust lecturer, gave an excellent slide show and talk of Trust Gardens.

Saturday, the sun came out and made our visit to Hever Castle a total joy. Hever is an ancient castle - complete with drawbridge and portcullis. The Boleyn family built a timbered house which has been restored and modernized by the Astor family. The property is now owned by Mr. Gurney of the Broadlands Trust. The grounds possess those essential ingredients of gardening variety, surprise and water. Near the castle all is simple on one side, apple trees in grass thickly planted with page narcissi, on the other, is a sweep of grass rising to shrubbery in which rhododendrons were beginning to flower, backed by woods.

Further on, one enters an Italian garden - with two long pergolas, built from golden antique stone, with statuary and urns to

match on the north side, a magnificent fernery watered by a hundred dripping fountains, gives way to a long wall of mature camellias. We all agreed Hever had to be one of the "Stars" of the week end.

Our next stop was at Chartwell, the home of Sir Winston Churchill, set high on a ridge. The house has the typically sweeping views of the county with the ground falling away in a great unbroken run of grass down to a lake. The National Trust is replanting one of the many woods destroyed in the '87 hurricane. The house is interesting for its Churchillian Associations and memorabilia. The garden, divided by many enviable brick walls, Sir Winston constructed, contains 18 fine old camellias rumored to have been planted by "Winnie" himself.

That night the society entertained our honored guests. Mr. and Mrs. Glass and Mr. and Mrs. Bleaney who were kindly opening their gardens to us.

Sunday was Sissinghurst Day. Ideally Sissinghurst should be seen in June when the garden is filled with the beauty and scent of Vita Sackville - West's Planting - the old fashioned roses. At other times of the year, Harold Nicholson's achievement can best be appreciated, for it was he who designed the garden's astonishing architecture, using the remains of the old Tudor Mansion and two cottages. Nicholson's design for the garden drew together the chaotic mess of rubbish and vegetable patches they found into a bold and completely satisfying garden. His work is best appreciated from the top of the Tudor Tower. rarely have yew hedges been so well used. We were greeted by Vita's eldest son. Nigel Nicholson, who apologized for the lack of camellias - actually we noted a pale pink C. x 'Williamsii' near the tower and one or two others tucked away in corners.

After Sissinghurst, we visited the garden of Miss Patricia Thoburn at Pymptne Manor,

Benenden. We discovered the great surprise of this garden - A valley, quite invisible from the house with high banks on either side and an enviable stream lead past towering "Tree" rhododendrons and the tallest camellias - 'Donation'. the thick canopy of flowers supported on leafless and curiously elegant stems - the result of the hurricane which removed many of the trees. Happily, many of the camellias had been pruned just before the storm and these are now shooting up with renewed vigor.

We then visited Dennis and Peggy Glass' 10 acre garden at their home, Inwood, Charing. The place is aptly named for "In Wood" it is indeed - a thick forest all in the first pale green of spring growth. There were more camellias here than we had anywhere else, both around the house and thickly planted in a valley on the present such a mass of flowers as those at Inwood. Another feature of Inwood is a conservation area of meadow below the house with primroses, cowslips, orchids and the delicate cuckoo flower where the grass is left uncut until August to allow everything to seed.

We then traveled to the old town house, Lingfield, the pretty home of Paul and

Jeannette Bleaney, an ancient timbered house. The limited space has been used well. A small suntrap courtyard between the house and an outhouse, smothered in cleamatis montana, their glass house was literally bursting with so many plants that one could see that the Bleaney's are camellia fanatics

Some of the members visited Ightham Mote. The first part of Ightham dates from 1340 but grew at intervals until the 17th century. Charles H. Robinson purchased the property and restored it bit by bit. After his death, he bequeathed the house and its 500 acres to the National Trust, who are restoring, replacing and rebuilding it. Joe Simons, the young head gardener, is faced with a difficult task in restoring the garden. A camellia was presented to join the others as camellias had been presented to each of our earlier hosts.

We have Joyce Wyndham to thank for all of the arrangements which added up to the success of so many conferences since 1982. She is retiring from the onerous task of finding new gardens and organizing new trips. Thank you Joyce. And may you enjoy many conferences free of worry.



Camellias in South Africa

JAN VAN BERGEN S.A.

CAMELIAS EN AFRIQUE DU SUD

KAMELIEN IN SUEDE AFRIKA

CAMMELIE IN I-AFRICA MERIDIONALE

CAMELIAS EN SUDAFRICA

Growing camellias in an area where very little or no rainfall occurs, during their flowering season, presents certain problems and limits the growing of some varieties if high quality flowers are required.

At our nursery, Boskoop Nursery, we keep daily records of rainfall, temperature and humidity. These records help us in growing our camellias. The following are the general growing conditions in our nursery: (1) Growing our plants under shade netting of 40%; (2) Soil mix consisting of 1/4 bark, 1/4 peat and 1/2 sandy loamy soil, and a small quantity of trace elements; (3) Feeding the plants a balanced fertilizer; (4) watering by overhead sprinklers which increases the humidity.

During the flowering period (February to September), they have the following average rainfall:

Feb 71mm	Mar 139mm
Apr 54mm	May 50mm
Jun 9mm	Jul 0mm
Aug 7mm	Sep 42mm
Oct 113mm	

Humidity on hot, warm days in February, can be as low as 15%, in March and April, slightly higher; In May, June, July and August, the humidity can go as low as 15%.

Temperature-Degrees Centigrade

Feb 13-24	Mar 11-32
Apr 8-30	May 4-27
Jun 01-23	Jul 02-23
Aug 0-24	Sep 3-29

During the peak *C. japonica* flowering season, there is no rain, low humidity, cold nights and warm days. The *C. sasanqua* is not affected as they flower mainly during February, March and April.

There are about 75 varieties at the Boskoop Nursery, which include *C. japonica*, *C. reticulata*, *C. sasanqua* and *C. hybrids*. These burn easily when exposed to direct sun and in view of this, the single, semi-dou-

ble and loose double type are promoted. The nursery was started 15 years ago and under normal garden conditions, some of the original plants like 'Anticipation' and 'Francie L.' are now four metres high and 'Elegant Beauty' is about five metres high. The *C. japonica* varieties are about three metres high.

The plants are fed once a year and the old leaves around the bushes are never removed as they create a much needed mulch. The nursery recommends *C. reticulatas*, *C. sasanquas* and *C. hybrids* for sunny positions and *C. japonicas* for semi-shaded positions, except for the white flowering varieties like 'Snowman' where full shade is recommended. The nursery has no diseases in the plants, but sometimes has aphids which can be easily controlled.

CAMELLIA JAPONICA 'STALIN'

ANTONIO SEVESI, Italy

CAMELLIA JAPONICA 'STALIN'

KAMELIA JAPONICA 'STALIN'

CAMMELIA GIAPPONICA 'STALIN'

CAMELLIA JAPANICA 'STALIN'

Prof. E.G. Waterhouse, on his journey to London in 1950, and in order to be present at the conference "Camellias and Magnolia," stopped in Italy and visited some places where he thought he could find interesting camellias for his studies on camellias. Camellias at that time, owing to his studies, were coming out from oblivion. The relation of this journey was published in the 1950 "American Camellia Society Yearbook."

Prof. Waterhouse pointed out that in the nursery "Le Camellie" of Bagnasco Brothers at Bogliasco, they showed him a camellia called 'Stalin' of which he probably did not recognize from the description. The cover of the *International Camellia Society Journal* of October 1988 had a photo of the camellia *japonica* 'Stalin' taken in my garden. I thank Mr. K.H.R. Clapp for photographing the camellia and Mrs.D.M. Freeman who published it.



ANTONIO SEVESI

As soon as I became interested in camellias around 1950, I tried to find out about the old varieties, unnamed and forgotten, and import new varieties and discover the forgotten ones. One of the nurseries I visited was Bogliasco called "Le Camellie" founded in 1835, at that time belonging to Dr. Ulderico Ferrari.

During my visit, Dr. Ferrari showed me the *camellia japonica* 'Stalin', telling me that his old gardener, a communist, saw this seedling and asked if it could be named 'Stalin' and Dr. Ferrari agreed. I asked for a small plant to enrich the collection of my garden and now it is 4 mts. high.

I asked the nursery of Lago Maggiore to reproduce this camellia and put it on the list of available camellias because the camellia nursery at Bogliasco was no longer in business.

THE CHARACTER BEHIND THE CAMELLIA OR THE PERSONALITY AND THE PICTURE

ROSS HAYTER, Australia*

LE CARACTERE DES CAMELIAS OU. PERSONALITE ET IMAGE

CHARAKTER DER KAMELIE - ODER - DIE PERSOENLICHKEIT UND DAS BILD

IL CARATTERE DIETRO LA CAMELLIA O SUA PERSONALITA ED IL DISENGO

CHARACTER DETIAS DE LA CAMELIA - O PERSONALIDAT E IMAGEN

The naming of camellias after people has become increasingly popular with camellia lovers since their introduction into the Western world about 180 years ago. Eastern botanists rarely use peoples' names preferring to give a camellia the name of a locality or natural event. Quite often a legitimate oriental name was given an European synonym to honor or flatter a lady.

Seldom when camellia lovers handle a flower bearing the name of some person, do they think who was this person and why does it bear his or her name? Sometimes it has the name of the wife, the person behind the man — for with every good grower, there is usually a very patient and supportive wife.

Tradition has it that Buddha was the son of a king born some 500 B.C., not very far south of the great Himalayan range. The enlightened one, as he is referred to, gathered around him monks who followed his teaching and spread his doctrine. They established monasteries which spread throughout Asia, and to beautify these buildings, the monks collected camellias, magnolias, peonies, etc. Naturally they would have selected special forms and these they traded with other monasteries in China and over to Japan. Hence when European trading posts were established around the coast of the China Sea and obtained their first camellias for sending to Europe, the varieties sent were far removed, both botanically and geographically from the wild species.

Camellia 'Buddha' could not have been one of these as it is a *reticulata* x *pitardii* hybrid raised by Professor Tsai in Yunan and sent to Descanso Gardens in California where it was given its name.

Another camellia bearing a very famous Chinese name is 'Confucius'. Confucius was a philosopher and adviser to several governments, an advocate of righteousness and benevolence. The sayings of Confucius are

numerous, for example the golden rule "What you do not like when done to yourself do not do to others" and "Learning, undigested by thought, is labor lost; thought unassisted by learning is perilous". I consider this very appropriate to camellia hybridizing.

Camellia 'Confucius' is attributed to hybridizing in Yunan by Professor Hu who sent the seed to the U.S. where it was named and distributed. It has now returned to China as 'Kongfuzi'.

One Japanese character does have his name immortalized in the camellia world as well as in Japanese literature. Hikaru Genji, meaning bright Genji, was a prince of the Minamoto clan. He loved the fine things in life and enjoyed himself in one of the emperor's courts. He is recorded as having quite a lot of success with the ladies as well as having other adventurous exploits. Perhaps that is why camellia 'Hikaru Genji' has produced such a lot of beautiful offspring, too numerous to mention here.

Captain Rawes. Perhaps no man did more under most difficult circumstances to bring camellias into the western world. We know him best for this camellia *Reticulata* which bears his name. It is probable that an on-shore agent, one John Reeves, obtained, potted and packed plants for their long sea journey to England before handing them over to captains of the ships of the East India Company, of which Richard Rawes was one.

This sea captain has a very special place among American camellia greats through the small camellia, the so-called species '*Maliflora*', brought to England by him in 1816. *Hovey's Magazine* listed it in 1835. It was seen in the Woodruff garden in Pasadena and nurseryman Vern McCaskill propagated it and, not knowing its name, gave it the synonym of 'Betty McCaskill'. Most interesting is the connection of an oriental species, brought to the west by an English

sea captain listed by a Bostonian nurseryman, to turn up later in a Pasadena garden and be propagated on and distributed by a Californian. Camellias are truly international.

This diminutive flower Camellia forest is named in honor of one of the giants of plant collecting. George Forrest was a Scot who collected in Yunan, southern China, over 28 years, some of his expeditions spanning over a three year period. His introductions of new rhododendrons dwarf all other collectors. His contributions to the camellia world include the single, or species type camellia *Reticulata*. Up until this time, botanists had concluded that *C. reticulata* 'Captain Rawes' was the specie. Forrest also sent back the first and many naturally occurring variants of the species *saluensis*. Having personally travelled through the more civilized parts of the area, where he collected, one can imagine the dangers and hardships which he incurred over the many years. At one stage he was hunted for eight days by blood thirsty bands of Lama bandits. He hid by day and battled his way through wild mountainous country by night. This was in the area where the mighty Mekong, Salwein and Irrawaddy rivers cut deep gorges between 14,000 ft. ridges. George Forrest died of a heart attack at the conclusion of the collecting trip after which he had planned to retire. His grave in Tenchong on the Yunan-Burma border was desecrated by followers of the notorious Gang of Four. It is now a cornfield.

Gillian Carlyon of the Cornish and New Zealand family of gardeners must be rated as one of Britain's most successful hybridizers. She was the sixth generation descendant of William Carlyon, the developer of the great Cornish garden, Tregrehan. This camellia cultivar 'Edward Carlyon' is one introduced by Gillian, it has been described as a weeping form of *C. 'Donation'* and was named to honor the founder's son Edward. His son, George, rather disgraced himself by falling in love with the estate game keeper's daughter—hardly socially acceptable in those days. He took off rapidly to New Zealand—I suppose as far as possible. He established his family successfully there. George's grand-son, Rupert, with his family, as heirs, returned to Tregrehan in 1935 but tragedy soon struck. He died on war service and later his son was killed in a motor accident in Africa at the age of 28. Family fortunes declined, no doubt aggravated by having to meet British death duties twice in rapid succession. On Miss Carlyon's return from the Women's branch of the Royal Navy after World War 2, she embarked upon restora-

tion of the neglected garden. Over 40 years she built a thriving nursery business selling over 100,000 cuttings per year. Her enthusiasm for camellias was not just for profit, but hybridizing was a great joy to her until her untimely death at age 62. She was greatly encouraged by her friend of many years, Mrs. Christian Lamb, who is with us today. One of Gillian Carylons favorite camellias and said to have inspired her, was *C. 'Leonard Messel'*, one of the famous Messel family responsible for the creation of that classic English garden, Nymans's Sussex. *C. 'Leonard Messel'* a hybrid between *C. reticulata* wild form and *C. Williamsii* 'Mary Christian' is of 1958 registration—the first successful cross of this type recorded. When talking of early hybridizing mention must be made of *C. J.C. Williams'* recorded as the first *C. saluensis* x *C. japonica* hybrid. The man whose name it carries, spent two to three hours each evening recording the work being done in Caerhays, the garden which he controlled. About 1930 he had collected all his scattered notes into one book and was taking it to London by the night train. His attache case containing 50 pounds, but more importantly his book, was stolen from his sleeper and his life work of recording lost.

James Saumarez (1757-1830) was born in Guernsey, Channel Islands. In his naval life, he ultimately reached the rank of Admiral and for his successes in the Napoleonic Wars was raised to the peerage as Baron de Saumarez. The camellia *C. 'Lady de Saumarez'* honors them both. Fernao de Magalhaes, a Portuguese sea captain who sailed for the Spanish is better known to the English speaking world as Ferdinand Magellan. He does not need a camellia to immortalize his name. Donna Herzilia de Magalhaes of Oporto is a descendant of this famous man so perhaps this connection will help you in remembering the longest name in the nomenclature book.

In France, honors were bestowed upon the ladies of prominent soldiers and celebrities by having camellias named after them. Andre de Massena, he became one of Napoleon's most trusted marshals—Eugenie de Massena I presume to have been his wife. Wives, apart from having camellias named after them, do not appear to have been sufficiently important to be mentioned in history.

The former Province of Berry is steeped in history from before the reign of Clovis and at one time, by reason of a royal marriage, became English territory. The title of Duke de Berry was usually given to the second son

of French kings, in this instance it was Charles X's. The Duke was assassinated leaving his beautiful widow, Caroline, pregnant. The Duchess de Berry gave birth to a son and on the death of Charles X in exile, he became the legitimate pretender to the throne of France as Henri V.

That camellias were so important in French social and intellectual life is born out by the fact that one of the copies of *Verschaffelt's Nouvelle Iconographie es Camellias* was from Empress Josephine's own library. It is now in the American Camellia Society's Library at Masse Lane. Also it is recorded that Empress Josephine grew many camellias at Malmaison, employing English gardeners. During the Napoleonic Wars, these personnel plus plants were allowed through the British blockade, provided they were destined for the Empress's garden.

Another fragment of international camellia history is the story of G.F. Seidel, a nurseryman botanist, who had been conscripted into the German army and was billeted near Malmaison during the campaign of 1814-1815. On returning home, he stuffed his knapsack with small camellia plants. Within two years he was offering camellias for sale and the nursery became one of Germany's most famous for over 100 years. The beautiful C. 'Otome' of Japan or C. 'Pink Perfection' of America has another synonym, C. 'Frau Minna Seidel'. Which one of this famous camellia family was she?

In Nantes a nursery was established in 1862 by Henri Guichard. After his death in 1911, his widow and daughters carried on the business as Guichard Soeurs. They exhibited widely in Continental Europe and at Chelsea. In 1955 it was taken over by Claude Thoby who controls it to this day. He is of course one of the I.C.S. directors for France.

To the Antipodes, and as I could not find a camellia named after a prominent South African, it is to Australia where camellias arrived in 1836.

One of the best known Australian camellias is C. 'E.G. Waterhouse', a founder of the Australian Camellia Research Society and the International Camellia Society. He was a language professor at the University of Sydney where he had gained first class honors in French and German. He did postgraduate work in Paris. Whilst he was there, he was asked to lecture in French on how English was pronounced in Australia - no mean task! Before retiring he added Italian to his language skills and at the age of 80 started studying Japanese so that he could better

cope with the sorting out of the camellia nomenclature mess of his day. He died in 1977 at the age of 96.

Walter Hazelwood, the gentle giant of Australian camellias, was a retiring, generous man, who was always ready to help when called upon. He was a great advocate of tree planting for parks and in combating pollution before it became fashionable to do so. He and his brother created one of the great nurseries of the Southern hemisphere. He was a co-founder of the Australian Camellia Research Society, a foundation member of American Camellia Society. He was awarded medals by the French and Italian governments for his services to horticulture in these countries — a true international. He died in 1980 at the age of 95. Alec Jessep, the last of the founding fathers of the Australian Camellia Research Society, died only last year a week before his 99th birthday. He spent much of his working life as Director of the famous Melbourne Botanic Garden. He was President of the A.C.R.S. for the first 10 years of its existence, when it made dramatic growth.

Less than a year before, he died he spoke articulately at the A.C.R.S. Annual Dinner and presented the six medals which he had been awarded for his lifetime's work in horticulture to our Society. These are now housed in the study of Professor Waterhouse's old residence Eryldene, the spiritual home of camellias in Australia.

Camellia research and hybridizing in Australia did not stop with the founders. One person very active in this field and in importing new species into the Western world is Bob Withers, receiver of the highest awards of the Australian Societies of Liliiums, Rhododendrons and Camellias. He is very ably assisted by his wife Hari, that dynamic Egyptian-born Greek who is with us today. Bob proudly named a camellia in her honor.

Camellia 'Thomas Walter Savige' was originated by his son Thomas J. Savige who is a world figure in camellias. For the last 10 years he has worked on camellia nomenclature culminating in his book *The International Camellia Register*, now at the printers. This work continues on the incomplete research of Dr. Ralph Philbrick who was sponsored by the Longwood Foundation. Tom has not enjoyed such support. It has been a labor of love for the future of camellias.

Margaret Davis has the rare honor of having three flower cultivars named in her honor; an iris, an azalea and, of course, this superb camellia. She was the founder of the Garden Clubs of Australia, an organization of 20,000 members. This camellia is a sport of

the old *C. 'Aspasia Macarthur'* (not a real person), of 1850 registration, but it was not the first offspring of the sporting lady. As early as 1898 *C. 'Lady Loch'* was listed as a tribute to the support given to horticulture by this Victorian Governor's wife. Australia's only native rhododendron *R. lochiaie* also honors her. *C. 'Aspasia Macarthur'* did not stop sporting with these accomplishments. Her latest was introduced and named *C. 'Jean Clere'*, by the wife of Richard, I.C.S. director. This takes us to New Zealand where camellias thrive better than in most parts of the world and the name 'Jury' springs to mind immediately. The two great but independent hybridizers, Les and Felix, have taken out many world-wide honors. *C. 'Mona Jury'*, named after the wife of Les is just one of the many introduced, with *C. 'Debbie'*, *C. 'Anticipation'*, *C. 'Elise Jury'*, *C. 'Water Lily'* etc., and, of course, *C. 'Wilbur Foss'*. Wilbur noticed this superb bloom in the trial area of Les Jury's garden. At this time Wilbur was President of the Camellia Society of Southern California. Apparently Les did not think the bloom worthy of registration, but due to the enthusiasm of Wilbur and his wife Helen, he did so. Every year when it blooms in our garden, it reminds us of our late Californian friend and of his wife. This could take us on the United States but a little more of New Zealand first. Ben Raynor named *C. 'Wayne Raynor'* after his wife. His interest in camellias is said to have started when he considered some old camellias were in the way in their new garden. He pruned them with a chain saw and shifted them with a front end loader. To his surprise, they survived and so decided, this practical man, that camellias were for him. His collection of camellias grew to thousands as his farm shrank.

Dr. Brain Doak pioneered the crosses of the previously considered sterile *C. reticulata* 'Capt. Rawes' with *C. saluenensis*. He named this one for his wife 'Phyl Doak'. The camellia which bears the name of 'Dr. Brian Doak' was registered by Betty Durrant. She, in turn, has this camellia named in her honor. It was bred, as you may have guessed, by Dr. Doak, another *C. saluenensis* 'Capt. Rawes' cross.

Whilst speaking of the Durrants, Betty and Tom, these two people have been and still are giants in the camellia world. Tom was involved in getting the Yunan reticulatas into New Zealand direct from China, contributes world wide to camellia publications, and was editor of the *New Zealand Camellia Bulletin* for years. He was a very successful farmer after a distinguished army career and in his retire-

ment is as active as ever. He and his wife hybridized extensively. It's doubtful if the camellias which carry their names do these outstanding camellia personalities justice.

Yvonne Cave's name is synonymous with good camellia photography which has appeared on the front covers of many camellia publications. This camellia bears the name of her late husband Harry, a very prominent New Zealand camellia plantsman, but his name goes down in the book of records as the cricket captain whose test team made the least runs in any international test match. New Zealand went all out for 39. It must also be noted that the seed parent of *C. cv. 'Harry Cave'* is none other than *C. cv. 'Bob Hope'*. We could say *C. 'Bob Hope'*, is the mother of *C. 'Harry Cave'* - strange things do happen in the camellia world! This latter camellia named after the English born film star who made his name not only in American but world wide. He is a true international bringing joy and family style entertainment to millions. However let us slip back in time to about 1830. At this time C.M. Hovey, nurseryman and editor of *Hovey's Magazine*, was doing much to popularize and sell camellias to those near and far, as well as importing and evaluating seedling.

Among his contemporaries was one Col. Thomas H. Perkins — a pity a camellia does not bear his name today. These gentlemen with Marshal Wilder and Samuel Sweetner exhibited frequently at the Massachusetts Horticultural Society and are credited with bringing most of the European varieties to Boston between 1830 and 1860.

The world famous Arnold Arboretum, founded in 1872, under the auspices of Harvard University, had as a guiding star, Professor Charles S. Sargent. Under him, a most extensive and aggressive plant and seed collection program was conducted, benefiting not only his homeland, but the world in general. His special interest was China, Japan and the south east of the United States. Strangely the latter area had been neglected for over 70 years. He remained director of the Arnold until his death in 1929 at the age of 86.

Referred to by the late Ken Hallstone as "the man who never did anything halfway", the camellia which carries the name of 'Frank Pursel' bears this out. Frank was made a Fellow of the A.C.S. for his outstanding hybridizing efforts. Added to this, he was a successful business man, a strong supporter of his camellia societies, a talented musician and a loyal and caring friend. What better memorial to such a man as this magnificent

camellia C. 'Frank Pursel' and this bloom of C. 'Jean Pursel' his loving wife. The name Giulio Nuccio, like so many of his family is synonymous with Camellias in California and, indeed, the whole world. Giulio migrated to California from Northern Italy and it was his two sons, Joe and Julius, who established the present nursery business. They are highly selective in their new introductions. 10,000 seeds are sown each year and exceedingly few of these are ever released to the public annually — sometimes none - occasionally up to five. No wonder when they do introduce a new cultivar, it has to have the merit of the camellia they named in honor of their father. *C.v.* 'Giulio Nuccio' represents their search for perfection.

Mr. Camellia, or Dave Feathers, originated and registered this camellia in honor of his friend, Milton Brown. "Brownie's" outstanding war service earned him the Silver Star, followed by the Medal of Merit awarded him by the U.S. Government. He came to Fort Valley as administrative head of the A.C.S. and served in that capacity for thirteen years. His efforts did not stop there. He was a great administrator with almost boundless energy for every organization with which he came in contact, his church, the Chamber of Commerce, the Boehm Collectors Guild, his local Camellia Society and the list goes on. His activities in our International Camellia Society naturally led him to becoming a Vice President and he attended many I.C.S. conferences as well as being involved in the bringing of Chinese botanists to Massee Lane and assisting in getting Camellia chrysantha into the Western world. To sum up the meritorious like of Milton Brown in such a short space of time is of course impossible, but those who knew him are richer for the privilege.

To follow the latter gentleman is no easy matter. I have chosen Milo Rowell, Advocate General to Douglas McArthur in Japan and who was basically responsible for writing the Japanese Constitution which appears to be serving that country very well today.

I refer to the hard working Annabelle Lundy Fetterman. Breaking tradition, she became the first woman to preside over the American Camellia Society, a position for which she was ideally suited, as her love of camellias is long standing and her capacity as a business woman without question. She was rated No. 8 chief executive of North Carolina's top 100 — no mean feat.

The generosity of the Lundy Fetterman family matches her business competence, the large bequests to Campbell University and to the A.C.S. are well known. I'm sure

there are many others. To be a guest in her home is a great privilege and joy. Her warmth exudes everywhere. Annabelle is a member of many camellia societies world-wide. She fulfills her father's motto, "Service above all. He profits most who serves best".

Ann Blair Brown is another one of our present day leading ladies of the Camellia world. Widely travelled, a diplomat by nature and an exceedingly hard worker, both as support to her late husband and after his all too early death, in taking over his position as executive director of the American Camellia Society. We all owe a great deal to Ann Blair Brown. Her task is not easy but the A.C.S. continues to make great progress through her efforts in association with the changing executive of the society which she represents.

In my allotted half hour it has, of course, been quite impossible to pay homage to all the camellia characters whose names adorn flowers. To finish I have chosen this bloom because it is named after a lady who epitomizes the spirit of this convention, warm southern hospitality at it's best. Indeed Vi Stone, that generous Southerner, a widely travelled director of the I.C.S., hybridizer and one who shares her good fortune with all those around her. If asked who has the most friends in Louisiana and in the I.C.S., a lot of people would say Vi Stone - for to know her is to love her.

CAMELLIA FRIENDSHIP

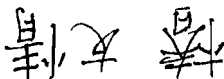
HELEN SIMON, Australia

AMITIES CAMELIENNES

KAMELIEN "FREUNDSCHAFTEN"

CAMELIE AMICIZIA

LA AMISTAD DEL LA CAMELIA



Browsing through the Australian Camellia Research Society, New South Wales, Foundation Branch Library recently, I pounced on the book by Choka Adachi "Camellia — It's appreciation for Artistic Arrangement." As I turned the pages nonchalantly, a strong feeling of reminiscence came over me. No longer was I at the camellia meeting in Gordon but wafted over the oceans to Tokyo, home of the Adachi family where I was a guest one evening. Just as quickly I was back to the local scene with the book safely tucked under my arm for future enjoyment.

Although I had read Choka's book some years ago, a second reading gave me much more pleasure and appreciation of his delightful style. The book is a must for all camellia admirers. It has a sentiment to attract and please all readers. Memories crowded my mind of the kindly family greeting given me and my guide/interpreter, Eikichi Satami, followed by a walk in the lovely family garden dodging the rain.

While Choka led the way up a spiral staircase to his studio, Takeko, his wife disappeared. Choka was a scholar, painter, artist extraordinaire garbed in an elegant, shimmering grey, black and silver kimono. We three knelt on cushions around a Kotatsu aglow with soft pink embers anxiously viewing color slides, mine on loan from Professor E. G. Waterhouse in Sydney, Australia and Choka's in preparation for his forthcoming book.

After a freezing, wet and hectic journey by train, bus, taxi and on foot from Maranouchi in peak hour, battling through New Year crowds, the warmth and calm of the studio seemed like heaven! Then an electric storm caused much consternation as light, power and inter-com system failed for fifteen minutes.

A faint knock introduced daughter, Toko, who drifted in like a dream with exquisite lacquer trays, camellias fresh from the rain and an appetizing meal. All language barriers

fell away as the camellias took charge of the conversation, Satomi being a skilled interpreter, alternated Japanese and English with apparent ease throughout the evening.

Later, with a few swift and expert strokes of his brush, Choka completed two intriguing bamboo paintings which he kindly gave me. He also composed a poem for me which, after many attempts in many directions, I have not been able to have translated. Tantalizing!!

In one section of his book, with great reverence, Choka says: "To all camellia lovers in the world, I dedicate here my treasure 'The picture one hundred camellias' which has never allowed to be taken out of the house." "Lord Mitsuhiro Karasamaru, an authority of Japanese literature and poetry made up this scroll from the many thousands camellia varieties in Japan." "It has prefaces written by Karasumaru and Rozan Hayashi so this is undoubtedly one of the earliest versions."

In retrospect, I realise just how privileged I was this evening when Choka placed this very precious scroll of camellia paintings in my hands to carefully unroll and study in amazement the delicate paintings of ornaments decorated with camellias. Birds and mice (!!) pecking at fallen petals. Indeed this is a wonderful product of the imagination for our camellia heritage... nearly four hundred years old!

In his book, Choka records that Dr. Honda named the snow camellia species "Rusticana" from the title of the famous Italian opera "Cavaleria Rusticana." How versatile the doctor was!

Originating in the Higo province chiefly around Kumamoto City on the Kyushu Island, many Higo camellias are over 100 years old and much revered. I do like Choka's observations that "Camellias are sweet like mothers, gentle like fathers, and tender like grandmothers!"

"My son photographed all the camellias through the mountains all over Japan while

I only instructed him with the aid of a warm Kotatsu at an inn." Katsuyoshi's photos are outstanding throughout this book with individual camellias and trees in bloom.

Yoshiaki, the elder son, is a famous potter — some of his creations are included in the "Artistic Arrangement" section of the book. Wife and daughter also arranged camellias and other flowers in vases for selection in the same section. All of which means that the whole family has contributed to confirm what Choka generously proclaims that "The hope and endeavors of my whole family are exactly those of my fifty thousand devotees."

This wonderful evening came to an end with a delicious supper downstairs with Takeko and Toko in the warmth of a Teburu. I reluctantly said, "Sayonara" as I departed in the luxury of a taxi all the way back to the Maranouchi laden with newly acquired treasures and exhilarated by my new experience.

In March 1980, at the ICS Congress in Kyoto. I was the fortunate recipient of a most useful cushion from Miss Toko Adachi. This

caused quite a stir for the customs officers who searched it for drugs and guns.

This camellia friendship began in the tea-house of the Eryldene Garden "to get the feeling of the East", said Professor E.G. Waterhouse as he wrote a letter of introduction for me to the Japanese Camellia Society. Unreliable as shipping could be so long ago, the Society was in recess when I arrived so plans were changed to avoid disappointment. This visit to the Adachi Family was the happy result in December 1958.

Toko Adachi has carried on her father's tradition of a most successful and long standing flower arrangement school. Her latest triumph — she has become the eminent president of the Japanese Camellia Society.

CONGRATULATIONS

A JOYOUS FUTURE TO MISS TOKO ADACHI

DAVID AND HIS GARDEN

JEAN MICHEL MADEC, France

DAVID ET SON JARDIN

DAVID UND SEIN GARTEN

DAVIDE ED IL SUO GIARDINE

DAVID Y SU JARDIN

For its second trip to a foreign shore. The "Societe Bretonne du Camellia" has remained faithful to the prestigious region that is Cornwall, cradle of the Williamsii Hybrids.

Planned, organized and directed by Denise Madec, with the enlightened local help of our friend and member. Charlotte Petherick, the group of 24 Bretons visited in succession — Anthony Woodland Garden, Trangwainton, Trewidden, Trehane, Tregrehan, Porthpean, Chyverton, Caerhays and Bumcose.

Each of us appreciated the gardens according to our own tastes and leanings. We all know there is no accounting for taste or colors. But amid these impassioned camellia fans, friendship permits each of us to express his or her preference.

Some were enchanted by the size of the semi-wild parks, the splendid blooms and by the love of nature, respected and well tended. Others were seduced by the harmony of colors between the camellias, the rhododendrons and the magnolias. Others admired the castles and manor houses, their magnificent settings, as in Caerhays and Chyverton, with their large well-kept lawns, their sheep-dotted meadows, limpid brooks and quaint bridges.

My purpose though is not to tarry on the



Jean Madec and David Trehane

beauty of the parks and the gardens — that has been done before. I would simply like to tell you about a man, an extraordinary man, who surprised and enhanced our group. I want to speak of David Trehane.

I met David Trehane in 1985 during the congress at Brighton where his humility, his generosity and his professionalism left their mark on me. This time, I found him in his surprising garden, near Truro, radiating happiness, and with a twinkle in his eye! Our sadness at seeing the manor in ruins contrasted sharply with

our pleasure of basking in the owner's wisdom, discrete smile and quiet assurance, his utmost attention given to our questions and feelings. Dressed in a velvet suit with vest, typically British, David invited us into his universe, which he saved from utter ruin by purchasing the property in 1963.

The large four-acre maze made up of interior gardens, slanted pathways, great walled courts slowly unfolded its riches. Hundreds of prestigious camellias, some espaliered, interspersed with rare shrubs, vibrant plants and bulbs. The richness of the gardens spoke well of the knowledge of its master who reads and travels incessantly to feed his passion — his work and his plants.

At this time, David Trehane finds great

pleasure in overseeing his orchard and in cultivating a vegetable garden, the surplus of which he sells at the market in Truro. He cares for his garden himself with the help of a local lady who works for him about 10 hours a week. His trips to London are made by train and always coincide with the capital's floral events and expositions. He also plays an active part in the running of his celebrated nursery at Ninborne in Dorset. This gives him a chance to keep up with old friends and to buy new plants.

David was a committee director of the "Cornwall Garden Society" for several years. Today, he enthusiastically lends his talents to various local expositions. Let us not forget also the great part he played as Director of ICS. Though he lives over 100 miles from his nursery, David Trehane has remained its director. His daughter, Jennifer, efficiently runs the business.

Finally, I would like to salute this talented nurseryman who made it possible for many European countries to discover *japonicas*, *reticulatas* and their numerous offspring. Passion, intelligence, humility and generosity have made David Trehane a fantastic human being, out of the ordinary, ahead of his time and to whom the "Societe Bretonne du Camellia" is most grateful for the excellence of his accomplishments.



Denise Madec



Group visiting David Trehane

CAMELLIAS IN GERMANY

PETER FISCHER, Germany

LES GAMELIAS EN ALLEMAGNE

KAMELIEN IN DEUTSCHLAND

CAMMILIE IN LA GERMANIA

CAMELIAS EN ALEMANIA

A camellia exhibition is held yearly in early March at Peter Fischer's nursery in Wingst, not far from the mouth of the river Elbe at the North sea. For 20 days many camellia lovers come from all over Germany, Austria, Switzerland, Denmark and other parts of Europe. More than 20,000 people visited the nursery this March. Over 300 varieties of camellias were in full bloom in the 5,000 square foot glass exhibition house. Here all the camellias are planted in the ground and fashion a harmonious display with daffodils, primulas, bamboos and much Asiatic groundcover. A duck pond, a brook and an Oriental bridge add to the scenic beauty. Wide paths with several benches invite one to linger in the garden. The other greenhouses of the nursery have many flowering camellias in containers.

Most of the natural varieties, like all the *sasanquas* (of which over 30 different types are present here), have finished blooming by this time. After all, these camellias begin flowering in September. The peak of their blooming season is about Christmastime. Forty natural varieties are for sale here for replanting.

Weather permitting, visitors coming in March can stroll outside in the five acre botanical display. Here are found a Japanese garden, a rose garden, heather garden, sun garden, a blue/white/silver garden, an herb garden, a typical North-German landscape garden and of course a camellia garden. The last is situated next to the cafe, where you can sample Jutta Fischer's original "camellia cake".

The biggest and oldest camellias are in the camellia garden and are permanently planted, one having withstood forty years of North-German winters. Thirty different varieties in this setting have their peak blooming time in early April and will be finished by June. During the rest of the summer the garden is open to the public and offers the nature lover many attractive individual groupings of plant varieties. Advice is available to help with other plants as well as camellias.

The breeding and selling of camellias is the main business of the nursery. 20,000 camellias from one to five years old are sold every year. Although the catalog advertises only 300 varieties, more than 600 different sorts and types originated here.

Ten to twenty year old display plants from Peter Fischer contributed to successful Eastertime camellia exhibitions at the famous Frankfurt "Palmengarten", the Hamburg Botanical Garden, and the Essen "Grugapark" Botanical Garden.

The German members of ICS met March 8th at Peter Fischer's nursery and chose Dr. Ingrid Batzenschlager as new director for Germany, Austria and Switzerland.

A new glass enclosure about 50 feet high was constructed in "Schlosspark" (Palace park) Pillnitz near Dresden, for Germany's oldest camellia. This interesting structure is used only in the winter months and is placed beside the plant at other times.

Since Germany has had four consecutive mild winters, with only short freezes down to about 10°F, many have successfully kept camellias and other delicate plants out of doors. Probably they will be disillusioned with the return of a normal (five below zero) winter, which might be the acid test for several new varieties. My own experience with growing camellias outdoors is based on plants propagated here and planted more than five years ago. I'm sure there are many places in Germany where camellias could survive for decades outdoors, provided they are proven varieties planted in a good location and offered a reasonable amount of care. Of course, they will need protection in winter to have flowering in the spring. Since none want to miss the early flowering rhododendron and magnolia in their gardens, I am surprised that so few camellias, whose risk is no greater, are present in German gardens.

KAMELIEN IN DEUTSCHLAND

PETER FISCHER, Germany

Jedes Jahr im frühen März findet eine große Kamelien-Ausstellung in dem Spezialbetrieb von Peter Fischer in Wingst, unweit der Elbemündung nahe der Nordsee, statt. Während dieser Ausstellungszeit von 20 Tagen finden sehr viele Kamelieninteressierte Menschen aus allen Teilen Deutschlands, Österreich, Schweiz, Dänemarks und auch anderen europäischen Ländern zu dieser Ausstellung. Allein im März 1992 waren es mehr als 20 000 Besucher. Ein 500 m großes Ausstellungshaus bietet mit seinen über 300 verschiedenen Kamelien in vollster Blüte einen imposanten Eindruck. Alle Kamelien sind hier ausgepflanzt und bilden eine Landschaft, die mit Primeln, Narzissen und vielerlei asiatischen, überwiegend bodendeckenden Pflanzen harmonisch vervollständigt ist. Ein Ententeich, ein Bachlauf. Über den eine chinesische Brücke führt, bieten ein abwechslungsreiches Bild. Die Wegführung ist großzügig und mehrere Bänke laden zum Verweilen in dieser Anlage, ein. Auch in allen übrigen Gewächshäusern stehen viele Kamelien in Containern in Blüte.

Die meisten Wildarten, sowie auch alle "Sasanquas" — (mehr als 30 verschiedene sind hier vorhanden), sind zu dieser Zeit bereits verblüht. Immerhin beginnen diese Kamelien schon ab September mit ihrer Blüte. Vierzig verschiedene Wildarten befinden sich hier und sind natürlich auch in der Nachzucht verküfflich. Ihre Hauptblütezeit liegt vorwiegend um die Jahreswende. — Kommen Besucher zur Hauptausstellungszeit im März bei gutem Wetter, ist ein Gang durch eine zwei Hektar große Schauanlage möglich. Es befindet sich hier ein Japanischer Garten, ein Rosengarten, der Heidgarten, ein Sonnengarten, sowie ein blauweiß-silber Garten, ein Kräutergarten und ein typischer norddeutscher Landschaftsgarten. Natürlich fehlt auch kein Kameliengarten. Dieser nimmt gleichzeitig die Terrasse des Cafés auf. Die liebevoll ausgestatteten Innenräume des Cafés bieten nahezu 60 Sitzplätze. Hier kann neben anderen Spezialitäten auch Jutta Fischer's kreierte Kameliensorte genossen werden. Im Kameliengarten befinden sich die größten und auch ältesten Kamelien, die hier ihren dauernden Freilandplatz haben. Die älteste

Pflanze widersteht hier immerhin schon 40 Jahren den so wechselhaften norddeutschen Wintern. Über 30 verschiedene Freiland-Kamelien haben hier im April ihre Hauptblütezeit, die schließlich Anfang Juni beendet ist. Während des ganzen Sommers bleibt der Betrieb dem Publikum geöffnet und bietet dem Pflanzenfreund zu jeder Zeit viele attraktive Plätze, welche individuell mit Pflanzen gestaltet sind. Weit über das Kamelienthema hinaus geht auch die Beratung, die jeder Besucher in Wingst erfahren kann.

Die Anzucht von Kamelien, sowie auch deren Verkauf bleibt dennoch der Hauptzweig dieses Betriebes. 20 000 produzierte Kamelien verlassen jährlich in Altersgrößen zwischen einem und zwanzig Jahren die Gärtnerei. Obwohl der Katalog "nur" 300 verschiedene Sorten und Arten enthält, werden hier mehr als 600 verschiedene Sorten und Arten produziert.

Peter Fischer's Kamelien haben als 10 - 20 jährige Ausstellungs-pflanzen mitgeholfen, um im berühmten FRANKFURTER PALMENGARTEN im Januar 1992, im "GRUGAPARK" während der Osterzeit erfolgreiche Kamelien-Ausstellungen abzuhalten.

Deutsche Mitglieder der ICS haben sich am 7. und 8. März bei Peter Fischer während der Ausstellung getroffen und einen neuen deutschen Vorstand gewählt, der eine nun für deutsche Mitglieder verbesserte Arbeit gewährleistet. Dr. Ingrid Batzenschlager in Landshtut wurde neuer Direktor der Region Deutschland, Österreich und Schweiz. 1992 wurde auch ein vollkommen neues Glashaus für Deutschlands älteste Kamelie im Schloßpark Pillnitz bei Dresden gebaut. Dieses interessante Bauwerk mit einer Höhe von 15 m wird nur während der Wintermonate über diese alte große Pflanze gefahren, um ihr den ausreichenden Schutz gegen den kontinentalen Winter zu bieten.

Da in Deutschland nun schon der vierte Winter in seiner gewohnten Härte ausgefallen ist, (es gab kaum mehr als - 12°C Frost, und dieses für lediglich kurze Zeit) waren sehr viele Menschen erfolgreich mit dem Überwintern von Kamelien im Freiland, aber auch mit vielen anderen sonst recht empfindlichen Pflanzen. Möglicherweise wird ein weiterer "normaler" Winter dann wiederum viele Illusionen zerstören. Es wer-

den viele dieser Pflanzen sterben, wenn -20°C, was einen normalen deutschen Winter ausmacht, über einen längeren Zeitraum einwirkt. Als Kamelienzüchter, der Schwärzpunkte in "Winterhärte" setzt, wünscht man sich normalerweise Winterverhältnisse, um die Nagelprobe für eigene Neuheiten machen zu können.

Alle eigenen Erfahrungen mit Kamelien im deutschen Freiland stützen sich auf hier herangewachsene Pflanzen und sind mit ihren aussagefähigen Ergebnissen älter als 5 Jahre. Dennoch bin ich ganz sicher, daß an sehr vielen Plätzen in Deutschland Kamelien

im Freien über Jahrzehnte gut gedeihen und blühen können, vorausgesetzt, man beschränkt sich auf die heute vorhandenen erprobten Freilandkamelien und bietet diesen Pflanzen das gewisse Minimum an Standort und Vorsorge. Dazu gehört natürlich der entsprechende Winterschutz falls man im Frühjahr eine Kamelienblüte haben möchte. Da niemand auf seinen frühblühenden Rhododendron und seine Magnolie im eigenen Garten verzichten möchte, verwundert es mich, daß so wenig Kamelien, die ebenso risikoreich zu halten sind, in deutschen Gärten stehen.

Errata:

P55- The picture is of Alexander William Jessep and should appear on p5. My apologies to the Jessep Family.

THE CAMELLIA IN BRITTANY

JEAN MICHEL MADEC, France

LES CAMELIAS EN BRETAGNE

DIE KAMELIN IN BRITTANIEN

LA CAMELIA IN BRETAGNA

LA CAMELLIA EN BRETAGNA



JEAN MICHAEL MADEC

As I told you in the ICS '90 Journal, in the year of my birth, my mother planted a white camellia. This premonitory event alone is not sufficient to explain my presence here today at this podium facing this prestigious assembly, especially since my modesty, a complex, almost won the day as I answered "No" to our

dear president's invitation to tell you what is happening in Brittany.

In order to make up my mind, I "organized" a referendum — the camellias voted "Yes," Brittany voted "Yes," Denise, my wife, voted "Yes," and the Breton in me voted "Yes." As for myself, I voted "No," then promptly capitulated. My camellia adventure thus continues with these difficult moments in front of you.

In the 1980s, my timid yearning to know the camellia transformed itself into a great adventure. His majesty "Camellia" has absolutely brainwashed me, making me one of his apostles in Brittany.

This Brittany has a great personality, so generous, so secretive. Man has lived here for 10,000 years or more. To describe the camellia to you in a few minutes is difficult and there are many ways of doing it. Let me start sketching her portrait by giving you a few details of her climate. Briefly skim through her history in the fifteenth and sixteenth century; then after a few words on the Brittany of today, I will explain the "why" of the creation of the Societe Bretonne du Camellia on the grounds of Trevarez Castle.

Unique and diverse, Brittany is the prow of the old continent. True child of the sea, she is first to receive the sprays and the fogs

and first in sweetness for those who inhabit her. Brittany is sea, earth and light — inseparable. Few coasts boast as many gulfs, bays, estuaries, capes, reefs, islands and ports — 2800 kilometers in length, it stretches from Mont Saint Michel to the Loire Estuary. The interior is made up of low rocky mountains, moors, hills, glades, swamps, and forests. The dominant stone is a soft schist which breaks down into a compact highly acidic clay. Other areas offer sandstone formations, hard and characterized by a thin stratum of humus, also highly acidic. The natural vegetation here is made up of heathers and resinous shrubs. Harder still are the granite formations which seal in the clay and have a weaker acidity. The spontaneous vegetation in this area is mostly of the leafy kind.

With a few exceptions, the climate is oceanic and temperate. The dominant trait being the mildness of the seasons and the precocity of spring. The summers are mild and the winters gentle. The proximity to the ocean makes for a high degree of humidity — 90% to 95% in the morning, lowering to 60% or 70% by mid-afternoon, 50% in the summer. Hard downpours are rare. The prevailing precipitation being in the form of fine and frequent rains. The yearly mean average varies between 700 mm and 1400 mm depending on topography and exposure.

Often compared to Ireland, Brittany is indeed the emerald of France. It only freezes from 6 to 10 days a year in the islands and on the coast. Inland, however, the freezing days increase from 35 to 40. Between 1950 and 1980, the average mean temperature was from 10 degrees C to 12 degrees C. The average low is from 6 degrees C to 9 degrees C, average high 14 degrees C to 16 degrees C. One cannot speak of the climate, however, without mentioning the wind and the gales. Here, the wind is master, cruelly marking generations of sailors with its wintertime

fury. The monotony of an ever blue sky is not for us. As a matter of fact, it has been said that one can experience the four seasons here in the space of one day!

Brittany has a very long history. I have chosen the fifteenth and sixteenth centuries because that epoch gave us a marvelous architectural heritage. During this time, Brittany had a prosperous agriculture due to the use of marine fertilizers. She was rich, thanks to her salt, the fishing, and the textile industry. Great sailors, the Bretons entered the circle of international exchanges, adventuring often perilously on all the oceans of the globe to make their fortunes and sometimes, to discover new lands. The beauty of the Breton art manifested itself never more splendidly than in its christian architecture — chapels, churches and cathedrals dotted the countryside, often financed by dukes, aristocratic families, or rich merchants. Surely the benefactors contributed to these monuments with an eye to publicity but also most often out of sincere religious act of doling out religion. During that time, castles and manor houses sprang up everywhere, cities flourished and alliances were made, and of course there were wars. Anne de Bretagne, the heiress, twice acceded to the advances of Kings of France. In 1532, the perpetual and indissoluble union of the Duchy was signed. Henceforth Brittany is but a province of France.

But let us leave the Brittany of Dukes and castles for that of the soon-to-come twenty-first century. Though having remained isolated for a long time, more or less restrained by habits, traditions and obsolete structures, since 1950 and more so 1960, Brittany has begun to experience a rapid evolution — rail systems, like the TGV for instance, road and air travel have been considerably improved, opening up the region. A new passion for modernization has begun to spread putting us at the forefront of maritime exploitation, in agriculture, in certain industries, and in tourism. Each economic web has, at its oceanic research, the department of finistere (known as the "tail end of the world") is first in agriculture and food supply under the aegis of its institute. The technology of electronic information, fiber optic and telecommunication all contribute to the prominence of the region. Great schools and universities make the finistere the leader in scholastic awards, the most "diplomaed" department in France.

This rebirth of Brittany leads me easily to the development of professional activity in the matter of camellia growing. Here, through the introduction of new techniques, under an optimum climate, by the develop-

ment of multiple formulae, through the association and cooperation of laborious, thinking and stubborn men, Brittany distinguished herself. France annually produces some 450,000 camellias and Brittany makes up more than half that total — approximately 240,000 units. As an interesting observation, the 10 growers in Finistere are responsible for almost all of that total, which once again, puts our department to the forefront. The other half of the French production is assured by the celebrated firm of Mr et Mme Claude Thoby in Nantes. The sale is national in scope and is roughly divided this way — 70 to 75% *japonicas*, 20 to 25% *hybrids*, 4% *sasanquas* and 1% other species, some of which are *reticulatas*. The well-formed camellia, tailored and long-stemmed is still king but lately, one sees the appearance of more free-form and looser flowers. Also of note, is the fact that these nursery men also grow other plants, notably the rhododendron for which the Finistere is famous. Thanks to the fruitful contacts with other far-advanced countries, the near future promises the birth of new variety authentically Breton, if the profession of camellia growing does honor the old blooms of our manor houses and castles, the standing of the amateurs in camellia cultivation is very different and paradoxical. Our Brittany is inhospitable and isolated.

Our camellia adventure debuted in 1983 in Sacramento, when we discovered its show, its society and its members' private gardens. It continued at the Congress of Brighton with the visits to its fabulous parks. Soon afterwards, Sydney bade us welcome with its enchanting climate. Once more we saw the intense work of the amateurs by visiting their gardens. The discovery of Erydene also made us so happy. In New Zealand, we attended the convention of the society. Their organization, the number of participants and their enthusiasm awed us as did their magnificent gardens filled with collections of orange trees, heathers and marvellous camellias. This was 1986. The let-down was hard after each trip from paradise to purgatory. No local society to inform us, no books about camellias, few parks to discover, very few exhibitions to visit — such was the situation. This state of affairs made us understand the comments of a camellia pioneer in Brittany — Jean de Bihan, old member of ICS who wrote an interesting book "No Gardens Without Camellias" which he dedicated to Charles Puddle. He wrote "We lack two things, fundamental and essential — the organization

and the know-how—" He added "The great French horticultural and floral press as well as our great horticultural establishments have adopted a certain silent attitude toward creation's most beautiful shrub." We don't know why things are as they are, but we noticed the truth of it as early as 1985. At the Trevarez Festival, Mademoiselle Barre, who was in charge of the exposition, had asked us on the recommendation of Jean Laborey to help her with the show. That was the moment of truth, for we decided to show all and to tell all. Our work in progress, seedbeds, cuttings, grafts, our most beautiful blooms, everything packed and taken to Trevarez, 70 kms from our home. Festival after festival, thousands of visitors saw the Madec show. Some were surprised, astonished, interested and told us how much they enjoyed the show. Others either distrustful or not interested, passed by quickly. And so, we established a dialogue, sometimes easily, sometimes with difficulty. Our experience at the shows provided us with the following information:

1. The Breton public is very much interested in the camellia but knows nothing of amateurism as we know it.
2. There is no information on the camellia and it is needed.
3. Owning a camellia in Brittany is not a question of money or social standing.
4. The rural areas are better represented than the urban ones.
5. More women than men show interest in the camellia.

The traditional reasons which give the camellia a bad reputation are still alive and well — slow growth, fragile, rusting flowers and high price.

Stimulated by our success and by the interest we generated, the future Societe Bretonne du Camellia was on its way. In November 1987, we asked all interested persons to meet with us at Trevarez for an informative session on how to be a camellia amateur. This first contact was followed by a visit to the beautiful nursery of Mr. Alain Strevinou in order to give some substance to our thoughts. December 12, 1988, La Societe Bretonne du Camellia, little offshoot of ICS, was founded in the library of Trevarez Castle with 35 members and the following goals.

1. To promote the love of the camellia in Brittany, to maintain and enhance its popularity.
2. To propagate local, national and international information. To teach the members to identify, propagate and

care for camellias.

3. To develop and maintain friendly relations with foreign societies in the framework of the Societe International du Camellia.
4. To establish relations and cooperate with professional growers.
5. To inventory the camellias in Brittany.

After three years, our activities have remained true to our principles and can be summed up as follows: four annual reunions, the distribution of 150 pages of documents on 50 different subjects, workshops on grafting and seedlings, two trips to Cornwall organized by Denise, two participations in the Festival at Trevarez where just lately, we have welcomed the group from Jersey. Since its inception, the group has grown by 83 now boasting 123 members in all.

To conclude: The SBC is in place, active and dynamic in this land of tradition and modernity. Of course, it is still fragile and thirsting for knowledge. As for me, I will do my best to keep it on track and to make it progress in beauty and in quality. It feels comfortable, I think, in the bosom of the ICS family.

As the eradication of borders dawns on this old continent, I hope all European camellia amateurs unite, to better communicate, to know each other better, to share knowledge so we can all go forward in friendship. That would be a fitting and honorable recognition for the pioneers who introduced the camellia in Europe.

LE CAMELLIA en BRETAGNE

JEAN MICHEL MADEC, France

Je vous ai confié dans le journal ICS 90 que ma mère avait planté un camellia blanc l'année de ma naissance. Cet événement prémonitoire ne suffit pas cependant à expliquer ma présence à cette tribune devant une assemblée prestigieuse, d'autant que ma modestie, mes complexes peut-être, ont failli l'emporter en m'incitant à répondre non à l'aimable invitation de notre cher Président qui, bien informé de ce qui se passe en BRETAGNE voulait que je vous en fasse écho à ce congrès.

Alors pour me décider j'ai "organisé" un référendum : le genre Camellia a voté oui ; Denise, ma femme, a voté oui ; le breton qui m'anime a voté oui ; quant à moi j'ai voté non et j'ai dû m'incliner.

Mon aventure CAMELLIA continue donc par ce passage difficile devant vous. En effet cette timide envie de connaître le camellia des années 1980 s'est transformée en grande aventure ; sa majesté camellia m'a absolument endoctriné faisant de moi un de ses apôtres sur la terre de Bretagne.

Cette terre de Bretagne possède une grande personnalité tant elle est belle, généreuse et secrète ; l'homme l'habite aussi depuis 10.000 ans. Vous la décrire en quelques minutes est bien difficile et il y a aussi cent façons de le faire. Je commencerai en vous précisant quelques détails de son portrait et de sa climatologie. Je feuilleterai son livre d'histoire pendant la période XVème et XVIème siècles. Après quelques mots sur la Bretagne actuelle j'aborderai le pourquoi de la création de la "SOCIÉTÉ BRETONNE DU CAMELLIA" dans le cadre du château de TREVAREZ.

Cet exposé sera suivi d'une présentation de diapositives qui vous dévoileront successivement, les vieux camellias de Bretagne, son patrimoine chrétien, notre action à TREVAREZ et quelques travaux d'amateur que j'affectionne particulièrement.

Singulière et diverse la Bretagne est la proue du vieux continent. Vrai chef d'oeuvre de la mer elle n'en finit plus de subir la première les grains et les embruns. Elle n'en finit pas non plus d'être douce pour ceux qui l'habitent et pour ceux qui la connaissent et qui l'aiment.

La Bretagne c'est la mer, la terre et les lumières inséparables. Peu de côtes présentent autant de golfes, de baies, d'estuaires, de

caps, de récifs, d'îles et de ports ; sur quelques 2 800 km elles s'étendent du Mont Saint Michel à l'estuaire de la Loire. L'intérieur est fait de massifs montagneux peu élevés, de landes, de collines, de bocages, de marais et de forêts.

La roche prédominante est un schiste tendre qui se décompose en argile compacte à l'acidité marquée. Ce sont des sols de culture. En d'autres lieux des montées de grès plus dures caractérisées par une couche d'humus peu épaisse, engendrant une forte acidité ; la végétation naturelle est faite de landes, bruyères et résineux. Plus dures aussi, des montées de granit, elles renferment plus d'argile, l'acidité est sensiblement plus faible ; la végétation spontanée est le taillis de feuillus.

Au delà des nuances le climat est océanique et tempéré. Le trait dominant est la douceur des saisons et la précocité des printemps. Les étés sont modérés et les hivers cléments.

L'influence de l'océan apporte une humidité de l'air relativement élevée ; 90 à 95% le matin, pour s'abaisser de 60, 70% l'après-midi, voire 50% en été.

Les fortes précipitations sont rares, ce qui domine ce sont les pluies fines et fréquentes, plus qu'abondantes qui enveloppent le paysage. Les hauteurs moyennes annuelles qui varient de 700mm à 1400mm sont le reflet de la topographie et de l'exposition. Comparée souvent à l'Irlande, la Bretagne est l'émeraude de la France.

Il ne gèle que 6 à 10 jours en pénétrant dans l'intérieur.

De 1950 à 1980, les relevés de température ont donné les résultats suivants : moyenne annuelle 10 à 12°C — moyenne des températures minimales 6 à 9°C — moyenne des températures maximales 14 à 16°C.

Parler du climat sans évoquer le vent et les tempêtes. Le vent est ici le maître marquant cruellement les générations de marins par ses furies hivernales. Enfin la monotonie du ciel parfaitement bleu est rare. Dans ce pays tout en nuances ; le plus original est cette variabilité du temps qui fait dire que l'on peut parfois voir les quatre saisons dans la même journée.

La BRETAGNE a une très lourde histoire. J'ai choisi l'époque du XVème et du XVIème siècles car nous lui devons notre

merveilleux patrimoine architectural.

A cette époque la Bretagne maritime a une agriculture prospère, grâce à l'emploi d'engrais marins. Elle est riche grâce au sel, à la pêche, à l'industrie textile. Grands routiers des mers les bretons entrent dans le circuit des échanges internationaux, s'aventurant souvent au péril de leur vie, sur toutes les mers du globe pour faire fortune parfois ou découvrir de nouvelles terres.

L'éclat de l'art breton se manifeste dans l'art architectural et chétien. Chapelles, églises, cathédrales s'érigent dans les campagnes souvent financées par les Ducs, les familles aristocratiques, les très riches marchands. Les mécènes contribuaient à ces constructions dans un souci évident de publicité. Ce qui n'excluait pas parfois un profond sentiment religieux. Quant à l'église son rôle dépassait de très loin ses aspects purement religieux. Toujours est-il que ces monuments témoignent de l'immense croyance du peuple breton.

La Bretagne se couvre aussi de châteaux et manoirs, les villes se développent, mais aussi les guerres et les alliances. Anne de Bretagne l'héritière cédera deux fois aux avances intéressées des rois de FRANCE.

Mais abandonnons cette Bretagne des Ducs pour elle du proche XXIème siècle. Restée longtemps une zone isolée, plus ou moins freinée par des habitudes, des traditions, des structures inadaptées, depuis 1950 et davantage 1960 la Bretagne connaît une évolution rapide.

Les relations ferroviaires comme le TGV dernièrement, routières, aériennes, ont été considérablement améliorées désenclavant la région. Les esprits se sont ouverts aux techniques récentes. Une véritable passion de modernisation s'est réandue nous plaçant au premier plan dans l'exploitation de la mer, l'agriculture, dans certaines industries et le tourisme.

Le tissu économique s'est formé autour de chaque grande ville, BREST par exemple s'affirme comme le pôle européen de la recherche océanologique. Le département du FINISTERE "le bout du monde" s'impose au tout premier plan en agro-alimentaire sous l'impulsion de son institut. Les technologies de pointe: électronique, informatique, fibre optique, télécommunication, contribuent également à l'essor de la région avec évidemment la complicité des grandes écoles et des universités qui font du FINISTERE, le département le plus diplômé de FRANCE.

Ce renouveau de la Bretagne me conduit aisément à aborder l'activité professionnelle du CAMELLIA, qui s'est développée, et qui illustre parfaitement cette métamorphose à

l'approche du grand marché européen. Ici encore, par l'introduction de techniques nouvelles, sous un climat optimum ; par le développement de multiples formules d'association ou de coopération ; par des hommes laborieux, réfléchis, tenaces, la Bretagne se distingue.

En effet, si la France produit annuellement environ 450.000 camélias, la Bretagne en assure plus de la moitié soit 240.000 unités. Observation intéressante, la quasi totalité de cette production, produite par dix pépiniéristes, est finistérienne, mettant une nouvelle fois notre département à l'honneur. Je vous rappelle que la seconde moitié de la production française est assurée par les célèbres établissements de Mr et Mme Claude THOBY installés à NANTES.

la vente est nationale et se répartit grossièrement comme suit : 70 à 75% de japonicas, 20 à 25% d'hybrides, 4% de sasanquas, 1% d'autres espèces dont les réticulatas. Le camélia en forme de touffe, bien taillé, bien charpenté, est toujours de rigueur, on voit cependant apparaître depuis quelques années des formes plus libres, en tiges, et palissées.

Il est intéressant de noter aussi que tous ses pépiniéristes sont également producteurs d'autres plantes de terre de bruyère, en particulier de rhododendrons pour lesquels le FINISTERE est de loin au premier rang français. Après des contacts fructueux avec d'autres pays très avancés en obtentions notamment, ces professionnels "voyageurs" proposent maintenant à l'amateur exigeant une large gamme variétale introuvable ailleurs en France. Ce "Terreau" devrait permettre dans un proche avenir l'éclosion de nouvelles variétés authentiquement bretonnes.

Si la profession du CAMELLIA fait honneur aux vieux camélias de nos manoirs et châteaux, la situation de l'amateurisme du camélia est bien différente et paradoxale, notre Bretagne est inhospitalière cette fois et bien isolée.

Notre aventure "CAMELLIA" a vraiment débuté en 1983 à SACRAMENTO quand nous avons découvert son show, sa Société, les jardins privés de ses membres. Elle s'est poursuivie au congrès de BRIGHTON avec la visite de parcs fabuleux. Peu de temps après, SYDNEY nous accueillait avec son climat enchanteur. Nous retrouvions une seconde fois l'activité laborieuse et intense des amateurs en visitant leurs jardins. La découverte d'ERYLDENE nous procura aussi un grand bonheur.

Un saut en NOUVELLE ZELANDE, nous assistions à la convention de sa société. Son

organisation, le nombre de ses participants avec leur enthousiasme, nous étonnèrent comme évidemment de magnifiques jardins aux étonnantes collections où jouxtaient oranges, bruyères arborescentes et camellias merveilleux ; cela se passait en 1986.

La chute était lourde à chaque retour de voyage ; nous passions du paradis au purgatoire : pas de Société locale pour s'informer, pas de livre sur le camellia, peu de parcs à découvrir, quelques rares expositions à visiter ; telle était la situation ! Cette importante différence nous faisait cette fois comprendre les propos d'un pionnier du camellia en Bretagne pendant les années 1969-1975, je veux parler de Jean LE BIHAN, ancien membre ICS, qui écrivit un livre intéressant "pas de jardin sans camellia", qu'il dédia d'ailleurs à Charles PUDDLE.

Il écrivait à cette époque : "Il nous manque deux choses fondamentales et essentielles : l'organisation et le savoir". Il poursuivait à nouveau dans son prologue : "La grande presse horticole et florale française, de même que nos grands établissements horticoles ont adopté une certaine "Attitude silencieuse" envers le plus bel arbuste de la création".

Les raisons de cette attitude si attitude il y a eu, nous échappaient évidemment en ce qui nous concerne, nous avons seulement constaté une situation qui s'est avérée exacte sur le terrain, dès 19485, dans le cadre du Festival de TREVAREZ. En effet, Melle BARRE, responsable de cette exposition sollicitait les MADEC sur recommandation de Jean LABOREY, pour l'aider dans sa réalisation.

Tout s'est joué à ce moment car nous avons décidé de tout dire et tout montrer en exposant nos travaux en cours, de semis, bouturage, greffage, nos plus belles fleurs ont pris aussi le chemin de TREVAREZ situé à 70 km de notre domicile.

Festival après festival, des dizaines de milliers de visiteurs ont défilé devant le "MADEC show". Certains surpris, étonnés, intéressés, manifestaient leur contentement, d'autres méfiant, indifférents, ne s'attachaient pas. Ainsi un dialogue a pu s'établir, immédiat parfois, plus difficile en d'autres cas, impossible aussi avec les soi-disant "Déteneurs de secrets".

Rapidement nos expériences successives nous ont permis de faire les observations suivantes :

- Le public breton est très intéressé par le camellia, mais il ignore l'amateurisme comme nous l'entendons.
- L'information sur le camellia n'existe pas, et il y a un besoin.

- Posséder des camellias en Bretagne n'est pas une question d'argent ou de position sociale.
- Le milieu rural est plus représenté et mieux informé que le milieu urbain.
- Les femmes sont plus nombreuses que les hommes à s'intéresser aux camellias.
- Les traditionnelles mauvaises raisons qui font hélas tort aux camellias sont vivaces : pousse lente, plante fragile, fleurs qui rouillent, cherté.

Stimulés par notre succès et par l'intérêt suscité, la future SOCIÉTÉ BRETONNE DU CAMELLIA était en marche. En Novembre 87 nous réunissions les personnes intéressées rencontrées à TREVAREZ pour une réunion d'information sur l'amateurisme du camellia dans le monde. Ce premier contact en groupe fut suivi de la visite de la belle pépinière de Mr Alain STERVINO pour bien fixer les esprits sur le sujet.

Le 12 Décembre 1988, la SOCIÉTÉ BRETONNE DU CAMELLIA, petite fille d'I.C.S. était fondée dans la salle de la bibliothèque du Château de TREVAREZ forte de 35 membres.

Ses buts sont les suivants :

- 1° Promouvoir l'amour des camellias en Bretagne ; maintenir et accroître leur popularité.
- 2° Propager des informations locales, nationales, internationales ; assurer la formation des membres à l'identification, à la multiplication et à l'entretien des camellias.
- 3° Développer et entretenir des relations amicales avec les Sociétés étrangères dans le cadre de la Société Internationale du Camellia.
- 4° Entretenir des relations, voire coopérer avec les professionnels du camellia.
- 5° Faire l'inventaire du camellia en Bretagne.

Après trois années de fonctionnement notre activité est restée fidèle à nos engagements. Cette activité peut se résumer comme suit : 4 réunions annuelles — 150 pages de documents sur 50 sujets différents distribués — des travaux pratiques sur le greffage et le semis — Deux voyages en CORNOUAILLES organisés par ma femme Denise. — Deux participations au Festival de TREVAREZ où nous avons dernièrement accueilli le groupe de JERSEY.

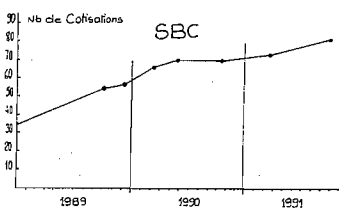
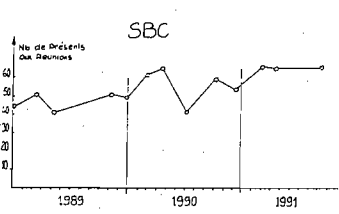
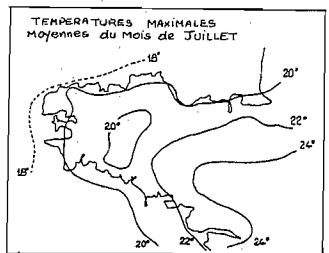
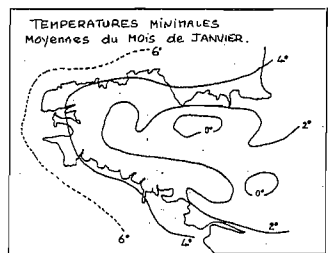
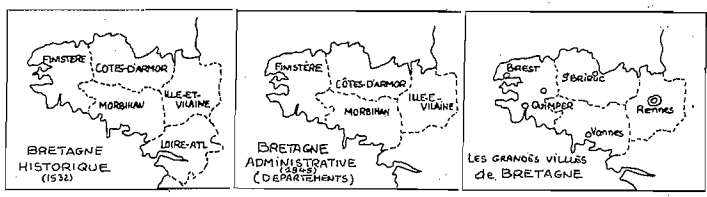
Depuis sa création la SOCIÉTÉ BRETONNE DU CAMELLIA s'est aussi développée, et compte à présent 83 adhésions réunissant 123 personnes.

Il me faut conclure maintenant, la S.B.C. est en place active et dynamique sur cette terre de tradition et de modernité. Certes,

elles est toujours fragile, assoiffée de connaissances. En ce qui me concerne, je m'emploierai à lui faire garder le bon cap pour qu'elle progresse en qualité et en beauté. Elle se sent bien je crois, dans la grande famille d'I.C.S.

À l'aube de la suppression des frontières sur le vieux continent, je souhaite que les amateurs de camélias d'EUROPE s'organisent pour mieux communiquer, pour mieux se connaître, pour mieux partager de manière à progresser et cela dans l'amitié. Je

crois que ce serait faire honneur à nos pionniers du camellia qui introduisirent le camellia en Europe.



THE POPULARIZATION OF CAMELLIAS IN CHINA

GAO JIYIN, China*

POPULARISATION DES CAMELIAS EN CHINE

POPULARISIERUNG DER KAMELIE IN CHINA

DIVULGAIMIENTO DEI CAMELLIE INCINE

POBLACIAU DE CAMELIAS EN CHINA

STATUS OF CAMELLIA DEVELOPMENT IN CHINA



GAO JIYIN

China is the richest country in Camellia resources in the world. It is recently reported that more than 90% of 220 Species that have been discovered in the Genus in the whole world are mainly distributed over China. The range of Camellia distribution in natural conditions extends all over South China and even spreads to North

China. China has the longest history of cultivation of Camellias in the world.

'Oleifera Chang' and some in other Sections, have been cultivated since ancient time. China is devoting major efforts to develop oil-camellia forests at present and the total area of forests has reached more than 4 million hectares. There are many boundless stretches of the forests in Jiangxi, Hunan, Zhejiang. As plants for beverage, *C. sinensis* has been highly thought of by Chinese from time immemorial. The cultivation and production of the tea trees have become an important profession in China. As ornamental plants, camellias, including, *C. japonica* and *C. reticulata*, had already been cultivated in flower garden by the Sui and Tang ages (BC 6 century). There have been more than 500 varieties that are distinct in the characteristics of flowers consisting of 300 cultivars of *C. japonica*, 180 of *C. reticulata* and some of *C. sasanquas*, etc.

THE POPULARIZATION OF CAMELLIA REPRESENTED BY CAMELLIA JAPONICA IN CHINA

As *C. japonica* cultivars are beautiful evergreen plants with a long period of

blooming and great variations of flower colors and shapes and easy culture, Chinese Camellia lovers enjoy them very much. The cultivars of *C. japonica* are more widely used than those of *C. reticulata* both in quantity and range. Popularizing Camellias among the masses of China has not been easy. Camellias were only luxury goods enjoyed by high officials and noble lords, scholars, Knights, magnates, rich men and religionists who lived in South and Ancient China. They were only spread among a few persons with high status, even 42 years ago. The development of camellias was very slow at that time. With the deepening of the reform and open policies put into effect since the end of the 1970's in China, new life has been given to the development of Camellia. Chinese experts on Camellia began to sort out systematically the varieties originated in China and Camellia plants were commercially produced from that time and this has aroused enthusiasm of thousands and thousands of Camellia lovers to raise Camellias.

And then, China underwent an upsurge in Camellias. People who possessed excellent cultivars such as 'Luzhuqiu', 'Dazhusha', 'Yuanyang Fengguan' were respected and envied for this. It was disappointing that the enthusiasm for Camellias among the masses had declined after this high tide of Camellias. The reasons for this were there was a shortage of new varieties and lack of rapid methods for propagating the plants and absence of Camellia organizations. With the introduction and culture of Western Camellia cultivars, the Camellia undertakings in China began to grow and flourish again. There have been about 600 cultivars introduced from overseas in recent years through different channels in China. The cultivars from the West are multicolored, large and unusual which show a bold and uninhibited character, such as yellow type, 'Dahlohnega', fragrant type, 'Scented Sun', 'Mariann',

'Scentation' and 'Kramer's Supreme', large type. 'Tomorrow' and its family, and many hybrids crossed with *C. reticulatas* peculiar color type, 'Margaret Davis' and its family and others fimbriated. The cultivars in the East including those of China and Japan are bright colored and exquisitely wrought, which show a splendid and elegant style, such as, delicate type, 'Shiba Xueshi' and its family, gorgeous type, 'Yuanyang Fengguan', large type, 'Danzhusha' and 'Dajixiang' and a special colored type, 'Luzhuqiu'. The assembling of the cultivars from the West and the East makes Chinese Camellia Circles become more active and thriving. People enjoying Camellias are on the increase. They not only culture their plants but also have begun to breed new cultivars. It is important that many Camellia "nuts" always like to extol Camellia's beauty to each other. It indicates that the Camellia "Spring" has truly come into our country! The Chinese Camellia Society was organized in 1987 and now there are 27 branch Societies of institutes on Camellias in China. There are also about 100 Camellia Nurseries distributed in 20 provinces of China. The societies, institutes and nurseries are keeping in contact with thousands of Camellia enthusiasts in China including Heilongjiang, a province in the north of China, and Xinjiang, a district in the northwest of China. Camellias as landscape trees have begun to enter factories, schools, gardens, etc. The promotion of Camellias among the masses of people in China are as follows:

1. Hold a Camellia exhibition on a large scale every three years in different parts of China sponsored by the CCS and local government. Hold many small scale exhibitions sponsored by local branch Societies in order to extend camellia influence to the masses.

2. Run Camellia study classes, discussions, training and teachings sponsored by the societies and large Camellia nurseries at irregular intervals in order to improve the amateur camellia lover's techniques to culture their camellias.

3. Publish four issues of "Report of Camellia of China" edited by the CCS each year, 4 issues of "Cha Fragrance" edited by Mr. Shao Taichong each year, and a copy of "The Observations from the Camellia World" edited by Mr. Gao Jiyin and Mr. Shao Taichong each year, and others such as, "Jiaying Camellias" and "Camellia Scope" edited by some branches of the Society. These publications are helping the people enjoy Camellias with new understanding and knowledge.

4. Print some Camellia books, for example, "Illustration of *C. reticulata*" written by Mr. Feng, "Sancha Hua" written by Mr. Ye, "Zhejiang Sanch Hua" written by Mrs. Chen, "The Camellia in China" written by Mr. Zhuang and "Color Illustration of Yellow Species in China" to be republished.

5. Produce Camellia plants in a large number at the nurseries to supply Camellia lovers and units.

6. Establish some "Camellias Collection Garden" or "Scion Producing Nurseries" in several provinces, in which the cultivars both from the West and East have been included.

In a word, the development and popularization of Camellias in China will certainly make considerable headway along with the raising of a living standard.

**Gao Jiyin, Subtropical Forestry Research Institute Fuyang, Zhejiang, China*

THE CAMELLIA

LE TEXNIER, France*

LA CAMELIAS

DIE KAMELIEN

IL CAMELIA

LA CAMELIAS

EDITOR'S NOTE — *The first part of "Le Texnier" was printed in the 1991 ICS Journal. Ann Richardson, Curator Camellia and Japanese Gardens, The Huntington, San Marino, U.S.A. obtained this history of the Camellia and Josette Bryson and Patricia Barlow translated it for the ICS readers. They are readers at the Huntington Library and both hold Ph.D's in French and are currently involved in scholarly research and translation.*

Ann Richardson sent this to Tom Savage to read and make footnotes. Tom Savage stated it might be good to remind readers that this was written before nomenclature or the register were published and therefore, there are a lot of errors in the identification and spelling of cultivars. Tom stated that Le Texnier, like most of us, is rather poor at botanical Latin. He had the advantage of being closer to the times he was writing about and possibly had access to material now lost.

Thank you Ann Richardson for sharing this, Josette Bryson and Patricia Barlow for the translation, and Tom Savage for making the footnotes.

In the Netherlands, double varieties were introduced at the beginning of the 19th century, for, in 1803, Jean Kreps, a florist in Haarlem, had *C. 'Alba Plena'*, '*Variegata Plena*', and '*Rubra Plena*'. He sold the first two for 42 florins and the third for 60 florins. In 1805, F.A. Wieggers, the florist of Mechelen, also advertised them at about the same price, and in 1808, Parmentier, the burgomaster of Enghien, also cultivated these same three varieties. In 1808, a ship from England consigned to Delmotte of Oostend, brought to De Bast de Herdt, of Ghent, from Ch. De Bast, his countryman living in London, a basket containing among other plants, a *C. 'Alba Plena'* and a *C. 'Rubra Plena'*, which, the following year, were given

to the Empress Josephine for her garden at Malmaison. During the same period, Vilbond, a florist in Brussels, also received from London, varieties of camellias which passed from his garden in Ghent to those of Josse Verleewen and Dr. Van de Woestyne. In 1811, through the efforts of the latter and of Dubois de Vroyland, *C. 'Variegata Plena'* appeared in Ghent. At the same time, Van Cassel, a florist in that city, received a large number of camellias in the form of young understock which caught the attention of the already numerous enthusiasts and, in particular, of Mortier, a baker who raised flowers during his leisure time. He cultivated one of the first double camellias, and at the 1811 exhibit of the Ghent Society, he showed *C. 'Alba Plena'*.

With the return of peace in 1816, and relations with England having returned to normal, all of the plants introduced and produced in England reached Ghent easily and formed the basis for large collections which were brought together by enthusiasts and growers and which, reproduced in quantity, were no small contribution to the horticultural renown of the city. Likewise, the camellia made its way to other cities: to Enghien, where Parmentier had 14 varieties in 1808; in 1823, Beeldsnyder, in his garden of Rupelmonde, near Utrecht, brought together a collection of 21 varieties, and in 1830, in Brussels, about 60 varieties could be found in the garden of the Royal Horticultural Society of the Netherlands.

Two imports from Japan also arrived in the Netherlands. Both of them went through the hands of Donkelaar, one of the first to cultivate the camellia while he was the gardener of Smedts, an enthusiast at Deurne, near Antwerp. In 1829, an Amsterdam shipowner received several camellia samples which had been grafted on strong understock in their native country. But either as a

result of the voyage or a lack of proper care, they would have died if Donkelaar, then head gardener at the Botanical Gardens of Louvain, had not asked for and received them. He restored them, and the first ones flowered in 1834. These were *C. 'Donkelaarii'*²¹ and '*Ochroleuca*' which were shown at the exhibit for the jubilee of the Agricultural and Botanical Society of Ghent; the impression they made was remembered long afterwards. Then, *C. 'Candidissima'*, '*Tricolor*', '*Decipiens*', and '*Multi flora*' flowered successively. About 1833, *C. reticulata*, introduced by Mechelynck, appeared in Ghent.

In 1830, Siebold, upon his return from Japan, entrusted the plants he had brought back to Mussch of the Botanical Garden of Ghent, where the camellia types named *C. 'Futteng'*, '*Sieboldii*', and '*Tsubaki*' by Siebold could be found, including the *C. japonica* type form. Siebold provided details about this tree, which in Japan reaches a height of about 20 meters [66 ft.]. It has strong, spreading branches, larger foliage than do the cultivated varieties, and small, regular flowers with five red petals. It also grows as bushes which often cover several acres, or it grows on hillsides, and along roadways where it blooms as early as the month of February. Simple, semi-double, and double varieties, often cultivated, can also be seen in gardens. The wild camellia spread in the Kyushu Islands of Shikoku and in the southern portions of Japan.

In 1835, Donkelaar went to work at the botanical garden of Ghent. There, he found the Siebold camellias and had to bring along plants that he had received from Holland. This was the origin of the belief that *C. 'Donkelaarii'*, '*Ochroleuca*', '*Tricolor*', etc. had been brought back from Japan by Siebold²². The truth is that Donkelaar used *C. 'Sieboldii'* and '*Tsubaki*' as seed producers along with his own plants. They produced numerous seedlings from which came *C. 'Agathe Royale'*, '*Comte de Flandre*', '*Schuurman*', '*Pompon Royal*', '*Commensa*', '*Van Dyck*', '*Rubens*', etc., the latter of which seems to date from 1847.

In 1834, we find the first mention of camellias originating in Belgium: *C. 'Jubilaire'*, a single of soft pink with some white striations, developed by an enthusiast fascinated by this genus, J. Van Hove de Caigny; and *C. 'Cockii'*, a deep red orange semi-double, produced by De Cock, a horticulturist of Ghent. The following year, Lefevre, another horticulturist from Ghent, popularized *C. 'Duc de Nemours'*,

'*Lefevriana*', '*Waldackii*'²³ and '*Nobilissima*'. After that, the plants produced by the enthusiasts and growers of Ghent and its surroundings successively added to the collections. Among those noted we find the names of: Van Houtte, with *C. 'Paulownia Imperatrix'* in 1842; Alexandre Verschaffelt, in 1844, with *C. 'Verschaffeltii'*, a descendant of *C. 'Minuta'* and '*Leeana Superba*'²⁴, a ranunculus form of soft pink marked and marbled with white; Ch. J. Varenberghe of Sleydinge, with *C. 'de la Reine'* in 1844; Mathot, with *C. 'Mathothiana'*, a cherry red derived from *C. 'Anemoneoflora'* (sic) and '*Sieboldii*'; this enthusiast is credited with a number of varieties among which it suffices to mention *C. 'Rosea Spectabilis'* in 1851, the deep reddish pink '*Mme Lebois*' in 1853, the white variegated with bright red tricolor in 1854, '*Mathothiana Alba*' in 1857, which was recovered after Mathot's death from the seeds he had left; plaus (sic) in 1849, with *C. 'Comte d'Egmont'*, crimson with a small stripe of white and pink on each petal, a descendant of *C. 'Donkelaarii'*; Ambroise Verschaffelt, who produced among others, *C. 'Comte Bobrensky'*²⁵, '*Princesse Charlotte*', and '*Alba Speciosa*' in 1849, '*Baron de Vrière*' in 1862, '*Archiduc Etienne*' in 1865, '*Mme Rudolph Abel*' in 1869, etc.; Louis Hellebuyck with *C. 'Roi des Blancs'* in 1850; Ch. de Loose with *C. 'Placidita'*, a deep pink marked with lighter stripes and then, *C. 'Triomphe de Wondelghem'*; Van Eeckaute, from Ledeberg, with *C. 'Polydore'* in 1856; Vervaene, from Ledeberg, with *C. 'Polydore'* in 1856; Vervaene, from Ledeberg, with *C. 'Bicolor de la Reine'* in 1860, and '*Reine des Beautés*' in 1861; Jean Verschaffelt in 1862 with *C. 'Comte de Flandre'* and '*Quercifolia*'²⁶, the latter having small, very jagged leaves.

Other places in Belgium also furnished some varieties. In 1836, Caters De Wolf, an enthusiast in Berchem-les-Anvers, produced *C. 'Constantin'*, which had pink flowers and '*Princesse Sophie*'. Shortly afterwards, Moens, a floral gardener from Antwerp, publicized an entire series of varieties: '*Moensiana*', '*Parthoniana*', '*Adelaida*', '*Victoria Antwerpiensis*', '*Rachel Ruys*', '*Duc de Brabant*', etc. About 1837, Van der Maelen from Brussels was credited with *C. 'Maeleniana'*, which he had introduced from China with a few other varieties, and a little later, *C. 'Duc d'Urset'*²⁷. In 1844, Baron d'Ukedem, an enthusiast from Louvain, produced *C. 'Baronne d'Ukedem'*. In 1846, Parmentier from Enghien, produced the crimson, anemone form *C. 'Fastuosa'* from

seeds from China. About 1849, Boddaert from Tronchienne publicized *C. 'Reine des Roses'* and '*Mont Blanc*', while Baron d'Hulot, from Tourmai, produced *C. 'Jubilé de Tournay'*.

The cultures from Liège also enriched collections with good varieties due particularly to Emile Defresne who produced them through cross fertilization. Among these we first note, in 1846, *C. 'Stockiana'*, then successively *C. 'Grétry'*, '*Alba Elegantissima*', '*Triomphe de Liège*' [sic], '*Archiduchesse Marie*', '*Auguste Delfosse*', etc., and finally, *C. 'Souvenir d'Emile Defresne'*, which appeared in 1861 and which was his final production. In 1845, another enthusiast from Liège, A. Van der Straelen, produced, by crossing *C. 'Atrubens'* with *C. reticulata*, *C. 'Straeleni'* which had red flowers. Among the other achievements of the Liège growers, we can mention *C. 'Marie Morren'* which appeared in 1847, and a little later, *C. 'Victor Haquin'* produced by H. Haquin, and *C. 'Mme Picouline'* produced in 1855 by Francotte.

However, the culture of the camellia was concentrated in Ghent and its surrounding areas. Nowhere was it propagated in such great quantity, and for a time it was the main specialty of Ghent. From 1835 on, entire greenhouses were set aside for growing it. Among the best known growers, we can mention De Cock, Lefèvre, Alexandre Verschaffelt, De Saegher, Auguste Van Geert, Van Houtte, Ambroise Verschaffelt, Gheldorf, Hellebuyck, Vervaene, etc. The enthusiasts were many. We can name, among others, the collections of Mathot, Ch. de Loose, Van Loo, De Biseau, Van Geersdale, Delimon-Papeleu, and Van den Hecke de Lembeke.

In addition to this enormous production, it was again Ghent that commercialized the new varieties produced elsewhere. Beginning in 1840, a number of new ones from Italy were circulated by Alexandre Verschaffelt and then by his son, Ambroise, who received them from their contacts in Milan, Florence, Brescia, and Venice. Business was increasingly successful for about thirty years, then tapered off. Some enthusiasts like Van Geersdale and Delimon-Papeleu also received new varieties straight from Italy. The new camellias were very valuable, and a few examples will suffice. In 1837, *C. 'Spectabilis Maculata'* was sold for 125 francs for a one-leaf graft and was difficult to obtain. In 1844, Jacob-Makoy sold *C. 'Baronne d'Ukedem'* between 50 and 200 francs each, depending on the strength. Between these two dates, in 1840, Alexandre Verschaffelt, having acquired *C. 'Queen*

Victoria' (produced in England as we have seen), sold it by subscription at 125 francs for one-and-a-half foot plants. The 110 plants were subscribed to. In 1852, the rate was lowered, an Ambroise Verschaffelt circulated three to four leaf-grafts for ten francs each, and for 30 to 40 francs, stronger specimens of a variety produced in 1849 by Lecomte de nancy, *C. 'Général Drouot'*, which had a round, bright pink flower with a deep set center, in the middle of each petal there was a white stripe often lined with pink.

This large production resulted in better means of propagation. Reproduction by runners gave way to approach grafting, then to a graft which consisted in carving the understock into the shape of a flute mouthpiece after having cut off the top. Then the double camellia graft was carved into a concave V and applied like a saddle over the understock. Finally, in 1816, Casier, from Ghent, tried the first fitted grafts, called Belgian grafts. Part of the bark was taken off the understock; then a small branch having an eye and a leaf and a properly beveled edge was placed exactly over the cut. Then the entire bundle was tied and wrapped.

It was also during the first years of the 19th century that camellia varieties were circulated in France. About 1800, *C. 'Alba Plena'* was said to have been introduced into the gardens of Malmaison thanks to the efforts of Empress Josephine; soon afterwards *C. 'Rubra Plena'* and '*Variegata Plena*' were cultivated there. At the same period an enthusiast from Ternes (near Paris), Mauduit d'Hainneville, was well known for his camellias.

Knowledge of these varieties in the provinces was also due to enthusiasts. In 1805, Dumont de Courset, according to his *Botaniste Cultivateur* [Botanist Grower], had them in his garden near Boulogne-sur-Mer. Ferdinand Fabre and Boisteaux, an enthusiast from Nantes, had them brought in from England. In Angers, Garnier-Joubert and de Bondy were the first to have them, just as is 1806, in Le Mans, they were found in the collection of Leprince de Clairsigny. In the North of France, the camellias of Norguet, an enthusiast from Lille, set an example by their beauty. In Savoy, Marin, a lawyer from Chambéry, cultivated then known varieties, and at the chateau of la Chapelle-Saint-Mesmin, near Orléans, Miss Raucourt, the tragic actress, had in her collection of plants 26 camellias, among which were found the first two ever to appear at the flower market on the Ile de la Cité in Paris and which she had acquired for 500 francs.

In 1815, once peace was restored, camel-

lias, which were rather rare until then, became more common, thanks to the English gardeners who sent them to the Continent. Parisian growers began to propagate them. To the name of Audebert, who was said to be the first to grow them, we can add Boulogne, Aernout, Stein, Biquelin, Tamponet, Cels, Noisette, and Fion. The number of varieties, most of them originating in England, rapidly increased. Thus we see that the collection of F. Cels, which contained 17 varieties in 1817, grew to 86 varieties in 1832; in his catalog for that year they were priced at 2, 8, 10, and 15 francs for each plant. The camellia was also rapidly circulated throughout the country. In 1832 in Marseilles, it covered several garden walls and regrew from the base when it had suffered during the winter. Named among the experts were Audibert de Tonnelle, Jacquemot-Bonnefond d'Annonay, and Rantonnet d'Hyères.

France can also claim the creation of new varieties: in Paris, Louis Noisette, who sowed the camellia in 1821, produced in 1829 the deep pink *C. 'Minima'*, the fiery red '*Ignea*', the brilliant pink '*Rotundifolia*', all characterized by the unusual form and arrangement of the flower's center petals. In 1831, he produced *C. 'Floribunda'* and '*Florae*'. It was also in 1831 that Fion popularized *C. 'Fioniana'* with small double variegated flowers; in 1836, Mathieu produced *C. 'Sophiana'*. Tamponet was the most fortunate Parisian sower. He had been one of the first camellia growers and owned the strongest specimens seen. In the beginning, he made numerous unsuccessful seedings, but gradually a considerable improvement in form and color became noticeable; certain of his achievements remained in collections for a long time. In 1836, he produced the poppy-red *C. 'Tamponetiana'* and the brilliant red '*Madame Adélaïde*'; in 1838, the deep cherry red *C. 'Duc d'Orléans'*; in 1840, the light pink *C. 'Louise Tamponet'*; in 1843, the white *C. 'Madame de Rambuteau'*, the creamy white '*Madame Tamponet*', the white lightly washed with pink '*Madame de Vatry*', and the white dotted and lined with brilliant pink '*Princesse Clémentine*'. We must not omit the names of Boursault and Abbé Brélès. About 1820, the latter devoted himself almost exclusively to the culture of the camellia. The collection he put together was renowned and notable because of the number and choice of the varieties. He did a great deal to spread

the culture of this bush. He is credited with the description of many new varieties as they appeared as well as with a monograph and an iconography of the camellia, the latter made up of 300 still life paintings done in his greenhouses. He also produced some varieties which showed real progress; among these were *C. 'Berlesiana'* with rounded, red flowers, produced in 1831 from seeds brought back in 1819 from the garden of Caserta, and in 1837, *C. 'Splendidissima'* which had large, full, white flowers.

Some Parisian growers were also known for their culture of the camellia. Among these are Guérin-Modeste, Margottin, and Paillet who cultivated a relatively small but well chosen collection propagated by the Fauchaux graft, and, who, about 1843, imported to Paris varieties produced in America: *C. 'Kurtzii'* and '*White Waratha*'. A little later, Henri Courtois, Tamponet's successor, was noted. He preserved and increased this collection and also produced some varieties: *C. 'Madame Place'* in 1856 and '*Madame e Beauregard*' about 1859. Also noted were the Lemichez brothers who replaced Fion. In Versailles, in 1849, Bertin found *C. 'Donkelaarii Alba'* which had white flowers, and Madeline, *C. 'Donkelaarii Alba'* which had white flowers, and Madeline, Boursault's gardener, produced, among others, *C. 'Adelaide Boursault'*, which bloomed for the first time in 1840. In Fromont's garden, Soulange-Bodin had put together a large collection which he propagated by cleft grafts sealed under bell jars and about 1842, produced *C. 'Splendidissima Alba'*. In Vitry, Margat raised some varieties like '*Variiegata Alba*', '*Tricolor*', '*Formosissima*', '*Imperialis*', etc. in open ground. There was also the collection of the Baumann brothers of Bollwiller, one of the most complete because it included in 1833, 300 varieties and was increased by several beautiful types the first of which they developed were *C. 'Baumanniana'* and '*Tryphosa Alpha*' in 1834, followed by *C. 'Alsatica*', '*Belle Clymène*', '*Maria Dorothea*', etc. Other collections include those of Oudin of Lisieux, Belot-Desfougères of Moulins, Miellez of Lille, who, about 1853, commercialized a certain number of Belgian varieties: '*Rubens*', '*Reine des Belges*', and '*Tricolor*', produced by Donkelaar and Mathot, as well as a certain number of Italian varieties.

In the south of France, Pierre Tourrès, a professional plantsman in Macheteaux, near Tonneins (Lot-et-Garonne), cultivated the camellia in open ground; about 1842, and during the following years, he popularized a few fine varieties: *C.* 'Coqueti'²⁸, 'Brignoliana', 'Gauthieri'²⁹, 'Pirolliana', 'Adrien Le Brun', 'Dugueti', 'Odorata', 'Belot-Desfougères', etc. Goudet, an enthusiast from Toulouse, seems to be the only person to have followed this example. From crosses made in 1839, 1840, and 1846 between *C.* 'Donkelaarii', 'Rosa Sinensis', 'Leeana Superba', and 'Pomponia', he produced *C.* 'Goudeti'³⁰ in 1859, and during the following years, *C.* 'Cornelia', 'Moquin-Tandon', 'Variegata Perfecta', etc.

Nantes and Angers were a paradise for camellias; their culture, encouraged by the climate as well as by the care and efforts of enthusiasts and horticulturists, expanded significantly there. In Nantes, where the camellia thrived outdoors and reached enormous size, it was, for a while, the main horticultural product, for, in 1851, a commission of the horticultural society of Nantes noted that there were 250,000 camellias cultivated and that 60,000 could be marketed annually.

Among the first who devoted themselves to this culture, we can name Boucher de la Villenois and Mellinet among the enthusiasts, and the elder Lefèvre and Gouillon among the horticulturists. Ferdinand Favre, one of the enthusiasts who imported the first varieties, was, above all, the instigator. He grew these varieties in open ground, and in order to produce plants which he considered to be more hardy, about 1810, he began to propagate them from seeds and continued doing so for three successive generations.. He had succeeded in having 7,000 seed plants when he turned over everything to a horticulturist, Noisette.

With this impetus, the number of followers from Nantes rapidly increased. Among the numerous private collections were noted those of Herbelin, Huet-Daguzon, Couvet, de Combles, Berthou, de Gouville, Colonel Geoffroy, Prosper Méry, Robert, etc. and among the trade establishments which supplied businesses, were mentioned those of Drouard-Gouillon, Brunellière, Prosper, Nérière, Phéliepeaux, Biton, etc.

The cultures from Nantes produced several varieties, some of which had great value:

C. 'Nantais' (*C.* 'Nantenensis'), the earliest, which had deep red flowers, was produced in 1827 by Gayon; the silvery white *C.* 'Hectotiana' produced in 1831 by Hectot; *C.* 'Henri Favre' and 'Lincata'³¹, appearing in 1840, were among the achievements of Fernand Favre; *C.* 'Drouard-Gouillon', 'Duc de Bretagne', 'Comtesse de Boigne', 'Marguerite Gouillon', etc. were among the achievements of Drouard-Gouillon; Herbelin is credited with *C.* 'Herbeliniana' and 'Comtesse de la Motte-Rouge'; *C.* 'Joinville' was produced by Prosper Nérière, etc.

In Angers, the horticulturists were the first to cultivate camellia varieties. Mr. Leroy, florist and nurseryman at the Grand-Jardin, in his 1808 catalog, announced as climatized greenhouse plants, *C.* 'Rubra Plena', 'Alba Plena', and 'Variegata Plena'. Two years later, Leroy's widow sent her employee, Macè, to Paris to look for new plants; he brought back various varieties of camellias. However, 1822 was an important date for camellia culture in Anjou. This was the year that one of the most skilled practitioners of the city [Angers], Cachet, planted his first camellias in open ground. This example was followed by André Leroy, Leroy du Grand-Jardin, and Lebreton; when the severe winter of 1829-1830 proved the hardiness of some varieties, this practice became more general. In 1832, André Leroy planted a 30-meter [99 ft.] espalier which included *C.* 'Coccinea', 'Pomponia', 'Conchiflora', 'Atorubens', 'Poeoniflora', etc. along a wall with an eastern exposure. At the same time, Cachet was testing some new varieties, and in 1842, according to the Maine-et-Loire horticultural statistics, of nearly 300 varieties cultivated in Anjou, 200 were raised in open ground. To show the progress made during these twenty years, we should note that, in 1822, the most complete collection, that of Restault, an enthusiast from Angers, included 14 varieties.

Despite an extensive culture, the varieties originating in Anjou were not numerous. Cachet, who was an expert and commercialized a certain number of good plants such as *C.* 'Henri Favre' (native to Nantes), and imported a number of Belgian and English varieties, produced the soft pink *C.* 'Apollina' in 1831, and 'Incomparabilis', which had spoon-shaped petals of dark red with one or two white stripes. In 1839, de Villemorge, an enthusiast from Angers, produced *C.* 'Ville-

morgeana', a brilliant pink lightly edged with flesh white. In 1843, the elder Audusson was credited with *C.* 'Henri Audusson', which had four tiers of vivid pink, slightly twisted petals.

In Germany, the first varieties of camellias were mentioned in 1804 at Herrenhausen (Hanover) which had *C.* 'Alba Variegata Plena', and at J.F. Reichert's of Weimar, who cultivated *C.* 'Rubra Plena'. In 1806, a horticulturist from Dresden, Joh. Heinrich Seidel, mentioned *C.* 'Rubra Plena' and 'Alba Plena' in his catalog, and a few years later, *C.* 'Variegata Plena'. Progress was slow. In 1816, Sckell, an inspector of the Grand Duke of Weimar's gardens, had brought together nine varieties of camellias in the Belvedere garden, while, in 1811, only five varieties were found in the grand ducal garden of Schwetzingen, near Manheim (Baden), and, in 1820, the varieties cultivated at Seidel's establishment (of Dresden) numbered only six, all originating in England. Moreover, these English varieties were imported one after the other as soon as they made their appearance, and Seidel seems to have been one of the principal importers. Varieties could also be obtained from the Baumann brothers of Bollwiller, whose extensive collection was famous in Germany. Even though camellias were less circulated than in other countries, they were not less sought after. They were often found among the plants offered to the Horticultural Society of Berlin by its members and were sometimes raffled off among them.

Some German growers also produced new varieties. Thus, J. Rinz of Frankfurt-on-Mein is credited with: *C.* 'Francofurtensis', derived in 1834 from *C.* 'Argentea' and 'Variegata'; 'Gunnellii', having a large pure white flower; 'Violacea Superba', notable for its purplish color, etc. In 1835, Gruneberg, also from Frankfurt, produced *C.* 'Teutonia'; in 1840 *C.* 'Modesta Rubra Variegata Alba' and 'Rothschildiana'; in 1844, *C.* 'Tumida', etc. In 1841, Kraatz publicized *C.* 'Berlinensis'.

Two famous collections were that of Baron Charles Hugel at Hietzing near Vienna which included all the known varieties, and that of Baron Sigismund de Pronay, one of the best connoisseurs of his time, who is credited with some valuable varieties like *C.* 'Imbricata Vera', 'Souvenir de Francfort', 'Triomphe de Mayence', and whose collection was acquired

by Amb. Verschaffelt in 1849 upon the death of this enthusiast.

In Italy, the camellia found a second home. In this privileged climate, it grew in open ground, needed little care, became very beautiful and grew very large. In Tuscany, and in the region around Milan, it became popular, and in Florence and Milan, it was more particularly cultivated as were other plants in other cities. However, its first varieties were cultivated a little late. In 1812, the gardener, Antoine Cattaneo, mentioned among the interesting plants in his garden *C.* 'Alba Plena', 'Rubra Plena', and 'Variegata Plena'. The following year, in the royal garden of Monza, these three varieties were still the only ones found, and in 1821, in the royal garden of Boccadifalco, near Palermo, the director, J. Gussone, had brought together 8 varieties.

The ease with which the camellia set seed was to encourage propagation by seeding. The first native Italian variety, *C.* 'Neriflora', thus named for its resemblance with the oleander, was produced about 1828, in Milan, in the garden of the Negri brothers, who for several years, had been sowing camellia seeds produced through artificial fertilization. The enthusiast, Traversi, had in his villa at Desio, near Milan, a collection from which his skillful gardener, Jean Casoretti, produced numerous varieties which gave him far-reaching renown. The first was *C.* 'Mutabilis', a soft, deepening pink shaded with violet, produced in 1830 from seeds of *C.* 'Rubra Semi Plena', sown in 1824. Then he successively produced *C.* 'Grandiflora', 'Santiana', 'Alba Variegata', 'Traversii', 'Variochii', 'Conchiflora Alba Plena', etc., and finally, 'Visconti Nova' and 'Montironi Vera' which appeared in 1849. Another Milanese enthusiast, Dr. Sacco, brought together a fine collection within which some specimens grew ten to fifteen feet tall and of which about thirty varieties — such as *C.* 'Coccinea', 'Aitonii', 'Imperialis', 'Pomponia', 'Corallina', 'Welbankii'³², 'Staminea', 'Lankmannii', etc. — annually produced a large quantity of seeds. This made possible the production of a number of varieties which were good for that period, among others *C.* 'Pictorum Rosea' in 1833, 'Superbissima' in 1834, 'Squamosa' in 1836, etc. After Sacco's death in 1837, the seeded plants he left continued to produce good

varieties, thanks to the efforts of his gardener, Paolino, the most famous of which was *C. 'Saccoi Vera'*.

Among the other Milanese sowers was François Mariani, a producer of very fine varieties. In 1838, he was credited with *C. 'Diana'* and *'Vespucius'*, then, until about 1854, one after the other, *C. 'Ferdinanda'*, *'Terziana'*, *'Pirzio'*, *'Taglioni'*, *'H. Roberto'*, *'Comte de Medici-Spada'*, *'Oloferno'*, *'Comte Maffei'*, *'Casati'*, *'Apiani'*, etc. Others sowers included: Joseph Baffi from Desio, who produced *C. 'Princesse Bacciocchi'* about 1845; the elder Burdin, who popularized *C. 'Emilio Campione'*, *'Il 22 Marzo'*, and *'Anna Zucchini'* in 1847-48; and Sangalli, who produced *C. 'Bonomiana'* about 1858.

In Florence, there were some growers and a great number of distinguished enthusiasts who successfully devoted themselves to camellia culture. One was the scholarly Dr. Pizzati who owned one of the most beautiful collections in Italy, obtained from all of the countries where the camellia was planted, and to whom is credited *C. 'Lucumone'* in 1839. Others include: Count Guicciardini, who owned numerous plants from 6 to 7 meters [19.8 ft. to 23.1 ft.] tall and who, about 1841, produced *C. 'Amethystina'* and *'Regularis'*; Marquis Ridolfi, whose vast gardens held a sizable number of plants, and who, assisted by his French-born gardener, Bonard, added to his collections between 1835 and 1849 a certain number of varieties, among them *C. 'Ridolfiana'*, *'Maria Antonetta'*, *'Illustris'*, *'Non Plus Ultra'*, *'Grand Napoleon'*, *'Radiata'*, *'Onor di Bibiana'*, etc.; the Burdin and Grilli establishment, which, between 1845 and 1850, circulated *C. 'Henri IV'*, *'Etrusca'*, *'Napoléon d'Italie'*, *'Comtesse Nencini'*, *'Coronata'*, *'Miniata'*, etc.; César Franchetti, who had one of the most beautiful collections in Europe and who was well known for his numerous achievements, among others, *C. 'Frederico Franchetti'* in 1853, *'Bijou di Firenze'*, *'Micheli-Angelo'*, and *'Pier Caponi'* in 1855, *'Amadryas di Cusano'* and *'Annette Franchetti'* in 1856, then successively *'Generale Pescetto'*, *'Duchessa del Balzo'*, *'Virginia Marini'*, and the most beautiful of all, *'Eugenia Pariatore'*³³, etc; Charles Luzzati, who produced *C. 'Bouturlin'* about 1852, *'Bella Milanese'* and *'Conestabile'* in 1853, *'Regina dei Giganti'* in 1856, *'Coradino'*, etc.; Professor Santarelli, who began in 1856

with *C. 'Philippo Parlatore'*³⁴, then the following years produced the varieties *'La Pace'*, *'Luiza Bartolini'*, *'Irène Mazzanti'*, *'Erebo'*, *'Clementina Magnani'*, *'Giardino Santarelli'*³⁵, etc.; Del Grande, who about 1860, enriched collections with *C. 'Ninja del Tebro'* and *'Roma Risorta'*; Count Bouturlin, whose gardens about 1860 gave birth to *C. 'Dionysia Poniatowsky'* and *'Contessa Mariana'*; and closer to our times, Mercatelli and Bonafoldi also popularized a few varieties.

Other places also furnished some varieties. In Turin, there were two horticulturists: Burnier, who, in 1839, produced *C. 'Billottii'*, and Prudent-Besson, who, in 1849-1850, publicized *C. 'Comtesse de Maglian'*, *'Abbate Branzini'*, and *'Princesse Maria Pia'*. In the Borromeo Islands, the Rovelli brothers provided the market with several fine varieties: *C. 'Metronesson'* in 1842, *'Squamosa Alba'* in 1844, etc. In Plaisance, Calciati-Borghesi had a fine collection, and in 1840, produced *C. 'Calciati'*, then *C. 'Langhiana'* and *'Borghesiana'*. At Lake Como, Louis Sada publicized *C. 'Bella di Giomi'* in 1848, then in the following years, *'Paeoniflora'*, *'Monstrosa'*, *'Frederico Confalonieri'*, etc.; in Leghorn, Mazzanti produced *C. 'Bella di Livorno'* in 1859. In Genoa, there was Antonelli; in Venice, Palazzi, who among others, produced *C. 'Vittorio Emanuele II'* in 1867. In Brescia, the achievements of Camille Brozzoni and an enthusiast, Count Bernardino Lecchi, had as much fame as those of the more renowned sowers of Florence and Milan. These were *C. 'Duc de Reichstadt'* in 1847, *'Faustine'* in 1848, *'Duc de Berry'* in 1850, *'Rosa William'* in 1851, *'Giudita Rosani'*, *'Emilio Bono'* in 1852, etc.

Thus the Italian sowers produced a multitude of more or less valuable varieties and, during a certain period, many of these varieties did not live up to the qualities claimed by their producers. But, about 1840, when varieties produced in the other countries of Europe were brought into the collections of Milan and Florence, the valuation of new productions was made easier, their value was firmly established, and while the number of achievements in other countries lessened, it increased in Italy. This country became the source of new camellias which were commercialized by Cachet and Miellet in France and by a few horticulturists from Ghent, namely Amb. Verschaffelt.

In the United States, it was the same enthusiast who had introduced the *C. japonica* type form who cultivated the first variety: *C. 'Alba Plena'*, which had been brought to him from England in July, 1800, by Flor, a horticulturist from New York. In 1806, John Prince of New York received a small sample of the same variety which was sent to him by Joseph Borrell of Charleston. The first collection was put together by David Landreth of Philadelphia. Progress was rapid, since in 1828, William Prince of Flushing, near New York, listed 34 varieties of camellias in his *Short Treatise of Horticulture*. The liking for this plant had become general, and camellia collections, brought together with perseverance, and cultivated with success, were seen especially in the greenhouses of the enthusiasts of New York, Boston, and Philadelphia.

American growers sowed camellia seeds beginning in 1821. From that time on, Floy from New York, who especially liked this kind of propagation, sowed many seeds. His first achievement was *C. 'Clintonia'*, which bloomed for the first time in 1826. This variety derived from a cross of *C. 'Waratah'* and *'Variegata Plena'*; its flower had only one tier of large, scarlet red outer petals; the center was formed of many small, narrow petals striped with red and white.

The following year, the same sower raised *C. 'Hosackia'*, with flat, double red flowers descending from a seed of *C. 'Rubra Plena'* sown in 1822. Then he successively popularized *C. 'Wardii'*, *'Lorillardii'*, *'Novoe Boracensis'*, *'Bostonia'*, *'Franklinii'*, *'Margaretha Crassifolia'*, *'Coruscans'*, and one of the best known, *C. 'Floyii'*, produced in 1834 and which was circulated throughout Europe by A. Verschaffelt under the name of *C. 'Grand Frédéric'*, given to it by its first purchaser, Jacob Makoy of Liège.

Among other seeders, the following were noted: Landreth of Philadelphia who publicized *C. 'Landrethi'* in 1835; Kurtz of Baltimore, who, the same year, produced *C. 'Kurtzii'*; Hogg, a horticulturist from New York, who is credited with *C. 'Spectabile'* in 1836; C.M. Hovey of Boston, whose seeds from *C. 'Waratah'* crosses were as good as the English varieties; Harrison, an enthusiast from New York, who produced *C. 'Arnoldi'*, *'Rubina'*, and *'Meteor'* about 1837; Sherwood from Philadelphia, who produced *C. 'Sherwoodii'*; W.E. Carter of the Boston botanical garden; Th. Dunlop, the gardener

of an enthusiast from the area around New York, made famous by *C. 'Americana'* which appeared in 1837, and *'White³⁶ Waratah'*; R. Buist of Philadelphia who produced *C. 'Prattii'* and *'Martha'*; Feast of Baltimore, producer of *C. 'Baltimorensis'*; Smith of New York, who produced *C. 'Philadelphica'* in 1839, then, during the following years, *C. 'Estherii'*³⁷, *'Benneyi'*, *'Amabilis'*, *'Caroline Smith'*, *'Général Lafayette'*, etc., commercialized for the most part by Boll of New York, who, himself produced *C. 'Washington'*; Chalmer, an enthusiast from Philadelphia, who produced *C. 'Perfection'*, sold by Van Houtte in 1847; Marshall P. Wilder of Dorchester, who had a collection of about 300 varieties of which some were seeded by him and some produced through cross fertilization. Of the latter, the best known were: *C. 'Wilderii'* and *'Mrs. Abby Wilder'*, which he popularized in 1846 and which remained in collections for a long time.

When the camellia lost its popularity in Europe, in the United States, collections continued no less to be maintained. C.M. Hovey and M.P. Wilder still produced some valuable varieties into the last quarter of the 19th century.

As for all highly cultivated plants, one of the sources of the camellia varieties was the spontaneous production of a variation on a branch attached by grafting. The number of varieties produced in this way is probably greater than we know. This is how *C. 'Duc de Chartres'*, *'Duchesse de Cazes'*, *'Teutonia Amabilis'*, *'Comte de Toll'*, *'Professor Zannetti'*, *'Grace S. Wilder'*, etc. appeared at various periods.

During the time it was popular, the number of camellia varieties was considerable. It was also noted that the same variety was circulated under several names and that others resembled already known varieties. Nevertheless, the first varieties with irregular flowers, those related to *C. 'Anemonaeflora'* (except for a small number) one by one disappeared from cultures and were replaced by forms more and more sought after for their entire duplicature and their very perfect and regular imbrication which caused them to be named 'Perfections'.

At this point, the camellia was neglected. Not only were famous collections dispersed, but the large cultures built up for the production of cut flowers used in floral arrangements, like that of Olivier Ragoneaux of Montreuil, disappeared. The flowers of the

camellia were replaced by other flowers dictated by fashion.

**Paris. Librarie Horticole, 84 BIS, RUE DE GRENELLE, 1991; Obtained by Ann Richardson, Curator Camellia and Japanese Gardens, and The Huntington, San Marino, CA., U.S.A.; Translated by Josette T. Bryson, Ph.D. and Patricia M. Barlow, Ph.D.*

- 21 'Donckelaeri', synonym for 'Masayoshi'
- 22 There is no doubt these came from Japan, as we know most of the Japanese names.
- 23 'Waldakti'
- 24 Named after a Mr. Lee.
- 25 'Bobrinsky'
- 26 Japanese 'Kingyo-tsubaki'
- 27 'Duc d'Urse'
- 28 'Coquetti'
- 29 'Gaulbieri'
- 30 'Goudetii'
- 31 'Lineata'
- 32 'Welbankiana'
- 33 'Parlatore'
- 34 'Professore Filippo Parlatore'
- 35 'Professore Giovanni Santarelli'
- 36 'White'
- 37 'Estherae'

CAMELLIAS IN THE GARDEN OF EDEN

HANS GRIEDER, Switzerland

CAMELIAS EN JARDEN DE EDEN

KAMELIAN IN GARTEN DES EDEN

CAMELIERS EN GIARDINO DI EDEN

CAMELIAS EN JARDIN DE EDEN

I am a member of the International Camellia Society and run a small hotel, The Eden, in the southern part of Switzerland, in the Ticino, near Ascona. It is in Porto Ronco on the shore of Lago Maggiore overlooking the Brissago Islands. These islands are a botanical garden of the Swiss Confederation.

The hotel has been in our family for four generations. My grandfather, who was a gardener in Zurich, bought the house in the early 1920's and moved his activities to Lago Maggoire. Since the climate of this location is very favorable for camellias, my grandfather made many trips abroad for buying camellias and other rare plants. He and my mother, who ran the hotel for many years, cultivated the garden surrounding the house with love and passion. My mother is now 78 years old and still a passionate camellia lover.

I live in Basel, about 300 kilometers away from the hotel and my mother, and on weekends, I spend in the Ticino near my camellia collection. My collection now has over 300 cultivars, including many very old trees of camellias bought by my grandfather. One old document shows that my grandfather went to Dresden to the Seidel Nursery to buy camellias. The document, a freight bill, tells us about 20 camellia plants were to be shipped in May 1936. These trees are still in the garden.

The hotel is frequented by camellia lovers from all over Europe. In fact, a camellia flow-

er is the emblem of the hotel.

Every year, one week before Easter, we organize a camellia exposition in the garden and on the terraces of the Eden. One day during the exposition last year, a family from Dresden visited us. The lady was a daughter of the last Seidel. She told me that the nursery still exists and she invited me to visit her family and the nursery. Some months later, during a business trip to Poland, I stopped at Gruengraebchen, near Dresden, and visited the Seidel Nursery.

When I left, Mr. Schroeder, husband of the Seidel's daughter, gave me a photocopy of a booklet that in my eyes is a little sensational. The booklet, printed in 1837, is a guide to the culture and propagation of camellias written by Traugott Jacob Seidel. Whoever would have thought that, in the field of camellia literature nothing new could ever come up, was wrong. We knew all about early camellia literature (Hoepli, Berlese, etc., etc.) — and now this!

The author had a 26-year experience with camellias when he wrote the book. In 1837, he had 308 cultivars in 40,000 plants. He states, "If you follow my advice, you will have same success in propagating camellias that I do. My year's requirement of 15,000 plants is growing in perfect health."

I am now trying to translate the booklet for the International Camellia Journal.

JUMPING GENES —

Can They Cause Mutations in Camellias?

NANCY VAN SCHAIK, South Africa*

LES GENES MOBILE PEUVENT - ILS CAUSER DES MUTATIONS CHEZ LES CAMELIAS

KOENNEN "SPRINGENDE" GENE MUTATIONEN IN KAMELIEN HERVORRUFEN

OLTREPASSANNO LE GENE - POTRANNO CAUSARE MUTAZIONE NELLE CAMELIE

ALTERACIOU DEL LOS PEUES EN LAS CAMELIAS PUEDE CAUSAR MUTACIOUES

Certain cultivars of camellias are renowned for their repeated production of new mutants — changes in flower color, flower form — all the marvelous and beautiful variations that give so much pleasure to Camellians. These sudden changes which occur seemingly magically to produce a branch of a plant which bears flowers different from that of the rest of the plant are called sports or somatic mutations. They result from changes in a single gene in a cell that will divide and produce more cells to form a bud and eventually a branch. This change in the DNA, the chemical of the gene, results in a change in a protein in the cell, and that in turn may change a complex biochemical process which has the result of changing the appearance of the flower eventually produced on a branch derived from the mutant cell.

All the things that happen from the time a camellia seed forms from a single fertilized ovule until the plant that develops from that seed gives us beautiful flowers, are the result of thousands of chemical processes that take place within the cells of the plant. In this development, the genes (which are themselves chemicals) control which reactions occur, and when and where in the plant they occur. It is the genes contained in the seed that determine that that seed will grow into a camellia instead of a snapdragon and that the camellia will have a certain growth habit, leaf shape, size and color and a certain flower size, form and color. Genes also specify whether or not a particular plant will be heat or cold tolerant, whether it will grow well in full sun or prefer deep shade, have leaves that aphids or beetles find tasty or repulsive and whether it will be sensitive or resistant to infection by various viruses, bacteria and fungi.

Each new seedling starts originally from a single cell which has obtained half of its genes in the nucleus of the cell from the mother plant and half from the pollen

parent. Deoxyribonucleic acid or DNA, the chemical from which genes are made is usually very stable. Each time a cell divides the genetic code written in the building blocks of DNA is copied precisely so that each daughter cell gets a copy of all the genes present in the mother cell. On the very rare occasion when a mistake is made in the copying process, the information stored in the DNA is changed and this is what we recognize as a mutation. The frequency of mistakes can be increased by treatments with radiation or with chemicals that can affect the DNA directly or interfere somehow with the copying process.

An intriguing question is, why do some plants seem to mutate fairly often while others are very stable? The ultimate manifestation of this high mutation rate is seen in plants showing variegated flowers. There are two types of variegation, the non-heritable type produced by a virus which gives white spots or irregular streaks on a colored background and the genetic type which gives well defined colored flecks or stripes on a background of a different color. It is this type that I will discuss. In genetic variegation, it seems that some active gene in one of the steps in the formation of pigment has become highly unstable so that the flower usually shows many spots or stripes of dark color on a light background. Such unstable genes affecting flower color have been described in snapdragons, roses, dahlias, delphiniums, cyclamens, rhododendrons, chrysanthemums, peaches, carnations, maize, nasturtiums and many others as well as in camellias. Some of the most striking examples in camellia in my garden are 'Lady Vansittart' (Edo-nishiki) and 'Hikaru Genji' (Herme) with a large colored sectors and 'Roma Risorta' and 'Strawberry Blonde' with tiny flecks. Others are 'Betty Foy Saunders', 'Corroboree', 'Tricolor' and 'Carters Sunburst'.

Back in the 1940s and 50s, the American geneticist, Barbara McClintock studied this type of variegation in maize showing stripes of red on its kernels. Her studies led her to the very startling conclusion that in these plants there were strange genes which she called controlling elements that instead of having a fixed position on a chromosome could jump from one location to another. Sometimes these jumping genes or transposons or transposable elements as they are now called, jumped into a gene controlling a step in the biochemical synthesis of pigment. This piece of foreign DNA in a gene interrupts the reading of the genetic code and the gene usually becomes non-functional. If a cell on a red camellia plant in which this happened, divides to form a bud and a branch, a flower on that branch would be white. If the jumping gene jumped out of that gene in such a way that the original genetic code was not changed, the cell would again be able to make red pigment, and the cell's descendants would form a red stripe or sector.

More than forty years of classical genetic studies had indicated that each gene had a specific location on a particular chromosome of the cell and that genes only moved if chromosomes were broken and rearranged. The idea of genes that could jump from one position to a different one was very unorthodox at that time and not understood by most geneticists until the era of molecular biology some 30 to 40 years later. A Nobel Prize was awarded to Barbara McClintock almost 40 years after her pioneering work. Now we know the molecular structure of these jumping genes and are starting to understand how they move.

Using sophisticated biochemical techniques, it is now possible to determine the entire formula for any piece of DNA, therefore any gene. A few simple viruses which have only a few genes, have had their entire genetic chemical formulas solved. There is a massive international research project presently underway which aims at sequencing the genetic material of humans. This will take many laboratories, many man hours of work, and cost billions of dollars. When it is finished, we will have a record of the complete chemical formula for a human being. Once the techniques for sequencing bases existed, studies of the structure of individual genes could be made.

A gene is a certain length of the double stranded DNA molecule that forms the backbone of the chromosome. Most genes are several thousand nucleotides (DNA building

blocks) long and different genes are different sizes. The whole DNA molecule is like a long double chain with only four different kinds of links. The order of these links (nucleotides) forms a code that in turn specifies just what kind of proteins are formed in the cell.

Let us take a closer look at what jumping genes really are and how they produce mutation.

To understand jumping genes, we must first look at the structure and function of a normal gene. Most genes work by carrying the coded information for the formation of a particular protein. Some of these proteins help to form the structure of the cell and its machinery, but most are enzymes, biological catalysts, which in turn control all the chemical reactions in the cell. Each different reaction by which molecules are built up or broken down is controlled by a specific enzyme and one gene controls the production of one enzyme. A complicated process such as the formation of pigment in the flower involves many different steps and is controlled by a different gene. In the same way the formation of a flower requires the cooperation of many genes. A change in any gene involved in such a process can cause the whole process to fail or the product to be different.

When a gene is switched on, an enzyme forms a single stranded molecule of a different nucleic acid, RNA in which each link in the DNA specifies one link in RNA. One strand of DNA is used as a template and the order of building blocks in the RNA is determined by those in the DNA. These messenger molecules are then used as blue prints for the assembly of a chain of amino acids with three letters in the RNA code specifying each different amino acid. A change in a gene produces a change in the messenger which may produce a change in a protein which can cause a change in a structure or a biochemical process in the cell.

The picture then, that emerges of the structure of a typical gene encoding a protein of a higher organism like a camellia plant (or a human being) is that it consists of four different kinds of regions. Firstly, many of the nucleotides are used as a code to specify the amino acids that are the building blocks of protein. It is this part that forms the so-called genetic code. This is the business part of the gene. But, biology is always full of surprises and it was a great surprise to learn that this coding region is usually interrupted by the second type of region, non-coding spacers that have to be cut out of the message before it is translated into amino acids. Some of the human genes that have

been sequenced have dozens of these non-coding interruptions in them. Each of these introns, as they are called, contains certain sequences of bases that are recognized by enzymes that cut them out of the RNA. Processing signals make up the third class of structures. The fourth class is the most interesting and the one that we know the least about. These are the control regions that determine when and where and how strongly each gene will be switched on.

In plants, every cell contains every kind of gene. The products of some genes are needed by all cells. These are the so-called housekeeping genes whose products are necessary for the basic chemistry of keeping the cell alive. Other genes are switched on only when the cells divide, some only in leaves, others only in flowers. Some genes are switched on only in the light, others only if the roots find themselves in water. Some genes control chemical processes that make natural insecticides and many plants can increase the production of these insecticides in response to leaf damage. This kind of gene is regulated by its control region.

Now what about the structure of transposable elements? They seem to belong to two main classes. Some seem to be derived from viruses and may contain several different genes, but the simplest type contains only one gene with a special sequence on each side of it. The single gene encodes an enzyme called transposase which can cut DNA. It can recognize the special ends of its own kind of element and cut it out of the DNA and insert it elsewhere. If a jumping gene lands in the coding region of another gene, it is easy to see that the message encoded by that gene would be interrupted. If the transposable element inserts in the control region of a gene, it may change the time, or place or strength of action.

How can we explain the fact that some of the mutants produced seem to be stable? Sometimes in the process of moving, the transposable element may be damaged. If its transposase gene is not complete, it could not move unless there is another complete transposable element of the same type elsewhere its genome to make transposase. Stable mutants can be produced if the transposase gene is not switched on or its message is incorrectly processed. If one of the special ends is damaged, it would not be able to move even in the presence of the transposase enzyme because the enzyme would not recognize the changed end.

Geneticists used to assume that most mutations were simple mistakes in the DNA

produced during copying or as a result of interactions with chemicals. We are only now coming to realize that many well known mutations are actually insertions of transposable elements into the gene. One of the seven mutants of garden peas studied in the 1860s by Mendel, the father of Genetics, has recently been shown to be an insertion. Very recently, a mutation in a gene involved in controlling cell division in humans which is implicated in some cancers, has been found to be mutant because it contains a jumping gene. Jumping genes have been found in all types of organisms from bacteria to man and have been used in the geneticists' guinea pig, the *Drosophila* fly, to do genetic engineering. A foreign gene can be put in the center of a transposable element, the doctored jumping genes are then injected into *Drosophila* eggs and some flies recovered from these engineered eggs carry the foreign gene inserted in among their own genes. Perhaps one day we will be able to carry out this type of genetic engineering in camellia to introduce desirable genes.

Although transposable elements have not yet been formally identified chemically in Camellias, all the typical symptoms are there in the unstable varieties. We hope soon to start looking for them on the molecular level in our laboratory in Johannesburg.

Let us look at some *C. japonica* mutations and interpret them in terms of the genes affected and how transposable elements could affect their functioning.

In 'Lady Vansittart', one can see mutant sectors of various kinds. The plant carries the genes for red flowers. The background white is tissue where a jumping gene is inserted in the coding part of a gene involved with pigment formation. The red sectors result when the jumping gene jumps out of that gene allowing it to function again.

Recent scientific work with snapdragons has shown that the insertion of jumping genes into different positions in the controlling region of some of the genes involved with flower color can control not only whether the gene is switched on fully, partially or not at all, but also change pigment distribution producing a flower with color on only certain parts of the petal. This explains how a jumping gene can turn a genetically red flower or petal not only into a pink flower or a white flower but also into a picotee. In the mutant of 'Lady Vansittart', 'Yours Truly', the jumping gene has probably jumped into the controlling region of the gene so that pigment production does not extend to the edges of the petals giving the picotee pattern.

In 'Hikaru' genji, I would hypothesize that most tissue has a jumping gene in the control region (giving the picotee pattern). Where the jumping gene jumps out of the pigment gene, a red sector occurs which then can extend all the way to the edge of the petal. In 'Roma Risorta' and 'Strawberry Blonde', the time of transposition of the element is always very late in flower development so that the reverted sectors are very small.

Another common type of mutation which can affect flowers in a dramatic way are those in genes which control the formation of the different flower parts. When plants form flowers, some unknown switch changes the meristem (the cells that are dividing) from a vegetative one to a florescent meristem and finally to a floral meristem. Instead of producing stem with leaves at nodes, in the wild form single camellia, it produces much smaller leaves in a whorl and then finally whorls of the four basic flower parts, first bracts and sepals, then a whorl of 6-9 petals, followed by a whorl of stamens usually joined at their bases and finally, in the center a whorl of three carpels joined into the ovulary and tipped by the stigma which is split into three parts at the tip. Intensive studies within the past few years on two very different plants, *Antirrhinum majus* (the common snapdragon) and *Arabidopsis thaliana*, a very small weed, known as wall cress, belonging to the cabbage family, have shown that flower development in these two very distantly related plants is controlled by very similar genes acting in very similar ways. One group of these genes determines which whorl develops into which kind of organ and a different group determines how many organs are present in each whorl.

Mutation, or the insertion of a jumping gene into one of these genes can change the flower form. A mutation in a gene which changes the number of organs could produce a semi-double with extra petals or a Higo type with many stamens. A mutation in a gene which changes the kind of organ could change all whorls which should produce stamens and carpels, into petals - (the formal double) or act incompletely giving rows of normal petals first, then petaloids mixed with stamens and finally a somewhat deformed pistil in the center, as is seen in various degrees in the rose, peony and anemone forms.

These changes in flower color and flower form are the easiest to observe but we would expect that transposable elements can affect many other genes and therefore serve

as a very useful source of variation for selection by plant breeders.

Variation of the type expected from jumping genes is fairly common in *C. japonica* but I have never seen it in *C. reticulata* or *C. sasanqua*. It has also been noted that *C. japonica* seems much more variable than the other cultivated species. I should like to know if any of the camellia experts from all over the world know of any examples in species other than *C. japonica*. It seems from studies of these elements in other plants and animals that inactive forms of them may be present in many species and that they may sometimes be activated to start jumping under conditions that put their genes under stressful conditions.

Several of the Camellia families that have produced many variants such as the 'Elegans' and 'Betty Sheffield' groups show variegation of the splotched (not striped) sort typical of virus infection rather than of jumping genes. In animals, and in bacteria, certain types of viruses can behave not only as infectious agents but also as jumping genes and can produce mutations by inserting themselves in genes. To the best of my knowledge, no plant viruses of the type that the Camellia mottle virus is suspected to be able to do this, but in Camellia, it seems that some sort of genetic instability may be produced by virus infection. This is an interesting topic for further study.

Finally, to answer the question posed in the title, I am sure that jumping genes can and do produce mutations in camellias. In the never ending search for novel colors, forms and patterns, it may be that breeders should use genetically variegated plants more often as parents in order to introduce these elements into species that lack them in order to unleash a new source of variation.

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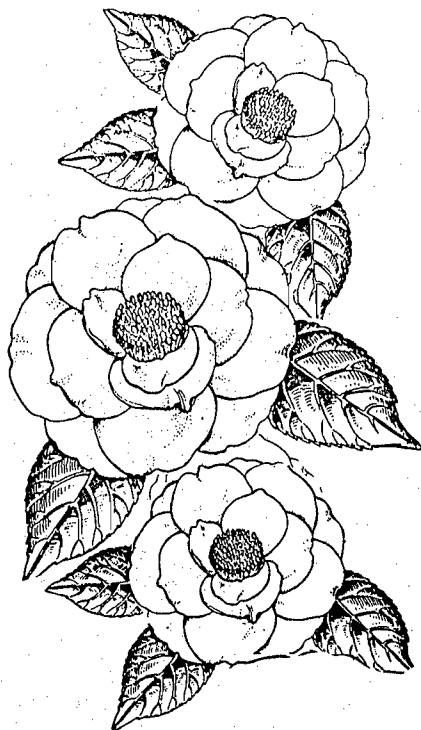
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A REVISION OF THE SECTION CHRYSANTHA OF CAMELLIA*

CHANG HUNG TA, China

REVISION DE LA SECTION CHRYSANTHA DES CAMELIAS

REVISION DES PARAGRAPHENNN - CHRYSANTHEU DER KAMELIE

REVISION DEL SEZIONE CHRYSANTHA DELLE CAMELIE

REVISION DE LA JECCIOU DE LA CAMELIA CHRYSANTHA

A revision of the taxonomy of the golden Camellia section *Chrysantha* has been completed. According to the characteristics and variability of the section, seven species and five varieties have been reduced to synonyms and two varieties were raised up as new combined species.

Keywords: revision, *Camellia*, *Chrysantha*, *C. grandis*, *C. fascicularis*.

When the Section *Chrysantha* was founded by the author in 1979, seven species in *Chrysantha* were reported. Two years later, in the monograph *A Taxonomy of the Genus Camellia*, nine species were published. Due to the high valuation placed on these species for ornamental horticulture, considerable attention to surveying and investigation was given by many botanists and horticulturalists. Within ten years more than 20 new names of yellow camellias were published. During this period of investigation, many aspects were examined, including cytology, karyology, embryology, palynology, anatomy and ultramicroscopy of structures were done in laboratories. Also hybridization and tissue culture was carried out, so that many results were obtained. The seed pool and gene base extended to most of the institutions within the mainland of China and the breeding of the golden camellias extended to many botanic gardens. During this period some confusion and ambiguity inevitably occurred as the ecotypes and some variable characteristics were identified as independent species, and a revision of the taxonomy became necessary.

The classification of the section *Chrysantha* depends on the correlation between the vegetative and reproductive organs. The texture and thickness of the leaves are correlated to the lateral nerves. On the thick leaves the nerves are usually impressed, as seen in *C. impressinervis* Chang, *C. euphlebia* Merr., and *C. chrysantha* (Hu) Tuyama etc., while in the chartaceous or thinly coriaceous leaves, the nerves are not impressed, as seen in *C. tungbinensis* Chang, *C. flavida* Chang,

C. pubipetala Wan & Huang, *C. grandis* Chang & Liang and *C. pingguoensis* Fang.

The leaf size and shape are variable in different sites and habitats. They also differ in dimensions, texture and shape, and the shape of the leaf base is also variable as seen in *C. chrysantha* (Hu) Tuyama and *C. euphlebia* Merr., their leaves usually being shorter than 15 cm, with extreme exceptions longer than 20 cm. The seedlings of *C. grandis* Chang & Liang commonly bears oblong leaves, but when it is moved from Longgang to Guangzhou, the leaves become thickly elliptic, very similar to those of *C. euphlebia* Merr. The type specimen of *C. euphlebia* Merr. has elliptic leaves, generally 8-9 cm wide, but some of the leaves of the cotype are oblong and 4-5 cm wide. The leaf base of *C. grandis* Chang & Liang is cuneate, but in some of the specimens it is rounded.

The number of lateral nerves is usually less than 10 pair, but on the leaves of *C. impressinervis* Chang, they are more than 10 pair. In the coriaceous leaves the lateral nerves are heavily sunken, but not so in the thin ones.

The indumentum of the vegetative organs is usually correlated to the reproductive organs. When the leaves are covered with indumentum, and the branchlets are hairy, as seen on *C. flava* Sealy, *C. impressinervis* Chang and *C. pubipetala* Wan & Huang, there is a correlation with the hairy ovary species. This is seen on *C. flava* Sealy and *C. pubipetala* Wan & Huang, where the ovaries are covered with indumentum and leaves and branchlets are usually hairy.

The morphological characteristics of the flowers are somewhat stable. The number and shapes of the bracts and sepals are usually consistent, commonly 5-6, and persistent after blooming. The petals are variable, generally 7-10 in number, but in certain species such as *C. chrysantha* (Hu) Tuyama, sometimes 13-14. However since this variability usually occurs on the same tree, there seems no specific significance. Stamens are numerous and usually free, sometimes slightly united at the base. The

exception is *C. fascicularis* Chang where the stamens are united into bundles. The styles are usually free, sometimes slightly united at the base, but the variance possesses no classification importance.

The ovaries are commonly composed of 3-5 cells and are mostly glabrous, however in a small group of species such as *C. flava* Sealy, *C. pubipetala*, *C. longzuo* and *C. micrantha* Liang & Zhong, the ovaries are hairy. In the red flowered section *Camellia*, there is a correlation between the ovaries and the pericarps; when the ovaries are pubescent, the pericarps are soft and corky, while in the glabrous ones they are woody and hard. However, in the section *Chrysantha* there is no correlation. Generally, in this section the pericarps are mostly thin, about 2-4 mm thick, with the thick pericarp of *C. fascicularis* Chang up to 8 mm thick as exception.

Most of the testa of the seeds are glabrous, with the hairy testa found on *C. fascicularis* Chang and *C. grandis* Chang & Liang of classification significance. Such conditions can be found in the red flowered section *Camellia* as seen on *C. trichosperma* Chang etc.

As the characteristics cited above in section *Chrysantha* does not show much morphological divergence, following are prominent characteristics, dependable for classification:

1. The presence or lack of indumentum on young shoots, leaves and ovaries.
2. The number of lateral nerves, together with the correlation between the thickness of the lateral nerves and as to whether the lateral nerves are impressed or not.
3. The number of locules in the ovary, whether 3 or 5 celled, presence or lack of indumentum.
4. The thickness of the pericarp is important for classification, although most of them are thin.
5. The indumentum of the testa of the seeds.

As to the size of the leaves, the number of petals and the length of petioles and pedicels, which are usually variable, are of less importance in classification; as are the stamens and styles; which sometimes may be slightly united at the base, which seems a negligible characteristic. If too much emphasis is made of subordinate characteristics, it would induce confusion and ambiguity in classification.

Most of the golden camellia species are shade plants, commonly distributed in limestone regions and restricted in area. Some are found on acidic soil, such as *C. euphlebica* Merr., *C. chrysanthoides* Chang and *C. micrantha* Liang & Huang, and some are located on both types of soil such as *C.*

chrysantha (Hu) Tuyama and *C. tungbinensis* Chang. It seems not possible to depend on habitat as an aid to classification.

From the viewpoint of arealology, within an area of less than 50,000 km², situated on the border of South Guangxi and North Vietnam, there exists 14 species of yellow camellias which is an extreme exception to phytogeography. This is perhaps due to the plasticity and variability of the section *Chrysantha*. If, because of the variable characteristic of leaves and flowers, new names or species are accorded, this will lead to confused classifications and the revision given below is an attempt to clarify the situation:

1. *Camellia limonia* Liang & Mo. = *C. tungbinensis* Chang.
2. *Camellia limonia* var. *obovata* Mo & Zhong. = *C. flavida* Chang.
3. *Camellia longgangensis* Liang & Mo. = *C. flavida* Chang.
4. *Camellia longgangensis* var. *grandis* Liang & Mo = *C. grandis* Chang & Liang. *stat. nov.*
5. *Camellia longgangensis* var. *patens* Mo & Zhong = *C. flavida* Chang
6. *Camellia chrysantha* var. *longistyla* Mo & Huang = *C. chrysantha* Tuyama.
7. *Camellia ptilosperma* Liang, = *C. grandis* (Liang & Mo), Chang & Liang.
8. *Camellia quinqueloculosa* Mo & Zhong = *C. aurea* Chang.
9. *Camellia terminalis* Liang & Su = *C. pingguoensis* Fang.
10. *Camellia parvipetala* Liang & Liang, = *C. grandis* Chang & Liang.
11. *Camellia chrysantha* var. *macrocarpa* Mo & Huang = *C. euphlebica* Merr.
12. *Camellia microcarpa* Mo, = *C. chrysantha* var. *microcarpa* Mo & Huang.
13. *Camellia euphlebica* var. *yunnanensis* Wang & Fan = *C. fascicularis* Chang, *stat. et nom. nov.*

KEYS TO SPECIES OF SECTION CHRYSANTHA.

1. Ovaries 5 celled, styles 5 parts, leaves longer than 15 cm.
 1. ser. *Flavae*
 2. Ovaries and lower surface of leaves pubescent, leaf base cuneate.
 1. *C. flava* (Pit) Sealy.
 2. Ovaries and lower surface of leaves glabrous, leaf base cuneate.
 2. *C. aurea* Chang
1. Ovaries 3 celled, styles 3 parts, leaves usually shorter than 15 cm.

-1. ser. *Chrysantha*
3. Ovaries glabrous.
4. Leaves longer than 12 cm, lateral nerves more than 10 pair, flowers 3-55 cm in diameter.
5. Leaves elliptic, filament base more or less united.
6. Filament base united into a short tube, capsule thin, 2-4 mm thick, seeds glabrous
-3. *C. euphlebica* Merr.
6. Filaments united into bundles, capsule with 7-8 mm thick pericarp, seeds pubescent
-4. *C. fascicularis* Chang
5. Leaves oblong, filaments usually free.
7. Leaves thickly coriaceous, lateral nerves conspicuously impressed.
8. Branchlets and leaf back hairy.
-5. *C. impressinervis* Chang
8. Branchlets and leaf back glabrous.
-6. *C. chrysantha* (Hu) Tuy.
7. Leaves membranaceous or thinly coriaceous, lateral nerves not impressed.
9. Bases obtuse or subrotund, lateral nerves 6-8 pairs, smooth, flowers 3-4 cm in diameter, seeds hairy.
-7. *C. grandis* Chang & Liang
9. Leaves thinly coriaceous, bases narrow cuneate, lateral nerves 9-11 pairs, slightly sunken, flowers 4-5.5 cm in diameter, seeds glabrous.
-8. *C. chrysanthoides* Chang
4. Leaves shorter than 10 cm, lateral nerves less than 10 pairs, flowers about 3 cm in diameter.
10. Leaves elliptic or ovate, shorter than 8 cm long.
11. Leaves oval, bases rounded or obtuse, flowers 1.5-2 cm in diameter, Petals 5-6.
-9. *C. pingguoensis*, Fang.
11. Leaves elliptic, bases cuneate, flowers 3-3.5 cm diameter, petals 8-9.
-10. *C. tungbinensis* Chang.
10. Leaves oblong, 7-10 cm long, petals 8-11.
-11. *C. flavida* Chang.
5. Ovaries hairy.
12. Branchlets and leaf backs hairy, leaves 20 cm long, flowers 4-5.5 cm diameter
-12. *C. pubipetala* Wan & Huang.
12. Branchlets and leaf backs glabrous, leaves shorter than 15 cm, flowers 3-3.5 m diameter.
13. Leaves oblong, thickly coriaceous, petals 2 cm long.
-13. *C. longzhouensis*, Luo.
13. Leaves elliptic, thinly coriaceous, petals 1 cm long.
-14. *C. micrantha* liang & Zhong.

SER. I FLAVAE CHANG.

1. *Camellia flava* (Pitard) Sealy in Kew Bull.

1949, 217, Revision of Genus *Camellia*, 39, 1958; Chang in Acta Sci. Univ. Sunyatsensi, 179, 3:70; Tax. Gen. *Camellia* 102, 1980. - *Thea flava* Pitard in Lec. Fl. Indo-Chine, 1:346, 1910. - *Camellia cordatula* Merr in Arn. Arb. 20:348, 1935

Vietnam, Tonkin. Vo Xa mt. Leaves oblong-elliptic, 15 cm long, lower surface pubescent, base slightly cordate, ovaries 5 celled, pilose.

2. *Camellia aurea* Chang in Acta Sci. Nat. Univ. Sunyatsensi, 1979, 71; - Tax. Gen. *Camellia*, 102, 1980. - *Camellia quinqueloculosa* Mo & Zhong in Quihaia, 5(4):353, 1985. - *syn. nov.*

Guangxi: Fushui County, limestone hill; shrub 4 m high; Forest-ecology Division of Guangxi Institute 34382. Vietnam: Liangshan, *Exp. China-Vietnam*. 1959, type, on limestone mountain, evergreen forest. Differs from *C. flava* Sealy by the glabrous leaves with cuneate base and glabrous ovaries. Guangxi Bot. Inst. 84382 bearing 11-13 petals and styles slightly united at base is a variable ecotype only.

SER. II CHRYSANTHAE CHANG.

3. *Camellia euphlebica* Merr. ex Sealy in Kew Bull. 1949 216; Rev. Gen. *Camellia*, 41, 1958; Chang in Acta Sci. Nat. Univ. Sunyatsensi, 1979. 3:73; Tax. Gen. *Camellia*, 108, 1980. - *C. chrysantha* var. *macrophylla* Mo & Huang in Acta Phytotax. Sin. 17(2):88, 1979. - *syn. nov.* Guangxi: Tunghin., Y.: Zhong 622: Vietnam, W.T. Tseng 27348, type. Characterized by elliptical leaves to 20 cm long, filaments united at base, capsule 4.5 cm wide.
4. *Camellia fascicularis*, Chang, stat. et nom. nov.
- Camellia euphlebica* var. *yunnanensis* Wang & Fang in Acta Bot. Yunnan 10(3):634, 1988. Differs from *C. euphlebica* Merr. by its fascicular stamens, large seed capsules, 5-8 cm in diameter, thick pericarp and pilose seeds. Yunnan: Hekou, alt, 350m, in forest. C.J. Wang, G.S. Fan & F.C. Rang 860237, type. ibid T.L. Min ex X.D. Li, 225.
- A distinct species differing from *C. euphlebica* merr. by the filaments united into bundles, larger capsules with much thicker pericarp and pubescent seeds. The original variety name "yunnanensis" is invalid and a new specific name is applied.
5. *Camellia impressinervis* Chang & Liang in Acta Sci. Nat. Univ. Sunyatsensi, 1979, 3:72, Tax. Gen. *Camellia* 105, 1980.

Guangxi: Longzhou, S.Y. Liang, 700304, type, *ibid.* S.H. Chun 3286, *ibid.* P.C. Tan 57315; *ibid.* C. S. Ye 21.

Characterized by the hairy branchlets and leaves, the numerous lateral nerves, about 10-14 pairs, impressed, and 12 petals.

6. *Camellia chrysantha*, (Hu) Tuyama in Journ. Bot. Jap. 50:299, f.1; Chang in Acta Sci. Nat. Univ. Sunyatsensi, 1979, 3:71. - *Theopsis chrysantha* hu in Acta Phytotax. Sin. 10:139, 1965. - *Camellia chrysantha* var. *longistyla* Mo & Zhong in Quihaia. 5:356, 1985. *syn. nov.*

Guangxi: Nanning, Medical Institute of Guangxi 17520, type; *ibid.* R.C. Guo 17628; *ibid.* Letan, S.Y. Liang & Z.M. Huang 6403506; Tunghin, Y.C. Zhong 621; Nanning, Y.C. Zhong 7815, 7816; Tunghin, H.S, Kiu 167; Guangzhou, bot. Gard. Sunyatsensi, H.T. Chang 90001, 9000. Vietnam: Mone Son Hun Ig, Forestry Institute, Qujue 6173. The leaves are variable in size and shape, commonly 8-12 cm long, largest to 17 cm long; the petals united at the base, usually for different lengths; when they are united higher, the petal limbs spread vertically; when they unite lower, the petal limbs spread horizontally; sometimes both are found on the one tree, and sometimes it was supposed they were different species.

- 6a. var. *microcarpa* Mo & Huang in Acta Phytotax. Sin. 17(2): 90, 1979. *CC. microcarpa* Mo in Quihaia, 6(1-2):62, 1982. - *syn. nov.* Guangxi: Nanning, X.C. Huang 7241, type. Differs from the type by smaller leaves, flowers and capsules.

7. *Camellia grandis* (Liang & Mo) Chang & S.Y. Liang. *Comb. nov.* - *Camellia longgangensis* Liang & Mo var. *grandis* Liang & Mo in Quihaia, 2(2):6a, 1982. - *Camellia pilosperma* Liang & hen in Bull. Bot. Research 4(4): 185, t,2,1984. - *syn. nov.* - *Camellia parvipetala* J.Y. Liang & Z.M. Su in Quihaia, 5(4):357, 1985. - *syn. nov.* Descriptio emend:

Folia elliptica vel oblongo-elliptica 8-12 cm longa 47 cm, lata; basi cuneata vel rarius subrotundata, nervis lateralibus 6-8 jugis, petalis 1-2 cm longis, seminibus brunneo-pubescentibus.

Guangxi: Longgang, Longzhou, on limestone mountain, *Exp. Longgang* 1160 type, 11413, 11109, 11697; *ibid.* H.T. Chang 6776, 6778; *ibid.* P. Ceng 17005. *Exp. Longgang* 10515, 10249, which had been erroneously described as the type and paratype of *C. longgangensis* Liang & Mo, belongs to *C. flavida* Chang. Since the name *C. longgangensis* is invalid, and its variety *grandis* differs from *C. flavida*

Chang, it is an independent species, so a new combinative name is needed. *C. grandis* (Liang & Mo) Chang & S.Y. Liang is valid and is represented by *Exp. Longgang* 11600, 11413, 11697, 11109. The type specimens of *Camellia pilosperma* Liang & Chen has the same morphological structure as *C. grandis* Chang & Liang. Although Liang & Chen had emphasized that the new plant bore hairy seed, when the author (H.T. hang) investigated the paratype of *C. grandis* Chang & Liang, *Exp. Longgang* 11697, he found hairy seeds existed in the immature capsule. Unfortunately Liang & Mo had missed this and took it that their new plant *C. longgangensis* was glabrous on the seed testa. Actually *C. pilosperma* is a synonym for *C. grandis* Chang & Liang. The newly named *C. parvipetala* J.Y. Liang & Z.M. Su has broader leaves, the specimens of *C. grandis* as *Exp Longgang* 11413, has larger leaves, and P. Ceng 17005 from Longgang also bears broader leaves, so to reduce *C. parvipetala* Liang & Su to *C. grandis* Chang is reasonable. The specimens H.T. Chang 776 and 6773 cited above from Longgang have leaves with rounded bases, so that, at first glance they seem different to *C. grandis* Chang & Liang is a variable species and both leaves and flowers are polymorphous.

8. *Camellia chrysanthoides* Chang 1.c. 73, 1979, 1.c. 1050 1980. Guangxi: Longzhou, Mt Dachingshan, C.C. Chang 11847, type; longgang, *Exp. Longgang* 11364.

The leaves are thinly coriaceous, lateral nerves 9-11 pairs, conspicuously impressed, flowers 4-4.5 cm in diameter, capsules 4.5 cm wide, pericarp 2 mm thick.

9. *Camellia pingguoensis* Fang. in Acta Bot. Yunnan, 2(3): 339, 1980; Chang, in Tax. Gen. Camellia 106, 1980. - *Camellia terminalis* J.Y. Liang & Z.M. Su in Quihaia, 5(3): 183, 1985. - *syn. nov.* Guangxi: Pingguo County, S.P. Liao 37692, type. Characterized by small, oval leaves, flowers about 2 cm in diameter, petals 5-6. J.Y. Liang 100861, collected from Tianden County, neighboring the type locality, which has terminal flowers and a slightly united style, is a variable form of the species.

10. *Camellia tunghinensis* Chang in Acta Sci. Nat. Univ. Sunyatsensi 1979, 3:73; Tax. Gen. Camellia, 206, 1980. - *Camellia limonia* Liang & Mo in Quihaia, 2(2): 63, fig. 11, 1982. - *syn.nov.* Guangxi: Tunghin, S.Z. Yen 77001, type; *ibid.* S.Y. Liang s.n. SYS herb. No. 153685; *ibid.* V.C. Zhong 80115; Longzhou, Longgang, *Exp. Longgang* 11258 (type of *C. limonia*

- Liang & Mo), 11527, 11489, 11549. characterized by smaller, elliptic leaves, flowers 3 cm in diameter, smaller capsules, compressed tricoccus, 2.5 cm in diameter. Distributed over limestone mountain and acidic soil.
11. *Camellia flavida*, Chang in Tax. Gen. Camellia, 103, 1980; Chang & Bartholomew in Camellias, 129, 1984. - *Camellia longgangensis* Liang & Mo in Quihaia, 5(4):354, 1985 - *syn. nov.* - *Camellia limonia* var. *obovata* Mo & Zhong, l.c. 155, 1985. - *syn. nov.* Guangxi: Longzhou, S.H. Chun 13736, type; *ibid.* C.X. Zhang & S.L. Wang 4095; Longgang 10249, 10515 (type of *C. longgangensis* Liang & Mo), 11481, 11549; *ibid.* C.C. Huang s.n. SYS herb. No. 149110, 149111, 149112. Characterized by smaller and thinner, oblong leaves, generally 6-9 cm long, 2.5-3.5 cm wide, flowers 2.5-3 cm in diameter.
 12. *Camellia pubipetala* Wan & Huang in Acta Phytotax. Sin. 20(3):316, 1982. Guangxi: Lung-an County, Y. Wan 30042, type, 80094 on limestone mountain. Branchlets, leaves, petals and ovaries are pubescent, styles united at the lower half.
 13. *Camellia longzhouensis* Luo in Quihaia, 3(3):192, 1983. Guangxi: Longzhou, Y.P. Tan 762328, type on limestone hill; Longgang, *Exp. Longgang* 20642. Differs from *C. pubipetala* Wan & Huang by the glabrous branchlets and leaves, which are usually 17 cm long.
 14. *Camellia micrantha* S.Y. Liang & Y.C. Zhong, sp. nov. Differs from *C. pubipetala* Wan & Huang by its glabrous leaves and branchlets; and from *C. longzhouensis* Luo by its smaller, elliptic foliage and smaller flowers.
A shrub 2-3 m high, branchlets glabrous. Leaves coriaceous, elliptic, 4.5-7 cm long, 2.5-3.5 cm wide, apex acute, base subrotund, glabrous both sides, lateral nerves, 5-7 impressed on each side on upper surface, raised below, margins serrulate, petioles 5-7 mm long. Flowers axillary, pedicels 3-4 mm long, bracts 4-5, circular, 1-1.5 mm long, sepals 5, obovate, 3-4, 4-6 mm long, glabrous, petals 6-7, bases joined, 7-10 mm long, stamens 6-7 mm long, separated, ovary 3 locular, pubescent; styles 3 free, 6-7 mm long, thin. Capsule compressed tricoccus, 3 cm in diameter, seeds glabrous.
Guangxi: Minming County, Benjiao, Y.C. Zhong 12019, type; S.V. Liang 8409430. This is the fourth species with hairy ovaries, the leaves are variable, the smaller ones 5-6 cm long, the larger ones up to 10 cm long.

NOTES ON "A REVISION OF THE SECTION OF CHRYSANTHA"

T. J. SAVAGE, Australia*

A considerable number of new species of *Camellia* have been described and named by Chinese botanists in the past 30 years. For example, since the publication of *A Revision of the Genus Camellia* by J. Robert Sealy in 1958 with its description of 87 species of *Camellia*, by the year 1991, the number has grown to 267; the most recent being 5 new species of red *Camellias* from Sichuan, published in *Acta Scientiarum naturalium Universitatis Sunyatsensi*, Mar. 1991, vol. 30, No 1.

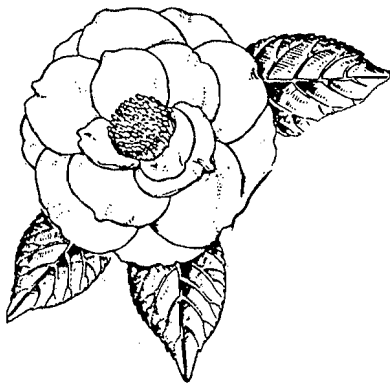
Aside from Chang's revision in which he reduces 7 species and 5 varieties to synonymy, there are other taxa on which there is varying opinion on their legitimacy. Some Chinese botanists do not totally agree with Chang Hungta's revision. For example Hung Shao-fu and Zhao Zhi-fan from the Institute of Forestry in the Subtropics and Xu Bing-sheng of the Department of Biology of the Fudan University, after morphological and karyological studies of *C. octopetala* and *C. gigantocarpa*, (both having been reduced to a synonym of *C. crapnelliana* by Chang Hung-ta) concluded that, while *C. gigantocarpa* was obviously the same as *C. crapnelliana*, the species *C. octopetala* varies sufficiently in both areas to be regarded as a separate species.

However the most recent and far reaching discovery that is causing a further revision of the yellow *Camellia* group was published by Chang Hung-ta and Ye Chuang-xing in *Acta Scientiarum Naturalium Universitatis Sunyatsensi*, Apr., 1991, vol. 30, No. 3, pp. 63-65, where it is reported

that a recent comparison of the original type specimens of *C. nitidissima* and Chi and *Theopsis chrysantha* Hu showed them to be the same. The English abstract of the paper is as follows:

'After comparing the specimen C. L. Tso 23483 (type of *Camellia nitidissima* Chi) with X.F. Wu and F.S. Huang 17530 (type of *Theopsis chrysantha* Hu), it shows that *Theopsis chrysantha* Hu is the same as *Camellia nitidissima* Chi. According to the *International Code of Botanical Nomenclature*, both the names of *Theopsis chrysantha* Hu and *Camellia chrysantha* (Hu) Tuyama are invalid; they are synonyms of *Camellia nitidissima* Chi. At the same time, *C. chrysantha* (Hu) Tuyama var. *microcarpa* Mo & Huang and *C. microcarpa* Mo & Huang are reasonably transferred to *C. nitidissima*, Chi var. *microcarpa* (Mo & Huang), Chang & Ye.'

This means that, in the future, for *C. chrysantha* one should read *C. nitidissima* as far as species is concerned. There would appear to be no reason to change the Section classification of 'Chrysantha'. However this means that *C. nitidissima* Chi should be reclassified from Section 'Corallina' to Section 'Chrysantha'.



BATCH PROPAGATION OF CAMELLIAS IN CHINA

SHAO TAICHONG, China*

PROPAGATION EN MASSE DE CAMELIAS EN CHINE

MULTIPLE UND GLEICHZEITIGE GEMEINSAME VERMEHRUNG VON KAMELIEN IN CHINA

PROPAGAZIONE IN GRUPPO NELLE CINA

COLECCION DE LA PROPAGACION DE LAS CAMELIAS EN CHINA



SHAO TAICHONG

Three stages have been involved on the techniques for propagating Camellias in China. An approach grafting method was mostly used in the country to propagate Camellias before 1960. The chief drawbacks of this method are low survival rate, complicated operation, low propagating rate, and high cost, which hindered the development of the Camellias. A cutting method was widely adopted to propagate the plants during the 1970's but there still existed the drawbacks of low propagation rate and slow growth. A set of systematically rapid techniques for propagating Camellias had not been advanced under the efforts of Chinese camellia worker until the mid 1980's. The technique has been extensively applied in different places. We have produced 1.8 million grafted plants of *C. oleifera* at a nursery in Hunan province in a summer of a year using the technique. We have grafted more than 200,000 plants of *C. japonica* in a summer at a Forestry Farm of Jiangxi province. We have propagated 30,000 plants within a season of *C. reticulata* in Yunnan province. The technique consists of several grafting methods and is outlined in the diagram shown on the following page.

The process shown in the diagram should be continuously made in all the links. The main points of each method in the technique are described as follows:

A. Pried Bark Grafting:

a. Select an understock with more than 1.5 cm in diameter and cut off trunk from 10-15 cm above the base.

b. After smoothing the surface on the cut with a knife, pry up the bark along with its cambium with a sharp knife. Then insert a

scion which has been whittled to be wedge-like with a leaf and bind sparsely but tightly.

c. Cover with a transparent plastic bag or put it into an airtight plastic house with two layers.

d. Culture at a temperature 18-35 degrees Centigrade for 45 days and then take off the bag or remove it from the plastic house.

B. Cleft Grafting:

The method is only suitable on understock that is less than 1.5 cm in diameter. The steps of the grafting are usual but the culture of the grafted plant should be the same as method A.

C. Sprout Understock Grafting

a. Cut off stock 15-20 cm high in spring or summer.

b. The stock will sprout many buds on the cut trunk after 40-50 days. Retain three buds which are vigorously growing in different directions and remove the rest.

c. After 10-15 days or so, the three buds remaining can spread their first leaves, but the leaves above the first leaves are still very small and tender. Cut off on the position above the first leaves on the tender shoots.

d. Cut lengthwise through the end of the tender shoot, insert a scion with a leaf on each of the three tender shoots and bind tightly and thinly with three rows of thin threads.

e. Cover with a transparent plastic bag or put directly into a plastic house which is airtight for about 20 days.

f. Remove the bag or take it out of the plastic house and culture it for 3-5 days in shade. Then follow by exposure to sun.

g. Remove the buds sprouted from the trunk after 15-20 days. The grafted plant can grow up and scions can be cut from it. Such grafting can be continuously made for three times under natural temperature within a year.

D. Big Tree Stock Grafting:

The method is used mainly to produce great quantities of scions. We usually take big

trees of *C. oleifera* and other species in oil-camellia forests as the understocks.

a. Cut off the trunk on proper positions of main branches retaining one branch at least, in order to keep the big understock vigorous.

b. Use the Method A to graft them and cover the grafted mouth with a small piece of paper.

c. Cover with a transparent bag and then place a paper bag over this.

d. Culture for 40-45 days under natural condition and then remove the bag with all of the buds sprouted on the trunk. The grafts can grow 40-100 cm high in the first year.

E. Bud Stock Grafting:

a. Select large and plump-eared seeds of *C. oleifera* and other species except for *C. sinenses* of the Genus. Sow them on a sand bed which is 10-15 cm. deep and cover with a layer of sand 5 cm. thick. Keep under shade conditions.

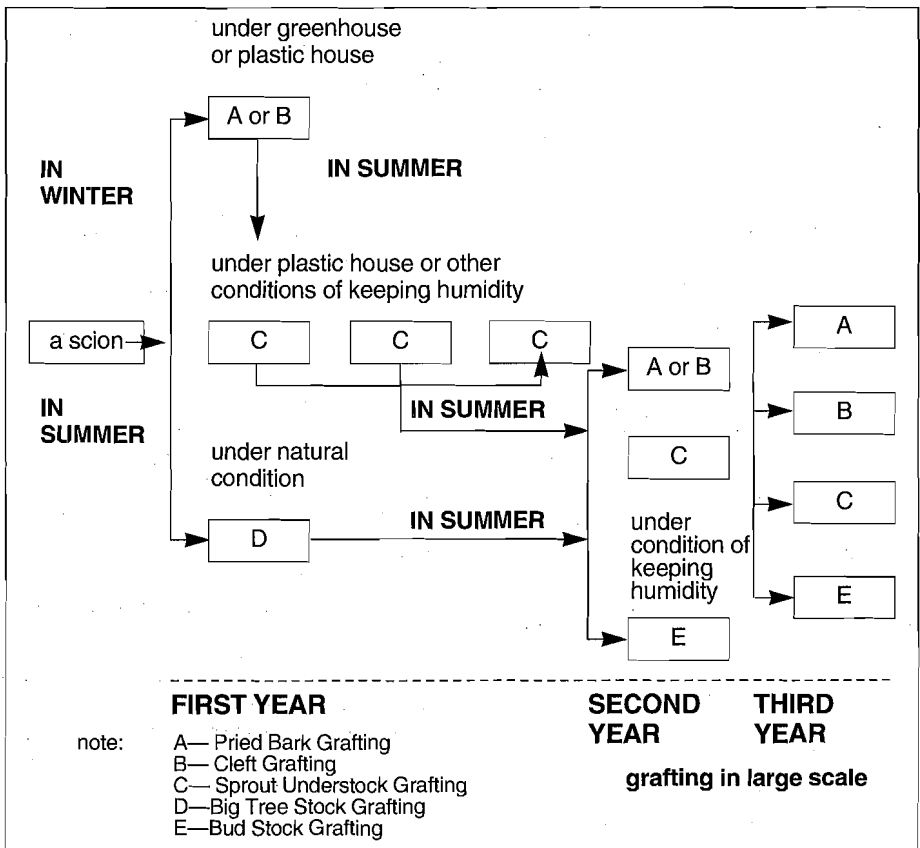
b. When seeds germinate and appear, take them out carefully from the bed, wash them in water and cut off a part of their roots according to the need you want.

c. Both scion and bud-stocks are whittled with what we call the pull-cut method. A small piece of aluminum foil is placed around the mouth of the stock after a whittled scion has been inserted. Bind the foil tightly. The operation is done assembly line basis with one person grafting 500-800 plants a day.

d. The plants can be cultured in pots or beds with covers of plastic cloth and shade materials for 40-45 days under natural conditions in Spring or Summer. Of course, it is also suitable that the plants just grafted are put directly into a transparent plastic bag which contains water and then hung in the room.

e. Remove the plastic covering and all of the buds would have sprouted on the bud stocks. The plants can reach 5-10 cm. high the first year and over 30 cm. high the second year.

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CAMELIAS FOR COLDER CLIMATES

WILLIAM L. ACKERMAN U.S.A.

CAMELIAS POUR CLIMATS FROIDIS

KAMELIEN LE CAMELIE PER CLIME PIU FREDDO

LE CAMELIE PER CLIME PIU' FREDDO

CAMELIAS PARA LOS CLIMAS MAS FOROS



Dr. William L. Ackerman

Cold hardiness in Camellias has always been a concern to growers in the Mid-Atlantic region of the United States. Back in the 1960's and early 70's, we would occasionally get a hard winter freeze that did some plant damage, but rarely would any of cultivars be killed. Growers to the south spoke of cold hardiness, but they

were referring to flower bud injury; damage to the plant themselves was almost unknown.

Our whole concept of cold hardiness changed following the winters of 1977-78 and 1978-79 when temperatures dropped repeatedly into the -15 to 17 degree C range. Typical of the devastation was that of the nationally recognized collection of over 900 specimens at the U.S. National Arboretum in Washington, D.C. Here, most sasanqua cultivars were killed that first winter and the *C. japonica* very badly injured.

New sources of cold hardiness were needed. Even those *C. japonica* cultivars long considered to be the hardy ('Kumasaka', 'Bernice Boddy', 'Governor Mouton', 'Lady Clare', 'Pink Perfection', etc.) were devastated. The Arboretum's once outstanding collection had by 1980, been reduced to a dozen struggling plants and sprouting stumps.

There was a single exception, a specimen of fall flowering *C. oleifera* introduced in 1948 from northern China. It came through those first winters and all winters since, completely unharmed. It even bloomed quite normally despite the severe conditions. Although it makes a handsome evergreen shrub, its single white flowers shatter badly even when left on the plant.

This was to be our new source of cold har-

diness. Since *C. oleifera* showed such promise, it seemed only natural to test out other sources of this species. Five strains were secured which has been collected from a wide region of the Orient. Of these, only one was comparable to the original Arboretum specimen. The others were less hardy even to the point of one strain from Taiwan being more tender than many *C. sasanqua*.

From 1979 through 1981, a series of 2,500 interspecific hybrids, involving *C. oleifera* crosses with various *C. sasanqua* and *C. biemalis* cultivars were developed. In addition, a series of *C. oleifera* hybrids made by the author in 1969 during a species compatibility study, were back-crossed to *C. oleifera*. The entire group was green house grown until 1982 and then planted out for field testing at 14 locations, 2 in Pennsylvania, 8 in Maryland, 1 in Virginia, 2 in North Carolina and 1 in the District of Columbia. Protection from the elements varied at the individual location, from an overstory of mature pines and/or deciduous trees, to lath or shade houses covered with 40% shade netting.

A second series of crosses was begun in 1980 and extended through 1984, which resulted in more *C. oleifera* hybrids, but here, spring-flowering parents such as *C. japonica* and *C. x Williamsii* were used. Field evaluation and selection among these continue to the present, but several more years will be needed before any of these are named and introduced.

Progress during the years from 1982 to the present centered primarily on the evaluation of individuals at the various locations for their cold hardiness. Those that showed little or no injury were then judged for their flower quality and commercial possibilities. This included flower descriptions and color photographs of all potentially good quality flowers.

During the period of field testing, these hybrids were subjected to minimum temperatures of from -20 degrees C to -26 degrees

C, depending upon location. Perhaps the most severe test occurred in January 1985 when temperatures, which had been very moderate (4 to 10 degrees C) suddenly plunged to (-22 to -27 degrees C) during the third week of that month. As the saying goes, "it separated the men from the boys!"

I consider the fall blooming series basically as landscape plants. They are not meant to be show flowers, although, unlike most *C. sasanqua* cultivars, they do NOT all shatter after being cut. I have had cut flowers of some hybrids that last four days. As landscape plants, they are far more attractive than most *C. japonicas*; the leaves are smaller, and, in most cases, very shiny dark green. Most also have the characteristic of early flowering, some the second year from rooted cuttings.

Although last year was not a typical one, flowering began among these hybrids in my garden in early October and the plants had at least some blooms out every week through the first week in January. During November and December, we had some very hard freezes which browned all the open flowers. Yet, following a change to more moderate temperatures, many of the more immature buds came into bloom in the following weeks.

It is felt that most of the breeding and development work for fall flowering hybrids has been completed. There is now a substantial group of hybrids capable of withstanding our most severe winters, which also have flowers of equal or better quality than existing *C. sasanqua* cultivars. In selecting hybrids worthy of commercial distribution, an effort was made to provide a diversity of flower and plant forms. These include flowers which are single, semi-double, peony, anemone, and rose forms, as well as formal doubles. Colors range from white through various shades of pink to lavender; as yet, there are no true reds. Plant forms include those which are compact-upright, spreading, and pendulous.

'Polar Ice' - White, medium, anemone form, larger flower than 'Snow Flurry'; spreading growth.

'Winter's Cream' - Pink, medium, semi-double, compact, upright, growth.

'Winter's Hope' - White, medium, semi-double, spreading growth.

'Winter's Interlude' - Lavender +pink, medium, anemone form, upright growth.

'Winter's Rose' - Shell pink, miniature, rose form double, very floriferous, small leaves, slow, compact, spreading growth.

'Winter's Star' - Reddish pink, some with

white centers, medium, single, compact upright growth.

'Winter's Waterlily' - White medium, formal double, slightly incurving petals, upright growth.

Additional selections with commercial potential continue to be made. The nursery trade can absorb only so many new cultivars at a time and I feel nine are enough for the present.

Although the past several winters have been relatively mild, these cultivars are now being successfully established in areas where they were not previously grown — even before the severe freezes of the late 1970's. New England has never been considered 'Camellia Country', yet I have reports from coastal regions in Connecticut, Rhode Island, and Massachusetts of these hybrids being grown successfully. Other areas include New York (Long Island), Pennsylvania, Tennessee, and Arkansas. Certainly, areas, where the winter extremes do not exceed -23 degrees C and where some protection from winter wind and early morning sun can be provided, are now possibilities for growing these hybrids.

CAMELIAS POUR CLIMATS PLUS FROIDS

Dr. William L. Ackerman

Résumé

A la suite d'une succession d'hivers rigoureux à travers la région mid-Atlantique des Etats-Unis durant les dernières années de la décade 70, un programme ayant pour fin de produire des espèces résistantes au froid a été amplifié au "US National Arboretum" de Washington, D.C. Des croisements ont été faits entre des races robustes de *Camellia oleifera* et des variétés de *Camellia sasanqua* et *Camellia hiemalis*. Les hybrides résultants furent observés et mis à l'épreuve durant une période de 7 à 9 ans, à des températures aussi basses que -20° à -26° centigrade, dépendant de la location.

9 sélections ont été nommées et distribuées aux pépiniéristes pour la vente au public.

BREEDING IN MY WAY

TADAO YAMAGUCHI, Japan

PROPAGATION A MA FACON

MEINE EIGENEN ZUCHTMETHODEN

MIO MODO DI PRODURRE

REPRODUCCIU A MI MANERA

I have already reported in the *International Camellia Journal 1990* referring to the characters of four yellow F1 hybrids grown by interspecific hybridization with *C. chrysantha* and *C. japonica*. Today, I would like to speak about the process of breeding for such varieties in my way.

All the work of mine related to breeding has been carried on in the greenhouse, not only the crossing of *C. chrysantha* but also with other temperate species of camellia. All the seeds obtained are treated with some germination accelerators.

First of all, the lowest temperature in greenhouse has been set at 10 degrees centigrade or above throughout the course of crossing and ripening, from embryonic development to maturation.

In the crossing period, namely, in the winter time from November to February each year, the outdoor temperature falls occasionally below -5 degrees centigrade in Hokuriku Area, where I live. And due to snowfalls and snowcovers, it is not feasible to work outside. Accordingly, it is sure that we have to work all day long in the greenhouse.

Under Japanese climatic conditions the early flowering variety of *C. japonica* starts to bloom from the beginning of September. Since it is too warm to obtain a favorable flower setting percentage at that time, the crossing work is generally taken up in November.

As *C. chrysantha* is not in bloom yet around that time, stored pollens are used for crossing of *C. japonica* and *C. chrysantha*. Pollens are stored in a refrigerator for home use and kept at about -18 degrees centigrade, which assures safe storage for about one year.

For crossing, pollens are applied immediately after collecting from the blooming flowers, or that stored in the refrigerator are used.

The reason why the lowest temperature in the greenhouse is set at 10 degrees centigrade, is to have the better flower bearing percentage. In case of *C. chrysantha*, sufficiently favorable conditions would have to be available, as its place of origin is the subtropical zone. *C. chrysantha* is supposed to bloom in winter even in its place of origin, when a day

length is comparatively short, in a temperature of about 10 degrees centigrade.

The seeds obtained upon crossing *C. chrysantha* and *C. japonica* contain many empty or immature ones.

Low temperatures during the growing and ripening period of seeds are considered to give a great influence on their maturity. An overwhelming majority of seeds ripened under the low temperature conditions are found abscessed before ripening, with their contents being empty, jellied, or endosperm only unable to perform embryogenesis.

About seven months after crossing are anticipated for ripening of seeds, although in the case of conspecific crossing of *C. japonica* it would be a month or two shorter. It means that when crossing is made in the period from November to February each year, fruits are collected from June to September, and seeds obtained are sowed immediately.

Seeds are placed under water before sowing, and those staying on the bottom are used, while those floating above are discarded.

The purpose of accelerating germination is (1) to have blooms earlier, as about one year's difference would be expected depending on growth of seedlings, and (2) to reduce putrefaction of seeds having the time from sowing to germination shortened about half a year. It is performed as follows:

1. Peel off the skin of seed, the seed coat and pellicle, about 1/3 to 1/4. At this time it can be confirmed whether inside is firm and ripened, or jellied. Naturally those jellied are to be discarded.
2. Seeds are soaked in a gibberellin solution at 100 ppm for 30 minutes to accelerate germination.
3. Seeds are saturated in Benlate at a dilution of 1:500 for sterilization.

Single uses of vermiculite has been employed for sowing seeds.

Since the sowing time ranging from June to September falls in the high temperature season, rooting starts in a week or two and germination in 3 to 4 weeks. About a month

after sowing, each seedling is transplanted into a plastic pot.

At this point of time, if a bud and the part of seed peeled off, i.e., seed leaves, are noted in purple-red, it is known that F1 hybrid flowers of the yellow line will bloom.

After that young seedlings are raised in the heated greenhouse, which makes them grow up to 15-20 cm high by May next year.

When seeds are collected, sowed without treatment of sprout promotion, and planted outdoors, they will not sprout out before May next year. Accordingly it makes a difference in comparison of about one year in the growing stage.



THE PROPAGATION OF A COLD-HARDY CAMELLIA

L. STANKLER, Scotland

PROPAGATION D'UN CAMELIA RESISTANT AU FROID

DAS ZUECHTEN VON KAELTE UNEMPFFINDLICHEN KAMELIENSORTEN

LA PROPAGAZIONE DELLA CAMELLIA CON RESISTENCIA AL FREDDO

PROPAJACAS DE UNA EDINELIA RESISTANTE AL FRIS

Severe cold is known to have a devastating effect on camellias (Ackerman, 1986), and the various factors concerned in their survival have been well documented (Scheibert, 1988).

Two approaches have been adopted to contend with severe cold; the use of a cold-hardy parent, either one in cultivation or a wild form, for hybridization (Ackerman, 1986) and cultural techniques (Fisher, 1946). The excellent results of Ackerman (1989) confirms the value of his approach.

I have used both genetic and environmental factors in order to propagate a cold-hardy camellia retain this characteristic. The environmental approach was to subject recently rooted cuttings to progressively colder and more exposed situations.

The camellia used for taking cuttings was regarded as being very cold-hardy as it has been growing in an exposed site in the North-East of Scotland (lat. 57°) over 40 years. It has attained a height of 10 feet and produces hundreds of blooms every year without fail (fig. 1).

Ten cuttings were taken from the parent plant and rooted in a mist propagator over a period of three months (July to September) and then potted up in 3" to 5" pots according to the extent of the root system, the potted camellias were then kept outdoors exposed to the elements over the next two years. During the first autumn and winter the pots were kept in a sheltered situation but were in an exposed site the following autumn and winter (fig. 2). The next spring all the camellias had survived and two had produced a flower (fig. 3).

Comment

In addition to the advantage being taken of the fact that rooted cuttings retain the characteristics of the parent plant, further cold-hardiness was developed by subjecting the plants at an early stage to progressively

increasing cold and exposure.

There is evidence to show that camellias as well as other plants, develop a hardiness to adverse condition, provided that they are gradually introduced (Anderson 1961; Salisbury and Ross, 1985)

The ability of immature camellias to survive in pots when subjected to freezing conditions attests to their cold-hardiness and it is proposed to use these plants for hybridization at a later date.

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Fig. 1. The parent camellia showing the large number of flowers.



Fig. 2. Rooted cuttings in winter covered in snow.



Fig. 3. Rooted cuttings in the following spring.

TRANSPOSABLE ELEMENTS AS A FACTOR IN CAMELIAS' FLOWER COLOR DISTRIBUTION

DR. WILLIAM Y. BENNETT, U.S.A.*

ELEMENTS TRANSPOSABLES COMME FACTEURS DE DISTRIBUTION FLORALE CHEZ LES CAMELIAS

VERÄNDERUNG DER ELEMENTE ALS GRÜNDE DER FARBVERTEILUNGEN IN KAMELIEN

IL ELEMENTO TRANSPORTATILI PER CUANTO CONDERNNE A DIATRIBUZIONE DEL COLORE DELLA CAMELLIA

ELEMENTO INTERLAMIABILE CEINE FACTO DE LA DISTRIBUCICE EN EL COLOR DE LAS CAMELIAS

Camellia flower colors and the patterns of color distribution have long been a major value in camellia culture. Even though many planned crosses have been made to elucidate some of the genetic principles controlling the above, comprehensive explanations are still lacking.

To summarize a few "beliefs" concerning variegation of flowers, the following assumptions have been made. Certain flowers exhibit symmetrical color patterns, usually referred to as "Picotee" - ex. 'Leah Baggs', 'Betty Sheffield Supreme'. There is also the reverse "Picotee" form. Symmetrical patterns have been referred to as controlled by the rules of conventional genetics. The picotee and the reverse expression are widely distributed in flower plants. Petunia and Begonia are excellent examples.

Irregular color splotches and streaks have been explained to be the result of an invasive particle such as a virus, as in tulip variegation or some other submicroscopic agent. Evidence from graft transmission and natural root graft transmission appears to support the microbe theory in part. Perhaps using more micrografting techniques will distinguish variegating mechanics more clearly.

Chimeras have been employed as explanations of bold stripe patterns seen in 'Tomorrow's Tropic Dawn', 'Tom Herrin', and 'Bon Bon'. Plants with these characteristics tend to produce solid color spots on occasion. One can often predict the development of a shoot bearing the solid color by observing epidermal cells of a new elongated shoot. Spots and streaks occur here also. If pigmented epidermal cells completely cover a lateral bud, flowers born years later on the developed lateral bud will have solid coloring.

In the later 1940s and early 1950s, Barbara McClintock developed an hypothesis about unusual color patterns in indian corn grains (Micklor and Freyer - 1990). At the time, McClintock proposed the same genetic elements could move from place to place on a chromosome or even skip over to another

one. The "Jumping Genes" concept was not well received. It was not until 20 years later that the scientific world generally accepted McClintock's hypotheses. Transposable elements (TES) have been confirmed in organisms from bacterial to fruit flies, yeast, flower plants and humans (Alberts et al. 1989). Barbara McClintock was awarded the Nobel Prize in 1985 for her pioneering work.

How does TES influence camellia flower color? It is proposed here that TES are, in fact, one genetic mechanism for imparting variegated color patterns.

Envision some of the detailed markings in the following camellia cultivars - 'Carter's Sunburst', 'Clown', 'Campari', 'Sarassa', 'Sarassa Pink', 'Lady Laura', or 'Tammia'. You may need a hand lens to see the smallest streaks of color, especially in 'Tammia' and 'Campari'. It is most often observed that small color markings begin and end somewhere within the long axis of the petal. A few marks begin at the petal bases and extend to the margin. Widening as they go, these color patterns fit the TE expression found in corn as well as snapdragon (Alberts et al. 1989 and Coen and Carpenter, 1986).

In theory, the TE inserts into the specific gene responsible for the expression of Anthocyanin, the pink to the red pigment. When the TE is present within the pigment gene, there is little or no color produced. If the TE moves out, the color is expressed again. Streaks are a result of two events: (1) Moving out and back into the gene to allow a burst of color expression, and (2) The linear growth of new cells as a very young petal is being formed.

There are several different families of TES. Observation suggests at least two types are at work in camellia. These are activator - Dissociation (AC-DS) and Suppressor-Mutator (SPM) (Federoff, M, 1989). Much research work has been achieved in corn pertaining to these systems. TES has been identified to segments of DNA and those segments have been sequenced (Federoff, 1989 and Alberts et al. 1989). Additional research has identified sev-

eral TES in snapdragon. There are; TAM 1 (TAM is an abbreviation of Transposon Antirrhinum Majus); TAM 2 and TAM 3 in four different locations along the DNA (Gene) strand. (Authocyanin is a pink to red pigment).

Several camellia cultivars illustrate one or more types of TE action. A white flower with pigmented stripes can be used, as one example, 'Irene Coker'. The large red stripe seen in 'Tomorrow's Dawn' also illustrates the escape of the TE and a quick reinsertion. 'Tammia' and 'Campari' represent this pattern. It could be that a solid white, like 'Charlie Bettes', has a TE insertion that is stable and cryptic. There is a slight amount of pink in 'Charlie Bettes' and several other "white" cultivars. This is easily observed when flower opening occurs in greenhouses during low light intensity periods.

Light pigmentation with dark streaks superimposed represent a combination of TES. 'Lady Laura' and 'Sarassa Pink' have this combination.

Other interesting evidence shown in corn and snapdragons is the occurrence of various sized splotches (Coen et al - October 1986 and Alberts et al - 1989). Irregular patterns heretofore, attributed to foreign agents in camellias may, in part, be the result of TE insertions similar to those produced by TAM.

To this point, only pigmentation has been considered. TE can interrupt many different types of genes, especially those controlling morphogenesis (Coen and Carpenter, Nov. 86). Reviewing sports of 'Elegans Chandler', one can trace color changes in 'Elegans' to 'C.M. Wilson', 'Shiro Chan' and to 'Snow Chan' (Woodruff, 1990). The color changes are from dark pink lines to solid white. The spectacular members of the 'Elegans' family are morphological changes — 'Elegans' to 'Elegans Supreme', 'C.M. Wilson' to 'Elegans Splendor' and 'Elegans Champagne'. Color and morphological changes are prime examples. Not only have the petals changed to a more delicate "crapey" texture, but the leaves have a deeper serration. In addition, the super forms can revert back to the original 'Elegans' as if the TE escaped from the morphogenic controlling genes. Potentially, any of the 'Elegans' family can mutate in either direction for both color and/or texture and do!

Biologically, what are the implications of Transposons (TES) generally, and for camellias in particular? They occur throughout the biological world. They make up 10% of the human genome (Alberts et al. 1989). They can move entire genes from one place to another, scramble gene information to create new combinations or even eliminate some gene function. It has been stated that transposons are most active when an organism is under stress,

thus increasing mutations, some of which may be valuable in survival for camellias (Alberts et al. 1989). This continues to give the excitement and expectation of something new and there always will be the surprise, somewhere, sometime over which man has no control.

Transposon influence in flower pigmentation can also be observed in poinsettias — 'Jingle Bells' and 'Pink Peppermint'; in carnations, begonias and roses — 'Peppermint Twist' and 'Purple Tiger' (Hall, 1991).

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ECOLOGICAL BEHAVIOR OF WILD CAMELLIA JAPONICA POPULATION IN NORTHERNMOST BOUNDARY IN THE WORLD

SHUNPEI UEMOTO, Japan

COMPORTEMENT ECOLOGIQUE DE POPULATIONS DE CAMELIA JAPONICAS SAUVAGES
DANS LES REGIONS SEPTENTRIONALES DU MONDE

OEKOLOGISCHES VERHALTEN DER WILDEN CAMELIA JAPONICA IN DEN NOERDLICHSTEN
WACHSTUMSGEBIETEN DER WELT

COMPORIAMIENTO ECOLOGICO DELLA POPOLAZIONE DELLA CAMELIE FORESTS
GIAPPONICA NEL PUNTO PIU SETTENTRIONALE DEL MONDO

COMPORTAUIEUTO ECOLOGIES DE LA PUBLACIEU DE LA CAMELIA JAPONICE SILVESTRE EN EL LIMITI MAS AL
MORTE DA WUNDO

Distribution of wild *C. japonica* has been extending northward along the coastline of Japan's main islands by transporting their fruits and seeds with warm currents. Kuro-Shio Current (The Japan Current) and its branch Tsushima Current, during present interglacial period after Wisconsin glacial period. The northern-most population of them is spotted in Fukura-Cho (North Latitude 40 degrees 37') in Aomori presumed that this population was the northern-most wild type completely by the studies of isozyme patterns. I will discuss some unique ecological behaviors on three points in this report.

1. The process of expanding to the northern-most area of Japan.

A. *C. japonica* populations have taken thousands of years to expand its distribution northward in this interglacial period from Yaeyama Islands (N.L. 24 Degrees 25'), the southern-most area in Japan, to Fukaura-Cho, the northernmost spearhead. Camellia trees in both points indicate the same pattern of flower pigmentations, but wild ones in Taiwan Island have a considerably different pattern of flower pigmentation from them. So, it is assumed that the origin of wild *C. japonica* distributed widely in Japan should be *C. japonica* var. *horanensis* in Yaeyama Islands and not be the same as Taiwan's var. *horzanensis*.

B. The survival term of camellia fruits and seeds in seawater is about a month, and it was indicated by the test that more than 50% of the seeds could survive 20 days in sea water. The average speed of warm current around Japan is approximately halfknot. So

wild camellia populations would expand from Yaeyama Islands to Fukaura-Cho during several thousand years of this interglacial movement.

C. Acquiring cold resistance by north migration is manifested with intensified bud dormancy, which is indicated by bract number increasing morphologically, and also decreasing of auxin (growth promoting one) biochemically. Accompanying expanding populations toward the north, bract numbers have been increased from 4-5 to over 12. The tropical and sub-tropical originated species or populations have only 4 or 5 bract numbers but the ones in the temperate zone have 7-12 or more bract on leaf buds in the winter season, respectively. As shown in Table 1, *C. japonica* trees in Yaeyama Islands have only 4-5 bracts and no dormancy is observed and we can see branch shooting 3-4 times a year.

In contrast, camellia trees in the temperate zone have 9-12, 13 bracts and indicate a clear dormancy in the winter season, and the intensity of dormancy is controlled by both plant hormone changes of auxin and ABA in leaf buds as shown in Figure 1.

2. Ecological behavior observed in populations of *japonica* located in the northern-most area, Fukaura-Cho.

A. Climatic data in Fukaura-Cho in winter season atmospheric temperature — minimum -10 deg C.; Maximum snowfall — 90cm; maximum wind velocity — 20-30 m/sec (frequently)

B. Growth behavior
Growth and branch elongation of wild

camellia trees on the southern slope in Henashi Peninsula, Fukaura-Cho, are suppressed and show an oppressed crown shape. To compare with that of southern distributed camellia trees in Goto Islands, they are very interesting, though it is assumed that both trees are about 300 years old. Most of the wild camellia trees on the southern slope of this peninsula have been formed into patch shapes, which are presumed to be caused mainly by adventitious shooting from ground roots. Probably each patch is composed of a tree reproduced vegetatively, or they are connected with each other by the root. The soil of this slope consists of small volcanic gravels, in which camellia root growth is accelerated. Adventitious shoots from roots are all in the upright direction and it is clearly different from the *C. japonica* Subsp. 'Rusticana' (snow camellia) usually grown creeping under deep snows.

Fig. 1. Seasonal changes in endogenous auxin and abscisic acid (ABA) activities in leaf bud of *C. japonica*.

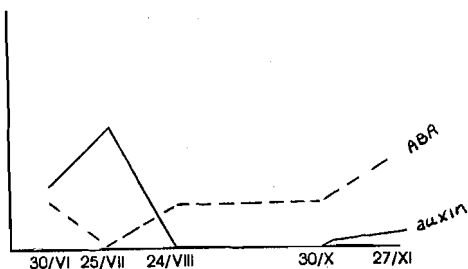


Table 1. Comparative table of the characteristics in leaf bud bract among various camellia species. (1989).

SPECIES	VARIETY	# OF BRACTS	ORIGIN	DORMANCY
<i>C. nokoensis</i>		4.0	Taisan	NO
<i>C. chrysantha</i>		4.0	South China	NO
<i>C. lutchuensis</i>		4.6 + 0.4	Okinawa	NO
<i>C. sasanqua</i>	wild	4.0	Kyushu	YES
<i>C. japonica</i> <i>horzanensis</i>	wild	5.2 + 1.1	Okinawa	NO
<i>C. japonica</i>	wild	11.9 + 1.38	Fukuoka	YES
<i>C. japonica</i>	wild	12.4 + 1.42	Aomori	YES

FACTS AND FALLACIES ABOUT CAMELLIAS— A REJOINDER

DAVID TREHANE, U.K.

REALITES ET MYTHES SUR LES CAMELIAS

KAMELIEN - WAHRHEITEN UND TRUGSCHLUESSE

FATTI E FALLACIE DELLE CAMELIE

HECHOS & FALACIAS SOBRE CAMELIAS

In researching a reply or rejoinder to Dr. Leslie Stankler's "Facts and Fallacies About Camellias," I came across the Oxford Dictionary quotation from Disraeli, "He wrote against dogma with a spirit perfectly dogmatic." It would perhaps be unkind to brush aside Dr. Stankler's doubts and fears — rather they should be the vehicle for a restatement of safe rules for the cultivation of camellias in the ground outdoors. I will try to deal with his queries in the order in which he placed them.

1. "Camellias Are Surface Rooters." Note that Col. Durrant's words are "an unqualified statement that camellias are surface rooters is simply not true." I find in practice then a statement that they are not surface rooters is equally untrue but Dr. Stankler has mixed up two separate things — surface rooting and planting too deeply and I can be dogmatic about the latter. I was once invited to see a plant of 'Bob Hope' which died, in order to decide who was responsible — Me, the supplier or Mr. B., the recipient. A spade revealed that the top of the rootball in the pot (now ex-pot) was nine inches (23 cms) below the surface of the soil. Cause of death — asphyxiation and premature burial! The surface of the rootball should, after planting be level with the finished compacted surface of the surrounding soil, that is fact — not fable.

But Col. Durrant was referring to root growth as the plant progresses, so on reading Dr. Stankler's article, I put on my boots and hastened down to the garden, picking up a spade and a cross-mattock on the way to a row of camellias on trial which had been cut down, the old stems being about three inches (7.6 cms) in diameter, the re-growth about three feet (1 m) high.

What did I find — a mass of fine roots concentrated in the top six inches (15 cms) of our spit of soil, fairly heavy stuff, with one or two roots beginning to penetrate into the

subsoil. I know that some camellias develop big taproots for I moved a bush some 6 ft (2 m) high of free style and had to get my son to help me deal with them, but the roots now seen justified the warning about surface rooting. The purpose of that warning in a handbook is to stop the amateur gardener forking or hoeing up the fine roots of a young camellia and also to caution him or her against planting where the roots of a hedge or bush will rob it of moisture and nutrients. If Col. Durrant had qualified his statement by putting in the word "all" before "camellias" he would have been correct. It is obvious, too, that a camellia is more likely to root deeply in a deep pumice soil than into a clay subsoil.

2. "Camellias Require Acid Soil." I did not say that camellias require an acid soil for their survival. What I continue to say is that they prefer an acid soil in the range 5.5 to 6.5 pH. There is not much point in advising people to plant in alkaline soil with the risk of their spending two lost years watching for chlorosis when it is so easily avoided. On pg. 17 of the handbook, I do say "It is unsafe to be dogmatic."

3. Cold Resistance. Species and genetic make-up are as nearly the same thing as no matter. Flower damage is related to color in the sense that the paler it is, the more likely the flower is to suffer from frost and damp.

4. Feeding is still very much "A Little of What You Fancy Does You Good!" Whether the feed is liquid or solid does not matter so long as it is intelligently given. The development of pelleted fertilizers designed to last for stated periods has altered commercial practice, not always reliable. Standing with an exhibit at an RHS Show, I meet innumerable people who use fertilizers designed for other plants, mostly house plants or tomatoes and they are happy with the results. I also meet more who want to know what to

use and my order book has more pages with Vitax Q4 written on them than anything else, but intended to be helpful not dictatorial. One can only dogmatize on the basic rules in a handbook. It is a very basic rule that camellias in pots should not be fed in the dead season or they will be dead too! What intrigues me is the unique American use of cottonseed meal. I have childhood memories of the cake-crusher into which my brothers fed great slabs of decorticated cotton cake for the cows while I turned the handle! About 1920, but now cotton cake does not seem to reach Britain.

5. Pruning. The pruning of *reticulatas* is of course done by nurserymen either to shape the plants or to get propagating material. They are mostly grown in greenhouses in Britain and are rarely in a condition to be cut back in the way Col. Durrant demonstrates. There is, however, another fallacy about *retics* — that they need to be grafted. For many years, I was probably the only nurseryman in the world growing them from cuttings. They root nearly as easily as *japonicas* but their habit of making one long root, like some magnolias, results in heavy losses when they are potted up from a peat bed. Moral — root them in three inch (76 mm) pots and pot soon after removing them from the propagating bench.

Dr. Stankler's random observations or quotations mostly feature exceptions which prove the rule or E.B. Anderson, who was a superb gardener, would not have cited them. His page 101 was written before the girls were raised!

I have here in Cornwall, a big bush of 'Francie L' on the north side of a highwall where it grows and flowers well but the Wisley handbook features one on a south-east wall in Hampshire which climatically makes sense.

There are many big bushes or trees of *C. reticulata*, 'Captain Rawes' in Cornwall. They must have come through five weeks of 25 deg F of frost in 1963 with nobody making special mention of it.

Wind — It is not always easy to decide when a blow becomes a draught. Arnold Forster had a very special garden high up among granite rocks above Zennor in Cornwall where he got the Atlantic blow. I have a row of *C. 'Pitardii'* which stood unharmed so long as the wood sheltering them stayed fully planted but when it was thinned, the camellias were "completely defoliated, but they still grow!

Just for a moment let me, with the aid of

the librarian of the RHS, take Dr. Stankler back to 19 May 1853. When an article in "The Cottage Gardener" by Donald Beaton described a bush he called "The Lion of Surrey." Donald Beaton was brought up on Gaelic but learned English in order to become a head gardener in England. The "Lion of Surrey" was a bush of *C. reticulata* 'Captain Rawes.' Some 20 feet in diameter in the greenhouse of Sir John Broughton in Surrey, carrying 3000 flowers after 2973 buds had been taken off to reduce them to singles. Chandler and Booth had written of 'Captain Rawes' in 1830 — "We are of the opinion that when it becomes so plentiful as to admit of a trial being made, it will be found to be hardier than the *Camellia japonica* and that, at no distant period perhaps it may ornament our shrubberies." Donald Beaton continues, "This last hint was made, no doubt, in reference to one of the most popular topics of the day in 1830. For the five or six preceding springs, flowers of camellias 'which stood the last three winters were sent to London from all parts of the country and nothing was then more familiar to our minds than that camellias were just as hardy as Portugal laurels in England but that they could not open their flowers with impunity in the face of our cold easterly winds and the alternate action of the sun's rays and hoar frost." This is why E.B. Anderson had "protection from surrounding small trees and shrubs" for all his east-facing wall.

Dr. Stankler must be content with the final verdict that the exception proves the rule.

I am still seeking an account of what happened and how it happened, to put camellias back into the greenhouse so far from Donald Seaton's hardy world of 1830. It was a different world — no slow-release fertilizers, sheep manure and soot soaked in a tank that was the feed of the day and could be used through the winter. There were no holes in ozone layers, gases diffused in exemplary fashion, swallows wintered at the bottom of ponds and the camellia of Summit, New Jersey, cocked a snook at the rule-book. But surely someone noticed that the camellias had gone! or were they all mesmerized by global cooling. Did anyone peer down to the bottom of the well?

PUBLICATION REVIEWED

T.J. SAVIGE, Australia

Publications En Revue

Rezension Der Veroeffentlichungen

Pubblicazione Ripasse

Publicaciones Revisadas

For gardeners and horticulturists with a specific interest in the camellia as a garden plant, there is an intermittent problem in procuring up-to-date information in the form of publications which cover aspects of the culture, propagation and history of camellias together with advice on selecting the modern cultivars. This is due to the fact that books published on the subject become out of print in two or three years and there is often a period in which no current publications are available. Quite aside from this, because of rapid developments in the discovery of new camellia species and the subsequent hybridization, new cultivars of many forms are constantly being produced. It is therefore desirable that fresh publications are available at regular intervals.

This book, "Gardening with Camellias," by Jim Rolfe, admirably covers these requirements. In addition, it includes clear and con-

cise information on camellia history, botany, nomenclature, gardening, landscaping, propagation, hybridizing and pest and disease control. It is also illustrated by many beautiful color photographs of camellia cultivars carefully selected from the efforts of a number of first-class photographers. There are lists of available camellia cultivars suitable for various situations to assist in the planned planting of modern cultivars and eliminating problems of chasing different varieties.

A well-researched book, written by an observant and practical gardener, it is well worth a place either on the coffee table or in the library of all camellia lovers.

Gardening With Camellias: A Complete Guide by Jim Rolfe, published by Godwit Press, Ltd. Auckland N.Z.



1992 CAMELLIA REGISTRATIONS

TOM SAVIGE, Australia

ENREGISTREMENTS DE CAMELLIAS 1992

1992 KAMILIENREGISTRIERUNG

REGISTRAZIONI DI CAMELLIE 1992

REGISTROS DE CAMELLIAS 1992



No. 23 'Doomsday Sunshine'

ERRATA - No. 22

Camellia Japonica 'Doomsday Beauty'
OB P 101 ICS Journal No. 23 1991 should read
No. 22 - *Camellia x Reticulata Hybrid*
'Doomsday Beauty'

No. 23

Camellia Japonica x Reticulata Hybrid
'Doomsday Sunshine'
Originator and Applicant
Doomsday Garden
Horsham
West Sussex RH 13 6LB ENGLAND

FLOWER: Miniature 8 cm diameter x 5 cm deep, pink, single of 6 petals (colour RHS CC55A-56C). A chance seedling of 'Milo Rowell' that first flowered in 1985 at 7 years old. Buds round, green (RHS CC 139E). Flowers mid-season. Petals texture heavy. Self-grooming. Similar to *C. japonica* 'Gertrude Preston'.

LEAVES: Green (RHS CC 144B), Mature 139A, Elliptic. 7.5 cm long x 4 cm wide. Smooth surface. Plant growth bushy, rapid. Originated in West Sussex, England.

No. 24

Camellia Japonica 'Eric Baker'
 Originator and Applicant
 Mr. Michael Galsworthy
 Trewithen, Grampound Road
 Truro
 Cornwall, England

FLOWER: Average size white, globular shaped, anemone to peony form *C. japonica* chance seedling. Blooms early to mid-season. Petals are folded and bloom falls complete. First bloomed 1977.

LEAVES: Green elongated elliptic, twisted, surface glossy. A compact, upright shrub of moderate growth. Originated in Cornwall, England.

No. 25

Camellia x williamsii 'Contribution'
 Originator - Mr. David Feathers
 1 Camellia Lane
 Lafayette, California, U.S.A.
 Applicant - Mr. D.C. Trehane
 Trehane, Probus
 Truro
 Cornwall, England

FLOWER: Medium sized pink, semi-double *C. x williamsii* 'Donation'. Chance seedling of 15-25 petals and a few petaloids. Petals outcurved. Colour RHS CC 52D with 52C veining. Golden yellow anthers with white petaloids in an erratic central bunch.

LEAVES: Green, ovate, upper surface somewhat glossy, slightly curled, 7.2 cm long x 4.5 cm wide with petaloids, 8 mm long. Plant is very slow growing with a dwarf habit. Propagated by James Trehane & Sons, Ltd Nursery, Dorset, England.



1. Shao Taichong, China; Dr. David Scheibert, U.S.A.



5. Dr. Kaoru Hagiya, Japan; Shigeo Matsumoto, Japan



2. Lorena McRee, USA; Marion Smith, Jersey; Joy & Bob Hooper, Australia



6. Ross Hayter, Nance Swanson, Australia



3. Art Landry, USA; Chitose Uemoto, Japan



7. Kimiyo & Shinji Shinoda, Japan



4. Tom & Olive Savige, Australia



8. Jean Madec, France & Mayda Reynolds, Jersey



9. Dr. Nancy Van Schaik, So. Africa; Dr. Bill Bennett, U.S.A.



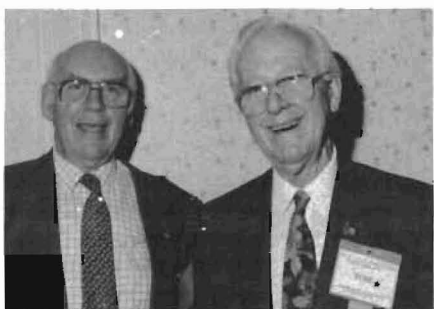
13. Leslie Riggall, Nancy Van Schaik, So. Africa



10. Dr. Ingrid Batzenschlager, Germany; H.J. Tooby, England



14. Greg & Rosamay Davis, USA; Kiyomi Shinodo, Japan



11. Tom Savige, Australia; Tom Perkins, U.S.A.



15. Jane Hayter, Bob & Hari Wübers, Australia



12. Rowena & Eric Craig, Australia; Ann Busbell, Jersey



16. Ann Richardson, Annabelle Fetterman, Bob Stroud, U.S.A.

ICS TREASURY REPORT RECEIPTS AND DISBURSEMENTS

US \$

		1991 5/29/92		1990		1989
<u>INCOME</u>						
Net Subscriptions Received	'90	82		'89	843	'88 4,152
	'91	9,335		'90	11,774	'89 8,673
		<u>9,417*</u>			<u>12,617</u>	<u>12,825</u>
Advertising		320			320	240
Interest		2,733			2,737	1,948
British Bank Settlement		-			-	676
ICS Register Donations		12,048			4,790	1,535
Total Income		<u>24,518</u>			<u>20,464</u>	<u>17,224</u>
<u>EXPENDITURES</u>						
Printing, Stationery, Postage and Telephone		769			103	750
Journal Expensives		8,937			9,764	9,119
Printing		2,132			2,232	1,784
Subscription Envelopes		304			250	258
Translation of Titles		-			40	470
Membership Lists		-			1,052	-
Total Journal Cost		<u>11,373</u>			<u>13,338</u>	<u>11,631</u>
ICS Register Expenses						
Tom Savige		614			741	0
Tama No-Ura Painting & Misc. Costs		3,835			1,693	0
Other Expenses						
US Incorporation		-			-	448
US IRS Application		-			-	300
US Bank Charges		20			6	39
State of GA Registration		15			15	-
Total Expenditures		<u>16,626</u>			<u>15,896</u>	<u>13,168</u>
INCOME - EXPENDITURES		7,892			4,568	4,056

•Detailed on attached table

GED: ncw

7/20/92

Thank you John Movich

The USA executive of ICS wishes to take this opportunity to express a warm and sincere appreciation to Mr. John Movich for his serving as ICS Auditor these past years. John has asked to be replaced due to health reasons. We appreciate John's efforts and help as auditor and wish him the best.

**SUBSCRIPTIONS RECEIVED
BY ICS TREASURER
US\$**

	Total	Expenses	Net	% Remitted
For 1990				
Spain	-	-	0	?
Portugal	127	45	82	65
			82	
8/5/91				
For 1991				
Africa	60	0	60	100
Asia	1,157	274	883	76.3
Australia	2,165	719	1,446	67
Channel Isles	1,741	157	1,584	91
France	921	144**	777	84.3
Germany	-	-	0	?
Italy	313	0	313	100
New Zealand	610	116	494	81
Portugal	159	39	121	76
Spain	-	-	0	?
United Kingdom	3,244	1,492	1,752	54
U.S.A.	2,305	400*	<u>1,905</u>	83
		Total for 1991	<u>9,335</u>	
		Total '90 & '91	9,417	

•Includes \$276 Ad for ICS Register in ACS Journal

**Added \$36 check clearing charge

GED: ncw
7/20/92

The financial records of ICS have been reviewed by the auditor and a copy of his report is on file with the secretary and treasurer.

ICS Executive

ICS BALANCE SHEET

Assets	<u>1991</u> 5/31/92		<u>1990</u> 3/29/92		<u>1989</u> 3/1/90
Debtors	0		80*		80
Cash at Bank	6,477	cash	4,985	cash	4,417
	<u>36,480</u>	CD's	<u>30,000</u>	CD's	<u>26,000</u>
Total Assets	42,957		35,065		30,497
Liabilities	0		0		0
Net Current Assests	42,957		35,065		30,497
Designated Funds					
Life Membership	5,281		5,281		5,281
Int'l Register Fund	<u>11,860</u>		<u>4,058</u>		<u>1,576</u>
	17,141		9,339		6,857
Accumulated Funds					
Balance on 3/29/91	35,065		30,497	3/1/90	26,441
Income - Expenditures	<u>7,892</u>		<u>4,568</u>		<u>4,056</u>
	42,957		35,065		30,497
Less Designated Funds	17,141		9,339		6,857
Available Funds	25,816	5/31/92	25,726	3/29/91	23,640
				3/1/90	
Total ICS Funds	42,957		35,065		30,497

GED: ncw
7/20/92

NOTES ON 1991 ICS FINANCIAL REPORT

1. 1991 receipts and disbursements have been extended through May 29, 1992 in an attempted to better depict the 1991 financial year. No 1992 subscriptions or ICS Register deposits have been included in the 1991 financial summary.
2. Please note that 1991 subscriptions received by the ICS Treasurer did not cover 1991 ICS Journal expenses. No 1991 subscription have been received from Germany or Spain
3. Each region is again urged to follow the ICS Diary of Administrative Events, Circulated in Memo #2 on June 9, 1989. Final remittances for 1991 were due by December 15, 1991 and final remittance for 1992 are due by December 15, 1992.
4. Remittances to ICS US Treasurer should be made through wire transfer in U.S. Dollars.
5. Pre-publication orders for the ICS Register are continuing to be received. Collection of the \$15,000 loan from the ICS Directors is essentially completed and we except to be able to pay for publication in August 1992

REPORT OF THE MEMBERSHIP REGISTRAR

WALTER KRZYMOWSKI, U.S.A.

COMPTE RENDU DU RESPONSABLE DES MEMBRES

BERICHT DES MITGLIEDERSCHAFTREGISTRARS

RELAZIONE DEL SEGRETARIO DEL REGISTRO DEI SOCI

INFORME DEL SECRETARIO DEL REGISTRO DE SOCIOS

As in prior years, subscriptions (membership dues) fall due on January 1st. The Board of Directors has set the subscription rates for the 1993 as noted in this *Journal*.

Membership representatives are asked to report to me any changes or corrections to the

membership booklet so they can be included in an appropriate newsletter.

Support the I.C.S., urge your fellow camellia enthusiasts to enter their subscriptions to the International Camellia Society for 1993.

ICS Members' Subscription Rates in 1993 and Membership Representatives to whom payable - please use enclosed envelope to mail your dues to your I.C.S. Representative.

AFRICA (R 13.00, or Husband and Wife R 15.00) Mr. Leslie Riggall, Fern Valley, Igwababa Road, Kloof, 3600 Natal, S.A.

ASIA (Y2400, or Husband and Wife Y3300) Mr. Hiroshi Tsushi, 33F Sunshine Bldg., 3-1-1, Higashi Ikebukuro, Toshima-Ku, Tokyo 170, Japan

AUSTRALIA (\$17, or Husband and Wife \$22) Miss N. J. Swanson, 43 Wellington Road, East Lindfield, NSW 2070

FRANCE (80.00 Frs, or Husband and Wife 100.00 Frs) M. Claude Thoby, Levieux Grand Chemin, Route De Paris, 44470 Carquefou

GERMANY (30.00 DM, or Husband and Wife 35.00 DM) Dr. I. Batzenschlager, 830 Landshut, Altsdtadt 28, Germany

ITALY (L.20,000, or Husband and Wife L.25,000) Arch. Franco Giorgetta, Via Fiori Chiari, 8-20121, Milano

NEW ZEALAND (\$ 16.00, or Husband and Wife \$ 17.00) Mrs. R. J. MacDonald, "Westwyn" Creamery Rd. 3 R.D. Waiuku, Auckland, N.Z.

PORTUGAL (E1000, or Husband and Wife E.1200) Senhora Clara de Seabra, Praceta Prof. Egas Moniz, 167-4 Esq 4100 Porto

SPAIN (P.1300, or Husband and Wife P.1500) Don Juan Armada Diez De Rivera Avda Doctor Arce 4. 28002 Madrid

UNITED KINGDOM & ISLE OF MAN (£ 8.50, or Husband and Wife £ 11) Mr. Herbert C. Short, 41 Galveston Road, East Putney, London, SW 15 2RZ

CHANNEL ISLANDS & REPUBLIC OF IRELAND with BELGIUM, DENMARK, FINLAND, MALTA, NETHERLANDS, and OTHER REGIONS (£ 8.50, or Husband and Wife £ 11) Mrs. Ann Bushell, Lower Hall, Rue de la Pompe, Augres, Trinity, Jersey, C. I. via U. K.

UNITED STATES (\$ 13, or Husband and Wife \$ 16) Mrs. Edith Mazzei, 1486 Yosemite Circle, Clayton, California 94517

Annual subscriptions fall due on the 1st of January each year and Members are requested to pay them to the appropriate Membership Representative before the 1st June at the latest. Please use the enclosed envelope.

1992 I.C.S. MEMBERSHIP

AS OF JUNE 30, 1992

	LIFE		REGULAR		TOTAL MEMBERS
	SINGLE	COUPLE	SINGLE	COUPLE	
Australia	9	2	106	67	253
Austria			8		8
Belgium			3	2	7
Channel Is.	11		75	26	138
China			3		3
Denmark			2		2
France			50	20	90
Germany			121	27	175
India			1		1
Italy	2		18	5	30
Japan	20	1	68		90
Korea	1				1
Luxembourg					1
Mexico			1		1
Netherlands			1		1
New Zealand	5		27	36	104
Portugal			6	13	32
Rep of Ireland	1		1	3	8
South Africa	10	1	11	1	25
Spain	1		33	1	36
Swaiziland		1			2
Switerland			6	3	12
United Kingdom	12	2	183	58	315
U.S.A.	9	1	79	57	204
Zimbabwe	1	1			3
Total	82	8	804	319	1540

REVISION – MEMBERS OF THE I.C.S.

At the time of going to press, only the following revisions have been received for the membership booklet of 30 June 1990.

Austria

NEW MEMBERS

HOUSEBERGER, Herr Anton, Kehlermohder 30, 6350 Dornbim
 DEISSL, Herr Heinz - Rejoined
 GINDL, Frau Elizabeth - Rejoined

Germany

NEW MEMBERS

KASIMIR, Gerhord, Stahlbuhrling 96, D-6802 Ladenburg
 DOHEM, Herr Monfred - Rejoined
 EBERTS, Boumschule, Soarstr.3, 7570 Baden-Baden
 FISCHER, Herr Jutta, Hoeden 16, 2177 Wingst
 FROEHLICH, Frau Ulnike - Rejoined
 GROEFIN ZU EULENBURG, Frau Dr. Gilo, Brunnenstr 22, 3575 Kinchein
 HELL, Herr Holger - Rejoined
 JONDER, Herr, Silvia, Holdenweg 46, 7500 Kartsruhe 51
 KROUS, Herr Doris. 6751 Schollodenbach
 MUELLER, Herr & Frau Hans J. & Gertud - Rejoined
 POLOTOWSKY, Frau Petro - Rejoined
 SAUERBORN, Herr Aen, Postfach 1771, 5400 Koblenz - Rejoined
 SCHOENEBERG, Frau Petro - Rejoined
 SIEBER, Herr Prof. Josef, Uhustr 22, 8050 Freising
 STRUNZ, Herr Christian, Thueleck 4, 4795 Delbrueck
 TIEFENBACH, Herr & Frau, Rolf, Am Muehlenbach, 2860 Osterholz
 ULBRICH, Herr Karl, Hoffnungsthaler Str. 28, 5064 Roestrath
 VOGEL, Frau Anneliese - Rejoined
 VOGT, Frau Resi, SchlettweF 3, 6759 Wolfstein
 WAGNER, Frau Anneliese - Rejoined
 WILHELMA, Zool-Botanischer Garten, Postfach 5012127, 7000 Stullgart
 WOLF, Herr & Frau Friedrich, Ausserholb 4, 6054 Rodau
 ZUMMER, Herr Orof Dr Karl, Herrenhoeuser Str.2.3000 Hanover
 ZWEYDINGER, Herr Bernd, Kirchvonn, 1414 Fuechtorf

- Resigned - Bartles, Andreas; Buder, Ulrich & Frau; Dors, Bert & Giesla; Gander, Dr, Silvia; Hacklander, Derr Dr. Klaus; Kraus, Winifred; Marz, Georg; Muller, Thomas; Neubert, Christa; Piert-Borger, Barbara & Mann; Schroeder, Marianna; Tefehne, Wilham; TremI, Franz-Xavier

Netherlands

NEW MEMBERS

SCHINDLER, Herr Dipl. ing, Karl- Heinz Dingerloon 7, 6419 BC HerIen/NL

- Resigned - Slinder, Mr. B.

Switzerland

NEW MEMBERS

EDEN GIARDINO HOTEL, Vio Ronco, 6613 Porto Ronco

Australia**NEW MEMBERS**

ELLIS, Mr. & Mrs. Arthur, 12 Vacluse St., Calermont, W.A. 6010
 KING, Mr. & Mrs. Don, Bridgeview, Jingellic NSW 2642
 PFORR, Mrs. Joan, 12 Tingle St., Robertson, QLD 4109
 WALKER, Mrs. Shirley, 12 Tingle St., Robertson QLD 4109
 WALLACE, Mrs. June, 39 Fitzwilliam Road, Vacluse, NSW 2030
 WILLIAMS, Mrs. Florrie, 250 Jersey Rd., Woollahra, NSW 2025
 WOHLMUTH, Mr. Hans, 5 Blenheim St., Waverley, NSW 2024

CHANGES AND CORRECTIONS

FRASER, Mr. & Mrs. H.A., Box 565. P.O., Wagga Wagga NSW 2650
 JAMES, Mrs. M.C., 5 Billabong Ave., Turramurra NSW 2074
 KNYVETT, Mr. & Mrs. R., 1395 Old Northern Rd., Middle Dural NSW 2150
 O'SHEA, Dr. & Mrs. Desmond, 1402 EWastpoint Tower, 180 Ocean St., Edgecliff
 NSW2027
 QUEENSLAND CAMELLIA SOCIETY, P.O. Box 180 Kenmore, QLD 4069
 WYLIE, Mrs. J., 10 Boomerang Rd., Springwood NSW 2777

Resigned - Boulton, Mrs.W.; Hackett - Jones, Mrs. F.; Keightley, Mr. & Mrs. R.S.; King, Mr. & Mrs. D.M.; Mitchell, Mr. & Mrs. J.L.A.; Robers, Mrs. M.

Channel Islands**NEW MEMBERS**

ALLEZ, Mrs. Margaret, La Valeuse, St. Brelade's Bay, Jersey JE3 8EE
 BICHARD, Mrs. P.M., Le Grouin, St. Brelade's Bay, Jersey
 BRYAN, Peter, Rocquebille, Mont Cantel, Jersey JE2 3ZQ
 CHINN, Mrs. Suzanne, Le Fournier, St. Brelade's Bay, Jersey JE3 8EE
 DOREY, Mrs. Ailsa, Le Haugard, Rue De Sortel, St. John, Jersey JE3 4AA
 EDWARDS, Mr. & Mrs. C.J., Lande A Geon, Old Beaumont Hill, St. Peter,
 Jersey JE3 7EA
 FALK, Mrs. Leysa, Ravenscroft, La Rue De La Val De La Mare Sud, St. Peter,
 Jersey JE3 7EA
 GARTLAN, Mrs. Tania, La Gare, Coast Road, Grouville, Jersey JE3 9BD
 JACKSON, Mrs. Patricia, Glenwhem, Golf Lane, Grouville, Jersey JE3 98BD
 JEUNE, Mrs. Monica, Langley House, Rectory Lane, St. Savior Jersey JE2 7NP
 LAW, Mrs. Paranee, Silvalai, Mont Arthur, St. Brelade, Jersey JE3 8EH
 LEACH, Sir Ronald & Lady, La Rosiere, St. Saviour, Jersey
 LEE, Mrs. Sylvia, Rose Farm, La Route De L'Etacq. St. Quen, Jersey, JE3 2FB
 LE CORNU, Mr. & Mrs. R., La Chaumiere Fleurie, Grande Route De Faldouet, St.
 Martin, Jersey
 LIVESEY, Mrs. Kathleen, Bel Event, 1 pont Marquet Drive, St., Brelade, Jersey JE3 9FB
 MALTWOOD, Mrs. Greenfields, St. Mar, Jersey JE3 3ED
 MARETT, Lady Riedad, Mon Plaisir, La Haule, St. Aubin, Jersey
 MARRINER, Thomas D.t., la Ferme grandet, Rue De La Golarde St. Lawrence,
 Jersey JE3 1GW
 PARKER, MR. & Mrs. R., le Clos, La Maudelaine, La Move, Jersey JE3 8GT
 RAINER, Mrs. Caroline, Beau Coin, La Haule, St. Aubin, Jersey
 ROGER, Mr. & Mrs. A.P.H., Clos De Collett, Villaise, St. Quen, Jersey JE3 2AP
 WALKER, Lady Angela, Old Cadet House, Gorey, Jersey JE3 6DS

CHANGE AND CORRECTIONS

MACKINNON, Mrs. D.S., From Single To Life Membership
 YATES, Mrs. F.A. Bouley Bay Lodge, Rue De La Falaise, Trinity, Jersey JE3 8BD
 ARNOLD, Mr. & Mrs. Jeremy, Bras De Fer, Augres, Trinity, Jersey JE3 5FB (Formerly
 In Name of Mrs. D.S. Prestwich)

DECEASED

DE LA MARE, Lady Katherine; Perree, Mr. Francis

Resigned - Fattorini, Mr. & Mrs. Joseph; Fox, Mrs. Eleanor; Jamison, Dr. & Mrs. David; Maryat, Mr. & Mrs. R.A.; Seth-Smith, Mr. & Mrs. Brian; Thompson, Mr. & Mrs. F.M.

DENMARK

Resigned - Anderson, Curator A. Jacob; Petersen, Dr. Michael Finland

FINLAND

Resigned - Valtonen, Mrs. Sirkka

REPUBLIC OF IRELAND

Resigned - Cuthbert, Mr. & Mrs. P.W.; Douglas, C.J.; Hadwick, Mrs. M.; Hurley, Dr. Pierce J.; Keane, Sir Richard & Lady; Merry, Mrs. Tracy; Savino, Anna Stokes Pierce

Deceased - Rosse, The Countess Of

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PEREIRA, Mr. & Mrs. Joaquim Baptista, Bloco C2-4 ESQ.HE. 3000 Coimbra
SANTOS, Mr. & Mrs. Virgilio, R.15 De Marco 2000 Santarem

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CAMERON-GAVIN, Mr. & Mrs. J.W.B., 70 Main Higheay, Ellerslie, Auckland
COOPER, Mr. & Mrs. J.A., Walkers Rd., West, Katikati
COWAN, Mr. M.G., P.O. Box 44, Waitati, Otago
JACKSON, Mr. & Mrs. B.R., 11 Pimlico Place, Christchurch 5
ROBINSON, Mr. & Mrs. F., Wrights Rd., West Katikati

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BODLEY, Mr. & Mrs. T.E., Poyntzfeld, Valley Rd., R.D.2
MCDONNELL, Mr. S.S., Rural Delivery, Waikanae
PRICE, Mrs. J.H., 152 Redoubt Rd, Manukau City
SHARPE, Mr. B.E., Unit 2, 29A Hart Rd., Takapuna, Auckland

RESIGNED - Dean, Mr. & Mrs. A.M., SR.; Fogarty, Dr. & Mrs. P.J.; Goodwin, Mr. J.W.; Low, Mrs. J. Hope; McNeil, Miss S.R.; Simpson, Mr. & Mrs. C.S.; Wake, Mrs. A.R.; Walton, Mrs. R.

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COOK, Mr. & Mrs. Colin, 16 St. Thomas Rd., Claremont
JOUBERT, Mrs. Veronica, P.O. Box 19, Hazyview 1242

RESIGNED - Burgess, Mr. E.; King, Mr. Derek; Rowles, Mrs. D.

SPAIN

PEREZ-CIRERA Lopez. Jose Luis, Facultad De Biologia De La Universidad, 15701 Santiago De Compostela, La Coruna
PIREIRO Lago, Maria Del Carmen Fatima, Rua Castelao 7-3, Villagarcia De Arosa, Pontevedra

REAL Jarden Botanico, Plaza De Murillo 2, 28014 Madrid

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NEW MEMBERS

- ADAMS, Mrs. B., Muirlands, Kirsy-In-Furness, Vumbria LA17 7TT
 ALLEN, Mrs. O.V.B., 9 Fairdale Gardens, Putney, London SW15 6JW
 BENTON, David, 50 Dukeswood Dr., Dibden Purlieu, Southampton SO4 5NJ
 BOSSIER, M.S., Ithersay Cottage, ecclesbourne Lane, Idridgehay, Derbyshire DE4 4JB
 BOORMAN, Dr. & Mrs. E.J., 19 The Boundary, Langton Green, Tunbridge Wells, Kent
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 CORNWELL, Mrs. E.A., 47 Locks Ride, Ascot, Berkshire SL5 0QZ
 CREEK, F.N., Beech Cottage, Selsfield Road, Ardingly, Sussex RH17 6TN
 CULPIN, David, 10 Summerhouse Road, Godalming, Surrey GU7 1PY
 FLINTOFF, Mr. & Mrs. M.E., Morley House, Bath Road, Chippenham, Wiltshire
 SN15 2AD
 FLOCKINGER, Gerda, 101 Hemingford Road, London N1 1BY
 GRAY, H.J., 36 Old Barn Road, Christchurch, Dorset BH23 2QY
 KENWORTHY-BROWNE, John, 12 Hollywood Drive, London SW10 9HY
 KENZY, Mrs. E.L., 249D Cameron Road, Sequim, Washington 98382 USA
 MACKAY, Colin, 79 Bedford Court mansions, Bedford Square, London WCI
 OAKES, Mr. & Mrs. W., high Trees, Hickmans Lane, Haywards heath, West Sussex
 RH16 2BZ
 ROBERTS, M.R., High Gables, Main Street, Frankton, Warks CU23 9NZ
 SCOTT, Lady P.A., 31 Kensington Square, London W8 5HH
 SIMONS, A.W., Wingfield House, 11 Brinsmade Road, Amptill, Bedfordshire
 MK45 2PP
 VON STAUFFENBERG, Baroness Linda, 2 Wilton Place, London SWIX 8 RH
 THOMSON, Mr. & Mrs. W., 22 Halsey Street, London SW3 2QH
 TOOGOOD, Christopher M., 20 The Rise, Walton-On-The-Hill, Strafford, Staffs
 ST17 0LH
 TURNBULL, Mrs. A., Mulberry House, Vineyard Drive, Bourne End, Bucks, SL8 5PD
 WEBB, E.J., 7 Hooly Close, Buckhurst Hill, Essex IG9 6HT
 WILSON, Mr. & Mrs. D.P., 19 York Avenue, New Milton, Hants BH25 6BT

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- FARNES, Mr. & Mrs. D.N. (Family)
 JONES, Dr. & Mrs. C. (Family)
 MEREDITH JONES, Mr. & Mrs. N. (Family)
 LANGFORD, J.D., (Single)
 MCCALL, Mrs. B.M. (Single)
 SCOTT-MONCRIEFF, Mrs. E., 14 Richmond Road, Malvern Link, Worcs WR14 1NE
 (Address)

DECEASED

- BITTERLINE, Mrs. M
 CHAPMAN, Mrs. M.
 MCCALL, Dr. A.M.
 REYNOLDS, Major R.A.W.

U.S.A.

NEW MEMBERS

- BROWN, Elizabeth L., 20 Spanish Wells Plantation Rd., Hilton Head Island, S.C. 29926
 EHRHART, Mr. Robert, 2081 Norris Rd., Walnut Creek, CA. 94956
 DICKSON, Brenton & Elizabeth, 90 Bridge St., Manchester, Mass 01944

GIMPEL, Mr. Leon, 6 Salvia Ct., Homosassa, Fl. 32646
 RICHARDSON, Ted & Judith, 412 s. Jackson St., Brookhaven MS. 39601
 RENAISSANCE HORTICULTURAL SOCIETY, P.O. Box 311, Oregon House, CA 95962
 STROBACH, Dr. & Mrs. Richard, P.O. Box 246, Hammond, LA 70404
 UNIVERSITY OF WASHINGTON, Elizabeth C. Miller Library, Center for Urban
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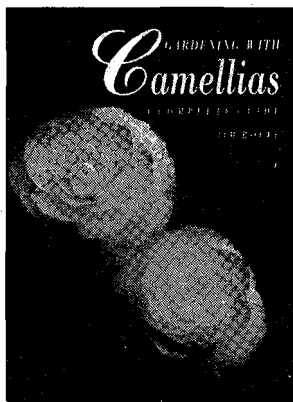
COMBER, Mrs. Jean (John Deceased)
 DONNAN, William W., 1050 Bastanchury Rd., Fullerton, CA. 92635
 FETTERMAN, Mr. Lewis, P.O. Box 244, Delphi, IN 46923-0244
 HALBERT, Judge & Mrs. Sherrill (Deceased)
 LAROSE, William F., 3229 Lake Trail Dr., Metairie, LA 70003-3432
 SIMMONS, Mrs. Edward (Deceased)

RESIGNED - Groden, Mrs. Helen; Waltz, Eleanor

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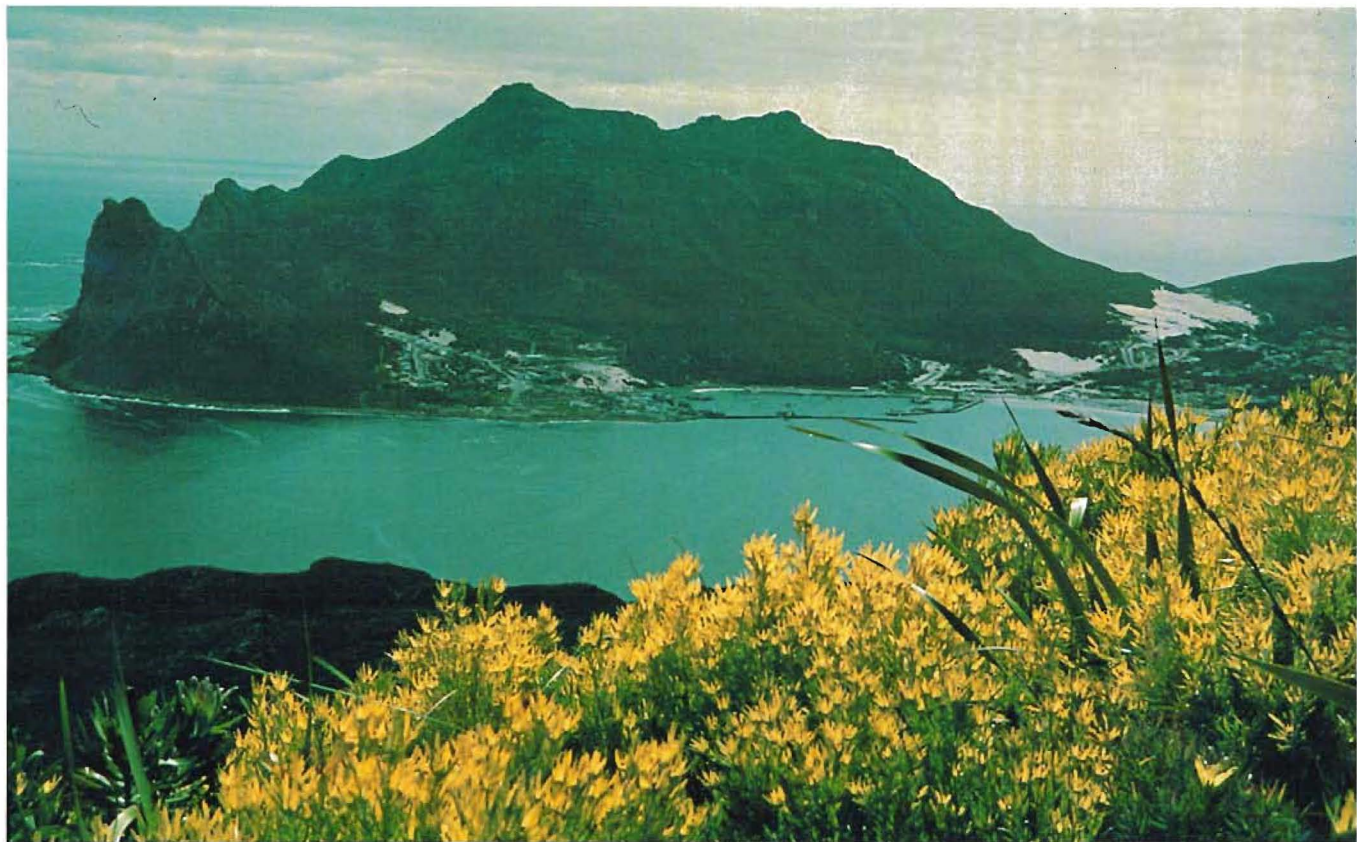
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